

Planning Application 18/P/5118/OUT

**Applicant: Bristol Airport (majority owned by Ontario
Teachers' Pension Plan, Canada)**

Submission to North Somerset District Council

By the Parish Councils Airport Association

1 February 2019

**Document 1 of 2 –
for appendices apart from Appendix 8 see separate document**

This submission is based on detailed examination of some of the documents referred to in the planning application. The Parish Councils Airport Association (PCAA) is a group of elected representatives from 21 parishes and one town which represent the local community interests. We cover a large area with parishes from Sedgemoor district, Bath and North East Somerset district as well as North Somerset district. The parishes the association represents are Barrow Gurney, Blagdon, Brockley, Burrington, Butcombe, Churchill, Cleve, Dundry, Kingston Seymour, Long Ashton, Winford, Wraxall and Failand, Wrington (**North Somerset**) Chew Magna, Compton Dando, Keynsham Town Council, Publow w Pensford, Stowey Sutton, Timsbury, Ubley (**BANES**) Cheddar, Shipham (**Sedgemoor**). The population within the Association equates to over 40,000 residents.

The purpose of the PCAA is to advise and represent its member councils on matters affecting them which are connected with Bristol airport and its operations. It reports back to, and reflects the views of, some 21 parish councils and one town council which, in turn, are responsive to the views of many thousands of electors. We do not have the resources to run a media campaign or seek costly expert advice from consultants in various fields.

The PCAA **objects** to this application

This response was agreed at the PCAA meeting held Thursday 24 January 2019

This response document has been compiled entirely by local volunteers from within the communities affected by the airport and working to a tight timescale over the Christmas period. Layout, consistency, style and language may not be the same as in a report commissioned from an expert or a professional business. There is some duplication but this and other inadequacies are mostly the result of needing to respond within such a short timescale. We trust, however, that you will look beyond any shortcomings of this nature and recognise the depth of concern that exists amongst local communities, voters and council tax payers.

All figures and statistics used in this document are from Bristol Airport or documents that relate to local and government policy papers and reports. Other papers are referenced.

CONTENTS

Each main section starts with a summary, usually of no more than one page

	Page
Cautionary note	2
Executive Summary	5
Introduction	9
Procedure for determination	10
The Inadequacies of the Environmental Statement	13
Prematurity	18
Concerns about NSC competence and impartiality	25
Alternatives	27
Economic Impact	31
Introduction and Background	32
Current Baseline Impact of the Airport	37
GVA and Employment Impact of Expansion to 12 mppa	37
Socio-Economic Impacts of Expansion to 12 mppa	43
Regeneration and Social Impacts	44
Jobs	45
Transport Assessment	46
Road Access	49
Parking Controls	55
Work Travel Plan	56
Car Parking – MSCP – Silver Zone Phase 2	56
History of MSCP at Bristol Airport	57
Application 18/P/5118/OUT	58
Public Transport Interchange – Parking Strategy	60
Green Belt	62
Permitted Development 1	63
Low-cost parking strategy	64
Permitted Development 2	66
Noise	68
Introduction	69
Government Policy & Emerging Policy	71
Noise annoyance	73
Air noise – Why noise matters	74
Ground noise	76
Night noise	77
Cumulative impacts – Western apron and Eastern apron	83
Complaints	85
Future Aircraft	86
CAP1616	88
Growth in aircraft based at BA	88
Noise insulation	90
Aircraft stands 37 and 38	91

Public Safety Zones	93
Air Quality	94
Biodiversity/Ecology	101
North Somerset and Mendip Bats SAC	102
Health	110
Issues	110
Climate Change - Carbon and Other Greenhouse Gas Emissions	114
Aviation emissions	116
Vehicle emissions from passengers	117
Climate Change Action Plan	120
Vulnerability of the Development to Climate Change	120
Lighting	123
Proposed Heads of Terms for Section 106 Agreement	124
Proposed Planning Conditions	129
Appendices via separate pack	-
Appendix 1 PCAA response to Your Airport: Your Views Nov 2017	-
Appendix 2 PCAA response to Your Airport: Your Views May 2018	-
Appendix 3 Notes of meeting with NSC	-
Appendix 4 PCAA response to draft Noise Action Plan 2019 - 2024	-
Appendix 5 BA Financial Performance 1997 – 2016	-
Meeting with BA 27 June 2018	-
Letter from Janis Kong 25 July 2018	-
Letter to Janis Kong 29 October 2018 amended 12 November 2018	-
Appendix 6 Background noise letters	-
Appendix 7 Aviation emissions from Campaign against Climate Change	-
Appendix 8 Compensation scheme & Treasury Green Book	133
Appendix 9 Response comment by Pilot	-

EXECUTIVE SUMMARY

Our arguments are shown in very summarised form below. The subsequent main sections provide relevant details and the questions that need to be answered to show that North Somerset Council has thoroughly examined the application.

In this summary section the PCAA set out their views on:

- Reasons why the application should be refused
- Reasons why, if this does not happen, that the application should be delayed under a prematurity argument
- Conditions, in the event that the application is granted
- The high priority concerns on the part of local communities

Why the application should be refused

1. The balance between economic benefits and environmental impacts has not been rigorously examined. The proposals are contrary to: (i) the NPPF's objectives for sustainable development; (ii) Article 3 of the UN Framework on the Convention of Climate Change (iii) Local Policy CS23
2. The proposals are contrary to all transport policies in which sustainable car travel is minimised. The substantial increase in car trips without any increase in the modal share percentage target (i) will not minimise use of the private car particularly without any change in parking strategy (ii) undermines the West of England Local Authorities to reduce carbon emissions from vehicles.
3. Important alternatives have not yet been considered that would remove the need to take green belt land and which would also reduce car travel on small roads around the airport. An alternative site is now available at Junction 21 and should be examined.
4. This is a major development which affects the Local Plan's spatial strategy and impacts on other authorities in different ways, such as carbon emission and air quality targets. It should be evaluated alongside other major developments in accordance with the NPPF's 'plan led system'.
5. There is no assessment of how transport-related emissions can be allowed to grow as a result of this application while still achieving the reduction targets that NSC has agreed.
6. The airport's key economic paper is an exercise in emphasising the positives and ignoring or completely discounting the negatives of further expansion of the airport:
7. Items that are not mentioned at all in the report, yet would have significant external impacts and costs, include:
 - a. road traffic congestion and the costs of a 20% increase in passenger traffic

- b. aircraft noise in general
 - c. sleep impacts of aircraft noise
 - d. climate change impacts
8. Risks willfully not mentioned include:
- a. significant changes to oil prices
 - b. carbon taxes
 - c. video conferencing and tele-presencing instead of face to face visits
 - d. climate change risks including hotter summers
 - e. Brexit and other risks to the economy in general and exchange rate in particular
9. Direct economic issues dismissed as ‘unlikely to be significant’, but with no methodology, workings, or evidence shown, include:
- a. outbound tourism spending
 - b. congestion in the job market
 - c. Misleading data and assumptions that defy recent experience are apparent in claims concerning growth in jobs at the airport.

Why the application should be delayed through being premature

10. The application is phase 1 of Bristol Airport’s stated intention of seeking to grow from 10 to 20 mppa. This development is so substantial, and its cumulative effect would be so significant, that to grant permission would undermine the plan-making process by predetermining decisions about the scale, location or phasing of infrastructure and other developments that are central to an emerging plan.
11. The emerging plan is at an advanced stage but is not yet formally part of the development plan for the area. The JLTP 4 consultation commences 6 February 2019. The PCAA has been unable to comment on the implications of the JLTP 4 within the consultation time frame of the application.

Conditions

12. The PCAA are concerned about the rigour with which NSC sets and maintains important conditions. A prime example is releasing the airport from a condition from 2011 which required them to construct a MSCP before any further use of green belt land for low-cost car parking. MSCP 2 and the public transport hub have still to be delivered.
13. The airport now wishes to be released from an important condition on the number of night flights in the summer months. A condition should not be over-turned just when it begins to bite in order to pander to a private developer at the expense of the local communities.
14. Within this document are some detailed comments in respect of conditions connected with the application. NSC needs to understand and act on the legitimate concerns of the local community, including the high priority issues identified below.

High priority issues for local communities

The following are some of the local concerns but not in any priority order.

1. **Noise** – night flights; new flightpaths under CAP1616; ground noise; slow and uncertain introduction of a modern, quieter fleet; ungenerous compensation scheme; absence of any respite
2. **Car parking** – continued expansion onto green belt land; delays to MSCP; a charged-for waiting area that will do little to stop parking on neighbouring roads; a low-cost parking strategy that encourages more car access
3. **Near-monopoly on car parking** – allowing more car parking at BA continues to support a near-monopoly and is anti-competitive.
4. **No further growth should be granted** until delivery of integrated transport such as mass transit or rail links and infrastructure such as the MSCP 2 and public transport hub.
5. **Public transport** – unambitious targets for use of public transport; vagueness in respect of the public transport interchange and community access to this, with low-cost parking for local people
6. **Road network** – grossly insufficient road improvements to deal with an average of 9500 extra cars on the roads, every day, compared with today (maybe 13,000 at peak levels)
7. **Policy CS23** notes the requirement for demonstration of satisfactory resolution of surface access infrastructure prior to further development at the airport
8. **The Junction 21 car park should be considered within this application process**
9. **Green Belt** – serious visual impact from car parking on open land; loss of biodiversity
10. **Biodiversity** – loss of important foraging land; insufficient mitigation to address threats to the loss of biodiversity (incl. rare bats); poor control of lighting
11. **Air quality** – impacts on S. Bristol; there 300 premature deaths a year related to AQ
12. **Health impacts** – absence of a Health Impact Assessment that deals comprehensively with potential adverse impacts on health
13. **Climate change** – significant growth in aviation and vehicle emissions when policies all dictate the need for dramatic reductions
14. **Permitted development** – a feeling of loss of control because major developments have been allowed without proper scrutiny
15. **Use of public money** – public money will be used to support a private developer whose business delivers significant environmental damage and will remove (at 12 mppa) £3.6bn from the UK economy mainly through the tourist deficit; why are we subsidising wealthier people when our local services are starved of cash and Weston is suffering from reduced visitor spending?
16. **Assessment of alternatives** – there are several alternatives which have not had a comprehensive assessment; NSC is at risk of blindly accepting the airport's story without sufficient challenge - Junction 21
17. **Economic considerations** - further evidence is needed particularly in light of the Highways comment on the Transport Assessment. Terms of reference need to be made available, if NSC engage external consultants - see direct employment figures

18. **Carbon and other greenhouse gas emissions** - further evidence needs to be provided in light of the comments by Campaign against Climate Change. Terms of reference need to be made available, if NSC engage external consultants
19. **Even-handedness of NSC** – the words and actions from NSC all indicate a slavish commitment to economic considerations with serious disregard for the community and the environment; NSC risk being hoodwinked into an erroneous view of the wider economic benefit of airport expansion and risk focusing just on the chance of increased tax revenue for themselves.
20. **Over 2000 objections have been lodged** - this shows that there is:
 - i) A cry from residents for no more expansion due to impacts of airport operations
 - ii) A call from the public for Authorities to take the lead on reducing carbon emissions from fossil fuel activities to safe guard the environment for future generation
 - iii) A call by the staff including BALPA who echo our concerns that low cost parking cannot be allowed to continue

Introduction:

Context of this planning application

1. Bristol Airport is majority owned by Ontario Teachers' Pension Plan, Canada. It is operated by Bristol Airport Limited (BAL). BAL was granted outline planning permission by North Somerset Council on 16th February 2011 for the expansion of Bristol Airport to handle 10 million passengers per annum (mppa). Bristol Airport and passenger numbers have grown by over 40%, from 5.8 mppa in 2011 to 8.2 mppa in 2017. Bristol Airport is proposing a further 50% growth to 12 mppa, phase 1 of growth to 20 mppa.
2. It is important to recognise that the consultants' reports accompanying the application **may be biased** and may be partial documents, the purpose of which is to boost the airport's expansion case. They are most likely to reflect the consultant brief (prepared by BA) and hence they will primarily reflect BA interests. The past experience of North Somerset Council with BA consultants' reports should make NSC very cautious when it reads the reports associated with the application (e.g. see section on Health).
3. From our three meeting with North Somerset Council the PCAA have been informed that North Somerset Council will retain a consultant to assess issues such as carbon and greenhouse gases, noise, the York Aviation Economic Impact Assessment Final Report November 2018 or any matter for which it does not have the expertise. The PCAA request that North Somerset Council **makes available the terms of reference for these engagements**, identifying the points that the consultants have been asked to assess.
4. There is a constant **shifting of the baselines** which has the effect of artificially increasing the apparent benefit to the airport and of decreasing the real disadvantage to communities and the environment.

Procedure for determination

A less-rigorous approach to planning

1. This application is phase 1 of growth to 20 mppa. If Bristol Airport had applied for growth to 20 mppa rather than to 12 mppa this application would meet the definition of a Nationally Significant Infrastructure Project (NSIP). The PCAA believe that the airport has chosen to apply for 12 mppa for three reasons:
 - 1.1. If this application was to be determined for growth to 20 mppa it would be turned down due to lack of infrastructure
 - 1.2. At 12 mppa it will probably be quickly and easily passed by North Somerset Council as the growth will be seen to have insignificant risks to residents and the environment. The cumulative impacts of development will be ignored as were the cumulative impacts of growth from 5.2 mppa in 2005.
 - 1.3. The financial risks to the airport are reduced.
2. The Bristol Airport document 'Your Airport: Your Views' November 2017 stated that *'the scale and type of development proposed in our Master Plan will influence the planning route we follow'*. The airport outlined two routes: (i) Development which increases capacity by 10 mppa through the Nationally Significant Infrastructure Project' and (ii) through the local planning authority NSC. The BA letter from Mark Herbert to the JSP consultation dated November 2017 stated *'Local Plan Policies in respect of Bristol Airport should allow for phased growth in both capacity and operational site area through an amendment of the Green Belt boundary, additional land-use allocation (including in relation to additional employment land), and support for investment in transport infrastructure based on an evidence-driven Corridor approach.'* This shows the firm intention of Bristol Airport growth ambitions to become an employment zone as well as growth of operational activities to 20 mppa through a phased approach based on the timing of investment to upgrade infrastructure.
3. The main policy covering application 18/P/5118/OUT is policy CS23 from North Somerset Council Core Strategy January 2017. This states *'Proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact on surrounding communities and surface access infrastructure'*. This is the main policy because:
 - 3.1. the West of England JSP has not rigorously examined growth to 20 mppa or phase 1 of airport growth (to 12 mppa),
 - 3.2. the Examination in public on the JSP has not commenced and
 - 3.3. the Local Plan 2036: Issues and Options public consultation has only just closed.

Absence of Master Plan

4. 'Your Airport: Your Views, Towards 2050' in May 2018 confirmed phase 1 growth to 12 mppa expected in the mid 2020s with the approach taken of a planning application to North Somerset Council. The airport believe that this approach will allow growth to continue whilst the Master Plan is developed. And, indeed, the Master Plan has not yet been published.

5. The delegated report by North Somerset Council to the Environmental Impact Assessment: Scoping Report confirms that growth to 20 mppa is now predicted for the mid- 2040s. Within the plans for growth to 12 mppa (phase 1) the PCAA would reasonably expect cumulative impacts of the development to be given but the new Master Plan is currently not expected until winter 2018/2019.
6. The BA Master Plan 2006 - 2030 only carries a preliminary assessment of the solutions to growth to 12 mppa and expressly states '*detailed proposals for long term development between 2016 and 2030 will be brought forward as part of the Master Plan review process*'. It is obvious that Bristol Airport is late in bringing forward the new Master Plan. Thus, there has been no review process or highlighting of environmental impacts.

Weak and rushed consultation process

7. The Bristol Airport application 18/P/5118/OUT was not announced to the public in the usual way. The application was received by NSC on 11 December 2018 and validated on Wednesday 19 December 2018. It is usual for an application to be shown on the weekly planning list, more often than not on the Monday or Tuesday of that week. The application went on the weekly planning list Monday 24 December 2018 with a target decision date of 10 April 2019. The application was only listed under one parish which is the home to the airport, Wrington, yet other parishes are heavily affected such as Cleve, Backwell, Brockley, Dundry, Winford and many more. The consultation period was given a deadline for comment of 26 January 2019. The PCAA consultation deadline has changed twice and is now 9 February due to additional documents being submitted late.
8. The unusual way of announcing this planning application strongly indicates, particularly as it is over the Christmas period, that North Somerset Council in partnership with the airport has no desire for there to be a mass public response to this application and for consent to be granted without rigorous examination. The PCAA and Wrington Parish Council have been granted a further two weeks to submit their submissions but do not believe that other parishes have been given an extension. Parish and Town Councils (unpaid volunteers) only meet on a monthly basis and so to consider an application and to make an informed response is exceedingly difficult particularly as it was announced a few days before Christmas.

'Calling in'

9. The PCAA may try to get this application called in. 'Calling in' can be done at any time during the planning application process, up to the point at which the local planning authority actually makes the decision. If a planning application is called-in, there may be a public inquiry chaired by a planning inspector, or lawyer, who will make a recommendation to the Secretary of State. The Secretary of State can choose to reject these recommendations if he wishes and will generally take the final decision. In certain circumstances a Judicial Review can then be taken on the Secretary of State's decision.
10. The decision to seek to call in the application will be in part to avoid this application being determined by the Planning and Regulatory Committee. The committee is made up of 25 district councillors of which 18 are conservative

members and 7 from other parties. The vast majority of these councillors sat on the previous Area Planning Committees and the Planning and Regulatory Committee in 2011. These councillors voted in favour of granting planning consent to the 2011 application. Very few showed any real understanding of the issues surrounding Bristol Airport in 2011 particularly on the economic arguments for and against expansion, climate change, noise, health and well-being for residents. The PCAA do not believe this position has changed.

A fair hearing for the PCAA

11. The PCAA request that, if the application is not called in, the PCAA are allowed to give a presentation to the Planning and Regulatory Committee for at least 15 minutes and that an expert on each issue such as traffic, noise, green belt and climate change is allowed to speak. The application is of considerable public interest. The PCAA requests that the Planning and Regulatory meeting which is usually held in the afternoon should be moved to an evening slot so that the public can attend more easily. The PCAA note that there is no facility for this meeting to be streamed to a large audience.

The Inadequacies of the Environmental Statement

Poor EIA scoping and an inadequate ES

1. BAL recognised that the proposed development *‘has the potential to have significant effects on the environment, due to the characteristics, location and potential impact of developing and operating Bristol Airport to serve 12 mppa’*. To that extent, they have not undertaken a formal EIA Screening Opinion because they already concluded that an EIA will be needed for a planning application to increase passenger capacity to 12 mppa. NSC Officers agreed with this conclusion. (Application 18/P/3502/EA2 delegated report). BAL then submitted an EIA Scoping Report to the Council for consideration.
2. The PCAA responded to the Environmental Scoping Opinion to determine the scope of an Environmental Impact Assessment for a future application for the proposed expansion of the airport to accommodate 12 million passengers per annum in July 2018. Despite responding on time, it was unfortunate that the NSC officer did not read our comments. These are available at <https://planning.n-somerset.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=PAIFLNLP02J00>
3. Nevertheless, the Environmental Statement ('ES') is also inadequate in many other respects, including some which make it impossible for significant environmental impacts to be adequately assessed.
4. NSC must now seek to remedy the shortcomings in the ES by using the provisions available to a LPA under section 25 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as follows:
 - 4.1. *"If a relevant planning authority... [is] of the opinion that, in order to satisfy the requirements of regulation 18(2) and (3)12, it is necessary for the statement to be supplemented with additional information which is directly relevant to reaching a reasoned conclusion on the likely significant effects of the development ... the relevant planning authority ... must notify the applicant or appellant in writing accordingly, and the applicant or appellant must provide that additional information; and such information provided by the applicant or appellant is referred to in these Regulations as "further information"."* (Regulations 18(2) and 18(3) lay down what must be included in an ES).
5. This PCAA submission identifies the topic-specific inadequacies of the ES in the relevant topic-based chapters of this submission, i.e. noise, surface access etc. The inadequacies highlighted are shown in detail in each chapter.
6. The PCAA examination shows that the proposed development affects the wider area of the West of England which will have cross boundary impacts in relation to air quality and carbon emission reduction targets. Therefore planning consent for this application should be taken by out of the hands of North Somerset and ideally be decided under a Public Inquiry.

Economic Impact Assessment – York Aviation report

7. An assessment needs to be made in monetary costs of the impacts of this development
 - 7.1. road traffic congestion and the costs of coping with significant increases in passenger traffic
 - 7.2. aircraft noise in general
 - 7.3. sleep and health impacts of aircraft noise and other pollution
 - 7.4. climate change impacts
8. There is discrepancy on the actual fte numbers for 2018. The York Aviation figure is 17% higher than the Workplace Travel plan figure introducing significant uncertainty into all of these calculations and this undermines the York Aviation report. The manner in which BA has addressed employment undermines the supposed benefits that the region should receive, especially as the main reason the expansion of an airport is put forward is that it is good for the economy.

Transport Assessment - cumulative impacts.

9. Cumulative road traffic impacts are a particularly important consideration in relation to this planning application and the DfT Circular 02/2013 states as follows:
 - 9.1. *"The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater"*
10. As the PCAA has pointed out in the transport section, the period assessed is only to 2026 which is two years short of the ten year period and the NS Local Plan ends in 2026. If road traffic impacts are understated then so too are air quality impacts as well as carbon emission from vehicles. This assessment excludes the three proposed Strategic Development Locations proposed in the West of England Joint Spatial Plan. This is a vital part of the cumulative traffic effects and needs to be assessed. Without it the assessment is defective.
11. No assessment has been made of the ending of the Severn Bridge tolls. This needs to be included. If road traffic impacts are understated then so too are air quality impacts as well as carbon emission from vehicles.
12. The modal transport split was 12.5 % in 2017 and the suggested improvement is only to 15% at 12 mppa which is the same target as the one for 10 mppa set under the surface access strategy to the 106 Agreement. 85% of all traffic at 12 mppa will be cars travelling to and from the airport A more ambitious target for use of public transport needs to be set which could be tied to the community accessing the public transport interchange to reduce traffic to other destinations. This has not been assessed in the Transport Assessment. This would support sustainable development policies.
13. It would be unreasonable for North Somerset to accept BA's parking strategy to 12 mppa without having first examined the need for low-cost car parking available to users of the public transport interchange, including users from the local community.

14. It appears that the Authorised Waiting Area for the private hire vehicles has not been assessed as an onsite development within these plans. A site within the ES document maps needs to be provided and an assessment given.

Green Belt

15. The Environmental Assessment has no evaluation of the impact of the low-cost car parking strategy in regard to national sustainable transport policies. The low-cost parking strategy is in direct conflict with the ambitions of the West of England to reduce traffic. What have been given within the documents are reasons why to continue the low-cost parking strategy with no reasons given on why and how to change the strategy.

Noise

16. The ES has failed to incorporate new targets of the WHO October 2018.
17. The ES has failed to show clearly to the public which assessment it is using to assess the impacts of noise.
18. The ES has failed to assess the impacts of noise under 7,000 ft from the additional flights from 10 mppa – 12 mppa.
19. The Draft Noise Action Plan 2019 – 2024 is currently being assessed by DEFRA. Due to the uncertainty of delivery of this Plan, the ES has failed to inform people of a definitive Noise Plan which will govern the time period of 2019 -2024.
20. The ES is based on an assumption that a modern, less-noisy fleet of aircraft will be in use at 12 mppa. The ES has failed to address the deliverability of a modern fleet of aircraft as the decisions are taken by airlines and not by the airport. An assessment is needed based on a more realistic, base-case assumption that the fleet is not modernised.
21. The ES has failed to cost the impacts of noise through loss of tranquillity, loss of enjoyment of gardens and being able to sleep at night. If the community can attempt to cost the noise impacts, so should BAL. The ES should address this point.
22. The ES has failed to explain or assess different forms of compensation for noise impacts, putting forward just grants for noise insulation. The ES should at least explain and show costing for different types of compensation and demonstrate that figures align with those in the Treasury Green Book.

Air Quality

21. Air quality is a cross-boundary issue and it is causing premature deaths of an estimated 297 in 2013 in Bristol alone. Further growth of Bristol Airport will undermine actions to reduce air pollution. (Reference: Towards a sustainable energy future for the West of England Report May 2018 by the Centre for Sustainable Energy).

Biodiversity

22. No Appropriate Assessment has been prepared for the North Somerset and Mendip Bats SAC at Kingswood.

Permitted Development Rights

23. The likely works that will be required as part of the expansion to 12 mppa and that will take place under PD rights need to be set out in the ES. This needs to include any intended PD work as part of the airport expansion with the ES assessment otherwise NSC will have no understanding of what they are consenting and what the likely significant effects will be.
24. The ES has failed to provide a lighting assessment for the newly acquired land that is proposed as compensation for the use of the 5.1 ha Silver Zone Extension Phase 2.
25. The ES has failed to address the Forestry Commission regulations for replanting of trees required after felling woodland.
26. The ES does not address the fact that the newly acquired land is close to the Brockley SAC and will already be used for foraging. Thus the land will deliver significantly less net mitigation benefit in comparison to *new* habitat.
27. The ES has failed to address the need for a 'Favourable Conservation Status' to be maintained for the Greater and Lesser Horseshoe Bat. For example, new foraging habitat needs to be mature and productive before other foraging grounds are removed (e.g. green belt land for car parking)
28. The ES has double counted mitigation planting schemes. Commitments within the 10 mppa have been used as part of the 12 mppa mitigation and this needs to be corrected.
29. The ES has failed to notice that the whole of the Silver Zone is a sensitive area for a protected species, thus lighting needs to be re-addressed.

Human Health

30. The officer's report to the BA Scoping Opinion July 2018 expressly stated that
30.1. *'It is noted that BAL do not intend to increase the number of 'night-time' flights per annum, which is limited to 4000, but they do wish to include greater flexibility to their distribution, which is restricted to 3000 in the summer time and 1000 in the winter time. If this leads to a higher concentration of night-time flights in the summer season, which is when more residents may choose to sleep with windows open, the potential impacts on sleep disturbance and human health should be examined'.*
31. The ES has failed to address this point. There is no reference to time-table scheduling of night flights. No illness such as heart attacks, strokes and dementia have been examined in detail for noise impacts.

32. The ES has put forward the argument that further growth will benefit the wards of deprivation of South Bristol and Weston super Mare without any supporting evidence.

Climate Change – Carbon and other Greenhouse Gases

33. The ES has failed to address how vehicle emissions are going to be reduced to align with the emission reduction targets of North Somerset Council and the West of England set under the Joint Spatial Plan.
34. The ES has discrepancies in carbon emission figures which undermine this chapter. View Table 1 in section titled ‘vehicle emissions from passengers’
35. The ES fails to address how BAL’s ambition to be carbon neutral by 2030 is to be achieved. Note the time period for growth to 12 mppa is to 2026 which includes the timescale of reducing carbon emissions to become carbon neutral. The manner in which BAL addresses this issue should be within the ES.
36. The climate change figures in the ES do not present a worse case scenario for the NSC to assess. This means that the ES is defective. The climate change figures should be assessed in line with the Government guidelines on assessing emissions for aviation companies which means that 1.9 multiplier should be applied. See page 64 of the following link
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/553488/2016_methodology_paper_Final_V01-00.pdf

Prematurity

Summary

1. Published guidance on prematurity states that:
 - 1.1. *'Planning applications have to be decided in line with the relevant local planning authority's development plan, unless there is a very good reason not to do so.'*¹
 - 1.2. *'Determination [of planning applications] must be made in accordance with the [development] plan unless material considerations indicate otherwise.'*²
 - 1.3. *'Where planning permission is refused on grounds of prematurity, the local planning authority will need to indicate clearly how granting permission for the development concerned would prejudice the outcome of the plan making process.'*
2. Under the National Planning Policy Framework (NPPF) 2018 which addresses the question, grounds for refusing planning permission require that:
 - 2.1. *'the development proposed is so substantial, or its cumulative effect would be so significant, that to grant permission would undermine the plan-making process by predetermining decisions about the scale, location or phasing of new developments that are central to an emerging plan; and*
 - 2.2. *the emerging plan is at an advanced stage but is not yet formally part of the development plan for the area.'*
3. Documents central to NSC's development plan in respect of the application include:
 - 3.1. Adopted North Somerset Local Plan 2026 & Emerging North Somerset Local Plan 2036 (at an early stage of consultation and no Examination in Public as yet)
 - 3.2. West of England Joint Spatial Plan (no Examination in Public as yet)
 - 3.3. Transport Study JTLP 3 and Emerging JTLP 4
 - 3.4. National Planning Policy Framework
 - 3.5. National Aviation Policy - Aviation Policy framework
 - 3.6. Beyond the Horizon – The Emerging 2050 Aviation strategy
 - 3.7. Bristol Airport Master Plan
 - 3.8. CAA airspace changes CAP1616
 - 3.9. BA Noise Action Plan 2019 -2024
4. The application is phase 1 of Bristol Airport's stated intention of seeking to grow from 10 to 20mppa. As detailed below, this development is so substantial, and its cumulative effect would be so significant, that to grant permission would undermine the plan-making process by predetermining decisions about the scale, location or phasing of infrastructure and other developments that are central to an emerging plan.
5. Furthermore, as shown above, the emerging plan is at an advanced stage but is not yet formally part of the development plan for the area.
6. Bristol Airport is the regional airport for the South West. The unitary authorities of Bath and North East Somerset, Bristol, North Somerset and South Gloucestershire are currently preparing the West of England Joint Spatial Plan.

This Plan, once it has been through a public examination and adopted, will provide the overarching development framework for the sub-region in which the airport is situated. The impacts of airport activities spread across the sub-region, for instance aircraft and vehicle movements which both affect air quality and an increase in greenhouse gases. Due to the impacts of this development on the sub-region a collective decision should be taken by all local authorities rather than North Somerset Council or a public inquiry should be held to allow for a rigorous examination of the impacts of the proposed development. Alternatively, the decision should be delayed on the grounds of prematurity.

Context

7. Bristol Airport is seeking to have this application determined at a time when the NSC Local Plan is in a state of flux and the Government is in the midst of a consultation on the future policy for the development of UK airports and aviation strategy. In short two of the main pillars for determining this application – the local development plan and Government policy - are currently subject to high levels of uncertainty.
8. Bristol Airport, in submitting an application for the first phase of growth to 20 mppa, may be seeking to pre-empt the risk that when the Aviation Strategy is finalised and published next year, environmental issues would clearly remain unresolved and problematic to granting consent.

North Somerset Core Strategy:

9. Policy CS23 is the principle Core Strategy policy relating to development proposals at Bristol Airport. It states that *‘proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.’*
10. Policy CS6 sets out that *‘amendments to the Green Belt boundary at Bristol Airport will only be considered once long-term development needs have been identified and exceptional circumstances demonstrated.’*
11. Priority objectives of the Core Strategy are *‘Living with Environmental Limits’, ‘Delivering strong and Inclusive Communities’, ‘Ensuring Safe & Healthy Communities’ and ‘Delivering a Prosperous Economy’*. The PCAA evidence below shows that the airport already delivers a prosperous economy but further growth will undermine three priority objectives of the current Local Plan to 2026.
12. Nowhere in the Core Strategy does it suggest that the airport should double in size to 20 mppa with the first phase of growth to 12 mppa. The PCAA believe that the environmental issues have not been resolved and secondly the long-term development of the airport is still being consulted upon at regional level and local level. A decision should not be taken until the Local Plan 2036 and the West of England Joint Spatial Plan and Transport Study have been through an Examination in Public.

North Somerset Local Plan: 2036 Issues and Options

13. The emerging NS Local Plan is incomplete. The North Somerset Local Plan 2036: Issues and Options website page states '*This is an early stage in the plan-making process. The purpose of the Issues and Options document is to identify the issues which need to be addressed and to receive initial feedback on a range of proposed alternatives. It is not a draft plan*'. The consultation closed 10 December 2018. The response document is to be published end of January 2019 with a draft Plan to be published at a later date. No date has yet been set for an Examination in Public.
14. The Issues and Options Document highlights the issues of airport expansion such as noise, surface transport, parking, built development and green belt changes but fails anywhere to mention the increase of carbon emissions by vehicles and aircraft movements. The document outlines four options for the expansion of the Airport in terms of the policy approach and amendments to Green Belt boundaries.
 - 14.1. Option 1 – Retain the existing policy.
 - 14.2. Option 2 – Remove airport area from the Green Belt.
 - 14.3. Option 3 – Remove airport area from the Green Belt and safeguard land for future expansion.
 - 14.4. Option 4 – Remove airport area from the Green Belt and allocate land for expansion now and in the future.
15. This document fails to suggest alternatives to make better use of airports which have excess capacity such as Cardiff and Exeter and fails to acknowledge that Heathrow Runway 3 is expected to be constructed by 2026/30 and has easy access by rail and coach from Bristol.
16. The Issues and Options document confirms that the West of England Joint Spatial Plan ambition for the airport is to expand by stating that '*growth opportunities*' are at Bristol Airport.
17. Since the Issues and Options consultation, an alternative site Junction 21 has become available for car parking, taking away the need for removing the airport from the Green Belt.

West of England Joint Spatial Plan

18. There is an underlying assumption within the West of England Joint Spatial Plan that Bristol Airport can expand by including it as an employment zone. The Transport Study shows new connections to the airport. The Plan avoids showing how vehicle emissions can be reduced within the West of England when the airport expands.
19. The West of England Joint Spatial Plan has not yet been through an Examination in Public. The PCAA has put in objections as have Bristol Airport to the JSP. Our comments are on sustainability issues relating to the employment zone, carbon emissions of vehicle access to and from Bristol Airport and from additional aircraft movements. Added to this are the cumulative impacts of housing developments and the Bristol airport designated employment zone on the Special Area of Conservation necessary for the protection of the Greater and Lesser

Horseshoe Bat, a protected species under the Habitats Directive. Bristol Airport has requested a seat at the Examination in Public.

National Planning Policy Framework (NPPF)

20. There is a presumption in favour of sustainable development, defined as:
- 20.1. *‘Meeting the needs of the present without compromising the ability of future generations to meet their own needs’.*
21. An imperative of the NPPF – Government and international policy – is to reduce greenhouse gas emissions (paras 8 (c), 148 and 150).
22. Emphasis on low carbon for example:
- 22.1. *‘The planning system should support the transition to a low carbon future in a changing climate ... It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions....’ (para 148)*
23. Expanding Bristol Airport to 12 mppa in phase 1 and then on to 20 mppa will have the opposite impact to this widely-accepted policy.

NPPF – Prematurity:

24. The NPPF provides for an application to be refused on the grounds of prematurity – but only in exceptional circumstances, and these do seem to apply in this case:
25. The new ‘Beyond the Horizon’ aviation strategy is set out in a Green Paper published December 2018 with a White Paper by mid 2019. Local Planning Authorities are required to take account of ‘any new environmental policies emerging from the aviation strategy’. ²
- 25.1. The emerging NS Local Plan is incomplete.
- 25.2. The West of England Joint Spatial Plan has not yet been through a public examination.
- 25.3. The West of England Joint Transport Study has only been consulted.
- 25.4. The NS Local Transport Study 4 public consultation commenced 8 January 2019.
- 25.5. The Bristol South West Economic Link option document is still work in progress and has not yet been published for consultation.
26. Bristol Airport will state categorically that the transport plans are not necessary for the phase of growth to 12 mppa. But North Somerset Council capped Bristol Airport at 10 mppa for the very reason that there will be gridlock on some rural roads and on the main A38 and A370 at certain periods of the day. This is supported and confirmed by the statement from Master Plan 2006 - 2030 which stated traffic *‘would account for 40% of traffic on the A38 which would suffer major levels of congestion constraining access to the airport’* with congestion on the A370. Development to 12 mppa will generate an average of 9,500 additional vehicle movements per day and at peak periods up to around 13,000 extra, per day.
27. The PCAA believe that the Joint Local Transport Plan 4 and the Bristol South West Economic Option document should be made available and scrutinised under

this application to understand the timing and potential risks of future infrastructure on residents and the environment.

Bristol Master Airport Plan 2006 -2030

28. Chapter 12 of the Master Plan outlined growth to 12 mppa at 2030. Bristol Airport now predicts that this growth will be achieved by 2026.
29. The document stated:
 - 29.1. *‘noise contours prepared for 9 mppa show that growth beyond that to 2030 will be associated with an increase in the number of people adversely affected by noise. Voluntary house purchase would be required with the emphasis on development expected to shift to the south side.’*
30. Traffic forecasts showed that by 2030, at 12 mppa, 40% of all traffic would be airport related on the A38 leading to congestion including congestion on the A370.
31. Detailed proposals for long term development between 2016 and 2030 would be brought forward as part of the Master Plan review.
32. Bristol Airport has failed in bringing forward a Master Plan review in time to show development to 20 mppa. This was expected in autumn 2018 and that it would incorporate growth to 12 mppa. The public were informed that the consultation for the draft Master Plan consultation would be published Winter 2018/Spring 2019. Instead the airport decided to publish two consultations in the pretence that the community would be involved in decisions about future development.
33. The PCAA responded to the two airport consultations, these are attached.
 - 33.1. Your Airport: your views: preparing a new Master Plan published November 2017
 - 33.2. Your Airport: your views: towards 2050, Master Plan consultation State II May 2018
34. Your Airport: your views: preparing a new Master Plan published November 2017. In order for the PCAA to give an informed comment to the consultation, we requested from Bristol airport that the environmental impacts of the three scenarios A, B, and C were given. Bristol Airport has failed to respond and went on to publish the second consultation.
35. Your Airport: your views: towards 2050, Master Plan consultation State II May 2018. Bristol Airport outlined growth to 12 mppa, 15 mppa and 20 mppa. No explanation was given why development is to be concentrated on the North side or the environmental impacts of their choice. The Master Plan 2006 – 2030 makes it quite clear that development on the north side will have many detrimental impacts to communities, particularly on noise. Note, the airport still did not answer any of our questions such as how many extra flights there would be a day or questions on road infrastructure.

36. Whichever way you look at the planning application, Bristol Airport has failed to deliver a new Master Plan in time for this application.
- 36.1. The Master Plan 2006 – 2030 states very clearly that a new Master Plan for growth to 12 mppa would be delivered.
37. The two airport consultations in 2017/2018 were to refine the airport plans before publishing their Draft Master Plan. The consultation May 2018 outlined three phases of growth. Phase 1 is growth to 12 mppa, phase 2 is to 15 mppa and phase 3 to 20 mppa.
- 37.1. In the absence of a draft Master Plan, there have been no discussion on the environmental impacts of growth to 20 mppa or the immediate impacts of growth in phase 1 to 12 mppa.

Bristol Airport Noise Action Plan 2019 – 2024

38. The Draft Noise Action Plan consultation was carried out in July 2018, to update the previous Noise Action Plan 2014 -2018. According to the Directive 2002/49/EC a new action plan for the airport should have been adopted by 18 July 2018. Note this was time the public consultation commenced. The consultation was not circulated widely to the public. It contained no actions to mitigate noise from future growth of the airport beyond 10 mppa. The Draft Noise Action Plan was submitted to Defra in mid-November 2018. Although the Noise Action Plan is not a government policy document, the PCAA at the time of this application has no idea whether our suggestions put forward in the noise consultation have been accepted as part of the Noise Action Plan 2019 – 2024 which overlaps with the time period of this application. The PCAA accept that noise will be looked at in the Environment Statement chapter 7 but we question the ‘prematurity’ of the application.
39. The PCAA consider the new Bristol Airport Noise Action Plan 2019 – 2024 not yet approved by Defra and to be already out of date due to the increase of 23,800 flights from 2017, flying at levels lower than 7,000 ft.
40. We have attached our noise response to the consultation so that NSC can consider our proposals and condition them if this application is granted consent.
- 41. CAP1616**
42. No mention of the CAP1616 airspace changes has been made in airport consultations leading up to the forthcoming BA Master Plan. Noise is a material consideration in the planning application and these proposals should be part of it.
43. References to changes in flight paths have been mentioned in the Draft BA Noise Action Plan Consultation 2019 – 2024 which has been sent to the DfT in November 2018. The comment stated ‘*We will begin looking at alternative flight paths for respite purposes with a view for implementation by 2026/27*’.
44. The PCAA argue that even if the process took four years to allow new flight paths this would cover part of the period of the BA Noise Action Plan and the period which the planning application is expected to cover. 12 mppa is expected to be reached in 2026. In further communications on this matter, the BA Head of Sustainability in an email dated 23 November 2018 stated ‘*in reality, this might be*

delivered earlier as the airport is following the FASI South programme as instructed by the Department for Transport'.

45. Any change in airspaces mean that noise maps submitted in the ES accompanying chapter six are out of date and may not reflect the noise communities will hear.
46. Airspace changes can mean many things, such as, further flight path intensity of aircraft movements for some communities and new communities previously not affected by aircraft movements now under a flight path. For these reasons airspace changes should be part of this application. New communities suddenly experiencing noise would more than likely object to this application.

Concerns about North Somerset Council Competence and Impartiality

1. With a population of just 210,000, North Somerset Council is a medium sized District Council and has neither the resources nor the level of expertise necessary to deal with this planning application which will impact on a great number of people beyond the boundary of the district.
2. Meetings which were initiated by the PCAA illustrate that NSC has no intention of refusing this application on environmental grounds, whatever the evidence. It is simply impossible to discuss these issues with them.
3. The PCAA had a meeting with NSC to discuss the Bristol South West Economic Option Development document on 10 August 2017 with the Director of Development and Environment and then a meeting with the NS Director for Public Health in September 2018. At the meeting, the Director of Development and Environment emphasised the economic importance of the expansion of the airport and that it was difficult for any concern to be shown for residents or the environment even though environment was part of his job title and role. The meeting concentrated on higher level issues of employment in the region and the Bristol South West Economic Option document. Bristol Airport and North Somerset Council are jointly paying for the analysis and report in part to allow Strategic Development Locations to be built south of the airport. These notes were sent to NSC and parishes. See Appendix 3.
4. Our meeting with the Public Health Director was to discuss the BA Noise Action Plan 2019 -2024 consultation and the forthcoming planning application on the issue of noise, particularly night noise. The meeting again pushed the economic interests of the region rather than impacts on residents. We gave him a copy of our response and he assured us that the department would respond. We also asked for a copy of the response as it would be very much in residents' interest to see how NSC had responded to the question of more night flights in the summer months when people have their window open and the issue of tranquillity. In order to obtain the response a Freedom of Information was asked followed up by an internal review. On 22 November, a response was received from NSC issuing an apology for not having dealt with the PCAA request in the correct manner and giving the Association a copy of the Public Health Department response. The response is totally inadequate and fails residents of North Somerset. (See point 4 section Government Policy and Emerging Policy)
5. The indication, in particular from the meeting in 2017, is that the airport would expand. The lack of co-operation between the NSC with the PCAA over the response to the BA Noise Action Plan consultation indicates again that the planning application will be approved and night flights will be increase in the summer months.
6. The in-built bias that prevents an even-handed approach to environmental issues is exemplified by the Executive Member for Environment who recently wrote

specifically in respect of this application: *I'm well aware of the problems concerning global warming, unsustainable world population, pollution of the air we breathe and the adverse effect pollutants are having on the seas and oceans of the world. To make any effect on these issues we must take the remaining 197 countries of the world with us. Radical changes in the UK will have a negative effect on trade and we have more than enough to contend with concerning Brexit.* (Reference email dated 13 January 2019 from Lobbying and Advocacy)

7. Although Bristol Airport is entirely in its own right to use the planning tool of permitted development, the airport has been using this to construct infrastructure to aid development beyond 10 mppa before the scrutiny of a planning application. It is extremely disappointing to see that the airport has applied to relocate a building to the South side in green belt for example, application 18/P/3206/AIN administration block (under construction) and an additional aircraft stand application 17/P/2360/AIN even though planning consent in 2011 was for only 33. There have been several significant permitted developments since 2011 including two for additional car parking in greenbelt.
8. North Somerset Council has showed little appetite to control the phasing of the 2011 development and granted consent to alteration of Conditions that were important to the local community. For example, timelines in relation to Multi Storey Car Parks were relaxed and earlier use of green belt land was authorised at the expense of the environment (applications 16/P/1455/F and 16/P/ 1486/F).
9. The PCAA have raised on numerous occasions problems with the website for planning comments. For example, application 18/P/3502/EA2 which is the Environmental Scoping Opinion to determine the scope of an Environmental Impact Assessment for a future application for the proposed expansion of the airport to accommodate 12 million passengers per annum. An email was received from the Head of Development Management Development and Environment dated 24/08/2018 to say that *'I'll look into the website issues with the officer but I can assure you that PCAA comments are very much taken into account'*. But not reassured, our secretary had a meeting on 5/10/2018 with NSC on which she reported: *'I have been to see the officer today. He says that the officer genuinely missed our comments which is possible as nobody is perfect. We shall never know if it was by accident or design'*. It is extremely disappointing that our response to this application was never taken into consideration.
10. In January 2019 the winter/spring edition of North Somerset Life Issue 41 had a comment by the leader of North Somerset Council giving positive praise to the airport whilst a Bristol Airport planning application was being consulted on. There was also in the same issue an article titled 'Tackling the Climate Change Crisis'. There was no mention of the harmful impacts of flying. There was also no mention of the fact that this application was open for consultation, let alone any encouragement for members of the public to become engaged.
11. To conclude, the airport is disingenuous in marshalling an argument in favour of whatever it wants. Parishes are extremely worried about the impartiality of North Somerset Council in determining the application.

Alternatives:

Alternatives to Growth to 12 mppa (phase 1 of growth to 20mppa)

Summary

1. Bristol Airport has been unreasonable with the public in its plans for growth to 12 mppa. Bristol Airport suggested three 'alternative' scenarios within the emerging Master Plan 'Your Airport: Your views' consultation. This should have allowed the public to assess the sustainability of each scenario. However, no environmental impacts were given for any scenario within the consultation. Thus the environmental impacts have never been presented to the public to assess them and the sustainability of the development.
2. Bristol Airport has taken a 'Business as Usual' approach, at a time when so much is changing, not least the urgency of the climate crisis.
3. The PCAA request that the Alternative Site Junction 21 is thoroughly examined under the application to save green belt land from further car parking.

Alternatives presented to the public

4. The 'Do Nothing' alternative was dismissed out of hand, although at the consultation stages in 2017 there were many objections to future expansion. Note that 'no further expansion' was not highlighted within the summary of consultation responses.
5. Consultation responses included suggestions that growth at other airports (e.g. Birmingham, Cardiff and Exeter) could easily absorb 2 mppa growth between them and allow Bristol Airport to remain at 10 mppa. Cardiff, for example, provides 1.5 mppa to Bristol.
 - 5.1. This point again was not considered with the Chief Executive stating on 3 December to parishes '*It would be commercial suicide*'. This is almost certainly not the case but, even so, NSC's task is not to safeguard the profits of a private developer if important planning policies are being ignored and environmental damage is being caused.
6. A further option that should be considered that gets closer to meeting NSC policies is that:
 - 6.1. No further green belt land is allowed for car parking
 - 6.2. All car parking is contained within MSCP
 - 6.3. This would restrict the total number of car parking spots and increase charges
 - 6.4. This would drive more passengers onto public transport
 - 6.5. This would ease the congestion problems on the roads
 - 6.6. And it would help to bring down carbon emissions from cars
6. It is important to note that an '**Alternative Site**' has become available at Junction 21 for car parking which is not on green belt land. This site was discussed at the PCAA meeting held Thursday 24 January. It was agreed that this site should be thoroughly examined to save low cost car parking on green belt land at the airport. The PCAA have been informed that this site is for 3,000 cars

which would easily cater for the 2,700 cars allocated to the Silver Zone Extension Phase 2 on green belt land in an environmentally sensitive area.

Consideration of on-site alternatives

7. Through the emerging Master Plan, BAL has analysed and consulted upon options relating to where future development should be located for growth to 20 mppa. BAL achieved this without commenting on any of the environmental or community impacts.
8. BAL also stated that the Draft Master Plan would be published in late 2018 which would have contained the environmental and community impacts.
9. The PCAA particularly requested that the environmental impacts of each of scenarios A and B and C were shown in the consultations in order to help people make an informed choice of scenario. An informed scenario was never given as the airport. In their second consultation the airport decided (*ES CH 3, 3.3.24*) '*to focus development to the north of the runway in order to:*
 - 9.1. *Minimise impacts on the Green Belt and wider landscape including the Mendip Hills Area of Outstanding Natural Beauty (AONB)*
 - 9.2. *Deliver the best passenger experience*
 - 9.3. *Maximise operational efficiencies*
10. This justification implies that they have not looked at the environmental impacts of each scenario such as carbon emissions, noise, traffic, biodiversity loss other than a stated desire to minimise the impacts on the Green Belt and the wider landscape the AONB.
11. A full justification of the environmental impacts is sought from North Somerset Council especially as the Master Plan 2006 -2030 stated:
 - 11.1. 12.28 '*With the emphasis on development expected to shift to the south side it would be reasonable to assume that the noise climate in Lulsgate and Downside area would not deteriorate post 9 mppa*'
12. The airport is disingenuous in marshalling an argument in favour of whatever it wants. BAL has decided to '*Deliver the best passenger experience and maximise operational efficiencies.*' This is in order to maximise profit rather than to create a sustainable airport for the future. If the latter were indeed their priority they would not grow until issues are resolved over surface access etc.

Green Belt

13. An example of the use of the green belt argument to suit the needs of the airport (rather than the environment) is the new administration block. This is in the green belt through use of permitted development regulations, despite it being a blot on the landscape and affecting the 'openness of the greenbelt' close to the A38.
14. Yet the airport now say that they want development on the north side to avoid damage to the green belt. These preferences are clearly for operational reasons, not for any concern over the green belt

15. The airport's use of permitted development regulations is eroding the green belt in an uncontrolled way. (see section Green Belt)

Maximise operational efficiencies

16. The 10 mppa approval allowed an increase in the number of check-in desks to 67 from an original 50.
17. Following recent works to the Hold Baggage Screening (HBS) in 2017/18, the number of check-in desks has now reduced to 49.
18. These 49 desks are currently deemed sufficient because BAL has commenced a transition to automated bag drop operations in its growth to 12 mppa.
19. In October 2017, Singapore's Changi airport opened a new Terminal 4. It has a fully automated check in system which allows passengers to check in and board without having to engage with counter staff. This will inevitably mean fewer airport jobs if Bristol Airport follows suit. (See economic section)

Passenger car parking

20. There has been no change since the 2009 application in the proposed modal split between public transport and private vehicle use. Usage at 2017 was 12.5% public transport mode share and the aim is for 15% in 2026; this was the same target that was set in 2009 for achievement by 10mppa.
21. Thus, local people will have to bear the negative externalities of no mass transit or rail link as well as having no reasonably priced car parking at the airport close to a public transport hub whilst the airport allows passengers low cost parking in the greenbelt, causing environmental harm. (see green belt, low cost car parking section and public transport interchange section).
22. Option 4: Sites adjacent to the Bristol Airport site for car parking
 - 22.1. The airport could only find one suitable site for more low-cost car parking, the Silver Zone Extension phase 2 with the argument being to '*Maximise operational efficiencies*'.
 - 22.2. This consideration should not be the driver of environmental damage. More MSCPs should be built which are priced differently.
23. The starting point should be the maximisation of space in the northern section using MSCP. BA make no assessment of or provide any information on why MSCPs can't be completed and then charged at a lower rate (than Premium). If low cost parking is not provided then users will have to use the parking provided.
24. In addition, the reasoning put forward for the need for low cost parking is that there is a demand for it. Clearly, everyone wants to pay less to park. However, justifications of avoid landscape effects from building more MSCPs on the north side are moot when there are landscape effects on the south side of further low-cost parking.

Highways improvements

25. This document gives 16 options to accommodate additional traffic generated by the Proposed Development to 12 mppa. Each of the options is within the vicinity of the airport,
 - 25.1. None are in the wider area such as the South Bristol Link Roundabout or the A370 which has two hotspots of congestion, as shown by the Transport map within the West of England Joint Spatial Plan. (see section on transport).
26. Option 10 was selected.
 - 26.1. *'Option 10 involved an online improvement to Downside Road, with widening only on its south side. While a new junction was provided into the Airport Tavern, the building is retained. This option provides the capacity and safety required but minimises the impact on third party land. The Transport Assessment (Appendix 6A) has demonstrated that this option is predicted to operate within capacity'.*
27. The RASCO study forecast from the 2006 -2030 Master Plan stated that:
 - 27.1. *'airport traffic would account for 40% of traffic on the A38 which would suffer from major levels of congestion so constraining access to the airport. By 2030 (which was when 12 mppa was predicted) all other key links would experience congestion to varying degrees due to high levels of background traffic, including levels of congestion on the A370 and M5.'*
28. Since 2006 background traffic has increased due to increased housing beyond the airport. The Transport Assessment makes no comment on the RASCO study findings nor a comparison. A comparison is requested.

Economic Impact:

N.B. all italic text is as per the York Aviation executive summary. All non-italic text is our response to that document.

This development will involve the use of public money on new infrastructure, on additional maintenance and on the impact of the many externalities resulting from airport growth. Furthermore the development will impact strongly and negatively on local communities.

The PCAA consider that NSC cannot determine this application until a thorough and complete analysis has been undertaken that includes **rigorous examination of the assumptions, omissions and risks that exist within the justifications offered by the airport. Many of the glaring weaknesses are outlined below.**

The PCAA considers that the methodology adopted by the consultants retained to estimate the economic benefit to the region is flawed. The Government's website on GDP measurement cautions against this methodology when assessing the economic benefits of specific projects. The issue is that this methodology assesses the gross benefit of activity (before taxes), without regard to the distribution of wealth created due to ownership and other stakeholders, nor an assessment of the origin of inputs required to sustain the operation. Most of the main contributors of wealth at Bristol Airport (Airlines, Bristol Airport, Concession Holders) are owned externally to the West of England and take the lion's share of income generated to the benefit of their shareholders or banks who funded the investment in the facilities.

Overall:

The executive summary, and the rest of the report, is an exercise in emphasising the positives and ignoring or completely discounting the negatives of further expansion of the airport. Items that are not mentioned at all in the report, yet would have significant external impacts and costs, include:

- road traffic congestion and the costs of coping with a 20% increase in passenger traffic
- aircraft noise in general
- sleep impacts of aircraft noise
- climate change impacts

Risks wilfully not mentioned include:

- significant changes to oil prices
- carbon taxes
- video conferencing and tele-presencing instead of face to face visits
- climate change risks including hotter summers
- Brexit and other risks to the economy in general and exchange rate in particular

Direct economic issues dismissed as 'unlikely to be significant', but with no methodology, workings, or evidence shown, include:

- outbound tourism spending
- congestion in the job market

Misleading data and assumptions that defy recent experience are apparent in:

- claims concerning growth in jobs at the airport.

In summary, the report takes the approach that, if it looks positive then overestimate how positive it is by using poorly justified multipliers or ridiculously extended time-bases; if it looks negative then dismiss it out of hand and hope no one notices. It is our view that the

financial strength of the airport may be insufficient to provide the funds required to help finance improvement in public infrastructure. See Appendix 5.

Introduction and Background

0.1 In March 2018, Bristol Airport Limited (BAL) commissioned York Aviation to undertake an economic impact assessment of the airport's proposals to increase its permitted annual passenger cap from 10 million passengers per annum (mppa) to 12 mppa. This report provides supporting evidence for Chapter 15: Socio-Economics within the Environmental Statement.

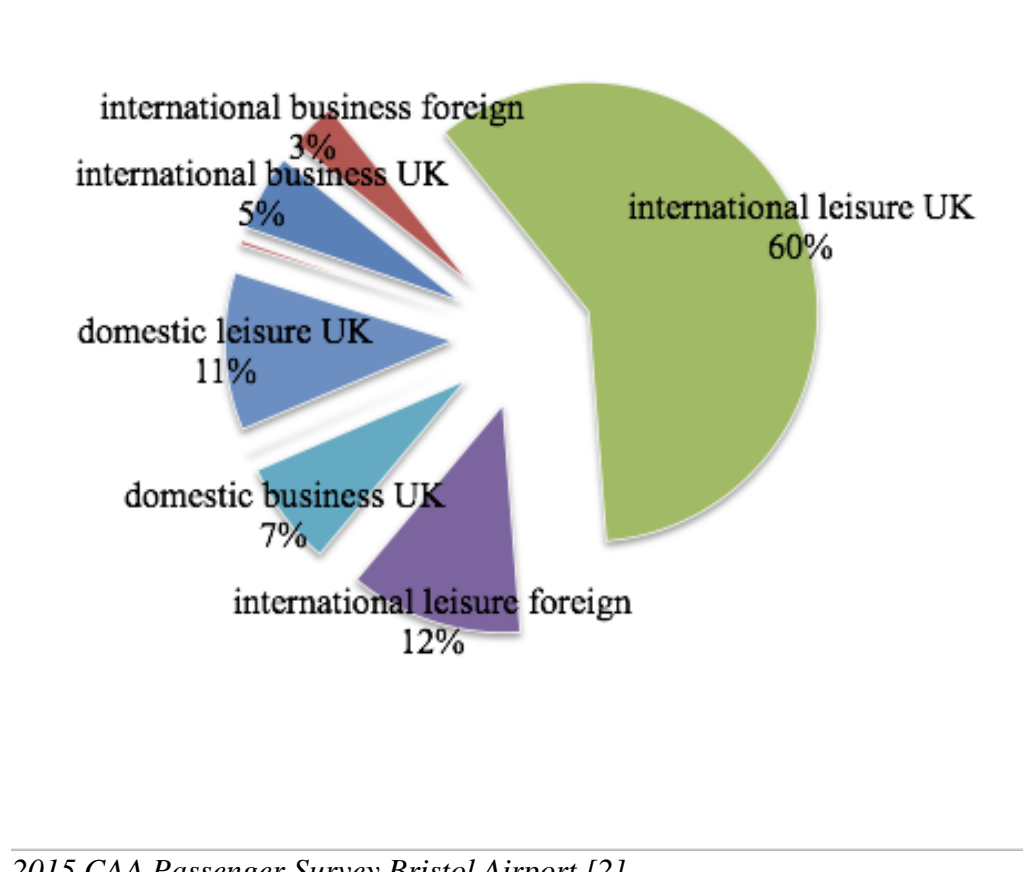
0.2 The study presents a range of both quantitative and qualitative evidence to assess the impact of future expansion. It considers the impact on economic activity through an assessment of the effect on Gross Value Added (GVA) and employment but also considers the broader economic welfare effects through a socio-economic cost benefit analysis. It examines the ongoing effects of growth at the airport through the increase in passenger numbers and also the transitory effects that will come through the construction of the necessary infrastructure at the airport to support 12 mppa.

The study covers two scenarios – no expansion (i.e. full use of the 10m passenger cap which still implies 2m more passengers than currently occur) and expansion to 12m passengers. This is not really a 'range'. The qualitative evidence is even less reliable than the quantitative evidence, amounting to little more than wishful thinking and hand waving.

0.3 Bristol Airport is located on the A38, around 7 miles South West of Bristol city centre. The airport is served by the Bristol Airport Flyer bus service, which links the airport to Bristol Temple Meads Railway station and Bristol Bus Station, both in the city centre. The service runs at up to 10-minute intervals through the day. The airport is located within the Green Belt in a rural location.

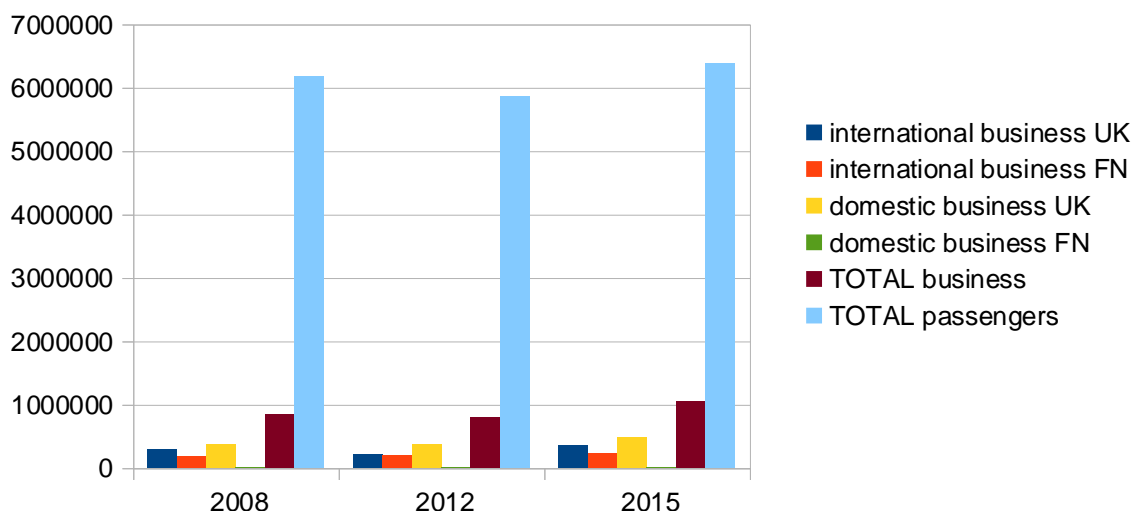
The airport is very poorly located with respect to mass transit public transport, and the access by road is already congested. To plan an increase of many thousands of cars per year along an already crowded road network implies a massive externalisation of costs by the airport onto all other users of that network plus the local authorities whose duty it is to maintain and improve the network.

0.4 Bristol Airport is an important regional airport, primarily serving the South West region and South Wales. It handled around 8.2 million passengers in 2017, its highest level of passenger throughput to date. Whilst the majority of passengers are travelling for leisure, the airport has built a strong base of business passengers, which now number over a million per annum. It is also a gateway for a significant number of overseas visitors to come to the region.



Passenger numbers at BAL are (and have been for a very long time) dominated by UK international leisure passengers i.e. UK residents travelling abroad for leisure purposes. The fraction was 63% in 2008, and 60% in both 2012 and 2015. Any future expansion of the airport is likely to continue this trend with around 1.2m of the requested growth of 2m passengers being outbound leisure passengers. Only 15% of the passengers are on business, and 12.7% are foreign leisure visitors. [2]

Bristol business passengers



Business passengers are a small fraction of the total (one in 8 in 2008 and 2012, one in 6 in 2015, the latest CAA survey report).

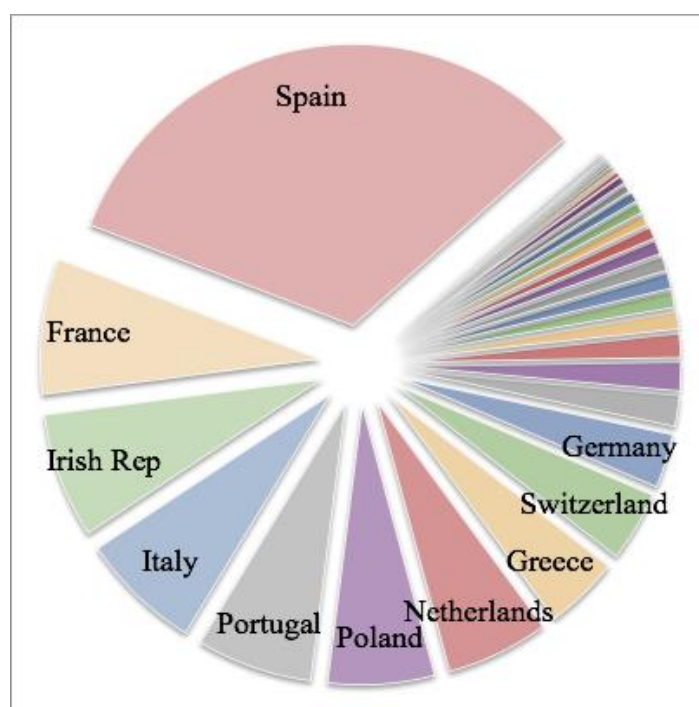
The main claim for business benefits is in terms of ‘productivity’ which is derived from previous modelling that claimed to show that a 10% increase in total business (and freight) flying increased economic activity by 0.5%. However there are a lot of faults with the use of this model:

- 1) causality is not proven i.e. it is not shown that the increase in business flights caused the increased economic activity or the other way around
- 2) business flights are much less sensitive to price than tourism flights and are more sensitive to economic conditions in general, i.e. an optimistic outlook drives internal investment which increases the urge to make business trips to feed the relevant businesses. This in itself could explain the 10%/0.5% ratio but with the economy driving the flights and not the other way around
- 3) the same assumption that is made about outbound tourism could equally be made about outbound business travel – all of the travel was already going to happen and the expansion just changes which airport is used for that travel. If this is the case wholly or in part then it radically reduces the ‘increase in business travel’ and hence the modelled increase in economic activity.
- 4) the model is obviously not generally applicable and is merely correlating two slopes on unrelated graphs (business travel and GVA). For instance, if a region had zero air travel then adding one business flight would not infinitely increase the economic activity in that area, yet that is what the model implies. Similarly, the model ignores saturation effects i.e. adding more flights to already served destinations does not add any extra business travel opportunities.

0.5 The airport has shown strong growth since the 2008 recession, now serving over two million more passengers per annum since the financial crisis. The airlines serving Bristol provide a good mix of low-cost services to both domestic cities and foreign city and leisure destinations, in addition to a small number of services to major European hub airports by network carriers, which provide onward connections to destinations across the globe.

The York Aviation report, Figure 2.3 shows that passenger numbers fell from a 2008 peak of 6.3m to 5.6m in 2009 (following the financial crisis) and only went past that peak in 2015. The report does not emphasise this slow recovery or point out that only the last 3 years have been above pre-crash levels. Business numbers dropped more severely than leisure numbers (-24% versus -9% between 2008 and 2012) which may well indicate that Bristol is not that vital for business passengers and new business was being accessed through other airports. For comparison, Heathrow saw its passenger numbers **rise** by 4% between 2008 and 2012 even though its business passenger numbers fell by 9%.

The fact that Heathrow saw a relatively small drop in business passengers and a rise in total passengers while Bristol saw steep drops in both demonstrates how much more important LHR is to the national economy and is more relevant to business passengers (in both directions).



International Passenger Destinations 2017 [1]

Although there is a wide variety of destinations represented (and it is mostly destinations as most passengers are UK residents travelling OUT not foreign residents travelling IN) the largest section by far are flights to Spain (32.7% of the total international passengers) with France (7.8%), Ireland (7.3%), Italy (7.0%), Portugal (6.7%) representing a further 29% of the total. It is clear from this that a very large fraction of flights are to pure-play holiday destinations with little opportunity for British businesses, and even less likelihood of foreign inbound business. There is no reason to expect this to change significantly with an extra 2 million passengers. [1]

Bristol Airport is predominantly a short-haul outbound leisure airport and nothing in the plans is likely to change this. Long-haul here is restricted to two destinations: Stanford in the USA and Cancun in Mexico, with a total of 0.34% of the international passengers.

Most long-haul passengers using Bristol are travelling via another hub, for instance Schiphol. This is an unattractive option for business passengers as it increases total flight time, adds

risks of missed connections, delays, loss of luggage etc and other inconveniences. It is also a very bad option environmentally due to the extra take-off and landing cycles involved.

Business passengers will typically only use Bristol for short-haul business on routes with 1 or more flights per day (preferably at least 2 to allow for delays, changes to arrangements and avoiding overnight stays). For long-haul at least daily flights are required to avoid extra nights away and for flexibility. Leisure customers have less stringent time requirements but are more price sensitive, indeed price may change the choice of destination altogether, which is not generally the case for business passengers. An airport that has most of its passengers on leisure trips will find it difficult to justify and support routes that are more dedicated to business.

Heathrow, for instance, has a large enough catchment (London plus essentially most of the rest of the UK) to be able to have a rich variety of destinations with many having a high business custom. But the fraction of passengers coming from or to the South West is very small (6.8% in 2017) and the variety of destinations that they are accessing so large that even if 100% of those passengers were captured by Bristol Airport they would not be able to sustain any new routes at a commercially relevant level, or a frequency that would be attractive to business customers. [CAA Passenger Survey Report 2017 Table 4.2a]

Comparing the top international destinations in 2008 and 2017 [from CAA annual airport statistics] we see not much has changed, certainly from a business point of view, apart from Paris losing its hub role to Amsterdam:

2008 top destinations		2017 top destinations	
DUBLIN	314971	DUBLIN	429794
AMSTERDAM	244274	AMSTERDAM	410341
PALMA DE MALLORCA	207158	MALAGA	347703
MALAGA	202327	PALMA DE MALLORCA	341400
PARIS (CHARLES DE G	199038	ALICANTE	331043
ALICANTE	193895	FARO	304906
GENEVA	158553	GENEVA	232800
FARO	146672	BARCELONA	190312
BARCELONA	129525	TENERIFE (SURREINA	189549
GERONA	100699	ARRECIFE	170474
Total International	5060095	Total International	6896650

If we assume that a flight must be 85% full to be economic and the average plane is a 737-800 (as flown by Ryanair) having 189 seats, this means an economic flight would have 160 passengers. Thus a once per day return flight would accumulate 116800 passengers per year. If we assume that this frequency is the minimum level relevant to business passengers then ONLY the top 10 international destinations met these criteria (demand and frequency) in either year. If we relax the criteria to only cover 5 days per week for 50 weeks of the year we need 80000 passengers per year on any given route, which means 24 destinations were suitable in 2008 but only 21 in 2017.

In 2008 there were a total of 115 international destinations served by Bristol airport (although some at very low levels) and 128 were served in 2017, but in reality the number of these routes that were frequent enough to be of use to business passengers was actually **lower** after 9 years of development.

0.6 The economic strategy and planning policy relating to the airport is supportive of airport growth and in particular development of Bristol Airport to expand to 12 mppa is clearly supported by the Government's Making Best Use of Existing Capacity policy paper.

It may seem wise to expand all airports up to their existing runway capacities rather than go through the planning pain of putting in more runways where demand is highest, but this flies in the face of both ‘government not choosing losers and winners’ and straightforward market economics. Expanding an airport does not necessarily reshape demand, nor make new routes economic because each route requires a high enough usage to make it both economic and attractive to its chosen customer base – for instance business passengers require at least daily return flights. Bristol Airport is in reality just planning to increase the number of passengers flying to its existing core base of destinations, dominated by outbound tourism destinations such as Spain.

Current Baseline Impact of the Airport

0.7 Our analysis establishes that Bristol Airport is a significant economic driver within North Somerset, the West of England and the South West region and South Wales. The operation of the airport itself supports significant GVA and employment and it also supports significant benefits in the wider economy by facilitating travel for business passengers and for inbound visitors. Business travel enables local businesses to trade more effectively overseas, giving them access to larger markets and driving productivity, and gives confidence to overseas companies looking to invest in the areas around the airport that they will be able to manage their operations effectively and that these local operations will have access to the markets that they need. Inbound visitors bring additional consumer expenditure to the economy, which increases market size for businesses in the region, driving GVA and employment.

0.8 Within North Somerset in 2018, we estimate that the airport’s economic footprint supported around 2,025 full time equivalent (FTE) jobs and around £260 million of GVA. When the additional wider impact from productivity and tourism is included, the overall impact rises to 2,525 FTEs and £355 million of GVA.

0.9 Within the West of England in 2018, we estimate that the airport’s economic footprint supported around 4,900 FTEs and around £430 million of GVA. When the additional wider impact from productivity and tourism is included, the overall impact rises to 7,950 FTEs and £810 million of GVA.

0.10 Within the South West region and South Wales in 2018, we estimate that the airport supported around 8,200 FTEs and around £610 million of GVA. When the additional wider impact from productivity and tourism is included, the overall impact rises to 18,875 FTEs and £1.7 billion of GVA.

See the discussion under 0.13 below

GVA and Employment Impact of Expansion to 12 mppa

0.11 Our analysis suggests that the expansion of Bristol Airport from 10 mppa to 12 mppa would bring substantial economic benefits to North Somerset, the West of England and the South West region and South Wales.

0.12 These benefits would start during the construction phase of the project and then continue into the future as the benefits from the operation of the expanded

airport are felt when it grows beyond the current 10 mppa planning consent.

0.13 The airport is expected to reach its passenger capacity of 10 mppa in 2021 based on the airport's passenger forecasts. If planning permission is granted to increase capacity to 12 mppa, this passenger throughput is expected to be reached in around 2026. This additional growth is forecast to bring significant additional economic benefits:

0.13.1. North Somerset – the economic footprint of the airport will be around £70 million larger in GVA terms and support around 525 additional jobs (450 FTEs) in 2026. When wider benefits are also included this increases to £90 million larger in GVA terms and support around 650 additional jobs (550 FTEs);

0.13.2. West of England - the economic footprint of the airport will be around £110 million larger in GVA terms and support around 1,200 additional jobs (1,050 FTEs) in 2026. When wider benefits are also included these increases to £210 million larger in GVA terms and support around 2,050 additional jobs (1,725 FTEs);

0.13.3. South West & South Wales - the economic footprint of the airport will be around £140 million larger in GVA terms and support around 2,125 additional jobs (1,750 FTEs) in 2026. When wider benefits are also included this increases to £390 million larger in GVA terms and support around 5,150 additional jobs (4,125 FTEs).

Inbound visitors, although welcome, are a very small fraction of the total and the benefits from them are massively outweighed by the outbound tourism loss. Many visitors to the South West (for instance to Bath and Stonehenge) come via other airports which are relevant to them or served by their local airport. No individual source of inbound passengers is significant enough for that to sustain a route on its own and therefore Heathrow, Birmingham and other large hub airports will always be the source for more inbound tourists than Bristol can ever be. How many inbound tourists is the airport expecting from Spain, to where the majority of passengers seem to be travelling?

The methodology used by York Aviation here not only ignores all negative terms but seeks to multiply all positive terms. For instance instead of just looking at jobs directly dependent upon the airport, for instance people employed at or by the airport, they multiply this by a factor to cover those jobs involved in the supply chain, and another factor for those 'induced' by the spending of all the people counted up to this point. Then they add in catalytic effects etc all of which are unmeasurable and may well double count the benefits used elsewhere in terms of reduced journey times for business passengers. Into this they also add inbound tourism and neglect to subtract outbound tourism.

Against these arguments we can state that:

- you can only count inbound tourism as a benefit if it is taken net of the concomitant outbound tourism loss
- all large projects, indeed any economic activity, has direct, indirect, induced and catalytic effects. Conventionally only the direct and quantifiable indirect effects are relevant, the rest certainly should not be included in any weighing or pros and cons of a project as they are unquantifiable
- many of the so-called benefits are in fact displacements from other parts of the economy – for instance money spent on coffee, food, sun cream or gifts at the airport might well have been spent on the local high street instead
- much of the Airport's turnover is from parking which is an additional non-

constructive cost to the passengers and has external costs in terms of it relying upon an increase in traffic along a congested road network, and impacts the local landscape and amenity greatly

- extra jobs are only relevant when unemployment is a problem – otherwise all that increasing demand for employees does is cause wage inflation. UK unemployment is currently 4% - the last time it was this low was 1975. So nationally there is no great need for an increase in low paid or low skilled jobs like those that predominate at the airport
- an increase in employees in and around the airport would also massively increase road traffic, and would likely have large external costs in terms of housing, schools etc
- there is no value given for the UK as a whole and this might well show zero benefit if all that happens is a diversion of passengers from other airports, as BAL seems to be arguing in the face of all the evidence

No mention is made of exchange rate fluctuations, or the impacts of Brexit. As the Brexit vote already caused a major weakening of the pound, despite the UK still being inside the EU, which has caused tourism costs for UK citizens to increase significantly and hence impact the majority of the airport's customers, it is hard to see how this risk can be ignored. Inbound tourism and export business will have benefited from the exchange rate drop but these are a small fraction of total passengers. Depending on how Brexit occurs the exchange rate may weaken even more and border procedures may become draconian – putting off both inbound and outbound passengers. Has the airport modelled these effects, or included costs for changes to border arrangements and the delays they will cause?

A review of the UK and Bristol passenger growth rates from 1998 to 2017 indicates that:

- passenger growth goes negative around the recession – Bristol is a little after the national point but almost as deep, at 12% shrinkage
- the passenger curves are far more extreme than the GDP curves i.e. strength of the economy affects optimism, exchange rate and disposable income so a small slow-down has a big effect and it takes a long time to recover
- the GDP dropped from a 2008 peak and recovered to it by early 2012
- BAL pax had a 2008 peak but only recovered in 2014 i.e. confidence and disposable income took longer to come back than the economy
- BAL growth rate was dropping ever since the 2001 expansion - potentially indicating a saturating market?
- the depth of the dip in BAL pax numbers is around 3 times deeper than the dip in GDP - which bodes ill for BAL if Brexit weakens the economy or exchange rate by anywhere near the numbers being projected by the Treasury and Bank of England.

0.14 *We have also considered the potential negative impacts of outbound travel from Bristol Airport in terms of the extent to which it removes expenditure from the local economy. This effect is highly complex and, primarily due to the extent of substitutability of UK airports for outbound travel, we have concluded that it is unlikely to be significant. The substantial role of airports such as Heathrow, Gatwick and Birmingham in the South West market supports this conclusion. Even in the short haul international market, Bristol Airport's largest segment, it does not have a 50% share of the passenger market in the South West.*

This is a deliberate whitewash of the issue. 60% of all Bristol passengers are UK citizens on international leisure trips, and this is unlikely to change with this expansion. According to the ONS International Passenger Survey (as shown in Travel Trends 2017 [3]) the average

outbound leisure spend excluding flights was £616 per head, and the equivalent inbound spend was £625 per head. Using these figures, the 2017 outbound spend through Bristol would be $60\% * 8.2m * £616 = £3.03bn$, whereas the inbound spend would be $12.3\% * 8.2m * £625 = £0.63bn$, meaning the tourism deficit was £2.4bn per year. Following this trend an expansion from current levels to 12m passengers would increase this deficit by around 50% (£1.2bn), or from the current planning cap would increase it by 20% (£0.48bn per year).

That is an additional net loss to the UK economy of £480m per year due to the tourism deficit **alone**, much of it from the local economy as most passengers are local and would otherwise be spending at least some of that money on local goods and services. It is not entirely coincidental that during the massive increase in cheap air travel, that traditional UK domestic tourism destinations, such as Weston-super-Mare, have lost much of their former tourism income.

York Aviation try to dismiss this massive economic negative by some fine arguments that go roughly like this:

- a) Bristol only captures 48% of the South West market so any expansion will just be claiming back some of the lost share from other airports
- b) therefore not one extra passenger will be flying outwards
- c) so no actual extra deficit will occur

This falls down on three main fronts:

- 1) they presumably don't pitch Bristol Airport to airlines this way – ie that they will be making them fly from two bases rather than one just to capture the same number of passengers. They will of course be saying that by opening a route from Bristol the airline will be accessing previously untapped markets ie extra passengers
- 2) the percentage of capture is only 48% because you cannot directly reach long-haul destinations from Bristol and even if you could there would not be enough demand to make such flights economic, or frequent enough to make them attractive to business passengers. Thus any extra planes put on at Bristol are likely to be just serving the same or similar destinations that Bristol already serves and not competing with those that can be served by larger hubs with longer runways and larger catchments.
- 3) They happily claim all extra inbound passengers as a plus, even though presumably those passengers could already be coming here through the very same competing airports.

Thus a calculation that should have both positive and negative terms is fiddled so that the larger negative term is completely ignored

0.15 The construction of the necessary infrastructure to enable the airport to handle 12 mppa will also result in positive economic impacts during the period of construction. Over the period to 2026, construction of the infrastructure to enable 12 mppa at Bristol Airport will support:

0.15.1. £39 million in additional GVA (discounted) and 390 job years of employment (345 FTE years) in North Somerset;

0.15.2. £52 million in additional GVA (discounted) and 995 job years (885 FTE years) of employment in the West of England (includes North Somerset);

0.15.3. £71 million in additional GVA (discounted) and 1,665 job years (1,450 FTE years) of employment in the South West and South Wales (includes West of England).

It is hard to discern how accurate these figures are, but the following can be said about them:

- 1) unless the firms involved are, themselves, local, the profit is likely to leave the region and possibly the country – for instance Ryanair is Irish
- 2) if the material and equipment supplies are not locally sourced then these are also a loss to the area, and possibly a loss to the country if they are imported
- 3) construction jobs are essentially ephemeral and should not be used as justification for a project – the workers are not likely to be local, will not remain local, and will not contribute long-term to the local economy
- 4) any similarly large project, such as a shopping centre, would have similar construction benefits and yet would not suffer from all of the negatives and externalised costs of the airport.

Table 5.3 is derived by subtracting table 5.1 from table 5.2 i.e. taking away the estimate for 10m passengers in 2026 from the estimate for 12m passengers.

The £90m GVA benefit to North Somerset in 2026 comes as follows:

£50m from 'Direct'
£20m from 'Indirect & induced'
£20m from 'Productivity'
£ 0m from 'Tourism'

They estimate NO extra money coming in from tourism in 2026 due to the extra 2m passengers pa. So **no** extra visitors to Weston-Super-Mare. And it includes deliberate ignorance of outbound tourism.

The £210m GVA benefit for West of England in 2026 comes as follows:

£70m from 'Direct'
£40m from 'Indirect & induced'
£70m from 'Productivity'
£30m from 'Tourism'

The £390m GVA benefit for the South West and South Wales in 2026 comes as follows:

£ 70m from 'Direct'
£ 70m from 'Indirect & induced'
£190m from 'Productivity'
£ 60m from 'Tourism'

What we note here:

- (1) indirect and induced are highly dubious here and yet are the major parts of the larger regional numbers - they also imply that very little benefit from the supply chain happens near the airport, in North Somerset
- (2) there is no extra 'Direct' beyond the WoE area, yet the indirect/induced goes up, which seems very odd as they tend to depend on the direct term
- (3) there is no estimate for the UK as a whole, so one might suspect that any displacement or movement of jobs or expenditure from elsewhere in the economy is being ignored eg how large a fraction of the inbound tourism would already happen through other airports and hence all that is happening here is changing which airport they fly in through - which is of little of no benefit to the UK as a whole

Justifying the ignorance of the outbound tourism term on the basis of what Roger Tym & Partners did last time is essentially saying that they will continue with a flawed methodology because they like the previous set of answers.

Given that the extra inbound spend might be $12.3\% * 2m * £625pp = £154m$ while the extra outbound spend might be $60\% * 2m * £616pp = £739m$ (using ONS tourism numbers [3]) – this means that even if 20% of that outbound count is new and not diverted from another airport then it would wipe out the inbound benefit altogether. If as much as 50% of the outbound is new, then that wipes out the total GVA benefit that they are claiming. No wonder they decided to discount that term!

The 'Productivity' term effectively is a partial duplicate of the 'socio-economic' benefit i.e. cheaper access to foreign markets through reduced travel time to the airport and cheaper fares. BUT the arguments against this are actually plentiful:

1. the number of business-relevant direct destinations is low and business passengers tend to want to avoid changing planes mid-journey (e.g. at Schiphol)
2. the other destinations are either not business-relevant or not served with sufficient frequency to be useful for business
3. business travel is relatively price **inelastic** - i.e. the price of the journey is not that relevant to the level of demand which means the price term is less important than the choice of destination, frequency, reliability, convenience etc. Nothing BAL is doing will make a significant increase in business relevant routes and that means there will be little or no extra benefit on expansion
4. businesses can already reach those destinations either through the BAL routes (which won't change significantly) or through other airports such as Birmingham and Heathrow.
5. NOTE that a single return flight per day of Ryanair adds up to 140000 passengers per year, so 2m extra passengers is effectively 14 extra full flights per day. The likelihood that this adds 14 useful business locations is low, and in fact the choice seems to have reduced since 2008.

They are using a highly suspect multiplier to get the productivity benefit i.e. "a 10% increase in combined business air travel and air freight would result in a 0.5% increase in productivity in the economy". They have just used ONS numbers for the size of the economy for the area, used CAA numbers to estimate the current total number of business fliers and then, bingo, we get huge benefits to the economy. This makes lots of assumptions and they justify it essentially by saying 'this is what other airport consultants have used to justify their projects'.

We can note that:

6. without analysing the extra routes and which of those are already being served by other airports we cannot know how many actual extra business trips will occur (rather than be diverted from another airport or not happen at all). More flights to the same irrelevant destinations would not generate **any** extra business passengers. Flights that duplicate those already accessible from other airports do not generate any net extra flights they just mean that BAL get the revenue rather than Birmingham or Heathrow. So assuming that a 20% increase in total pax means a 20% increase in business pax and hence a 1% increase in the economy would be very dodgy indeed - but they do not show their workings
7. they don't show that the expansion by 2m passengers would actually create a net N% increase in the flying to the target market - they don't know that, they just want a larger share of the pie. They might well increase the number of business passengers by diverting them from other airports and yet not increase the total number of business passengers in the UK or region and hence not have ANY productivity benefit in the terms they are using.
8. No GVA value is given for the UK at all, thus if their arguments for outbound tourists are correct and can be applied to business passengers as well, ie that there are no new passengers diverted from other airports, then the benefit to the UK economy as a whole is zero.

0.16 *It should also, of course, be recognised that major construction projects do generate adverse impacts. In socio-economic terms, they can result in pressure on housing and local services where significant in-migration of labour is required. However, given the relatively small scale of the construction project and the phased nature of the development, we do not believe that the project will result in significant in migration, resulting in adverse impacts on the housing market or local services.*

So – the project is ‘big’ when we are counting the GVA benefits, but ‘small’ when we are considering the externalised costs such as traffic, housing etc. They are trying to have it both ways here.

Socio-Economic Impacts of Expansion to 12 mppa

0.17 *We have also undertaken a socio-economic cost benefit analysis that indicates that supporting Bristol Airport’s growth to 12 mppa would provide significant socio-economic benefits and that these benefits would substantially outweigh the construction costs associated with the infrastructure development required to handle 12 mppa.*

Unfortunately, the only ‘socio-economic’ benefits that are deemed relevant here are reduced travel time and ticket costs for passengers. All the other terms that should be examined, for instance noise, air pollution and congestion impacts, the increase in climate changing emissions, and other externalised costs borne by the taxpayer and residents of the area are not examined or quantified.

Even on the terms chosen there is little methodology shown and no background data given. Essentially they state that because passengers may get to Bristol Airport more quickly or cheaply than a competing airport, and the ticket prices might be lower, that this amounts to a benefit to society, and they then total this up over a ridiculously long timescale of 60 years. Given that Saudi Arabia is aiming to be no longer economically dependent upon oil by 2030, and the UK is aiming to cut carbon emissions by 80% or more by 2050, it is hard to see how a business that is fundamentally dependent upon burning fossil fuel can know what it will be doing in 2080! Even on their terms this benefit only amounts to a measly £27m per year, which compared with the consequent £480m tourism deficit appears to be a poor reason to proceed with the project.

Looking at the arguments they use (with no real evidence) we find essentially the same faults used in section 0.14 ie they assume that the passengers are just going to be diverted from other airports and that they are bound to save money by using Bristol instead. We can see that this still suffers from the same faults in reasoning, and it adds some more of its own. It states that Bristol has cheaper fares yet table 6.1 shows that for the short-haul routes Bristol specialises in that Birmingham is 8.2% cheaper. In addition, those other airports may well be closer to or quicker or cheaper to reach than Bristol Airport for many people in the notional capture area of Bristol Airport. It should be reiterated that many routes serviced by those airports, and used by residents of the South West, are not sustainable from Bristol.

Thus this headline £1.6bn benefit over 60 years is scotch-mist and is used to obscure the real massive annual losses to the UK and regional economy that further expansion would cause.

0.18 *The largest single benefit comes from air fare savings, reflecting the fact that Bristol Airport provides access to a wide variety of routes offered by low cost*

airlines and that alternatives are often relatively more expensive. Passengers also significantly benefit in terms of surface access time savings, highlighting the importance of Bristol Airport in serving the demand centres in the West of England and across the South West.

0.19 Overall, the NPV associated with raising the airport's capacity from 10 mppa to 12 mppa is around £1.6 billion over the next 60 years.

Regeneration and Social Impacts

0.20 Our analysis show that there are significant areas of deprivation in Weston-Super-Mare, which are amongst the 10% most deprived areas in the UK, and in Bristol, particularly in South Bristol. All these areas would clearly benefit significantly from the development of more employment opportunities at Bristol Airport, particularly as both are already significant providers of labour for the airport, demonstrating that the airport is accessible and attractive as a source of employment.

Given that a lot of the loss of Weston-Super-Mare's previous economic activity is directly related to the massive expansion of low-cost flights and the impact that has had on domestic tourism, one can see the irony in claims that further expansion on the airport will counteract local deprivation.

0.21 The airport already works closely with a range of partners across the West of England to highlight the employment opportunities that the airport offers, including regular recruitment events and extensive work with local schools and colleges. The airport also subsidises employee travel to and from the airport on a number of public transport options and facilitates a car share scheme for employees. BAL is also currently actively exploring options to introduce a number of new apprenticeships in engineering, passenger carrying vehicles and IT.

0.22 Bristol Airport's influence on the availability of local services and the health of local businesses is multifaceted and in general should be viewed as positive and growth at the airport beyond 10 mppa would increase this positive effect. Increased activity at the airport will provide more opportunities for local businesses through the supply chain and increased consumer expenditure in the area as passengers either stay in the area or use facilities and services. The airport is holding its first Meet the Buyer event in January 2019, which is an example of ways that the airport can actively increase the amount of local businesses benefitting from the airport's supply chain. There are potentially some adverse impacts in the labour market, from additional congestion and crowding out, but we would expect these to be significant.

We assume that it is a Freudian slip to use 'significant' above rather than 'insignificant'. This is typical of the York Aviation analysis – emphasise the positives and hide, ignore or dismiss the negatives. With UK unemployment at its lowest level since 1975 it is hard to see how such a large localised increase in demand for workers could not have an adverse impact on the labour market, as well as causing external costs in terms of road congestion, demand for housing, schools and health services.

Previously a large number of EU nationals worked at BAL – one might ask how this might be affected by Brexit and whether their business model depended upon a ready supply of relatively cheap labour.

Jobs

The rate at which jobs have been created at the airport is much less than was promised and reinforces the fact that the airport is not a strong generator of jobs. New technology and working practices have been having a profound impact, despite growth in passenger numbers.

Direct Employment	fte	Source
2005 actual	2284	Table 4.2 BIA Economic Impact Study Oct. 2006 (amended)
2015 projection	3802	Table 8 BIA Master Plan 2006-30 for 9 mppa
2018 actual	2976	Table 1.1 Workplace Travel Plan (current application)
2018 actual*	3480	Para 4.8 York Aviation Report (current application)
2026 projection (10mppa assumption)	3825	Table 5.1 York Aviation Report (current application)
2026 projection (12mppa assumption)	4525	Table 5.2 York Aviation Report (current application)

* Note the discrepancy on the actual fte numbers for 2018. The York Aviation figure is 17% higher than the Workplace Travel plan figure introducing significant uncertainty into all of these calculations

- Part of the justification for expansion to 10mppa was based on increasing job numbers to at least 3802 by 2015. In fact, jobs have grown only to 2976 by 2018.
- The airport indicates that the rate of job creation for growth to 12 mppa will be considerably greater than in the recent past. This flies in the face of all the indications arising from technical advances which are becoming realities in airports such as Singapore where the passenger will have no need for human contact throughout the departure process.

	% growth (mppa)	% growth (fte jobs)
Past growth, from 5.2 – 8.2 mppa	58%	30%
Projected growth, from 8.2 – 12 mppa	46%	52%

- The PCAA request that NSC:
 - Obtains clarity on important discrepancies in the number of jobs at the airport and the projections that are built on these figures
 - Obtain detailed and credible evidence to support the airport's claim that direct jobs will be created at a rate almost twice as fast as in the recent past at a time when technical advances would indicate the opposite.

References:

- [1] CAA 2017 BAL data from <https://www.caa.co.uk/Data-and-analysis/UK-aviation-market/Airports/Datasets/UK-Airport-data/Airport-data-2017>
- [2] CAA Passenger survey reports from <https://www.caa.co.uk/Data-and-analysis/UK-aviation-market/Consumer-research/Departing-passenger-survey/Survey-reports/>
- [3] ONS Travel Trends datasets <https://www.ons.gov.uk/releases/traveltrends2017>

Transport Assessment – Surface Access – Parking Controls - Work Travel Plan – Car Parking - Public Transport Hub:

(This section needs to be read in conjunction with ‘Climate Change and Other Greenhouse Gases’)

Summary

1. Within this heading, the PCAA recognise that there are several, inter-connected issues that are fundamental to the practicality of the proposed development:
 - 1.1. The ability of the road network to absorb the traffic generated by the airport
 - 1.2. The extent to which passengers use public transport to access the airport
 - 1.3. The extent to which commuters and the local community use public transport
 - 1.4. The number of private vehicles used by staff to access the airport
 - 1.5. The provision of car parking for a) passengers and b) commuters and local people to use the public transport hub
2. It is worth noting that, using the airport’s figures, the usage of private vehicles will grow to 10.2m (at 12 mppa) – Appendix 17A, table 17.A.13 ‘Carbon and other greenhouse gases supporting data’. This equates to over 3.5m extra car journeys on the roads around the airport or over 9,500 extra journeys a day compared to today. This brings the total to nearly 28,000 private vehicle journeys a day for airport passengers
 - 2.1. The only network changes to cope with this extra traffic consist of minor tweaks to the roads immediately adjacent to the airport.
3. Challenges raised by the PCAA are as follows:
4. The airport has been capped at 10 mppa because the road network would not absorb a higher number and insufficient amelioration is now planned to allow an increase to 12 mppa, notably:
 - 4.1. No assessment has been made of the ending of the Severn Bridge tolls
 - 4.2. There has been no 10-year cumulative impact assessment as required by Department for Transport Circular 02/2013. Done correctly, this would include housing developments at Banwell and the ‘Garden Village’
 - 4.3. The development is contrary to established transport and sustainability policies. These contradictions need to be reconciled by NSC
 - 4.4. There is no quantification of the costs to the public purse of road improvements so that tax payers can be reassured that this is a good use of public money (which can be seen as subsidising a private business catering to the wealthy and producing a net loss to the UK economy through the tourist deficit)
5. Targets for the use of public transport are far too low:
 - 5.1. The airport’s business model requires high levels of on-site car parking at a low cost to the airport by using green belt land.
 - 5.2. NSC needs to challenge the targets and strategies for passenger and employee access to the airport. NSC needs also to constrain car parking, mandate the use of MSCP and thereby ease traffic congestion, reduce usage of green belt and lessen the environmental degradation

- 5.3. The approach taken by the airport is one of ‘business as usual’ but it cannot be business as usual if climate change targets are to be met. So car use has to fall.
- 5.4. The modal transport split was 12.5 % in 2017 and only 15% at 12 mppa which is the same target as for 10 mppa
- 5.5. No allowances have been made for commuters and local people to use the public transport hub
- 5.6. The Work Travel Plan is offered as some sort of concession that mitigates the impact of the development but it is normal good practice for any larger employer.
6. The history of car parking permissions is a litany of concessions to the airport at the expense of local communities and the environment.
7. It would be unreasonable for North Somerset to accept BA’s parking strategy to 12 mppa without having first examined the need for low-cost car parking available to users of the public transport interchange, including users from the local community.
 - 7.1. No examination is included for parking associated with local use of the public transport interchange. The proposed parking strategy is therefore incomplete and inaccurate and decisions based on the proposal could lead to unintended consequences for the local community and the environment.
8. Surface access strategies have not been satisfactorily resolved. A comparison of strategies is made below, indicating a ‘business as usual’ approach.

Application 09/1020/OT2 - 10 mppa Surface Access Strategy	Application 18/P/5118/OUT - 12 mppa Updated Surface Access Strategy
Public Transport	Public Transport
Public transport modal share 15%	Public transport modal share 15%
Increase use and improvement of buses	Increase use and improvement of buses
Develop long distance bus services	Promotion and development of long-distance services
Integrate public transport serving the airport	Development of new routes for buses
	Service quality upgrades of buses
£100,000 per annum contribution that commenced as part of the 10mppa planning consent for public transport	A fund [sum to be agreed] for the ongoing development of public transport serving Bristol Airport
	To improve the capacity of the A38 by tweaking junctions by airport
Public transport steering group set up	Renamed to ‘Surface Access Steering Group’
MetroBus	Metrobus
The X1 service and X2 bus service already exist between Bristol and Weston-super-Mare. These buses are	Development of proposals and a contribution [sum to be agreed] towards upgrading the A370 Weston-super-Mare

very popular & well used	to Bristol bus corridor
	A contribution [sum to be agreed] towards kick-starting a new Metrobus Complimentary Service on the A370 corridor
Highway Improvements	Highway Improvements
To improve the capacity of the A38 though South Bristol Link	To improve the capacity of the A38 by tweaking junctions by airport
	A fund [sum to be agreed] to support the implementation of local highway improvements
Sub-regional transport scheme which was the South Bristol Link (SBL) allocated £4.73m	A fund [sum to be agreed] to support the development of major strategic transport schemes within the region that would include major passenger transport improvements to the network serving Bristol Airport.
	Parking Controls
	A contribution [sum to be agreed] towards the costs of implementing Traffic Regulation Orders
	A contribution [sum to be agreed] for the purpose of funding 1FTE NSC parking/enforcement officer for a period of five years.
	Authorised Waiting Area for private hire vehicles on site
Work Travel Plan reviewed from 2006	New Draft Work Travel Plan
*SOV was 93% in 2004 reduced to 84% in 2017	SOV target of 75% by 2026
SOV was 86.6% in 2009 reduced to 84% in 2017	SOV target of 75% by 2026
Majority of employees travel by SOV	majority of employees travel by SOV
currently 24 car-share specific spaces, 3% employees car share	Priority car sharing spaces to encourage take up
Car share scheme relaunched in past	Relaunch of car share scheme
Bus employee travel in 2017 was 9%	Bus - expected employee share to increase
Discounted bus travel costs	Discounted bus travel costs
	Modal public transport mix for employees 25% at 31 December 2026
	Level of staff car parking spaces not forecast to increase beyond 1000 spaces to force change to public transport
	Travel Plan Co-ordinator
	Two zero emissions vehicles
	General Surface Access
	6 no of electrical vehicle points

*single occupancy vehicle (SOV)

Road Access

1. Policy CS23 is the principal Core Strategy policy relating to development proposals at Bristol Airport. It states:
 - 1.1. *“Proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure”.*
2. Policy DM50
 - 2.1. *‘relates specifically to Bristol Airport. Focusing on development within the Green Belt inset, it aims to ensure that, if further development of the airport is required, proposals demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure’.*
3. The PCAA remain convinced that the airport’s surface access strategy is insufficient and there will be increased congestion on the road network and frequent gridlock. Furthermore the proposal fails to follow NSC’s own policies, above.
 - 3.1. The analysis presented does not adequately address these points and a more comprehensive and cumulative analysis is needed looking forward at least 10 years
 - 3.2. Examples of the inadequacies of the plans and of the analysis are given below
4. The Department for Transport Circular 02/2013 states that forecasts and assessments should be over a ten year period. The forecasts in the application look at an eight year period. The guidance states that cumulative road traffic impacts are a particularly important consideration in relation to planning applications.
 - 4.1. *‘The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater’.* (ref DfT Circular 02/2013, 'The Strategic Road Network and the Delivery of Sustainable Development', para 25).
 - 4.2. No cumulative impact assessments have been found within the Transport Assessment. And it has only taken account of eight years not ten. If the period covered ten years, the proposed housing from the Strategic Development Locations would have to be considered especially for the Mendip Spring Garden Village (Mendip Vale) for 2,800 dwellings and 1900 dwellings at Banwell. These dwellings will be using the A38 to access employment in Bristol and will cause further congestion. (ref: <https://www.google.com/search?q=Strategic+Development+Location+m5+to+A38+corridor+-+Churchill+North+Somerset+October+2017&oq=Strategic+Development+Location+m5+to+A38+corridor+->

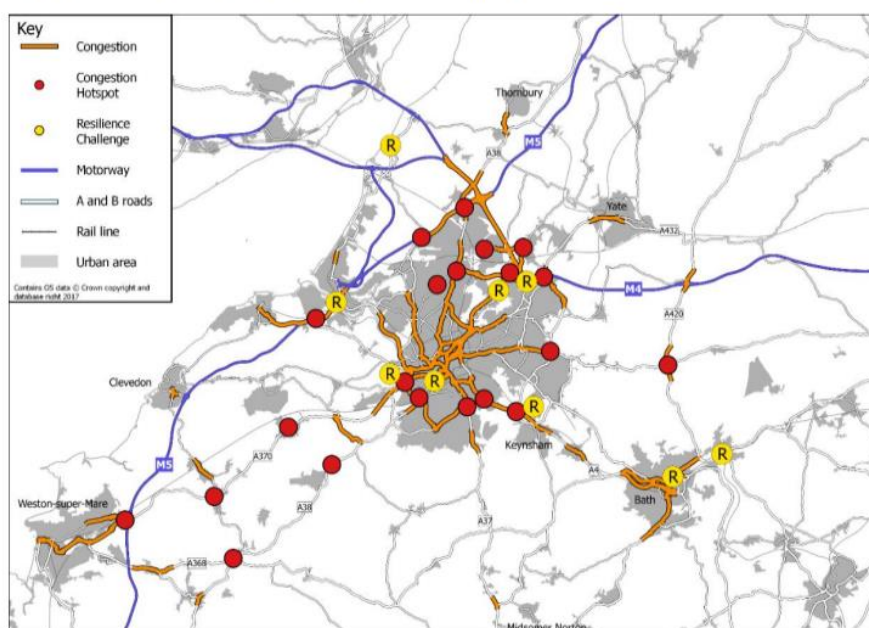
[+Churchill+North+Somerset+October+2017&aqs=chrome..69i57.2427j0j1&sourceid=chrome&ie=UTF-8](#)

- 4.3. Backwell SDL should be included.
- 4.4. The Transport Assessment within this application is until 2026. The NS Local Plan runs to 2026 as does the West of England Joint Local Transport Plan 3. The proposed NS Local Plan 2036 is currently at the initial stages of development and the Joint Local Transport Plan (JLTP)4 is being published for a public consultation on 6 February 2019.
- 4.5. The application is premature in respect to the new NS Local Plan and the JLTP 4. The JLTP 4 is to address issues of proposed and future growth at the airport. The five objectives of the JLTP 4 are: support sustainable economic growth, enable equality and improve accessibility, address poor air quality and take action against climate change, contribute to better health, wellbeing, safety and security, and create better places. Expansion of Bristol Airport undermines these objectives as will be shown in this document. A report by Atkins to the West of England titled 'Joint Transport Study', Appendix A. p68/69 states that improvements to the road network south of the airport would have negative impacts on local villages such as Churchill and Congresbury. The report gives this proposal the highest possible rating for negative impact, stating '*It will have an overall significant impact which will be difficult to mitigate*'. The implication for the airport is that congestion will increase to the north and south of the A38.
5. There needs to be an assessment of an option that constrains car parking into more expensive multi storey car parks so as to:
 - 5.1. Act as a disincentive to travel by private car
 - 5.2. Increase use of public transport
 - 5.3. Reduce car travel and congestion
 - 5.4. Save green belt land
 - 5.5. Reduce emissions
 - 5.6. Lessen other environmental impacts
6. The airport was capped at 10 mppa due, in large measure, to the many surface issues surrounding Bristol Airport. Growth to 12 mppa represents a 'business as usual scenario' with increased vehicle emissions, contrary to all transport policies promoting sustainable travel.
7. The removal of the tolls on the Severn Bridge may change passenger behaviour from Wales and act as a disincentive to taking public transport. The Joint Spatial Plan forecasts that the removal of the toll will result in an increase in traffic using the M4 and M48 between South Wales and the West of England, and on the M5. In 2017 there were 18.8 % of passengers from Wales and Bristol Airport anticipates that this trend will continue. (REF: ES CH 06, 6.6.4) Therefore the impact of the removal of the toll could be immense on the road network. The toll ended in December 2017 and has been known about since July 2017. The Transport Assessment has not considered the removal of the Severn Toll. Why?
8. Most of the roads giving access to the airport are badly congested country lanes, especially those used by passengers travelling through the Bath and North East

Somerset district and North Somerset district, such as the Chew Valley and Congresbury. Even the A38 is becoming increasingly difficult to cross.

- 8.1. There are no motorways, dual carriageways, mass transit or rail links to BA, and none is realistically planned and funded for the near future
 - 8.2. The lack of pedestrian facilities causes severe severance in villages such as along the A38, Felton and Chew Magna.
 - 8.3. Brockley Combe is a narrow and windy road and part of the Sustrans national cycle network.
9. Against this background the planning application still envisages a least 85% of passengers using private transport by the time it reaches 12 mppa in 2026, representing no change from the 10 mppa target. The vast majority of passengers up to 2026 are expected, as at present, to use private cars.
 10. Emissions from private vehicles (for passengers) are expected to rise by 16% to 2026 at a time when NSC and West of England Local Authorities have committed to reduce emissions by 50% (by 2035).
 11. The planning statement admits that, without the tweaking of the road network at junctions 1, 4a and 4b, the network would be at capacity. There are other hotspots of congestion close to the airport (see Fig 3.1)
 - 11.1. Para 5.55 reveals that in the peak month in 2026 there will be an additional 5575 vehicles compared to what would occur under growth to 10 mppa. However, the key point to consider is that the roads will need to cope with 9,500 extra vehicles per day compared to today (and this is an averaged figure, the peak level will be considerably higher)
 12. There is no discussion within the application of low-cost car parking for commuters and local people to access the transport hub to help reduce congestion and emissions. This would allow more healthy and sustainable ways of accessing Bristol. 'Making Sustainable Local Transport Happen' DfT January 2011.
 13. Figure 3-1 – Traffic congestion in the West of England from the Transport Topic Paper for the West of England Joint Spatial Plan

Figure 3-1 – Traffic congestion in the West of England



- 14.
15. This map from the JSP shows that congestion problems at Barrow Gurney (south west of Bristol) have now been largely mitigated by the South Bristol Link but the wider network still has congestion hotspots. Local tweaking of road infrastructure will have no effect on these other hotspots, yet airport-related traffic will be a significant cause of them.
 - 15.1. Backwell crossroads has not been considered within the TA for assessment. Many passengers exit the M5 at Portbury and cut across country to Wraxall Hill into Nailsea to Backwell Crossroads turning right onto the A370 and then left to go up Brockley Combe to reach the airport. Backwell crossroads need to be considered within the TA.
16. The increase in traffic during the construction phase of the proposed development is shown in the ES CH6 Table 6.18 against a no development scenario. It shows a total increase of construction traffic of exactly 5%. Commentary then states 'As noted in Section 6.3, significant effects are not anticipated where traffic increases of $\leq 5\%$ are experienced as such a variance can occur on a daily basis.' But at the height of construction there may well be significant effects.
 - 16.1. What evidence is there to support this analysis?
17. From the Joint Spatial Plan it is anticipated that there will be increases in the volume of vehicles travelling on the road network particularly on the A38 and the A370 due to predicted increases in housing and jobs provided within the local area. The Mass Transit system is not due before 2026 yet housing development is expected to commence from 2024.
18. Any substantial road improvements such as dualling parts of the A38 and a Mass Transit system raise significant concerns over the suitability and the sustainability of the airport development as highlighted by the Joint Spatial Plan Transport Topic Paper. This will add to the congestion hotspots on the A370 and the PCAA believe that the congestion hotspots around the airport, alleviated temporarily by

the proposed and minor infrastructure improvements, will recur.

19. There will be a considerable increase in traffic on to and off Downside Road from the activities of the Airport Tavern whose access is to be moved onto this road.
20. The proposed highway improvements are given in the Environmental Statement Ch 6, para 6.15.4:
 - 20.1. *'Highway improvements and junction upgrades proposed as part of the Proposed Development will help reduce driver delay times at the A38 / Bristol Airport Northern Roundabout and the A38 / Downside Road and A38 / West Lane junctions.*
 - 20.2. *Delays are expected to decrease by over 90 seconds at peak times which is considered to be a 'very high' magnitude change and therefore there **may** be significant beneficial effects.*
 - 20.3. *Increases in vehicle movements associated with the Proposed Development may cause a change in driver delay time of less than 20 seconds at junctions 1, 2, 3, 6 and 7 and therefore no significant effects are anticipated at these locations.*
 - 20.4. *There will be an increase in delay of up to 74 seconds at Junction 5 during the inter-peak hour. However, given the nature of the surrounding area and receptors it is not anticipated that this would result in significant effects. Therefore, no overall significant effects are anticipated at the above locations.'*
21. The PCAA question Bristol Airport and North Somerset Council on the significant beneficial effects and would like them quantified. These junction improvements simply allow the network to flow a little better immediately adjacent to the airport. The congestion hot spots along the A370 at Congresbury and Backwell will get worse, as will congestion at the South Bristol Link roundabout. No road improvements have been put forward to these hotspots. The only positive improvements are to cyclists and pedestrians which would not impact on traffic flow and in our view should have been implemented under the consent granted to 10 mppa.
22. The PCAA question the cost of the road improvements which are to be put in place to aid a private developer, and how much BAL is going to contribute? The Highways Improvements condition state a *'sum to be agreed'*. The PCAA request an analysis indicating why this investment of public money is preferable to spending the money on services which have suffered cuts and under-investment.
23. The Planning Statement to the 2009 application showed a draft 106 Agreement with the amount of funding Bristol Airport was going to contribute, such as the £4.73 m to the South Bristol Link Road. It is particularly important that the funding for the updated Surface Access Strategy is shown, for the following reasons:
 - 23.1. Bristol Airport was capped at 10 mppa due road capacity issues and the PCAA believe that a mere tweaking of junctions surrounding the airport is insignificant and major improvements are required to allow the planning application to be granted at 12 mppa and, until improvements are in situ, no planning consent should be granted.

- 23.2. Bristol Airport is the root cause of road network issues of congestion and gridlock from passenger vehicles to and from the airports, as well as fly parking, illegal parking and parking by passengers on streets of local parishes.
- 23.3. Carbon emissions from vehicles are to increase bringing a decrease in air quality standards.
- 23.4. Car parking is a problem outside the boundary of the airport and within as the low-cost car parking strategy subsidises wealthy passengers with cheap parking whilst harming the environment.
24. The application states from the 'conclusions of significance evaluation' that *'Changes in traffic flows experienced on the highway network as a result of the Proposed Development are expected to be small, with less than 10% increases in the number of total vehicles and less than 2% increases in HGVs'* (Environmental Statement 6.15.3).
- 24.1. This figure of 10% seems to contradict the figure of 20% mentioned para 5.5.5 of the Planning Statement.
- 24.2. Furthermore, it is important to remember that the daily vehicle numbers will increase by 9,500 relative to today. Considering the number of small roads close to the airport this figure can certainly not be judged as insignificant.
25. But the PCAA is aware of the RASSCO study referred to in the Bristol Airport Master Plan 2006 – 2030 which stated that at 12 mppa *'airport traffic would account for 40% of traffic on the A38 which would suffer from major levels of congestion so constraining access to the airport. All other key links would experience congestion to varying degrees due to high levels of background traffic, including intermediate levels of congestion on the A370 and M5'*.
26. The findings within the Transport Assessment also do not concur with the Transport Topic Paper of the West of England Joint Spatial Plan indicating that congestion hotspots on the A370 will increase.
27. The PCAA requests that North Somerset Council carry out a comparison of the RASCO Study with findings within the Transport Assessment to the application and the JSP as the conclusions drawn as so different.
28. The PCAA believe the proposals are contrary to the sustainable development objectives of the National Planning Policy Framework ('NPPF') because the economic case has not been made and significant local environmental impacts, as well as the adverse impacts on climate change, are unavoidable consequences of increased vehicle movements and air travel. National Planning Policy Framework 11.1.2
29. The NPPF could not be clearer in terms of supporting the need for sustainable transport solutions. It devotes a full chapter to this objective, for example, as follows:
- 29.1. Promoting sustainable transport. *'Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in*

favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

29.2. *Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. In preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.'*

30. Likewise, the Aviation Policy Framework includes the following:

30.1. *'All proposals for airport development must be accompanied by clear surface access proposals which demonstrate how the airport will ensure easy and reliable access for passengers, increase the use of public transport by passengers to access the airport, and minimise congestion and other local impacts.'*

31. The inconsistencies with these policies need to be reconciled by NSC before any decision is taken.

Parking Controls

1. A comparison of the surface access strategies highlights that 'Parking Controls' were not considered under the planning consent of 10 mppa.
2. Greatly increased and inconsiderate parking in villages is a direct result of growth to 10 mppa car parking and not of future growth to 12 mppa.
3. Parishes anticipate that parking problems will get worse with further growth. For this reason the parking controls should commence now and not when planning consent is given.
4. Only in 2018 did the airport consider engaging with parishes to try and resolve the issues through three meetings held under the title 'Parking Forum Group'. Parishes believe the hidden intent was really to help gain planning consent. It was a complete waste of community time attending the Parking Forum as the main request was for an Authorised Vehicle Waiting Area to be uncharged and not time limited at the airport to avoid taxis parking on local roads and Felton Common. This has been ignored by the airport; the proposed charged-for and time-limited proposal is not fit for purpose.
5. This proposed section within the 106 Agreement smacks of bribery. If the airport was really as good neighbour, it would have acted earlier to resolve these issues.
6. The actions to assist with implementation of Traffic Regulations Orders and funding of 1fte NSC parking/enforcement officer for a period of five years should commence immediately. Bristol Airport should fund the total contribution of these proposals as car parking problems arise directly from airport activities. And let's not forget that closing down off-site illegal car parking sites will directly favour

the near-monopoly that the airport has and will increase their car parking revenues.

7. The Design Access Statement Part 2 shows a dedicated drop off zone on the top level of the MSCP Phase 2 but make no mention of the Authorised Waiting Area for private vehicle hire. So where is the location of the Authorised Waiting Area within the documents? Confirmations of the location of the Authorised Waiting Area for private vehicles hire need to be given and a date with which it will become operational. If the MSCP 2 and public transport hub is delayed for any reason, for instance, financial, parking problems will get worse.
8. NSC has a responsibility to the community to ensure that an Authorised Waiting Area is provided.

Work Travel Plan

1. In 2017 the Airport employed 3918 employees. The aim of the Work Travel Plan is to have the number of persons employed at Bristol Airport who drive to and from the Airport by SOV to be no more than *'75% of the total number of persons employed at the Airport by 31 December 2026. This equates to 3,465 employees based on the forecast growth of total employees employed at Bristol Airport by 2026.'*
 - 1.1. The figures for jobs differ throughout the application. The York Aviation figure is 17% higher than the Work Place Travel Plan figure introducing significant uncertainty into all these calculations.
2. The Work Travel Plan shows some changes but any large employer would have a work travel plan, this is not some form of significant concession. Although it is welcome, it should not be considered a mitigation of the airport's activities but good practice for any business.
3. The PCAA believe that it will be very hard to reach the planned target of SOV reduction to 75% by 2026 as the table shows that this was a goal between 2009 – 2015 and that the airport failed.

Car Parking – MSCP – Silver Zone Phase 2

(This section needs to be read in conjunction with our comments on Parking Controls and Biodiversity)

1. The key points that the PCAA wish to emphasise are that:
 - 1.1. No planning consent should be given until the MSCP 2 and the transport interchange are delivered, both of which were conditions under growth to 10mppa. It is shameful that the airport is considering using more green belt land for low cost car parking, perhaps before the development of MSCP 2 and the transport interchange, by planning to open the Silver Zone extension 2 in 2020.

- 1.2. Due to issues of lighting and loss of biodiversity within the Silver Zone, another MSCP should be built with consultation with the community or an extension to MSCP 3 to save 5.1 hectares of green belt land.
- 1.3. The low-cost and unconstrained car parking strategy should be reversed in order to increase use of public transport, reduce road congestion and lessen the environmental damage.
- 1.4. The current strategy needs to be recognised as one that incurs considerable public investment, impacts negatively on local communities, and subsidises people with the money to fly and take foreign holidays when other local services are starved of money.

History of MSCP from planning consent of the 2011 application 09/P/1020/OT2

1. Under planning consent of application 09/P/1020/OT2 in 2011, the south side in the green belt would now have a car park capacity of 12,000 spaces with the north side, long-stay capacity of an additional 5,600 spaces giving a total of 17,600. (Planning Supporting Statement 2009). Note that the permitted development application 16/P/0454/ PAI and application 18/P/5140/AIN added an additional 400 spaces on the south side. **This results in a total consent for car parking spaces of 18,000.**
2. In December 2018 there was another application 18/P/5140/AIN for the development of 260 no. car parking spaces on land in the Silver Zone. **The total of consented car parking spaces changes to 18,260.**
3. Under conditions set in 2011 there were to be two multi-storey car parks on the north side providing 3,850 car parking spaces. One MSCP with four levels and the other with five levels. The uppermost floor of one of the car parks was to accommodate a transport interchange for use by taxis and buses. These MSCP were linked to a growth plan to 8 and 9 mppa and to the permission to use Cogloop Land on the south side in green belt (now known as Silver Zone Extension 1).
4. Application 16/P/1455/F was to change the phasing of the construction of the two MSCPs that had been approved under application 09/P/1020/OT2. The changes being:
 - 4.1. A MSCP with the first 3 levels, 984 parking spaces, completed in 2018 ('Phase 1a').
 - 4.2. 2 further levels (known as 'Phase 1b') consisting of a further 894 spaces in early 2019.
 - 4.3. This is a total of 1,878 car parking spaces in one MSCP.
5. This is vastly reduced from the amount expected of 3,850 leaving a deficit of 1,972 until MSCP 2.
6. The reason given was that *'The revised size of the MSCP is considered appropriate for the current and foreseeable demand based on passenger growth and car parking demand and will accommodate premium parking.'* (Car Parking at Bristol Airport Design and Access Statement June 2016).

7. MSCP 2 is finally to be completed by 2021 adding a further 1,800 spaces with the transport interchange. (Ref: Parking Strategy.) If BA honour the timeframe.
 - 7.1. After querying the delivery of MSCP 2 with Bristol Airport, the following response was received: *‘The current plan is that we will start work on the MSCP in winter 19/20, to be completed in 2021. Exact timing has not been finalised yet, and this could be subject to change.’*
8. It is only reasonable to request that no planning consent should be given until the MSCP 2 and the public interchange are delivered, particularly as North Somerset Council allowed use of ‘Cogloop Land’, now known as the Silver Zone Extension Phase 1, before completion of any MSCP. The airport has been treated very well already and must now live up to the conditions previously agreed.

Current position of car parking at Bristol Airport

- Delivery of the MSCP 2 and transport interchange is only expected at 10 mppa but this does not appear to be certain
- Off-site parking from aerial photos in 2017 is approximately 4,800.
- Staff parking is 1,000 spaces on the south side with bus journeys for staff to the north side.
- Total car parking spaces on site in 2017, shown in Table 3.1, is 16,700.

Application 18/P/5118/OUT

1. The application states: *erection of MSCP 3 north west of the terminal building with five levels providing approximately 2,150 spaces, the MSCP will occupy a footprint of around 1.12 hectares* (Transport Assessment.)
2. A baseline provision of 18,400 spaces has been used for the forecasts contained in the Parking Demand Study. The PCAA queries this baseline as it is completely dependent on the MSCP 2 and the public interchange being developed, at and for 10 mppa. There is substantial risk that this will be delivered later than 2021 and after the 10 mppa has been reached.
3. There is no proposed condition within the application to state what is to be delivered for growth to 10 mppa. The proposed Heads of Terms for the Section 106 Agreement and Planning proposed Condition states *‘A clause will be included to clarify the extent to which certain conditions of the 10 mppa and 12 mppa permissions will apply where other such conditions would otherwise be incompatible on the implementation of both permissions’*.
4. The PCAA requests that we are informed, now, whether MSCP 2 and the public transport interchange will still be delivered by 10 mppa as per the planning consent 2011. If the MSCP 2 is not guaranteed, a lower baseline figure should be used for the forecasts within the car parking strategy.

5. MSCP 3 on the north west side is to deliver approximately 2,150 spaces. This is to be delivered by 12 mppa. The PCAA request that a condition is made on MSCP 3:
 - 5.1. That it should be delivered at 11 mppa
 - 5.2. That the access to the MSCP 3 is not from Downside and only from Gyratory Road.
 - 5.3. The MSCP should be positioned to act as an additional sound barrier to noise coming from the Western Apron to protect residents from increased noise on Downside.
6. Silver Zone Phase 2 extension is to provide approximately 2,700 spaces which will occupy a footprint of around 5.1 hectares, including access space (3.73 ha for car parking alone). It appears from the application that this extension will be brought into operation as soon as planning consent is granted vis:
 - 6.1. Table 3.2 Indicative Construction Programme from the Planning Statement shows that the Extension to the Silver Zone Car Park (Phase 2) is due to commence December 2019 and be completed in March 2020.
 - 6.2. Application 18/P/3502/EA2 Scoping Report for the EIA states from Table 2.1 Components of the 10 mppa planning permission (09/P/1020/OT2) that the MSCP (Phase 2b) is to be completed by 2020 with the transport interchange post-2020. This strongly indicates that more low-cost car parking in the green belt, which is harmful to the environment, is to be brought into operation before MSCP2 and the public interchange have been delivered.
7. At a meeting of Bristol Airport and parishes held on 3 December 2018, a question was asked to the BA management team, enquiring when the MSCP 2 and the transport interchange would be delivered. The response wasn't quite heard but was followed up by an email request by a parishioner. The BA email stated that:
 - 7.1. *'The current plan is that we will start work on the MSCP in winter 19/20, to be completed in 2021. Exact timing has not been finalised yet, and this could be subject to change.'*
8. NSC must give certainty as to the delivery of a condition under 10 mppa.
9. MSCP Phase 3 is for 2,150 car parking spaces which will occupy a footprint of around 1.12 hectares.
10. Silver Zone Extension Phase 2 is for 2,700 car parking spaces which will occupy a site of approximately 5.1 hectares. There are major issues surrounding the Silver Zone Extension 1 and 2. These are:
 - 10.1. The Silver Zone extension 1 was, and 2 is at the moment, semi-improved pasture, of prime importance to the foraging of the Greater and Lesser Horseshoe Bat, a protected species.
 - 10.2. The Silver Zone extensions 1 and 2 are under 2 km from the Special Area of Conservation for the Greater and Lesser Horseshoe Bat.
 - 10.3. These bats are light-averse. And light attracts insects so there is not only a loss of foraging through the removal of a habitat but the attraction of light denudes neighbouring areas of insects.

11. Thus the PCAA call for an extension to MSCP 3 and object strongly to the use of any more green belt for low cost parking.

Public Transport Interchange – Parking Strategy

Summary

1. It would be unreasonable for North Somerset to accept BA's parking strategy to 12 mppa without having first examined the need for low-cost car parking available to users of the public transport interchange, including users from the local community.
 - 1.1. No examination is included for parking associated with local use of the public transport interchange. The proposed parking strategy is therefore incomplete and inaccurate and decisions based on the proposal could lead to unintended consequences for the local community and the environment.

Context and Rationale

1. A proposal for a public transport interchange is clearly included viz:
 - 1.1. The conditions attached to application 09/P1020/OT2 state that an '*erection of 2 no. MSCP of four and five storeys north of terminal building providing 3,850 spaces and transport interchange for buses with pedestrian bridge links*' and condition 12 is for 2 no MSCP ancillary development should be on sites H & I as shown in Drawing Number P11-02 Rev 2.
 - 1.2. The Planning Statement 5.3.20 states '*BAL expects to increase car parking capacity from circa 16,700 spaces in 2018 (at 8.7 mppa) to approximately 18,400 spaces in 2021 (at 10 mppa) through the completion of MSCP Phase 1b and the construction of MSCP Phase 2 (including public transport interchange) as part of approved plans to expand the airport to serve 10 mppa*'.

Transport Policies Have Not Been Followed

1. West of England Joint Local Transport Plan 3 2011-2026 4.5.1
 - 1.1. The Joint Local Transport Plan (JLTP) covers a 15 year period between 2011 and 2026 and sets out the transport strategy for the sub-region. The plan aims to deliver an affordable, low carbon, accessible, integrated, efficient and reliable transport network to achieve a more competitive economy and better connected, more active and healthy communities.
2. West of England Joint Transport Study 4.5.3
 - 2.1. A West of England Joint Transport Study (JTS) has been prepared by the four West of England authorities. The JTS is intended to provide a clear direction for the long-term development of the transport system in the sub-region to 2036 and beyond and will form the basis for the next JLTP and transport investment programme
3. The emerging JSP and the JTS envisage major public investment in the transport network including strategic public transport infrastructure that will be funded. The funding towards the mass transit and rail link is still uncertain.
4. Policy DM50 refers specifically to proposals for development within the Green Belt inset at Bristol Airport

- 4.1. *‘appropriate provision is made for surface access to the airport, including highway improvements and/or traffic management schemes to mitigate the adverse impact of airport traffic on local communities, together with improvements to public transport services.’.*
5. All transport policies are clearly seeking a more integrated transport network.
6. The Transport Assessment (6.2.15) recognises the role of the airport as a public transport hub:
- 6.1. *‘To help to further encourage the Airport’s role as a public transport hub where residents of local villages can access the Airport, Flyer services, a concessionary scheme for residents of selected areas of the local community is available for subsidised travel (up to a 60% reduction on fares) on services A1, A2 and A3 between Bristol Airport, Bristol and Weston-super-Mare’.*
7. Where, however, is the parking for people from the local community surrounding the airport to access the public transport interchange?
8. The parking strategy is put forward in two main documents titled:
- 8.1. ‘Parking Strategy’ and
- 8.2. ‘Development of Bristol Airport to Accommodate 12 Million Passengers Per Annum: Parking Demand Study’.
9. Neither of these two documents has considered the use of the public transport interchange other than by passengers to and from the airport. The public purse contributes to the infrastructure surrounding the airport thus the public should have a right to park close by and access the public transport interchange to Bristol as well as other destinations such as Plymouth.
10. And why is the subsidised scheme not available to people from further away who also suffer from the negative implications of airport growth: BS25 - Sandford and Winscombe; BS29 - Banwell; BS40 - Chew Valley and Blagdon; BS41 - Dundry BS48 - Nailsea and Backwell; and BS49 - Yatton and Congresbury?
11. By providing parking for public use and a subsidised service, the airport will be making a valuable contribution to reducing road congestion and carbon emissions.
12. The fact that public money will be used to help facilitate airport growth makes even the stronger the argument that local people must derive some benefit from this investment.

Conclusion

The aims and objectives of sustainable development within the NPPF are undermined by having no examination by Bristol Airport of low-cost parking for local use of the public transport interchange.

The Green Belt is being eroded through Permitted Development Rights and Bristol Airport's Low-Cost Car Parking Strategy

Summary

The PCAA challenge the application in respect of Green Belt, Permitted Development and the airport's low-cost car parking strategy on the following grounds:

1. The granting of permitted development rights can be removed by NSC if it so wishes. Individual full applications can then be challenged especially if development is in the Green Belt. NSC has chosen not to do this in the recent past and, as a result, there has been runaway encroachment into Green Belt land at the airport. Details are given below. Furthermore, the airport is guilty of abusing the concept of Green Belt when it builds the Administration Block but resists the building of an MSCP on the South Side. Details below.
 - 1.1. The PCAA requests that NSC does a thorough review of the recent experience of permitted development and use of the Green Belt and subsequently withdraws permitted development rights.
2. The current owners of the airport bought the business knowing that access is poor and that it is surrounded by Green Belt land. They have no special rights to develop into the Green Belt and NSC must be even-handed when they grant the airport use of this land but restrict other land owners, even when both parties wish to use it for car parking.
 - 2.1. The PCAA should stop, now, allowing the airport to use Green Belt land for open-ground car parking and require them to build MSCPs
3. The airport continues to pursue a low-cost car parking strategy that is clearly in conflict with NSC and national policies: on reducing use of private cars; on encouraging use of public transport; on reducing carbon emissions; on use of the Green Belt; on safeguards for biodiversity; and others. There is no evidence of a comprehensive assessment of this strategy that includes the negative externalities and that seeks to validate a balance between economic and environmental considerations. And there exists a viable alternative – constrained levels of car parking and in MSCPs which would address most of the policy conflicts. The airport's strategy is one of 'business as usual' aimed at retaining high levels of car travel to fuel the airport's significant reliance and near monopoly on revenue from parking. Claims that building MSCPs is too expensive for the airport or the immediate parent company 'South West Airport Ltd' must be challenged – they may not wish to, but this private company should not, in effect, be given public subsidies to favour wealthier people (who fly away on holiday) whilst damaging local communities and the environment.
 - 3.1. The PCAA ask for a comprehensive evaluation of the impact of the low-cost car parking strategy leading to demands on the airport that they drop this strategy in favour of one that aligns much more closely with local and national policies.
4. The Silver Zone 2 car park, on Green Belt land, is not justified for many of the reasons touched on above, for example: there is an alternative (an MSCP);

passenger preference is no argument for damaging the environment and abandoning local and national policies; the biodiversity mitigation is inadequate. Further details below.

4.1. The PCAA asks that permission is refused as the case is not made.

5. Policy CS23 is the principal Core Strategy policy relating to development proposals at Bristol Airport. It states: *“Proposals for the development of Bristol Airport will be required to demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities and surface access infrastructure.”*

5.1. The PCAA consider that the application has failed to take sufficient account of many significant environmental and community issues and that there is no strong evidence that Policy CS23 has been adhered to.

Permitted Development

1. The PCAA argue strongly that the airport is eroding the green belt through Permitted Development Rights. In this position the airport can do whatever it wants and the public's interest in maintaining the Green Belt is ignored. Recent examples include the following which were allowed under Permitted Development with little or no effective challenge from NSC:
2. 16/P/0454/ PAI proposed resurfacing of land north of the Silver Zone for 200 car parking spaces, in green belt, on the south side. The planning consent of 2011 allowed for 12,000 car parking spaces on the south side in green belt. The PCAA commented on this proposal.
3. 17/P/2360/PAI for a proposed new aircraft stand on the south side in green belt, The number of aircraft parking stands allowed under the planning consent of 2011 was 33. It now totals 34. The PCAA commented on this proposal. No environmental impacts of an additional aircraft were taken into consideration.
4. 17/P/2360/PAI for a fire station to be relocated to a different site within the south side in green belt. It was larger than the consent granted in 2011 and lighting from this development was not examined in the application, although this was highlighted as an issue The PCAA commented on this proposal.
5. 18/P/3206/AIN for a new administration building and associated facilities. Under the planning consent of 2011 this building was located on the North side of the airport but the airport relocated it to the south side, in green belt. The building is far larger than the one which was granted consent. Comments by the Officer in the delegated report stated *‘the development would be very prominent when viewed from the A38 and we are concerned over a three-storey building being sited so close to this major road link and the effect of this on green belt openness.’* The PCAA commented on this proposal.
6. 18/P/4238/AIN for a car rental consolidation centre on the south side in green belt. Although granted consent in 2011, the consolidation centre was larger than

proposed originally. The PCCA commented on the proposals.

7. 18/P/5140/AIN for the development of 260 no. car parking spaces on more land in the Silver Zone, and in the green belt. The PCAA commented on this application.
8. The continued use of applications under permitted development regulations has undermined the green belt, as has the low-cost car parking strategy. The PCAA argues that North Somerset Council must retain powers over development which the airport would like to be considered as permitted development due to the adverse impacts of increasing carbon emissions, increasing noise, visual impacts to the AONB, loss of openness to the green belt and impacts to the community etc.

The low-cost parking strategy on green belt land

The PCAA request that the Silver Zone Extension Phase 2 for 2,700 car parking spaces is rejected and object to the arguments put forward for more low-cost car parking on the following grounds:

1. Silver Zone phases 1 and 2 will have a total of 6,350 cars located in an environmentally sensitive area, as explained in the ecology and transport section on the green belt. Unless the low-cost car parking strategy is abandoned, the airport will gradually consume more and more land for car parking rather than construct MSCPs as passenger numbers grow to 20 mppa.
2. It is clear that an equitable balance was not struck, previously, between economics and environmental protection when green belt land was given up and alternative strategies were available. NSC are asked to undertake a very clear assessment of the relevant issues to prevent this happening again particularly in light of an 'Alternative site' being made available at Junction 21. **The PCAA request a through examination of Junction 21 as this might save the Green Belt.**
3. Placing 2700 cars on open land that can be seen from miles around (including the Mendip Hills). This cannot be judged, as claimed by the airport, to create '*minor harm to the openness of the green belt*'.
4. The airport claims that there is no suitable, available site outside the green belt. This should not be seen as a reason to release green belt land but a reason to build more MSCPs.
5. The airport requested use of the Silver Zone Extension Phase 1 'Cogloop Land' earlier than anticipated as a way of delaying the construction of a MSCP, which was a condition under the consent granted in 2011. If NSC now grants permission for Silver Zone 2, this may well again delay the construction of MSCPs and sacrifice green belt land unnecessarily.
6. Biodiversity mitigation of the Silver Zone Extension is inadequate and cannot replace the foraging required for the Greater and Lesser Horseshoe Bat (see Ecology Section).

7. The business model of the airport is heavily dependent on the near-monopoly that they have on car parking and the revenue this generates but NSC does not need to oblige the airport by granting permission for a dimension of their growth plan that delivers significant damage to the environment.
8. Low cost car parking is in direct conflict with and undermines the use of public transport. Public transport was only at 12.5% in 2017 and is expected to be 15% at 10 mppa and no better at 12 mppa. This underscores the lack of ambition by the airport as it is in their interests to retain heavy car usage. Note, there is no low-cost car parking even suggested for commuters and the local community to use the public transport hub.
9. Passenger preference for low-cost parking is not an argument for it to continue if it is in conflict with local and national policies.
10. Parking Demand 7.12 states that passengers from Cornwall and North Devon are on average in the lower quartile of household income in the UK. This may be correct but it ignores the fact that the people who fly the most are from socio-economic groups A, B and C1, the wealthier ones (ONS data). The low-cost parking policy predominantly subsidises the wealthy at the expense of the local community and the environment.
11. The airport is disingenuous in marshalling an argument in favour of attracting people from Wales, Devon and Cornwall whilst also reversing the argument in seeking to reduce road travel to Heathrow. If road travel to an airport is a big issue, development should be encouraged at Exeter, Newquay and Cardiff etc.
12. In the PCAA response to Your Airport: Your Views consultation held December 2017, we requested that there was a cost given on the negative externalities of airport operations. The PCAA request that a cost is given for the removal of the ecosystem services provided by the current 5.1 hectares of green belt land low cost parking for instance:
 - 12.1. Cost of loss of biodiversity due to lighting all year round of the existing seasonal Silver Zone and the further extension of the Silver Zone car park
 - 12.2. Loss of biodiversity due to the change of land use from agricultural rough pasture to car parking.
 - 12.3. Loss to air quality of removal of hedgerows and trees
 - 12.4. Loss of a carbon sink by the removal of hedgerows and trees
 - 12.5. Loss of a storm water filter due to the removal of hedgerows and trees
13. The new administration block is in the green belt by through use of permitted development regulations despite it being a blot on the landscape and affecting the 'openness of the greenbelt' close to the A38. The airport goes on to claim, however, that a low-cost car park can be constructed in the green belt which creates immense environmental harm. This biased argument must not be allowed to prevail.
14. The PCAA preference to resolve car parking at Bristol Airport is for an extension to the MSCP 3 on the North side.

Permitted Development:

This is to be read with the sub-section 'Permitted Developments' within the section titled 'The Green Belt is being eroded through Permitted Development Rights'. This section illustrates harm caused within the green belt through North Somerset Council having no power to constrain development or impose mitigation of the impacts of development.

Summary

1. The manner in which Bristol Airport has used permitted development regulations to grow to 10 mppa and to prepare for growth to 12 mppa shows that if North Somerset Council wishes to retain control over development, permitted development regulations must be removed for the period of growth to 12 mppa.
2. Although Bristol Airport wishes to be removed from the green belt, the application is being judged under policy CS23 in which the green belt is to be retained. It would be premature to judge the removal of the airport under the NS Local Plan 2036: Issues and Options document due to its infancy.
3. The PCAA are well aware of the implications of requesting that permitted development regulations are removed.
 - 3.1. The restricting of permitted development rights within the airport boundary would require a strong justification to be upheld at appeal
 - 3.2. Use of an Article 4 Direction which Local authorities do not often use due to fear of claims for compensation.
4. However, the speed and scale of the erosion of the green belt around the airport, through permitted development regulations, is such that North Somerset will need to justify in their response why it is not reasonable to remove these rights.
5. The PCAA, in our submission to planning application 09/P/1020/OT2, explicitly stated that the development outlined and granted consent was out of proportion to development to 10 mppa. The PCAA warned North Somerset Council that 33 aircraft stands which were included in the application would take passenger numbers to 12 mppa or perhaps beyond as aircraft become larger. The application is unclear how many aircraft are to be based at the airport in 2026.
6. Ostensibly the 2009 approval granted permission to provide facilities for the expansion of BA to 10 mppa at 2019/2020. But, as the PCAA has previously stressed and highlighted, the permission that was granted allowed growth of airport infrastructure to enable passenger growth well beyond 10 mppa. This application to 12 mppa (phase 1 of growth to 20 mppa) is again looking to put in place infrastructure for growth beyond 12 mppa.
7. We consider that the development now envisaged will not limit expansion to 12 mppa at the mid 2020's unless the infrastructure on the site is properly constrained. This can be achieved in large measure by removing use of permitted development rights and rejecting the request for further use of green belt land.

Comments on Permitted Development from the application

1. The Planning Statement: Airport Operational Boundary 3.3.44:
 - 1.1. *'In order to accurately reflect the operation of Bristol Airport at a passenger throughput of 12 mppa, it is proposed that the existing operational boundary of the airport is revised. This will allow BAL permitted development rights within the operational airport boundary thereby ensuring that it is able to fully and effectively respond to the future operational needs of the airport in a timely manner, facilitating the continued, efficient operation of the airport.'*
2. Unless permitted development regulations are removed the airport can prepare for future growth, beyond the passenger levels agreed by NSC, as seen under application 18/P/3206/AIN the new administration block. And this will be done without proper Local Authority control.
3. Environmental Impact Assessment: Scoping Report 'Proposed permitted development applications to 12 mppa' shows Table 2.2 'Proposals to be progressed under BAL's permitted development rights'. Here, the merging of application 09/P/1020/OT2 and 18/P/5118/OUT is clearly seen, for example through:
 - 3.1. the new administration building with visitor and staff car parking under growth to 10 mppa
 - 3.2. Stone Farm car parking (130 spaces)
 - 3.3. New bus access under growth to 12 mppa.
4. North Somerset Council must retain control as unintended consequences to the community or the environment may arise for example at Stone Farm which is close to Downside Road. The scale and nature of these developments bring considerable risk.
5. From the Proposed Planning Conditions in Planning Statement
 - 5.1. *'Permitted development 41. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 1995, or any order amending or revoking and re-enacting that Order, no development, other than that authorised by this planning permission, shall take place outside the 'Airport Operational Boundary' as shown in Drawing number [approved drawing number to be inserted] without the permission, in writing, of the Local Planning Authority'*
6. This condition is meaningless. If Bristol Airport submit an application under Permitted Development Regulations within or outside the Airport Operational Boundary, it will be exceedingly difficult for North Somerset Council to refuse permission. Permitted Development Regulations are exceedingly generous to airports and ignore environmental impacts.
7. The application needs to include any intended permitted development work as part of the airport expansion with the ES assessment otherwise the NSC will not have understanding of what they are consenting to and what the likely significant effects will be.

Noise

Summary

Growth beyond 10 mppa will introduce a change so great that there will be no respite for residents from ground and air noise for a continuous period 24/7. There will be a flight every three minutes in a 16 hour day with some points within the night time period having a flight every ten minutes over several hours.

In this context, PCAA challenge the application in the ways summarised below. Further detail is given in the body of this section which contains additional challenges not summarised in this summary list.

1. The airport's modelling of the future noise environment is based on a modernised fleet of aircrafts being introduced under both the 10 mppa and 12 mppa scenarios. The introduction of these aircrafts is dependent on individual airlines and not on Bristol Airport and cannot be guaranteed. Indeed Bristol Airport is in competition for the introduction of a modern fleet of planes with most airports in the UK who are also expanding or are seeking to expand.
 - NSC must see and consider the noise environment without the modernised fleet as this is the most realistic assumption
 - The noise assessment does not consider seasonal and hourly differences and this needs to be rectified
2. Night noise is one of the most significant complaints from residents across a large area, particularly in the summer months. Bristol Airport wishes to increase night flights in the summer as the planning condition is now beginning to bite
 - At the very least, NSC must not weaken this constraint and the PCAA call for a reduction in the night movement limit to 2,500. This would be the first step towards a night time ban.
3. Government guidance on developments with high levels of noise pollution is to include a health assessment, recognising that *'noise is associated with a range of effects on health. The three health effects currently valued are heart attacks, strokes and dementia.'* The World Health Organisation (WHO) recognises noise impacts as *'the second-biggest environmental health threat. Exposure to aircraft noise can lead to short term responses such as sleep disturbance, annoyance, and learning impairment, while long-term exposure is associated with increased risk of high blood pressure, heart disease, heart attack, stroke, and dementia'*.
 - NSC needs to call for a much more thorough assessment of health impacts using noise values within the latest Government and WHO guidelines
4. WHO and Government guidelines state that maximum noise event values and frequency distribution should be considered in respect of noise disturbance, especially at night. Furthermore, that 51dB should be seen as the onset of daytime noise disturbance and 45dB at night
 - NSC needs to assess the impact of noise using up-to-date values for the onset and level of disturbance experienced by residents, not least to align with NSC Core Strategies objectives 'Ensuring Safe and Healthy Communities'.

5. NSC, at the time of planning consent in 2011, failed to recognise the significance of the impacts of noise from the Eastern apron on residents, beyond 9 mppa. In addition, NSC failed to act on statements in the 2006 Master Plan that development from 9 mppa would be on the south side. No explanation is now provided for why development on the north side is taking place rather than the south side.
 - NSC needs to apply conditions to avoid these problems being repeated along with conditions on use of APUs and the number of aircraft stands
6. The ground noise maps show that ground noise is extensive as is air noise. Figure 7.6 shows that air noise covers the area from Weston to Bath. The cumulative impacts of air and ground noise have not been considered.
 - NSC needs to review in greater detail the impact of ground noise and include the cumulative impact alongside other noise sources producing a map of the total impact of noise received – air, ground and road.
7. CAP1616 concerns the introduction of new airspace changes and should be part of this consultation because new communities are threatened with being over flown and existing communities are threatened with noise intensification.
 - NSC needs to request and review, and make available to the public, data that explains the impact of CAP1616 on neighbouring communities
8. The noise compensation scheme, although enhanced from previously, is wholly inadequate and well below the figures given in the Treasury Green Book. Also, the start level of 57dB needs to be reduced in line with Government guidelines.
 - NSC needs to ensure the establishment of a scheme that reflects the true nature of the impact of high noise levels, including reductions in house valuations.
9. The monitoring points for noise disturbance need to be expanded. Ground noise can be heard from far away but is not monitored there, likewise night noise. Insufficient monitoring takes place along the line of the runway
 - NSC needs to place conditions to ensure improved monitoring and review.

Introduction

1. The Aviation Policy Framework (APF), March 2013 states:
‘The Government recognises that noise is the primary concern of local communities near airports and we take it seriously. As a general principle, the Government therefore expects that future growth in aviation should ensure that benefits are shared between the aviation industry and local communities. This means that the industry must continue to reduce and mitigate noise as airport capacity grows’. Bristol Airport's proposal contradicts this, for example by **increasing** noise pollution, especially during summer nights
2. Additionally, the APF states:
‘Before taking on any future new airport capacity, the Government will want to have a thorough understanding of the local environmental impacts of any proposals’.

3. People hear aircraft noise as a discrete number of noisy events with associated noise levels, durations and characteristics and are impacted by the frequency of occurrence of these noisy events compared to the background or ambient noise levels. People do not perceive aircraft noise as equivalent average noise levels over 16 hours in a day and the hours of night although this continues to be the misleading way in which noise data is presented by the airport. The WHO recommendation should be acted upon that average noise levels like the *L_{den}* or *L_{night}* indicators may not be the best to explain a particular noise effect and that single-event noise indicators – such as the maximum sound pressure level (*L_{A,max}*) and its frequency distribution – are warranted for example for night-time aircraft noise events that can clearly elicit awakenings and other physiological reactions that are mostly determined by *L_{A,max}*. [WHO Environmental Noise Guidelines for the European Region, 2018]
4. Bristol Airport is situated in rural surroundings where people have chosen to live to enjoy the quality of life and tranquillity afforded by low background noise levels. The planning application will give rise to an increase in aircraft movements from 2017 the baseline year of 76,212 air transport movements to 97,393 atm's at 12 mppa in 2026, a 28% increase.
5. It is clear that this will increase the adverse noise around the airport and under the flight paths. The planning application relies heavily on very optimistic assumptions about the future introduction of less noisy aircraft. However, even where new, less-noisy aircraft are introduced, the reduction in noise intensity of each aircraft, as heard by people around the airport and under flight paths, would be hardly perceptible and swamped by the increase in numbers.
6. The important point to note is that any further growth beyond 10 mppa takes away any respite from aircraft noise for residents. This is a transformative physical change to the noise environment. The PCAA question how residents will be able to enjoy their homes and gardens and local green spaces such as Felton Common and Goblin Combe.
7. The word respite has hardly been mentioned in any of the documents online and only in para 2.6 (p40) of the draft Noise Action Plan 2019 – 2024, where the airport offers to look at alternative flight paths for purposes of respite for implementation by 2026/27. This is a ridiculously long time to wait when the impacts of growth are so significant and there are other ways of seeking to provide respite that have not been considered.
8. The Environmental Statement 7.10.67 states: *'It has been assumed that the same proportion of the aircraft fleet has been modernised in both 2026 scenarios. In practice it is likely that modernisation would occur at a slower rate if passenger throughput were constrained to 10 mppa. This is because the likelihood that more modern, quieter aircraft will be allocated to Bristol Airport is reduced since no potential of growth for the airline will be present. Airlines are already securing flights to destinations and associated 'slots' at airports as far ahead as summer 2020 at the time of writing. If an airline can be assured growth at another airport it may seek to deliver a competitive advantage to secure capacity now. As airports are coming under increased pressure to reduce noise impacts, securing more*

modern aircraft fleets coupled with growth is a key way in which this can occur sustainably. Therefore, the 10 mppa 2026 scenario is a worst-case comparison for the 12 mppa scenario as the expectation of aircraft modernisation is similar. This point appears very much to be a ransom note. The PCAA has asked Bristol Airport within Airport Consultative Committee meetings for a commitment to phasing new aircraft but it is simply beyond the power of Bristol Airport to force airlines to bring modern, quieter planes to the airport. Seeking to convince local communities that a busier airport will bring overall noise reduction is underhand and misleading.

9. The PCAA know that Luton, Gatwick, Birmingham, Manchester, East Midlands and Stansted airport are all expanding. Stansted Airport is a base for Ryanair and Easyjet is at Luton Airport. There is absolutely no guarantee, with all airports expanding, that modern quieter plane will come here for 2026.
10. The noise calculations are based on an assumption that the aircraft fleet has been modernised in both 2026 scenarios – (i) the airport remains capped at 2026 with 86,973 atm's and (ii) with additional air transport movements of 10,420 atm's to make a total of 97,393 at 12 mppa.
11. This assumption is totally unrealistic. Bristol Airport is powerless to influence airlines in bringing in modern, quieter aircraft and is competing with other airports. The green paper published December 2018 titled 'Aviation 2050: The future of UK Aviation' recognises that there is a time lag with the introduction of new technology and a fleet of modern quieter aircraft. The Committee on Climate Change also recognises there is often a long lead time between order and delivery of a new aircraft. In addition, the long service life of aircraft compared to most other vehicles means that it takes longer for new technologies to imbed. It is generally accepted that a fleet change can take at least ten years. This means that the fleet would not be modernised under the 12 mppa scenario at 2026 but more likely by 2030 or beyond. The ES must include a worse case scenario assessment of noise if no quieter aircraft are in place.
12. The conclusion the PCAA draw is that any assumption about modernising the fleet under the 10 mppa scenarios at 2026 and 12 mppa at 2026 may be totally incorrect. In reality residents, schools, places of worship and amenity areas may all receive noise levels which show a 3 dB increase.
13. If the data for noise is incorrect or based on unrealistic assumptions, the data will also be incorrect on greenhouse gases as the two are interconnected through the modernity of the aircraft fleet.

Government policy and emerging policy

1. Government policy on aviation noise has been undergoing significant changes both for Airspace Policy and Aviation Strategy, leading to a revised Aviation Policy Strategy in 2019. These changes are designed to increase community protection against noise harms and can be summarised as follows:
 - 1.1. The introduction of improved noise metrics and appraisal guidance
 - 1.2. Lower threshold for the onset of community annoyance

- 1.3. The number of flights has to be taken into account, not just average noise levels.
 - 1.4. Noise becomes a priority up to 7,000 ft – raised from 4,000 ft
 - 1.5. Health impacts and quality of life factors are now included.
2. The Chief Medical Officer's report 2017 'Health Impacts of All Pollution – what do we know?' states that the Local Authority has a responsibility to mitigate pollution such as noise from airports and the health impacts of airports.
3. Of particular significance is the lowering of threshold levels and the inclusion of the number of flights in assessing harm caused. The DfT now accepts that '*recent evidence suggests people are becoming more sensitive to noise at lower levels and that the number of flights overhead can be a more significant factor than the average noise level*'. WHO Environmental Noise Guidelines for the European Region, 2018
4. Bristol Airport has recently sent to the DfT their Noise Action Plan 2019 -2024. Under a Freedom of Information request the PCAA eventually obtained the submission of NSC to the BA Noise Action Plan:
 - 4.1. *'Please find below the consultation response from North Somerset Council's Environmental Protection and the Director of Public Health on the Draft Noise Action Plan, 2019 - 2024.*
 - 4.2. *Overall, the Draft Noise Action Plan is well written and puts noise from the airport, the legislative framework and measures implemented by the airport to mitigate the noise impact in context. It is also welcomed that additional actions are being put in place to mitigate the noise impact further.*
 - 4.3. *We also have the following points to make:*
 - 4.3.1. *Where progress is reported against KPI's it would be useful to include that data in the action plan, which would help to show the progress being made.*
 - 4.3.2. *We welcome the action to review the Ground Noise Management Strategy.*
 - 4.3.3. *It would be useful to include a separate table which summarises all of the new actions. It would also be useful to prioritise all of the actions to those which Bristol Airport consider to be high, medium and low priority.*
 - 4.3.4. *In the Progress Today, column of action 3.1 it should read Bath & North East Somerset.'*
5. The PCAA view this response as totally inadequate and a failure to respond as outlined by the Chief Medical Officer's report. NSC has a duty to residents within the area and is failing dismally. There is not one mention of health impacts, the loss of tranquillity from growth beyond 10 mppa or the impacts of night flights. Furthermore, the response written does not reflect one of the key NSC Core Strategies objectives of '*Ensuring, Safe and Healthy Communities*'.
6. The BA Noise Action Plan stated that the PCAA are fully aware that airspace changes are to be delivered under the CAP1616 process and that management '*would begin looking at alternative flight paths for respite purposes with a view*

for implementation by 2026/27'. And 'The Airport will seek to introduce RNAV routes for arrivals and departures by 2026/27'. These actions highlighted for 2026/27 are in part connected to the CAP1616 Airspace Change process which has become effective on 2nd January 2018. Bristol Airport now has to comply with CAP1616 and has commenced that process. At the Airport Consultative Committee meeting held on 31 October 2018 a presentation was given on the CAP1616. The draft minutes on the presentation stated 'The scope of the process was explained, with a Level one change (effecting traffic patterns below 7,000ft) having the highest impact and, therefore, level of scrutiny. This would include a requirement for an environmental assessment and, usually, a 12 week public consultation period. The seven stages of the process were outlined from Developing and Assessing Airspace Change through to Implementation and Review. At several points the process to date would need to be approved, before moving to the next stage. The timescale for implementing Airspace change could be several years. It was a robust, transparent and inclusive process, with a consultation hub and documents being made available online. It ensured that noise impacts below 7,000ft were prioritised'.

7. The PCAA question why previous airport consultations such as Your Airport: Your Views I and II has no references to airspace changes. The BA Noise Action Plan is now out of date as airspace changes are being made.
8. The PCAA question the statement by Bristol Airport management team that the *'The timescale for implementing Airspace change could be several years'*. If it took four years to complete from commencement in late summer 2018 it would fall within the BA Noise Action Plan and without doubt fall within this planning application. An email response from the Head of Sustainability stated *'In reality, this might be delivered earlier as the airport is following the FASI South programme as invited by the Department of Transport.*
9. The PCAA believe that it is essential that parishes have details of the airspace changes in order to inform their residents on how to respond to this application.
10. There is a strong possibility that parishes and new communities who are not currently affected by airport activities, especially noise, will be affected by these airspace changes. It is vital that these new parishes and communities are made aware of the planning application.
11. Again, the PCAA believe that the planning application is premature due to the CAP1616 Airspace Changes.

Noise annoyance

1. Noise is generally defined as unwanted sound that is loud and unpleasant or that causes disturbance. Aircraft are inherently noisy machines. Aircraft noise is not only loud; it also has a large, low frequency content. Low frequency noise encounters less absorption than higher frequencies as it travels through the air, so it persists for longer distances. Additionally, the amount of noise transmitted from the outside to the inside of buildings is greater at lower frequencies than at higher

frequencies. Furthermore, modern high ratio bypass turbofan aircraft engines are characterised by a tonal whine feature which increases the annoyance.

2. Additionally, the area around Bristol Airport is rural in nature so people do not experience noise in an averaged manner as might be the case for those with high levels of constant background noise.

Air Noise: Why noise matters – health impacts – World Health Organisation (WHO): Core Strategy priority objective ‘Ensuring, Safe and Health Communities’

1. Noise impacts on both physical and mental health and is described by the World Health Organisation (WHO) as the second-biggest environmental health threat. Exposure to aircraft noise can lead to short term responses such as sleep disturbance, annoyance, and learning impairment, while long-term exposure is associated with increased risk of high blood pressure, heart disease, heart attack, stroke, and dementia.
2. The WHO Europe in October 2018 published the following guide lines and recommendations for airport noise:
 - 2.1. For noise exposure averaged across the day, evening and night (Lden), the guidelines strongly recommend reducing noise levels to below 45 dB Lden, as aircraft noise above this level is associated with adverse health effects.
 - 2.2. For night noise exposure, the guidelines strongly recommend reducing noise levels to below 40 dB Lnight, as aircraft noise above this level is associated with adverse effects on sleep.
 - 2.3. The WHO recommendation should be acted upon that average noise levels like the Lden or Lnight indicators may not be the best to explain a particular noise effect and that single-event noise indicators – such as the maximum sound pressure level (LA,max) and its frequency distribution – are warranted for example for night-time aircraft noise events that can clearly elicit awakenings and other physiological reactions that are mostly determined by LA,max. [WHO Environmental Noise Guidelines for the European Region, 2018]
3. To reduce health effects, the WHO guidelines recommend *‘that policy-makers implement suitable measures to reduce noise exposure from aircraft in the population exposed to levels above the guideline values for average and night noise’*

Air Noise (ES Vol 1, Chapter 7)

1. The proposed development admits that daytime air noise will differ between the 12 mppa and 10 mppa scenarios in 2026. There is to be an increase in noise of between 0 to 2 dB. The number of properties will also rise by nearly 1,000 dwellings to 3,100 properties. Dwellings exposed to night noise will increase by 1000 properties to 5,050.
2. The conclusion by the ES is that the noise impacts are low but this is heavily disputed by the following important points:

- 2.1. As stated above, there is an assumption of a modern quieter fleet which cannot be guaranteed
- 2.2. A point not considered in the ES is that all respite from air noise during the day has been taken away with an increase of flights from 10 mppa to 12 mppa of 10,420 movements.
- 2.3. Cumulative impacts of ground noise at the same time as air noise have not been taken into consideration
- 2.4. Cumulative impacts of increased atm's has not been considered in respect of an increase of 60,000 flights since 2008.
- 2.5. The important point that the increase in frequency of flights has not been considered, only the impacts of an average of noise are considered.
- 2.6. There appears to be no understanding by the Airport and the Local Authority that many of the dwellings and a large proportion of residents were in situ before the airport came into existence. It is the airport that is causing all the problems and not the other way round. There is no recognition that noise impacts affect house prices and the devaluation of property has been completely ignored within the application.

Long term noise monitoring (ES Appendix 7A)

1. The PCAA object to this sentence within paragraph 7.4.8. *'The A38 in particular is a major contributor to the baseline noise environment close to Bristol Airport, with the M5 and A370 also contributing significantly to the noise environment to the west of Bristol Airport'*. The M5 has no bearing on the noise environment surrounding Bristol Airport whilst the A370 very little. Much of the noise from the A38 is due to the vehicle travel to and from the airport. If noise data from the M5 has been included within the noise statistics, the PCAA request that the noise studies are redone.
2. The PCAA note the baseline noise levels were recorded over the period 13 March to 5 April 2018 during the winter months. This period did cover the Easter weekend, but Easter was unusually early in 2018. The PCAA note that the airport registered 438 fewer flights in 2018 than in 2017. The airport has been highly selective in choosing when to monitor baseline noise levels and question why a summer month was not selected. (Reference: Aircraft Movement Comparison from the Airport Consultative Committee papers Wednesday, 25 April 2018.)
3. Figure 6.1 from application 18/P/3502/EA2 and table 7C.2 below show the incomplete picture of monitors positioned to record base line noise levels. There is an absence of a monitor to the West and South West, along the line of the runway and main flight path. The PCAA request that a 360° picture of the noise baseline is undertaken and resubmitted.

Table 7C.2 Long-term noise monitoring locations

Receptor	Location	Date of Survey
A	Cooks Bridle Path, Downside	14 March 2018 to 4 April 2018
B	Downside Road, Lulsgate Bottom	13 March 2018 to 5 April 2018
C	School Lane, Lulsgate	13 March 2018 to 5 April

	Bottom	2018
D	Red Hill (A38), Redhill	14 March 2018 to 5 April 2018

4. Ground noise was measured for one day only and will not have reflected a true measurement of ground noise as it will only have registered the use of one runway, either 27 or runway 09, according to the wind.

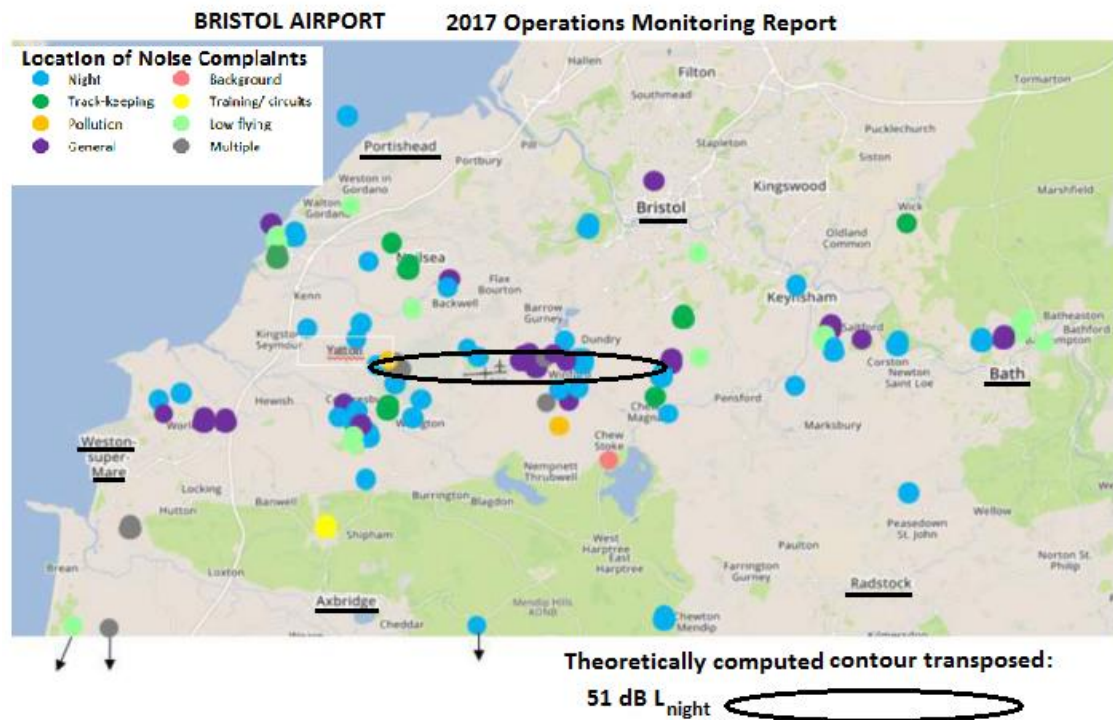
Ground Noise

1. Ground noise assessments have been based on forecast aircraft movement data, while assessments for 2017 have been based on actual data. For ground noise the ZoI considered consists of a 6km square centred on the Bristol Airport runway. Yet only one day-time noise survey was undertaken on 26 July 2018. with measurements taken at a distance of approximately 40 m from the centre of the apron. If the ZoI is 6 km surely ground noise should be measured from this distance. Long term monitoring, as shown by the table 7C.2 was taken over a number of days.
2. The results indicate that the general ambient noise level around Bristol Airport lies in the range of 50 to 60 dB LAeq during daytime with an underlying background noise level in the range 35 to 50 dB LAF90. But there is additional air noise from flights.
3. During the night, ambient noise levels generally lie in the range 45 to 55 dB LAeq, with background levels generally around 35 to 45 dB LAF90. But a flight movement or event generates noise of over 70 dB and will become the dominant noise heard, not allowing windows to be opened at night.
4. Results of the ground noise survey are given in Table 7C.19 within the Environmental Statement 7. These have been processed to present the loudest 10 seconds around the aircraft ground noise event, in order to exclude noise from other sources and show that on average the loudest noise is 84 LASmax dB which will travel at least 6 km.
5. Ground noise is of great concern to residents and is becoming a continual noise nuisance throughout the day. It impacts on many dwellings now and this will increase with growth to 12 mppa. Some dwellings will be particularly exposed to ground noise at night.
6. No information is available on how the modern quieter flight will affect ground noise.
7. The use of Auxiliary Power Units (APUs) should be banned at Bristol Airport and only Fixed Electrical Ground Power be used at all time for all aircraft stands.
8. 5m high noise attenuation walls should be constructed not just on the Eastern and Western Apron but to the South West of the Western Apron.

Night Noise

1. Bristol Airport is well aware that residents want fewer flights at night, yet it has consistently ignored this issue. Night noise is a major problem now at 8 mppa before growth to 12 mppa. There have been three airport consultations this year in which the PCAA has highlighted the impacts of night flights on residents, calling for a reduction in night flights moving towards a night time ban.
2. The airport should be aware of the health impacts through well-evidenced papers that show that sleep disturbance and lack of respite from noise lead to stress and cardiovascular impacts.
 - 2.1. *"The Government recognises that noise from aircraft operations at night is widely regarded as the least acceptable aspect of aircraft operations [and will] will bear down on night noise accordingly."*
3. Night flights are restricted to a maximum of 3,000 flights in the summer and 1,000 flights in the winter. The purpose of this night flight restriction, with its separate summer and winter criteria, is to set a maximum on the night disturbance suffered by residents as a consequence of the airport's night time operations. Bristol Airport seeks, within the present numerical limit, to remove the seasonal constraint on night flights, but without increasing the overall maximum number of flights, and they are seeking permission for an annual cap of 4,000 night flights. **The PCAA objects to this proposal in the strongest possible terms and calls for a reduction in night flights.**
4. There are serious objections to the noise criteria used to represent aviation noise pollution especially intrusion by noise at night:
 - 4.1. the use of modelling, untested by independent measurement;
 - 4.2. absence of any attempt to test the conclusions reached;
 - 4.3. the inadequacy of the criteria which the aviation industry uses (for details see above, *Air Noise: Why noise matters – health impacts – World Health Organisation (WHO): Core Strategy priority objective 'Ensuring, Safe and Health Communities'* para. 2.3
5. The inadequacy of the criteria can be seen from the airport's own published information. For example, the Operation Monitoring Report 2017 diagram, Figure 1 below, shows that night complaints come from an extremely wide area. The theoretically computed night noise contours are also published and a typical contour has been added to Figure 1 to emphasise the tremendous difference between the enormous area where night noise causes intrusion (coloured circles) and the very small area (black ellipse) where the possibility of night noise nuisance is officially admitted. [Further discussion can be found in the PCAA noise consultation response to Bristol Airport attached. Appendix 4.

Figure 1



6. To emphasise the seriousness of the **actual night noise problem** we have included some screen shots of the arrival and departure boards illustrating the high frequency of flights in and out of Lulsgate at times when North Somerset District Council residents might be expected to be trying to sleep. Figure 2 shows 18 arrivals between 23.25 and 03.50, an interruption roughly every 10 minutes on average!

Figure 2
Some of the arrivals, night of 18-19 July 2018

Malaga	Ryanair	FR 8122	23:25
Faro	Ryanair	FR 8249	23:40
Alicante	Ryanair	FR 8297	23:45
Flights from 19/07/2018 from 00:05			
Rhodes	TUI	TOM 6365	00:05
Faro	easyJet	EZY 6010	00:30
Heraklion	easyJet	EZY 6288	00:30
Kefalonia	easyJet	EZY 6134	00:40
Palma	easyJet	EZY 6046	00:55
Paphos	easyJet	EZY 6262	00:55 01:10
Ibiza	TUI	TOM 6315	00:55
Cape Verde	TUI	TOM 245	01:05
Alicante	easyJet	EZY 6076	01:15
Dalaman	easyJet	EZY 6272	01:15
Malaga	easyJet	EZY 6058	01:30
Larnaca	Thomascook	MT 1155	02:15
Rhodes	Thomascook	MT 1521	03:25
Larnaca	TUI	TOM 6391	03:40
Antalya	Thomascook	MT 115	03:50

Figure 3 shows the cluster of flights arriving before 23.30 hrs in order to avoid the movement limit. Many residents will be trying to get to sleep during this period.

Slot Allocation which has been established at Bristol Airport has not helped flight arrivals between 23.00 – 23.30 hrs but has led to a cluster effect where airlines seek to arrive before 23.00 hrs or within the slot allocation period.

Figure 3
High frequency of arrivals before the official "night flight" period

bristolairport.co.uk			
Mahon	easyJet	EZY 6090	22:15
Newcastle	easyJet	EZY 569	22:25
Tenerife	Thomascook	MT 1423	22:30
Zakynthos	TUI	TOM 6533	22:30
Malaga	Ryanair	FR 8122	22:35
Belfast Intl	easyJet	EZY 450	22:45 23:15
Glasgow	easyJet	EZY 408	22:50
Madrid	easyJet	EZY 6036	23:00
Prague	easyJet	EZY 6268	23:00
Burgas	TUI	TOM 6513	23:00
Palma	Ryanair	FR 8245	23:20
Antalya	TUI	TOM 655	23:25
Barcelona	easyJet	EZY 6030	23:30
Flights from 08/09/2018 from 00:10			
Naples	TUI	TOM 6571	00:10
Faro	easyJet	EZY 6010	00:35
Corfu	easyJet	EZY 6212	00:55
Palma	easyJet	EZY 6046	01:15
Alicante	easyJet	EZY 6076	01:15
Malaga	easyJet	EZY 6058	01:30

As Figure 4 shows, there is no period of night in which residents can sleep without being disturbed by aircraft noise. Note the early morning flights before 06.00 hr.

Figure 4
High frequency of early morning flights

Prague	easyJet	EZY 6268	23:00
Burgas	TUI	TOM 6513	23:00
Palma	Ryanair	FR 8245	23:20
Antalya	TUI	TOM 655	23:25
Barcelona	easyJet	EZY 6030	23:30
Flights from 08/09/2018 from 00:10			
Naples	TUI	TOM 6571	00:10
Faro	easyJet	EZY 6010	00:35
Corfu	easyJet	EZY 6212	00:55
Palma	easyJet	EZY 6046	01:15
Alicante	easyJet	EZY 6076	01:15
Malaga	easyJet	EZY 6058	01:30
Malaga	British Airways	BA 7340	02:45
Dalaman	Thomascook	MT 837	04:10
Antalya	Thomascook	MT 115	04:25
Sanford	TUI	TOM 453	05:30

7. The planning application includes a long list of developments distant from the airport (Appendix 18A) that may require special treatment as a result of the impact of airport noise. This underlines the importance of the noise issue and the large distances from the airport that noise travels. The developments range from a medical centre, a primary school with Nursery and Autistic Condition Spectrum, new dairy unit at Stanton Drew, housing in Yatton, Keynsham, Whitchurch and Bath. Bath is also a World Heritage site. These developments extend to 15 km from the airport. Yet, as shown, measurement and monitoring of noise is within a very small area.
8. The experience of the PCAA is that most local residents are reluctant to use the airport's complaint system and if they do, they have seen no change in their noise environment. In fact it has got worse as the airport grows and as aircraft movements increase. Complaints, however, are often given in respect of night noise. For example:
 - 8.1. In 2016 departures before 06.00 commenced and there was a spike in noise complaints. These complaints were reported to the Airport Consultative Committee. The management team stated they would work with the airlines to try to alter early morning departure flights. These talks were unsuccessful and

- in 2017 more early departure flights were introduced and again in 2018, see Figure 4 above.
- 8.2. In June 2017 the UEFA Champions' League Final was held in Cardiff. There was a large increase in night flights which accompanied a spike in complaints. These flights were within the night quotas. This again was brought up at the July 2017 Airport Consultative Committee. The minutes state that *'Airport management did try to work with airlines to try and alter times but this was often difficult to achieve'*. The PCAA would point out that it has never been achieved and communities surrounding the airport suffer the consequences, with little chance of this changing.
9. Bristol Airport is overwhelmingly a leisure airport with only 17% of travel being from the business sector. The flights taken at night are charter flights to /from holiday destinations. These are not business travel flights. Why should residents help to subsidise low-cost holiday travellers (taking money out of the country) by sacrificing their hours of sleep?
10. Bristol Airport argue that the current restrictions on flights at night constrain growth but this takes no account of the balance achieved by the condition of a 4,000 movement limit - 3,000 flights for the summer and 1,000 for the winter. During Summer 2017 use was 99.7% of the available 3000-night movements and residents suffered many disturbed nights. The rolling annual cap of 4,000-night flights sought by Bristol Airport is for long and short haul flights. The majority are leisure flights.
11. Why should a Local Authority remove a condition which protects local parishes just because the developer reaches the limit of that condition, particularly as residents have problems sleeping now and are calling for a reduction in night time flights? The whole purpose of the condition is to achieve a balance and the fact that this introduces a constraint to the airport indicates that the condition is working. Otherwise it would be meaningless.
12. There has been a record number of noise complaints from parishes in the summer of 2018, particularly concerning night flying and we highlight Cleve Parish Council as an example. In addition, residents have made the effort to attend parish meetings to complain.
13. We recognise that summer 2018 was a hot summer and that residents wanted to have their windows open, to which they have a right. The indications from the latest climate report for the UK from the Meteorological Office are that the UK summers will be hotter in the future. In order for residents to sleep without disturbance from aircraft noise, aircraft movements should be reduced and banned.
14. Other airports do operate with a night time ban. Recently, for example, Ciampino in Italy which from December 2018 has banned night flights from 23.00 to 06.00. There is also to be a 3% reduction in flights during the day from 2020 due to impacts of noise on residents. Other airports operate stricter night time bans such as Geneva airport.

15. The National Policy Statement sets out measures for Heathrow to include an expected six and a half hour ban on scheduled night flights landing or taking off between the hours of 11 pm and 7 am. The PCAA cannot see why residents surrounding Bristol Airport should be treated differently.
16. Note, the airport currently only has two Airbus 320/321neo operating at Bristol Airport (and they do not even carry out all four rotations to the airport within a day). There is an assumption that these aircraft will be in operation for growth to 12 mppa but there is no certainty, therefore noise calculations within the ES 7 are overly optimistic and based on unrealistic assumptions. The more realistic case of growth without flight modernisation needs to be presented and the implications need to be fully assessed.
17. The PCAA believes that a balance has not been struck under the present night flight movement limit and requests that night flights are reduced on the following grounds.
 - 17.1. Bristol Airport is a leisure airport with only 16.5% of travel being from the business sector. The flights taken at night are charter flights to holiday destinations. These are not business travel flights.
18. The PCAA do not believe a fair balance has been struck here, particularly as the proposed changes to the movement limit affect residents in the summer months with their windows open. Bristol is not Heathrow Airport and the economic interests of the country are not dependent on it. Heathrow has a cap of at least five hours without any flights.

Cumulative impacts – Western apron and Eastern apron

1. The ground engine noise before take off and landing and taxiing is now heard over an increasingly large area. For instance, when runway 09 is in operation the background noise or ground noise can be heard as far as the A370. This noise can continue all day and is accompanied by noise from flights arriving. The cumulative impact of this noise has not been taken into account.
2. The Eastern apron is only due to be completed in 2019 and the noise implications from these stands will be high. The 2006 – 2030 Master Plan forecasted growth to 12 mppa by 2030 (and this is now predicted for the mid 2020's) and stated that the growth 'will be associated with an increase in the number of people adversely affected by noise'. The RASCO study at that time estimated that the number of people expected to fall within the 57-dBA contour would rise to 3,500. This is a significant number of people. The airport in the previous Master Plan stated that from 9 mppa development would be on the south side so that the noise climate would not deteriorate post 9 mppa. The airport is now expected to reach 8.7 mppa this year (2018) and the eastern apron is only to open sometime in 2019.
3. The Ground Noise Management Strategy (2012), part of the agreement to the planning consent of 2011, was inadequate as it failed to take into account the cumulative impacts of ground/background noise from aircraft alongside flights arriving and departing. The Ground Management Plan was to install noise attenuation walls. No attenuation wall in this Plan was envisaged to the south

West to stop noise cascading towards the A370. A review of the Management Plan is only commencing in 2019!

4. The point to note here is that North Somerset Council has totally failed to take account of noise beyond 9 mppa and has allowed construction of the Eastern apron, on the North side, to be granted under the planning permission of 2011. North Somerset Council should have noticed the following points:
 - 4.1. As the PCAA stated in our 2009 response, the infrastructure being constructed was not for 9 or 10 mppa but, as we suggested, towards 12 – 15 mppa
 - 4.2. The implications of noise on residents from 9 mppa as stated in the 2006 – 2030 Master Plan specifically included that development should seek to reduce impacts and be on the south side. The PCAA can no longer buy into the argument that the airport wants to protect the green belt as they have demonstrated, through the use of permitted development rights, that development will occur in the green belt whether we like it or not. Thus development should be placed on the south side to reduce noise.
5. The 2017 Bristol Airport Operations Monitoring Report states '*Complaints about ground noise. As noted in section 11 there was no specific complaint about ground noise in 2017.*' This simply is inaccurate.
6. The PCAA has asked for clarification in the draft Noise Action Plan of the definitions of ground noise and background noise. Residents hearing a noise from the airport will assume that, once it is not an aircraft directly overhead, it is a background noise which is more than likely ground noise. So not to put background noise as a description from residents is very disingenuous. A resident has written many letters on this issue and received responses with the noise referred to in the letters as '*background noise*'. Letters received from the airport were dated 26 May, 5 September and 31 August 2017 all recognising background noise as a formal complaint. Appendix 6 shows letters responding to background/ground noise.
7. The Planning Statement states that '*As a worst case, the combination of the potential changes in air quality, noise, vibration, visual, land quality, water quality and flood risk for most of the human receptors on and surrounding the application site is considered to result in minor effects that are not significant*' and that '*All impacts including cumulative impacts have been considered and the planning balance applied*'.
8. The PCAA reject the notion that planning balance has considered the cumulative impacts of growth for the following reason:
 - 8.1. Growth from 60,000 aircraft movements from a 2005-2008 peak has not been considered. There is a cumulative effect, year on year, in which tranquillity is slowly being removed from residents through aircraft movements and increasing ground noise activities.

Complaints

1. The online website complaint system is difficult to find on the Bristol Airport website and not easy to navigate. The system has been out of operation on several occasions recently. It is essential that the telephone complaint service is maintained.
2. People have almost given up using the service as, although complaints are registered and reported to the Airport Consultative Committee, no change in procedures occurs. This has been highlighted in the night noise section but repeated here:
 - 2.1. In 2016 departures before 06.00 commenced. There was a spike in noise complaints. These complaints were reported to the Airport Consultative Committee. The management team stated they would work with the airlines to try to alter early morning departure flights. These talks were unsuccessful and in 2017 more early departure flights were introduced and again in 2018.
 - 2.2. In June 2017 the UEFA Champions League Final was held in Cardiff. There was a large increase in night flights which accompanied a spike in complaints. These flights were within the night quotas. The impact on residents from the night flights was brought up at the July 2017 Airport Consultative Committee. The minutes state that *'Airport management did try to work with airlines to try and alter times but this was often difficult to achieve'*. The PCAA would point out that it has never been achieved and communities surrounding the airport suffer the consequences.
 - 2.3. Another example is of a complaint about noise caused within the shoulder period of 06.00 – 07.00 hrs, during the official hours of night. The complaint is dated 09/08/2018. The email is below and shows that in certain periods of the day residents within the 54 and 57 dB contour are regularly hearing noise at least 3 dB above their contour level.

'Disturbance from aircraft'

Thank you for contacting the Bristol Airport noise complaint service regarding disturbance from aircraft. Your concerns have been logged and will be included in our statistics which are publicly reported to the Airport Consultative Committee.

I have logged your recent complaint about noise levels on the 30th July 2018.

In response to your questions the average decibel levels between 6am and 7am, and 7am and 8am at the Congresbury noise monitor were as follows:'

Location ID	Location Description	Date Time	Total Leq	Aircraft Leq	Aircraft Leq Count
2	Congresbury	30/07/2018 06:00	62.3	61.2	17
2	Congresbury	30/07/2018 07:00	64.7	60.2	14
2	Congresbury	30/07/2018 08:00	61.1	52.9	3

Table 1

The Congresbury monitor is approximately 3 miles from the airport and measures noise within the 54 dBl and 57 dBl contours. For two hours each date residents hear aircraft noise well above the contour in which they live.

Additional flights from 2017 will remove the quieter periods within the day such as 08.00 hrs. Many residents who will receive a 2 dB additional noise each day will change contour and should be entitled to compensation.

3. This complaint response indicates that the noise levels are going to be substantially higher. The PCAA question when there will be a period of at least 15 minutes of tranquillity when, on average throughout the day, there can be 8 arrivals and 8 departures within an hour.
4. As stated in the section 'Future Aircrafts' the new generation of aircraft are only 3dB quieter (see CAA email, below) although the aviation industry claims that '*new aircraft are 50% quieter*', based upon how aircraft noise is measured when manufactured. Noise is measured as pressure levels (noise energy) whereas what the human ear perceives is loudness (noise intensity).
5. Conclusion:
 - 5.1. The complaint section indicates that it is pointless for people to complain as nothing ever happens.
 - 5.2. The complaint shown above indicates that the noise levels are going to be substantially higher and that people close to the edge of a contour will receive substantial more noise throughout the day and pushed into a higher contour, for example from the 57 dB contour level into a 60 dB contour level.
 - 5.3. The airport never admits to being in the wrong for a flight deviation or low flying despite numerous challenges via the complaint system
 - 5.4. It's ability to fine air operators has never been implemented in recent years and is a perverse arrangement anyway. The airport will always be reluctant to fine its customers and this penalty needs to be administered by an independent body if it is to have any teeth.

Future Aircraft

1. Throughout the ES volume 1 chapter 7, there has been a constant reference to new, modern, quieter aircraft. These planes are the A320neo, A321neo and B737 –MAX8. Easyjet has 56% of all departing capacity at Bristol and Ryanair has 18%. The introduction of a new generation of aircraft brings two advantages: less noise and fewer emissions. These aircrafts have given rise to the aviation industry claim that '*new aircraft are 50% quieter*' which is based upon how aircraft noise is measured when manufactured. Noise is measured as pressure levels (noise energy) whereas what the human ear perceives is loudness (noise intensity). The two things are quite different.
2. Additionally, noise is measured in decibels using a logarithmic scale which introduces complications compared with a simple arithmetic comparison. When Bristol Airport claims 'new aircraft are 50% quieter' it is referring to a reduction in pressure level. A 50% reduction in noise pressure level (i.e. a halving) equates to 3 dB and a 3 dB change is the minimum change that is perceptible by the human ear. It would take a 10dB reduction in noise pressure to achieve a 50% reduction in loudness. The aviation sector is being less than honest implying that a 50% reduction in noise pressure levels means that 'new aircraft are 50% quieter'. They are not.

3. As the CAA stated in an email dated 6 November 2018:

‘Without knowing the specific details of any such claims made by airlines or airports, we agree that it is difficult to know what is meant by the statement “50 percent quieter”.

For example, the statement could be referring to a 50 percent reduction in noise energy or a 50 percent reduction in the perceived (subjective) loudness, which would correspond to a 3 decibel or 10 decibel reduction respectively.

As part of the ICAO noise certification tests, noise levels are recorded at two locations on take-off (‘Lateral’ and ‘Flyover’) and at one location on landing (‘Approach’). Because the two take-off noise levels are recorded at different locations and during different phases of the departure, it is common practice to arithmetically average both noise levels to obtain a single representative ‘Departure’ level.

As you can see, the A320neo model is at least 3 decibels quieter than the previous A320 model on both take-off and landing.

Aircraft Type	Registration	Certificated noise level, EPNdB			
		Lateral	Flyover	Avg. Dep.	Approach
A320-214	G-EZGX	93.1	83.3	88.2	95.2
A320-251N (neo)	G-UZHE	86.3	79.2	82.8	92.2

Noise level difference: -5.4 -3.0

4. But the level of noise is still high and communities under flight paths will still hear individual noise events with the average departure at 82.8 dB.
5. The PCAA do not believe that Easyjet will have replaced their fleet by the mid 2020’s as proposed as EasyJet has only a 100 aircraft on order which will be spread across UK airports. Likewise, Ryanair operates an old fleet and again the PCAA has no idea when the new generation B737 –MAX8 will be in operation and will replace the entire fleet. The B737 –Max8 are stated as being 3.0 dB less on departure and 2.2 dB less on arrival. These reductions would be effectively imperceptible since a change of 3 db is the minimum perceptible under normal conditions.
6. Conclusion:
- 6.1. These modern aircrafts are a little less noisy with a -3dB change but due to the increase in frequency of aircraft movements there will be no change to the noise environment but a worsening at 10 mppa and 12 mppa due to increased aircraft movements.

CAP1616

1. The PCAA are fully aware that airspace changes are to be delivered under the CAP1616 process which has commenced in September 2018. There is no mention of airspace changes within the application. Please see the draft Bristol Airport Noise Action Plan and comments on CAP1616 page 5.
2. The PCAA believe that, as CAP1616 is not within the application, a new application will have to be brought forward to implement these changes.
3. Wrington Parish Council has been assured from Bristol Airport in an email dated 19 December 2018 that *'To reach 12mppa airspace change is not required. A requirement for Noise Action Plans is, if major development is provided for at a (air)port during the time period of an existing adopted noise action plan then the noise action plan should be reviewed and updated where applicable as a result. This is what Bristol Airport will do if our planning application is successful. We have also notified Defra of our intent in this regard.'*
4. The PCAA believe that this information does not reflect the Green Paper published 17 December which states that a full planning application is required.
5. The PCAA believe that airspace changes should be part of the application so that new communities and residents under the current flight path are aware, now, of Bristol Airport's intentions. Change to flight paths is significant and a material consideration to the planning application thus if CAP1616 is within this planning application the accompanying environmental statement showing the development and mitigation in relation is out of date.
6. It is simply not good enough for the airport to say that this major CAP1616 change will be handled by subsequently reviewing the draft Noise Action Plan. The impact will be severe on a number of communities, the draft Plan has not yet been signed off by DEFRA and all of these issues should be considered at the same time as the current application to grow to 12mppa. More detail is needed, now, from the airport on the changes that will be required under CAP1616.
7. Conclusion
 - 7.1. The application is premature as airspace changes currently being undertaken by Bristol Airport under the CAP1616 process, have already commenced. These changes need to be reflected in the application.
 - 7.2. The PCAA want assurance from North Somerset Council that there will be no airspace changes to 10 mppa and beyond to 12 mppa before 2026. If there are to be airspace changes the public should be made aware now and a new planning application be submitted for growth to 12 mppa.

Growth in aircraft based at Bristol Airport

1. The 2009 planning application 09/P/1020/OT2 granted consent for 10 mppa and 33 aircraft stands to be based at the airport. Application 17/P/2360/PAI was for an additional aircraft stand giving a total of 34 aircraft based at the airport. In our response to application 09/P/1020/OT2 the PCAA stated *'Unless effective*

constraints are incorporated into any planning permission, further growth to 13.8 – 15.3 mppa may potentially occur when BIA desires it.’ The case remains today as aircraft get larger, for instance the A319neo has 140 seats, A320neo has 165 seats and the A321neo has 206 - 240. (Ref: www.airbus.com/aircraft/passenger-aircraft/a320-family/a318.html). Although larger planes mean fewer movements, problems arise from increased traffic on the road network and car parking on the green belt.

2. The Planning Statement for the current application states:
 - 2.1. 2.3.16 *‘The main charter operators, TUI and Thomas Cook, have expanded their services with additional based aircraft in recent years.’*
 - 2.2. 5.3.28 *‘Bristol Airport forecasts a growth in the number of based aircraft until 2026’*
3. The application states no new aircraft stands but *‘forecasts a growth in the number of based aircraft until 2026’*.
4. There has been no information given on helicopter movement, private jet movements or general aviation. The PCAA has requested information on the increases predicted in these movements to 12 mppa.
5. Conclusion
 - 5.1. The application fails to state the future number of aircraft based at the airport to 2026. The danger is that the airport will install infrastructure able to cope with demand above 12mppa, disguised within this application.
 - 5.2. The PCAA request a condition that states no new aircraft stands above the current 34 are allowed at the airport until 12 mppa is reached and that permitted development regulations are removed

Loss of value to properties - compensation

1. It is the PCAA’s understanding that from February 2017, the Department for Transport (DfT) proposed a number of changes to compensation and insulation policy. For example, rather than limit assistance towards the costs of noise insulation to homes affected by development, the DfT expressed a wish to see that provision is extended to homes affected by airspace changes.
2. The Green Paper published 17 December 2018, titled ‘Aviation 2050: The future of UK aviation’ also suggests that compensation should be given to residents through the following statement *‘the government wants to explore mechanisms by which airports could ‘pay for’ additional growth by means of local compensation as an alternative to the current sanctions available’*.
3. The PCAA believe that if the condition for limiting night time flights to 3000 flights in the summer months and 1,000 in the winter months is changed to a rolling cap of 4,000 pa that compensation outside of noise insulation should be given. As well as for the additional increase in flights to 12 mppa.
4. The PCAA are fully aware that airspaces changes are to be delivered under the CAP1616 process. The green paper states *‘The government recognises that while*

airspace modernisation will bring noise benefits for many people, it could create increased noise for others. New technology will allow more efficient use of airspace and offer the ability to increase capacity, though at some airports existing conditions limit the number of aircraft or passenger movements. Where an airport has reached that limit, any additional airspace capacity created through modernisation can only be used if and when planning approval is given for the increase.’ Compensation will be necessary for any further intensifying of noise on residents to 10 mppa and 12 mppa and any new communities over flown.

Noise Insulation

1. The enhanced noise insulation grant scheme for 12 mppa is as follows:
 - 1.1. *‘In this proposed scheme, the thresholds for insulation will remain as current daytime 57 dB LAeq,16h for the 50% grant and 63 dB LAeq,16h for the 100% grant. It is noted that in all scenarios the night-time 55 dB LAeq,8h contour is completely enclosed within the daytime 57 dB LAeq,16h contour. Therefore, people exposed to significant levels of night-time noise will also benefit from the scheme.*
 - 1.2. *The minimum specification of the ventilators that can be installed as part of the scheme will also be improved. These provide a benefit as with sufficient ventilation, residents are not required to open windows and therefore can experience the full acoustic benefit of the glazing.*
 - 1.3. *The grant amount available will increase by 50%, i.e. up to £7,500 for those properties within the 63 dB LAeq,16h contour and up to £3,750 for those properties within the 60dB & 57 dB LAeq,16h contour.*
 - 1.4. *For a limited time, all properties within the 57 dB LAeq,16h contour for the 12 mppa 2026 scenario will be eligible to use the grant amount towards 100% of the cost of works, rather than 50%. This is intended to incentivise uptake in the short-term in order to encourage implementation of mitigation measures prior to BAL reaching 12 mppa by 2026.’*
2. The PCAA still think that this is not a very generous proposition to residents for:
 - 2.1. not being able to open their windows at night,
 - 2.2. reduced enjoyment of their gardens,
 - 2.3. suffering from reduced tranquillity with no respite
 - 2.4. suffering from their properties being devalued,
 - 2.5. to say nothing about traffic and parking issues in the locality. And all of this to, effectively, subsidise the out-bound, low-cost holiday flights of the 83% of non-business travellers from the airport, drawing much more money away from the UK economy than it brings in.
 - 2.6. ventilators are not a substitute for being able to open windows to enjoy air free of pollution in terms of air quality and noise.
3. Furthermore, the PCAA question *‘For a limited time, all properties within the 57 dB LAeq,16h contour for the 12 mppa 2026 scenario will be eligible to use the grant amount towards 100% of the cost of works, rather than 50%.’* What is this limited period and why?

4. DfT Guidance is that 51 dB LAeq 16hr should be regarded as the LOAEL [Lowest Observed Adverse Effect Level] for daytime noise and 45 dB Lnight for night time noise. (Briefing Paper Number SN261, 13 February 2017)
 - 4.1. BAL's grant scheme is only available to households in the 57dB LAeq and above, recognising that the night-time 55 dB LAeq,8h contour is completely enclosed within the daytime 57 dB LAeq,16h contour
 - 4.2. The noise levels at which compensation becomes available need to be altered to reflect DfT guidance
5. In the Treasury Green Book it is noted that tools have been developed which convert changes in noise exposure to estimated monetary values, to support the assessment of the effects of environmental noise. The central estimates of values for road, rail and aircraft exposure are presented in Table 1 and Table 2 (see Appendix 7)
 - 5.1. The values within the Green Book far exceed the value of BAL's proposed grant scheme
6. The Green Book goes on to explain that projects with a major noise impact should be assessed in more detail. The potential areas for consideration can be broadly separated into four groups:
 - 6.1. *Amenity - the conscious displeasure of those exposed to the noise. At present two amenity impacts can be quantified and valued; sleep disturbance and annoyance.*
 - 6.2. *Health - noise is associated with a range of effects on health. The three health effects currently valued are heart attacks, strokes and dementia.*
 - 6.3. *Productivity - through distraction, fatigue and interrupting communication noise can have a negative impact on productivity. It is not yet possible to assess and value these impacts.*
 - 6.4. *Environmental - noise can have a notable impact on the natural environment, for example noise may alter bird breeding patterns, disturb wildlife and damage sensitive ecosystems. At this time these impacts have not been valued. The effects of night noise, school attainment and other factors such as the value of quiet areas have not been fully quantified. These cannot be included in full appraisal but it may be important to include these in future*
7. The PCAA contends that these considerations have not been adequately assessed and that this is a fundamental weakness to the application that requires attention from NSC.

Aircraft stands 37 and 38

1. Through the planning application for the Proposed Development, BA is seeking changes to the current restrictions with respect to the operation of Stands 37 and 38.
2. The proposed changes will allow for:
 - 2.1. the use of mobile power generators;
 - 2.2. installation and use of aircraft auxiliary power units;
 - 2.3. use of aircraft engines for taxiing (as opposed to towing)
3. The draft Bristol Airport Noise Action Plan explains that '*noise arising from aircraft on the aircraft parking apron is dominated by the use of the aircraft*

auxiliary power units (APU) and support equipment, particularly Mobile Ground Power Units (MGPU's). The primary purpose of the APU is to provide power to start the main engines.'

4. Fixed Electrical Ground Power (FEGP) should be introduced rather than auxiliary power units. The use of aircraft engines for taxiing will bring more ground noise in the shoulder periods which are also defined as official night time 23.00 -23.30 and 06.00 -07.00 hrs.
5. The PCAA strongly object to the removal of the existing condition.

Public Safety Zones (PSZs)

It is noted that Public Safety Zone changes are not proposed as part of growth to 12 mppa (phase 1 of growth to 20 mppa). Yet it is Government policy that PSZs should be updated approximately every seven years to ensure that the data underpinning the contours are reliable. (Ref; Civil Aviation Authority). It is highly likely that a review will need to be undertaken within the period of growth to 12 mppa before 2026, given airspace changes under the CAP 1616 process and the seven year requirement. This review should also take account of the change to the airport fleet mix.

The issue of safety is paramount to communities surrounding the airport particularly to those residents living close to Felton Common. It is therefore unreasonable for North Somerset Council to exclude changes to the PSZ for the period to 2026 covered by this application.

Air Quality:

Air quality is a cross boundary issue and is causing premature deaths of an estimated 297 in 2013 in Bristol alone. Further growth of Bristol Airport will undermine actions to reduce air pollution. (Reference: Towards a sustainable energy future for the West of England Report May 2018 by the Centre for Sustainable Energy).

The environmental assessment report Wood Dec 2018.

1. This EA section on air quality has been compiled and published by Wood on behalf of BAL Dec 2018 and refers to data available before this Government's Air Quality Strategy (Gove January 14th, 2019) had been published.
2. *Considerations for planning applications.*
 - 2.1. Are we to assume that the criteria used by Wood will remain the same for future modelling of pollution and its effects? Will it demand more relevant placement of **continuous air quality monitors** and collection of data using codified baselines for accurate predictions of pollution over a larger area, not just at local ground levels surrounding the site for transport hub development, ie 18/P/5118/OUT? Will such an EA contain epidemiological evidence related to spikes reflected in records of local inhabitants' cardio-respiratory history and treatment. Given that critical available MET data which is historic and independent is easy to access, this air quality methodology is limited as it is in other respects.
3. Wood states in its report:
 - 3.1. *"It is common practice in Air Quality assessments (except assessments solely focusing on emissions from road traffic) to use five years of met data in order to ensure that the worst-case weather conditions are modeled. However, the nature of airport operations means that emissions are strongly tied to weather conditions, since aircraft normally land and take off into the wind. Given the modeling effort required to consider implications of inter-annual variation in met data, it is not considered to be practical to model emissions with more than a single meteorological year for this assessment."*
4. Compare that with DEFRA air quality strategy 2019
 - 4.1. *"We are investing £10 million in improving our modeling, data and analytical tools to give a more precise picture of current air quality and the impact of policies on it in the future. We will increase transparency by bringing local and national monitoring data together into a single accessible portal for information on air quality monitoring and modeling, catalyzing public engagement through citizen science."*
5. So what does Woods statement about limitation and modeling effort really mean? Inaccurate pollution predictions? What does it mean in this report, when Wood states that the *"2017 met year produces consistently the highest predicted concentrations at most relevant receptors"*. There are no correlations for flight

schedules, day or night, Chapter ratings and emission values or that the summer of 2017 was hotter and dryer than normal, which gives rise to changed pollution characteristics? Site specific monitoring is not the problem. The variables are many but they exist. Surely the modeling effort is worth the time if there is to be a prediction of the likely effect of a rise in pollution from an increased number of flights from a baseline drawn from 2000 every five years to the present day and if the number of flights serving 8.6 mppa in 2017 is increased to service 12mppa by 2020, a predicted 50% increase in flights and surface traffic, the baseline of 2017 is not satisfactory for the overall impact upon the local communities and environs. Site specific focus of air quality using a base line for one year 2017 is very limited.

6. The use of annual mean levels of nitrogen dioxide should surely be replaced by the recording of spikes and median to low levels, which would better reflect traffic flow, congestion, aircraft movements and resultant cumulative emission levels. Furthermore, each could easily be done in real time given the software that is available. Air quality monitors should surely be used more widely and in all surrounding residential areas. It would seem from this report that they are minimal on the ground near the airport. The pollution effects of expansion, monitored in a restrictive manner and area under review in a planning application, may be useful but it cannot give a true reflection of the greater impact of the move from 8.6 mppa to 12 mppa.
7. There is no mention of the periods of the day when readings are taken or even as mentioned by CAMS, **“night time peaks of CO2 PM25 etc.”** This is of particular relevance if the summer months will have a greater number of night flights due to a release of the quota restriction.
8. Copernicus Atmosphere monitoring service 2109 states:
 - 8.1. *“Near the surface the reason for this diurnal pattern is that the vertical stability of the lowest layer (Planetary Boundary Layer) is higher during the night. This means that the emitted pollutants are trapped (not diluted), which leads to higher concentration values. Horizontal winds tend to be weaker during the night. The pollutants stay closer to the emission hotspots during the night”.*
9. This ought to be analysed when there may be up to 3,500 night flights in the summer months if the quota is changed. This increased pollution variable should have been recognised. It could then be considered under night time blight by noise and light pollution.
10. Will Bristol airport (BAL) be able to respond to real time residential readings using software such as Copernicus regional monitoring service (CAMS), so that residents can be aware when pollutants, either from surface traffic or aircraft reach unsafe levels? A real time App monitor, rather like noise monitoring used around Dublin on smart phones, would make for accountable recording of data and a better interaction tool in the hands of the local community than a desk approach and modeling from an unsatisfactory baseline. It would also eliminate the false assumption that because there are no complaints registered to BAL about the smell of aircraft fuel or traffic fumes on particular days they do not exist. The

complaints system handled by BAL is not easily accessible or adequately dealt with for either noise or for aviation smells. These problems will be raised in the consultative 2050 green paper by online consultation by Parish Councils and community groups.

11. The overriding limitation of this air quality report is that it uses modeling which does indicate moderate to high levels recorded closer to the site but there is nothing to equate expansion with a tangible calculation of reduction in emissions from aircraft and surface traffic, save for mitigation on site. Reference to how reductions in emissions from aircraft in the Clean Air Strategy 2019 is also scant. A common-sense approach would suggest that, even with aspirational use of public transport and BAL's contentious application for parking on green belt, emission rates will increase significantly on site and further a field, despite the comment by Wood:

11.1. *"Aircraft in the air have a limited impact on ground level pollutant concentrations, with off-airport concentrations being dominated by emissions on the ground being blown horizontally rather than dispersing downwards from aircraft overhead" (Wood).*

12. One is bound to ask if aircraft emissions at their peak are measured at take off and particles from rubber on landing, do they remain within the confines of the ground monitors or do they gradually disperse with the westerly winds and collect towards the agglomeration of Bristol? Is it not then that the airport becomes the background pollution source for Bristol, Bath and Weston super Mare, once the aircraft climbs into the westerly prevailing winds? There is no recognition of transboundary impacts when the measurements are site specific. The following statement by Wood under predicted effects and their significance:2017model evaluation, should be compared with the second from DEFRA:

12.1. *"Contour plots of modeled annual mean NO2 concentrations are given in Fig 8.24. These show the contribution from the airfield and from the modelled roads clearly above the background, demonstrating that these contributions fall quickly with distance and reach background levels within a few kilometers of the airfield and within a few hundred meters of road. They also show that concentrations above 40ugm-3 are confined to the airfield (where the limit value does not apply as there is no long-term public exposure very close to the carriageway of the A38 and within the carriageways of Downside road and Northside Road (where again the limit value does not apply)).*

13. Whereas DEFRA states:

13.1. *"air pollution comes from many sources. Pollutants can travel long distances and combine with each other to create different pollutants. Emissions from distant and local sources can build up into high local concentrations of pollution. The UK has set stringent targets to cut emissions by 2020 and 2030. (GOVE 2019)*

14. Are we to conclude that any pollution from Bristol Airport will never have an impact anywhere, no matter by how much BAL seek to expand their transport facility by 2030?

15. Pollution levels will be compounded on communities by an increase in surface traffic from the M5 South and North, M4 East and West, descending on minor routes to Lulsgate. This was not accounted for in this report. If the ultimate aim of BAL in their Master plan(unpublished) to become a 20 mppa International airport serving the South West and South Wales materialises, communities will no longer enjoy clean air. The increased surface traffic routing will be beyond the control of the airport (as are the Chapter ratings of aircraft by Budget airlines) and therefore Government imposed clean air regulations on Bristol and Bath and perhaps later, many towns and villages, will be unattainable. This will be as a result of an unregulated and ambitious expansion plan by BAL. If the levels recorded as higher than normal in 2017 are the result of 8.6 mppa and there is a trend towards hotter summers, what will the readings at 12 mppa be surrounding the site and further out into communities? The 8.6 mppa to 12 mppa in 2020 to 2030 (the Gov' reduction timeline for pollution levels) is the immediate problem contained in this application to break the cap of 10 mppa. It would be commensurately worse to 2030 and the plan for 20mppa by BAL. If the A38 is predicted to cater for the increase in surface traffic without a clear plan to cut emissions within the aspirational clean air strategy timelines, what real pollution levels will the communities along its path suffer? and even if the UK taxpayer were to foot the bill for road improvements, it would not reduce pollution levels. If anything, it would create more.

15.1. This must be carefully considered by the Local Authority.

16. Westerly windy days are the norm and can be factored in for take off or landings. New Budget airline fleets are slow to materialise with marginally lower emissions. That will not be sufficient to reduce emissions, if increased aircraft movements of even 50% negate the minimal improvements in aircraft design within 12 years. What of those damp drizzly windless days when the air is heavy with fumes due to a take off every three minutes in peak times in an 18 hour day? Who measures air quality in communities? Will it be done by an independent body, North Somerset Council or by BAL merely at their site monitors placed comparatively recently?

17. Returning to the new Air Quality strategy Jan 2019. If we accept that the Government's publication of a strategy at this stage is aspirational, with or without legislative powers, it is fitting for NSC first to examine those aspirations, and then to examine how this application by BAL, in the context of such a strategy, fits within timescales and baseline measurements for reducing emissions and improving air quality. In order of priority the areas to be addressed by DEFRA in the published strategy are:

17.1. *"Transport, the home, Farming, Industry, clean growth and innovation"....*

17.2. *"Clean air is essential for life, health, the environment and the economy. Government must act to tackle air pollution which shortens lives..."*

17.3. *"We have already adopted ambitious, legally-binding international targets to reduce emissions of five of the most damaging air pollutants (fine particulate matter, ammonia, nitrogen oxides, sulphur dioxide, non-methane volatile organic compounds) by 2020 and 2030. We are proposing tough new*

goals to cut public exposure to particulate matter pollution, as recommended by the World Health Organization. (Defra Jan 14th 2019).

18. These are long overdue ambitions, but they must be translated into action plans with legislative powers to enforce. Soft targets have already been in their sights i.e. wood burning stoves and farm animals, but firmer warnings have been issued to public bodies in for example Bristol. *The Government, the Sec of State for Transport and Sec of State Defra and The Welsh Minister were challenged in the High Court when Mr Justice Garnham found the third air quality plan to be unlawful.* (Feb 2018). Have we in the space of under one year now got the protection of a fourth lawful plan?

19. Furthermore, it is also ironic that there is conflict between ambitious statements in a clean air strategy 2019 on the right government hand, but in its left hand, support for regional airport expansion (Baroness Suggs Aviation 2050 consultation paper July 2018 to April 2019). This will weigh heavily on the left hand with a 2020 and 2030 timeline to halve air pollution. Yet air travel and resultant road travel is set to treble in the UK. Will both sides be fairly balanced or will economic growth outweigh protection of the nation's health? How will the powers to cut emissions, devolved to local authorities and city councils, pan out, when they also have to deal with the commercial race by regional airports applying for planning permission to expand? The green paper 2050 expounds the ideal of sustainable growth and each airport making the best use of its existing runway and facilities. That is not an ideal of sustainable growth for BAL, but rather a clear signal for a race to secure commercial supremacy by breaking its cap of 10mppa at the expense other regional airports. Its ambition is beyond the spirit of the green paper to become the largest airport serving the South West and South Wales at the expense of the health of the local and regional inhabitants. Common sense would dictate that the 10mppa cap should remain to allow a catch up for all surface traffic to become electric or bio fuel and electric motors to taxi all planes to their bays or to the take off point. That would be a real plan for approval within 2020 to 2030 to cut emissions by half within aviation and road transport industries. (See Towards a sustainable energy future for the West of England Report May 2018 by the Centre for Sustainable Energy).

20. BAL bought an airport with a cap of 10 mppa which it has yet to achieve, but it does not have a statutory duty like NSC to put the health of the inhabitants of North Somerset first above spurious claims of economic prosperity. Economic growth claims are easily dismissed if the latest findings from the Office for National Statistics (3rd quarter) released on Jan 16th 2019 are read. 24.2 million passengers left the UK with a spend of 16.4 billion. Conversely 10.8million came in to the UK with a £7.2 billion spend, creating a £9.2 billion deficit spend to the UK economy. BAL's figures produce a more alarming deficit of approx. 6.3 million people leaving via Bristol and only 700,000 tourists coming in to travel the UK not specifically the South West. According to the Government if we cut emissions we will save £1.7 billion every year then £5.3 billion every year from 2030. This economic overview does not include the further tax and VAT deficit to the Revenue because of low tax on aircraft fuel and VAT collection or to the personal deficit caused by living near an airport.

21. The air industry as a whole, its aircraft manufacturers, airlines, are all regulated by IOAC and CAA standards, with vested interests in the industry; the surface transport industry predominantly cars and lorries, which travel to and fro to 40 UK regional airports operated and owned by a handful of private companies. are they to be a primary target where **“tough new goals to cut public exposure”** (DEFRA) will land? This transport industry is recognized as one of the largest polluters. The Government is seeking to reduce emissions within 13 years. So how will the aspirational actions of government pan out as far as the airline industry is concerned, when local authorities have the responsibility to monitor and try to enforce policy? The UK does not own its airports. Is that why soft targets are first in line for air quality plans?
22. Who in Government will be responsible for lawful plans that can be enforced on grounds of air quality by planning departments in local authorities, if action is encouraged at local level when an airport applies for permission to expand by breaking its cap?
23. In conclusion the following points should surely lead to a refusal of this planning application to break the cap of 10 mppa.
 - 23.1. Air Quality is now of significant national and local importance in protecting the nations health and every effort should be made at local level to reduce pollution from transport.
 - 23.2. North Somerset Council is charged with its statutory duty to protect its inhabitant's health and monitor air quality. It should pay particular attention to transboundary pollution and its responsibility as a local government body, when discharging its authority in planning.
 - 23.3. NSC should seriously consider transboundary impacts on Bristol and communities to the West and not confine their deliberations to site specific air quality readings closer to Lulsgate found in this EA by Wood.
 - 23.4. The cost of placing more continuous monitors along more roads and in communities which will be impacted to a much higher degree. The cost of epidemiological data collection and treatment of those in a region that already suffers a high national average for CPOD and asthma.
 - 23.5. Forensic accounting of presumed economic growth and promised job creation of 190 unspecified jobs promised by BAL is not worth the increased costs to the economy through tourist deficit, loss of tax revenue and, most importantly, costs to the NHS and to individuals whose lives may be at greater risk and cut short.
 - 23.6. This planning application ought to be refused on the simple grounds that the cap of 10 mppa has yet been reached by BAL , to reach that cap will meet the green papers proposition to make best use of runways and facilities and it will serve the air quality strategy DEFRA 2019 and its plans(if proved to be lawful in the UK courts) to protect the nations health and furthermore help us meet the still soft legal commitments to climate change.
 - 23.7. The collection of air quality data by modeling has already been challenged through the UK High Court by Client Earth and DEFRA has been found to be using methodology that is inadequate and therefore their air quality plans to date are still to be proven as better than “conservative” and lawful. Immediate action has been called for by the UK courts and to date this remains uncertain. Increasing traffic that still emits NO2 and increasing

aircraft movements that emit the same, proven to harm human health, should not be agreed beyond the capacity already set at 10 mppa for Bristol airport.

Biodiversity – Ecology:

Summary:

The NPPF, the Conservation of Habitats & Species Regulations 2017 and EU Directives all give protection to biodiversity. However, the mitigation for growth proposed to 12 mppa is not robust enough to ensure no loss of biodiversity.

An alternative site at Junction 21 has become available for car parking which is not an environmental sensitive site such as the Silver Zone Extension Phase 2. The Junction 21 site is not close to a Special Area of Conservation and thus will give added protection to a protected species. The Junction 21 site needs to be examined. Natural England and the North Somerset Officer for Ecology should be informed of the alternative site Junction 21 which has come forward.

A summary of challenges from the PCAA is shown below with more detail in the body of the document which contains further challenge questions for NSC which may not be mentioned in the high-level summary:

1. NSC, Natural England and BA have had meetings about the Greater and Lesser Horseshoe Bat and the Special Area of Conservation, however:
 - 1.1. there is no evidence of a Screening Report and subsequent Appropriate Assessment taken by NSC
 - 1.2. there is no shadow Habitats Regulations Assessment from Bristol Airport which was requested from the officer in the delegated report to the EIA Scoping application 18/P/3502/EA2.
2. There is double counting
 - 2.1. some of the mitigation expected but not yet completed for 10 mppa is proposed as future mitigation for growth from 10 to 12 mppa. This does not therefore constitute net mitigation provision for the subject application.
 - 2.2. some proposals for mitigation should have been already carried out under the current Bristol Airport Biodiversity Action Plan.
 - 2.3. NSC needs to ask for and review a detailed outline of the steps that should already have been completed and overlaps with new proposals
3. Loss of the foraging habitat could result in adverse effects to lesser and greater horseshoe bats due to a reduction in the availability or quality of foraging habitat. Part of the problem is that increased lighting will attract insects away from the darker areas where bats like to forage.
 - 3.1. NSC needs to ensure that there is robust evidence to confirm that this does not occur
4. The target light levels for the Silver Zone car park are 1.0 lux (phase 1) and 0.5 Lux (phase 2) yet the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document Adopted January 2018 states a light level of, ideally, below 0.04lux
 - 4.1. Silver Zone phase 1 lighting levels are far too high and no condition has been set to change the lighting to the same level as phase 2 particularly as there is to be a revision to Phase 1 to operate throughout the entire year.

5. The time allowed for new habitat to mature, both on site and off site, is insufficient to comply with the SPD policy. Conditions need to apply to:
 - 5.1. Silver Zone Extension Phase 2 which commences in December 2019 and ends in March 2020.
 - 5.2. Highways improvements commence October 19 and end April 2020. Landscaping will not have matured or even be in place.
6. As regards the proposed mitigation for the stated net loss of 3.73ha of foraging habitat for greater and lesser horseshoe bats, there appear to be a number of inconsistencies across the relevant documents.
 - 6.1. NSC needs to understand and review how much net *new* mitigation is to be provided, whether it consists of woodland or open space and where it is located.
7. Low cost car parking phase 2 on the south side is in green belt. This approach harms the environment.
 - 7.1. NSC need to consider an option of no low-cost parking in the Silver Zone Extension Phase 2 but another MSCP subject to consultation with the community for the location or an extension to the MSCP 3 on the northern side of the airport. This gets closer to meeting NSC Policies.
8. Bristol Airport met with NSC on 7 August, 16 September and 1 October, and Natural England on 1 October 2018 to discuss biodiversity issues.
 - 8.1. NSC needs to explain why these meetings were not open to a larger number of stakeholders? The solutions put forward are a top-down approach to resolution of issues rather than a bottom-up approach with bat experts and the local community.

North Somerset and Mendip Bats SAC

1. An extension to the Silver Zone car park is proposed on agricultural land to the south of the existing Silver Zone Car Park Extension (Phase 1). Occupying a footprint of circa 5.1ha, this extension will provide an additional circa 2,700 spaces for year-round use. The car parking phase is expected to be implemented as soon as consent is given. The Environmental Statement (ES) recognises that there could be direct effects to the foraging and commuting of the Greater and Lesser Horseshoe Bat.
2. The ES also states that biodiversity conservation may be significantly affected by the proposed development and could contravene legislation:
 - 2.1. There will be ‘temporary and permanent damage/loss of habitats other than broadleaved woodland – semi-natural intact hedge – native species rich, scattered scrub, poor semi-improved grassland (cattle-grazed) and standing water’ which will particularly affect the bats.’
 - 2.2. Given this it is clear that Appropriate Assessment will be required by NSC. NSC are reminded that they are unable to include mitigation measures in the their screening assessment due to recent case law “people over

wind” <https://www.bakerconsultants.co.uk/baker-consultants/people-over-wind-ruling-blows-a-hole-in-the-habitats-regulations/>

2.3. However, even with the mitigation effects significant effects are likely so AA is required.

3. Table 11.9 ‘Summary of the integrated and embedded environmental measures’ suggests the following measures to safeguard the SAC:

3.1. A. *‘Full retention and ongoing management of the existing perimeter hedgerows and hedgerow trees. Construction of all bunds/structures outside of root protection area of existing/retained trees. Provision of suitable tree protection fencing during construction to demarcate and protect retained trees’.*

3.1.1. The PCAA request that this action is given priority and is implemented without delay due to the construction of Phase 2 being imminent.

3.2. B. *‘Reduced footprint of the Silver Zone Car Park Extension (Phase 2) to a minimum extent (3.73ha), thereby maximising the retention of areas that can provide alternative but equally valuable bat foraging habitat (woodland and grassland) with further positive benefits to the microclimate (increase in sheltered conditions) associated with the retained perimeter features and new planted bund.’*

3.2.1. Car parking obviously varies according to the size and shape of the site and layout, including circulation space and landscaping. 500 to 600 spaces per hectare is a reasonable assumption (assuming spaces of 2.4m x 4.8m, plus manoeuvring space for parking and lanes for circulation. In this case it is a valet service and the PCAA accept that this high-density parking with occupying a footprint of circa 5.1ha (3.73 ha for car parking). But the PCAA question why NSC has not considered an extension to MSCP 3 or an alternative site for another MSCP subject to community consultation.

3.3. C. *‘Lighting regime in the Silver Zone Car Park Extension (Phase 1) designed and installed to ensure that lux levels at the security fence perimeter are less than 1 lux and Silver Zone Car Park Extension (Phase 2) designed and installed to ensure that lux levels at the security fence perimeter are less than 0.5lux. This will be achieved through the use of specific lighting design criteria and guidelines (e.g. Institute of Lighting Professionals and the Bat Conservation Trust. 2018. Bats and Artificial Lighting in the UK. Bats and the Built Environment Series. Guidance Note 08/18)’*

3.3.1. The PCAA question why the Silver Zone Car Park Extension (phase 1) which is equally sensitive to active bats has a higher lux level than phase 2 where the requirement is for less than 0.5 lux. The Silver Zone Phase 1 is to be revised to operate throughout the entire year. Therefore there is an opportunity for NSC to reduce lighting to less than 0.5 lux and request alternative land for foraging due to the loss of land in late 2016. The guidance to the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document adopted January 2018 was available in May 2017.

- 3.4. D. *'Lighting associated with the highway improvements along the A38/Downside Road junction will be no greater than current levels and less than 0.5 within and above the future woodland boundary/canopy.'*
- 3.4.1. The PCAA request information on how 0.5 lux will be achieved.
- 3.4.2. The PCAA notes that aircraft arriving at night fly directly over the Kingswood SAC. The environmental statement has not commented on this point and how increased night flights during the summer months will impact the SAC and the bats foraging.
- 3.4.3. Application 16/P/1440/F: Extension to Staff Car Park: The Habitats Regulations Assessment Statement: 02 November 2016 stated *'Comment on lighting and foraging: Further corroborating evidence regarding the lighting impacts was requested and obtained from the applicants in the form of a lux contour plan, which shows existing light levels on the periphery of the site which are above the range that it would be expected for horseshoe bats to tolerate (generally requirements are below 1 lux, and ideally below 0.04lux).'*
- 3.4.4. The PCAA note that all lighting is far higher than the accepted range given in the above Habitats Regulations Assessment throughout the airport and even in the environmentally sensitive areas such as Phase 1 and Phase 2 Silver Zone Extensions. The 0.04lux level is supported in the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document Adopted January 2018.
- 3.4.5. No comment has been made on how light attracts insects. Previously-unlit areas such as the Silver Zone extension (phase 2) will now attract insects from the outer edges as will all the lighting at the airport. The result will be a decline in insects for the Greater and Lesser Horseshoe Bat to forage, in addition to a decline in insects from the removal of cattle on pasture land. The Greater and Lesser Horseshoe Bat feed in part on the dung beetle which feeds on the cowpat.
- 3.5. E. *'Provision of parkland trees within Downside Meadow to directly replace the loss of circa 0.16 ha associated with the A38/Downside Road junction (see Measure 3 below).'*
- 3.5.1. The PCAA ask when this action will take place
- 3.6. F. *'Protection and management of existing woodland east of the A38 roundabout and main application site entrance and provision of circa 0.34ha of new broad-leaved woodland. (Both existing and planted woodland will be improved in quality from a current limited level of opportunities for horseshoe and other bat species by thinning the currently very dense woodland interior and provision of small pathways/rides within the existing woodland block).'*
- 3.6.1. The PCAA note that existing woodland east of the A38 is already in situ and used by the bats. A further provision of circa 0.34ha of new broad-leaved woodland although welcome is simply not sufficient to offset loss of habitat.
4. Measures highlighted in Table 11.9 have been put forward to resolve all issues within the local vicinity. These issues include the Special Areas of Conservation

for bats and potential changes to flora due to increased nitrogen decomposition. The vicinity covers a very wide area from the Avon Gorge and Chew Valley Lake to local areas such as Felton Common, Goblin Combe SSSI and ancient woodland at Brockley. The PCAA do not think that the mitigation is sufficient due to the knowledge that there has been a collapse in insect populations. Most entomologists believe habitat change lies at the heart of the problem.

5. There will be a net loss of 3.73ha of suitable foraging habitat for Greater and Lesser horseshoe bats due to the development of the Silver Zone car park extension (Phase 2), assuming that Bristol Airport has agreed this position and that the full 5.1ha is no longer required for 2,700 car parking spaces. A further 0.16ha of suitable foraging habitat for greater and lesser horseshoe bats will be lost as a result of the proposed highway improvements works on the A38/Downside Road.
6. The '*OUTLINE SAC/SPD ECOLOGICAL MANAGEMENT PLAN FOR NORTH SOMERSET AND MENDIPS BAT SAC SPD SPECIES AND WIDER BIODIVERSITY*' Report was only put up on the NSC website on 4 January 2019, over two weeks after the application was validated on 19 December 2018. The date of issue on the report is 21 December 2018. As regards the proposed mitigation for the stated net loss of 3.73ha of foraging habitat for Greater and Lesser Horseshoe bats, there appear to be a number of inconsistencies across the relevant documents. These documents are **Planning Statement** (5.11 Ecology), **Environmental Statement** (Chapter 11 Biodiversity) and the **Outline SAC/SPD Ecological Management Plan for North Somerset and Mendip Bat SAC SPD Species and Wider Biodiversity**
 - 6.1. The Planning Statement proposes (5.11.5) 8ha of offsite woodland to provide replacement bat habitat but the Ecological Management Plan only refers to 6.34ha of woodland owned by Bristol Airport.
 - 6.2. A search of HM Land Registry records indicates that this 6.34ha is currently owned by Woodland Investment Management Ltd.
 - 6.3. The Ecological Management Plan states that the mitigation habitat "will be delivered either in woodland owned by Bristol Airport or at an alternative suitable location approved by North Somerset Council in consultation with Natural England". Clearly it is impossible to assess the suitability of 'alternative' mitigation habitat without knowing where it is located.
 - 6.4. Whilst we note that improved management of the 6.34ha is proposed, this relates to *existing* habitat, which will deliver significantly less net mitigation benefit than *new* habitat. This can hardly be considered sufficient mitigation for the 3.73ha loss, as it already forms part of the existing wider bat foraging area. In addition, the 6.34ha is located within the extensive woodland of Wrington Warren, which will effectively further reduce its net mitigation benefit in terms of wider bat foraging.
 - 6.5. The Ecological Management Plan (4.1.3, 4th bullet point) appears to propose felling of the 6.34ha to achieve a tree cover of no more than 20%. Given that most Forestry Commission felling licences require appropriate replanting after felling, have the Forestry Commission been consulted over whether the proposal is realistic?

- 6.6. Although documentation (as above) is unclear, it appears that predominantly open grassland bat foraging habitat is to be primarily replaced by woodland or mixed woodland habitat. The ecological justification of this habitat substitution as appropriate mitigation should be clearly proven.
- 6.7. The land acquired is quite unlike the Silver Zone extension area. It is on much higher ground and is dense woodland rather than open pasture with rough ground. No lighting figures have accompanied the report and there is a possibility that the light spill from the airport at night is above that required for the use of the land for bats. The Environmental Statement Figure 9.1 Figure 9.41 Comparative Light Pollution Levels states that the level is 1 – 2 (NanoWatts/cm²) which may be harmful to the Greater and Lesser Horseshoe Bat. Light levels must be investigated on this site.
- 6.8. 3.13 Preferred Options from the report states *'It is important to note that the SPD habitat management option can be delivered much quicker than the stated SPD criteria of 10 years. The replacement habitat management option would be delivered in advance of any loss of grassland or woodland horseshoe bat foraging habitat associated with the Silver Zone car park (Phase 2) and A38 highway improvements.'* The timings for Silver Zone Extension Phase 2 and Highways Improvements both commence December and October 2019 to be completed spring 2020. The PCAA cannot accept that the timescales fit with mature habitats being put in place in this timeframe.
7. The main mitigation appears to be the provision of a new landscape/habitat bund around the perimeter of the Proposed Extension to the Silver Zone car park (Phase 2) similar to Phase 1. The PCAA do not consider this a substitute for the loss of land to low cost parking.
8. The proposed Conditions are that:
 - 8.1. *The development of each individual component of the approved scheme shall not commence until full lighting details, developed in accordance with the Lighting Impact Assessment, for the relevant element have been submitted to and approved by the Local Planning Authority.*
 - 8.2. *Prior to the commencement of development, a ten-year Airport Landscape, Biodiversity and Habitat Action Plan shall be submitted to and approved in writing by the Local Planning Authority.*
 - 8.3. The PCAA notes that many components of the landscaping and biodiversity plan are to be classed as 'reserve matters' which means that they are put forward for approval to NSC at a later date. The PCAA requests that these schemes are put forward within this application. Bristol Airport has made it quite clear that determination of the application should be in April 2019, the target date for the decision from North Somerset Council. Bristol Airport has also stated it wishes to commence some construction works in May 2019. Landscaping enhancements need to be in situ from the very beginning and need to be allowed to mature to bring any biodiversity value, and this takes a time period of at least three to five years. Bat populations may drop to a level that is unviable if the foraging areas are decimated by the airport development and the mitigation measures have not reached sufficient maturity to provide replacement foraging.

8.4. The PCAA requests that the Landscape, Biodiversity and Habitat Action Plan is part of the application so that the public can view the timing of the enhancements within the Plan and comment on other matters.

9. Other comments concerning the Environmental Statement and the Integrated/Embedded Landscape Visual, and Ecology Master Plan.

9.1. From Ch 2 Table 2.1 'Components of the 10 mppa planning permission (09/P/1020/OT2) for landscaping' - these are shown as ticked, implying that they have been completed. But this simply isn't the case. For example:

9.1.1. Application 18/P/3206/AIN for the new administration block - which was originally granted permission in 2011 to be built on the North side of the airport and is now on the south side in green belt. The PCAA requested that an Environmental Assessment should be required for this development. The application was accompanied only by an Environment Impact Assessment Screening Report. However, in this report it stated *'Land surrounding the administration building and car park will be landscaped (detailed design to be confirmed but to comprise soft landscaping)'* and *'planned landscaping (including the creation of a landscape buffer around the site's perimeter) and 'Landscaping and replacement planting will mitigate any loss of habitat and may enhance the site via increasing biodiversity and its connectivity.'*

9.1.2. The PCAA understands that the building is being constructed and opening in early 2019 that the landscaping should be completed in early 2019 as part of mitigation for 10 mppa not 12 mppa. By including these elements in the growth plan to 12 mppa, the airport is double counting mitigation enhancement for visual and biodiversity loss.

9.1.3. Application 16/P/1440/F extension to the staff car park, reconsidered under application 18/P/3562/RM and 18/P/3570/NMA for eastern areas and development of the far eastern apron for aircraft stands. These applications were all considered under growth to 10 mppa.

9.1.4. Planning conditions 53 and 55 of outline permission 09/P/1020/OT2 had mitigation to cover this area. The PCAA believe there is, again, double counting at this particular spot and that any improvements due to these applications should be considered for mitigation for growth to 10 mppa development not 12 mppa.

9.1.5. Under application 18/P/3562/RM: *'Reinforce woodland planting on the top and northern side of western end of the northern bund close to junction of North Side Road and Downside Road. Plant native climbers (honeysuckle, ivy and clematis) on trellis along northern side of acoustic wall to soften appearance in views'*. Again, this mitigation relates to growth to 10 mppa but is claimed a second time in growth to 12 mppa.

9.2. The PCAA highlight the point below from application 16/P/1440/F.

9.2.1. Further ecological comments from Natural England Ecology 02/11/2016:

9.2.2. *6. Prior to the commencement of development, details of compensatory habitat provision for the species rich grassland to be removed from site, to be provided to the LPA in writing. The proposals shall include: 1) plans of the location of the receptor site for 1116 square metres of species rich grassland translocated turf from the application site and the*

additional area of 1116 square metres for grassland restoration/enhancement to species rich grassland. To include information relating to current botanical interest (DAFOR or NVC survey) and soil pH (as part of the justification for selection of the compensatory habitat site(s)); and ii) translocation protocol and justification for selection of protocol, with reference(s) to previous successful application. The compensatory habitat provision shall be implemented in strict accordance with the submitted details. If variation is required, the variation shall be submitted to the LPA for approval in writing.

9.2.3. *Reason: To retain and restore species rich grassland and ensure compliance with Section 40 of the NERC Act (2006); in accordance with CS4 of the North Somerset Core Strategy; and Site and Policies Plan Part 1, Development Management policy DM8.*

9.3. The PCAA request an update within the application explaining what has happened or going to happen to species rich grassland to be removed from the site.

10. In the ES there is a commitment to ‘*Reinforce and thicken existing hedgerow in the field between A38 and Felton*’ and ‘*Reinforce and thicken existing hedgerow alongside section of boundary north of the southern A38 traffic island and allow to grow to maximum 1.5m height*’ and ‘*Introduce extra heavy standard trees into section of A38 boundary hedgerow south of the southern A38 traffic island and allow hedgerow section to grow out to maximum height of 1.5m to improve screening effectiveness*’. However, all of these actions are elements of good practice that should be underway already in line with the current Biodiversity Plan to 2021 (for growth to 10mppa). The PCAA do not consider these proposals as mitigation for further growth to 12 mppa. Extra mitigation is required and needs to be set out in the ES otherwise the assessment is defective.

10.1. If NSC do not consider that these are expected elements of good practice, the PCAA would be concerned that proposed mitigations for growth to 12 mppa would not be maintained and would deliver the anticipated benefits in the long term

11. The PCAA note that meetings to discuss biodiversity issues have been held with NSC on 7 August, 16 September and 1 October, with Natural England on 1 October 2018 and we question why NSC has not picked up the double counting of mitigation.

12. Due to Bristol Airport not having published their next draft Master Plan consultation this year, the only guide line for future development to 20 mppa is the Master Plan Consultation – State II and ‘Your airport: Your views’ consultation document. Both scenarios A and B show that the hedgerow due for enhancement would be removed at the current boundary of Downside near Melody Cottage. The PCAA question the value of this mitigation within the plan to 12 mppa if it is already known that the hedgerow will (or may well) be removed.

13. The document has ignored the risk from climate change of hotter summers such as 2018. Those dependent on ecosystems that are now more fragmented will be at risk of being unable to adapt such as the Greater and Lesser Horseshoe bat.

Human Health:

Note: To call people affected by airport activities ‘receptors’ is dehumanising and a term the PCAA object to strongly. This is used throughout the Environmental Statement and particularly in the Health section.

Summary

1. In the absence of a full assessment of the risks and available mitigations, North Somerset Council would clearly be failing to safeguard the health and quality of life of residents surrounding Bristol Airport. To avoid this, NSC needs to:
 - 1.1. Carry out a Health Impact Assessment (HIA) on growth to 12 mppa by Bristol Airport given the scale and range of issues involved. This requirement comes in the context of North Somerset carrying out an HIA to accompany the new Local Plan 2036 and Joint Local Transport Plan 4.
 - 1.2. Assess the scheduling of the arrival and departure timetable for night flights
 - 1.3. Assess how many children live under the flight paths disturbed by night flights
 - 1.4. Assess the issue of residents surrounding the airport who may suffer from cardiac, vascular, mental illness, COPD and asthmatic related diseases.
 - 1.5. Obtain evidence of the number of airport employees from the deprived wards of Weston super Mare and South Bristol.
 - 1.6. Develop costings of health issues that will be borne by the NHS as a result of all types of pollution and externalities generated by activities at Bristol Airport.

Issues

1. If planning consent is granted, the quality of well-being for residents surrounding the airport will deteriorate as no mitigation can substitute a night free of sleep disturbance and the deteriorating of air quality from pollution.
2. North Somerset Council needs to show how it reconciles the damaging impacts of this development with many of its own policies. For example, NSC Core Strategy has a shared priority of ‘*Improving health and well being*’ and ‘*Sustainable, inclusive, safe, healthy, prosperous communities thriving in a quality environment.*’
3. For the avoidance of doubt, the requirement for a Health Impact Assessment ('HIA') for this planning application stems, not from NSC policy, but from EU Directive 2014/52/EU (April 2014) (amending Directive 2011/92/EU) "on the assessment of the effects of certain public and private projects on the environment", transposed into UK law by The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. (see schedule 4 paragraph). There is no Health Impact Assessment to this application, only a list of policies which should be considered.
4. It is therefore a statutory requirement for an assessment of 'the risks to human health' to be carried out in respect of this Bristol Airport planning application, although it does appear that the Applicant has considered it to be a voluntary option. A statutory HIA should not be undertaken lightly nor be 'muddled' by

subjective assertions about socioeconomic benefits. But that is precisely what the Applicant has done. The socio-economics of areas of deprivation in South Bristol and Weston super Mare have been strongly put forward as a justification for further airport growth. These same arguments were put forward in the 2009 application. The current Planning Statement states:

4.1. *'5.4.11 Bristol Airport is in close proximity to two of the South West's most deprived areas, Weston-super-Mare and South Bristol, which are amongst the 10% most deprived areas in the UK. These areas are significant providers of labour for the airport; Weston-super-Mare is estimated to account for around 13% of current on-site employment and South Bristol around 11%. Based on the expected increase in direct jobs at the airport and current residency patterns, the Economic Impact Assessment anticipates that the Proposed Development will support around 100 additional jobs in Weston-super-Mare and 90 additional jobs in South Bristol, helping to help improve levels of deprivation in these areas'*

5. Draft Work Place Travel, Table 5.1: 'Bristol Airport Employment Catchment Area' indicates that the percentage of employees from North Somerset in 2017 is 31% and City of Bristol 24%.
6. Figure 5.1: 'Bristol Airport Employment Catchment Area – North Somerset' shows that of the North Somerset figure, 54% come from Weston (all wards) which equates to 16% of the total work force at the airport. The number of employees from the most deprived wards is not identified but is critical to the argument.
7. In order to interrogate the claims by the airport, North Somerset Council needs to consider:
 - 7.1. how many employees from the most deprived areas of Weston super Mare and Bristol were employed at Bristol Airport in 2005, 2009, 2017
 - 7.2. how the 2017 figure compares to the projections identified in the 2009 planning application
 - 7.3. the relevance of the argument about creating extra jobs at a time when unemployment is at a record low - the last time it was this low was 1975.
8. Employment within the region is at a record high, shown within the cumulative effects assessment. The airport's document also recognises that there is high employment in the Bristol region which may give rise to a shortage of labour in the sub region. There are only 2,000 unemployed people in North Somerset. Thus, the jobs argument to justify further growth carries little or no weight particularly with no evidence about the most deprived wards.
9. Without detailed analysis, the airport's paper claims that the health benefits of the proposed development, namely extra jobs and extra holidays across the broader geographic catchment, outweigh the adverse health impacts on the local community such as increased incidence of cardiovascular and respiratory disease as well as increased stress and anxiety.
10. The Environmental Statement Chapter 16 mentions only twice the words 'night flights' which are in the Aviation Policy Framework statement:

- 10.1. *‘the Government expects the aviation industry to make extra efforts to reduce and mitigate noise from night flights through use of best-in-class aircraft, best practice operating procedures, seeking ways to provide respite wherever possible and minimising the demand for night flights where alternatives are available.’*
11. Night flying is highly disturbing; it causes sleep disturbance which causes illness. There is no discussion of the number of flights per night which means that the departure and arrival timetables for nights have not been considered particularly in the summer months when there are between 17 – 22 flights per night throughout the night. There is no period within the so-called night hours in which there is a two hour period without a flight movement. There is no recognition that for children to thrive at school, they require uninterrupted sleep for at least twelve hours. Note the night flight limit is for only six and a half hours from 23.30 – 06.00 hrs.
12. The Treasury Green Book goes on to explain that projects with a major noise impact should be assessed in more detail. The potential areas for consideration can be broadly separated into four groups:
- 12.1. . Amenity - the conscious displeasure of those exposed to the noise. At present two amenity impacts can be quantified and valued; sleep disturbance and annoyance.
- 12.2. Health - noise is associated with a range of effects on health. The three health effects currently valued are heart attacks, strokes and dementia.
- 12.3. Productivity - through distraction, fatigue and interrupting communication noise can have a negative impact on productivity. It is not yet possible to assess and value these impacts.
- 12.4. Environmental - noise can have a notable impact on the natural environment, for example noise may alter bird breeding patterns, disturb wildlife and damage sensitive ecosystems. At this time these impacts have not been valued. The effects of night noise, school attainment and other factors such as the value of quiet areas have not been fully quantified. These cannot be included in full appraisal but it may be important to include these in future.
13. The PCAA contends that these considerations have not been adequately assessed and that this is a fundamental weakness to the application that requires attention from NSC. The PCAA highlights the following example:
- 13.1. North Somerset Council published a paper titled ‘Changing Population’ in 2015. It stated that there were then 4,195 registered people with Chronic Respiratory Disease (COPD) in North Somerset and around 1,000 unregistered. According to the paper COPD prevalence in North Somerset is 1.96% compared to the national average of 1.78%. Deaths in the area related to COPD are approximately 90 deaths.
- 13.2. The health effects of air pollution remain a public health concern, particularly to subjects with COPD. Air pollution can induce the acute exacerbation of COPD and onset of asthma and increase respiratory morbidity and mortality. The PCAA are aware of residents within close proximity of the airport who suffer from COPD and asthma. It is clear that additional gases produced by a greater number of flights will cause a detrimental effect on existing COPD and asthma sufferers.

- 13.3. The PCAA request that a through examination of increased air pollution on COPD and asthma suffers is carried out.
14. There is no mention of the word ‘respite’ in the chapter or appendices. The PCAA, having met with the Interim Director of NS Public Health, have no faith in this department recognising the health impacts on residents from airport activities. (see section titled ‘Competence of North Somerset Council and the inadequacies in responding to the Bristol Airport Noise Action Plan’). The response from the NSC Interim Director for Public Health (email 06/08/18) to the Scoping Report for the Environmental Statement did not consider local residents but only life expectancy and deprivation, referring again to Weston and Bristol. Note: the Officer in charge of the Environmental Scoping Opinion to determine the scope of an Environmental Impact Assessment admitted not to have read our response to the Scoping Opinion.
15. The Chief Medical Officer Sally Davies in her report published 2017 titled ‘Health Impacts of all Pollution’ states clearly that it is the responsibility of the Local Authority to assess and mitigate health impacts from pollution of airports. For instance, the report highlights *‘in children, aircraft noise exposure has been linked to delays in children’s reading on standard scales in cross-national studies.* The report also suggests *‘More easily achievable source reductions include airport night curfews, changes in numbers of flights from airports’* to reduce noise pollution.
16. The health section of the Environmental Statement has failed to consider any of these measures as the airport wishes to increase night flying in the summer months. The report prepare by Wood obviously couldn’t examine any of these factors as it would go against the wishes of their client, the airport, in trying to change the night movement limit.
17. Human health possible impacts from Climate Change include increase heat related illness especially from summer 2018, increase in photochemical and other forms of air pollution, with resulting increase respiratory illness, increased mortality and morbidity as a result of increased frequency of floods, storms and other natural disasters and damage to public health infrastructure.

Climate Change - Carbon and Other Greenhouse Gas Emissions:

Summary

1. It should be deeply disturbing to NSC to see that carbon and other greenhouse gas emissions are considered by the airport to be 'not significant' throughout the application, particularly as we know that the aviation sector is the UK's fastest growing source of emissions and this development will increase aviation emissions by 59% to 2026 and vehicle emissions by 16%.
2. NSC can hide behind the fact that various Government papers and policies have not yet been published or it can recognise the underlying crisis that the world faces and give this application the strongest possible scrutiny, ensuring that every opportunity is taken to reduce carbon emissions.
3. Increasing the capacity of the airport must be seen as 'unsustainable' as it would exacerbate the problem of climate change at a time when the country is committed to achieving major reductions in carbon emissions.
4. By way of background, Ontario Teachers' Pension Plan (OTPP), the majority owners of the airport, states that its approach to investment is a sustainable approach guided by its principles in a 2017 Responsible Investing Report titled 'Building a Sustainable Future for All Our Members'. The guiding principles to investment are environmental, social and governance. The environment is first on the list in their approach. However, the PCAA believe that OTPP are failing its members and the wider community by investing in airport expansion, due to its impact on air quality and noise-related health issues and climate change. If airport development was to take place in their backyard in Canada they would have a public outcry.
<https://www.otpp.com/documents/10179/786418/Responsible+Investing+Report/b61561d3-c285-4f2e-bebc-0aa252bf4ff6>.
5. The PCAA ask that NSC reject this application. However, if NSC approves the application it must be on the basis of a comprehensive review of the economic and environmental implications and in particular further analysis of 'Carbon and other Greenhouse Gas Emissions' is required. This will need to yield clear evidence in favour of development. The application does not get close to achieving this. A summary of specific challenges is shown below with more detail in the body of the paper, along with a number of further challenges.
6. The main challenges from the PCAA are that:
 - 6.1. The airport's growth will lead to more than 9,500 extra car journeys a day around the airport. Emissions from private vehicles (for passengers) are expected to rise by 16% to 2026 at a time when NSC and West of England Local Authorities have committed to reduce emissions by 50% (by 2035) and the Climate Change Act requires a cut of 80% by 2050 from a 1990 baseline.
 - 6.2. NSC needs to explain how these dramatically different aspirations can be reconciled and this needs to be set in the context of a Carbon Reduction Plan for North Somerset so that it is clear where deeper cuts will be made if travel to the airport is treated leniently.

- 6.3. It is in the interests of the airport to maximise car travel as car parking is such a significant part of their business model (especially when they can get green belt land to accommodate low-cost parking without building sufficient multi-storey car parks). It is understandable, therefore, that the airport's commitments for public transport remain at 15% which is no different to the target at 10mppa. Growth to 12 mppa represents a 'business as usual scenario' with increased vehicle emissions.
- 6.4. NSC needs to justify in evidence-based terms why the airport should be given preferential treatment in respect of existing policies to reduce car travel when their business primarily concerns outgoing tourist travel which generates an economic loss to the country of £2.4bn each year, increasing to £3.6bn at 12 mppa.
- 6.5. There is a very shallow analysis of the risks involved with climate change, focusing just on flooding. Given that North Somerset is planning to invest in infrastructure changes to accommodate growth at the airport, NSC must consider the full range of risks. If public money is used to subsidise low-cost holiday flying then the public need to be aware of why this is being done and the risks attached.
- 6.6. NSC needs to undertake a much more comprehensive evaluation of the risks surrounding the development
- 6.7. Given the scale and urgency of the climate change crisis and the vested interest of the airport in attracting car travel, it is imperative that a comprehensive Carbon and Climate Change Action Plan is provided at the time of the application and not as a proposed condition and viewed by NSC at a later date. Climate change is the world's most important challenge and any development that exacerbates the problem must have the strongest possible scrutiny.
- 6.8. NSC needs to call for and scrutinise the airport's Carbon and Climate Change Action Plan
- 6.9. Emissions from aviation are expected to increase by 59% as a result of growth to 12 mppa. The Campaign against Climate Change has submitted an objection to the application on the emissions from aviation. The PCAA request that NSC examine carefully their submission which show that the environmental statement actually predicts a 73% increase in aviation emissions compared to 2017. This is a highly significant figure. These emissions cannot be ignored. Please see Appendix 7.
- 6.10. No information has been given on the carbon emissions resulting from the use of internal buses which connect and circulate between the main terminal to the Administration block to the employee transport hub.

Introduction

1. It is now widely accepted that climate change will create physical, social and economic disruption on an unprecedented scale. With roughly 1°C of global warming already driven by human activity, the physical impacts of climate change are being felt now.
2. Droughts are becoming more extreme, storms are increasing in severity and sea levels are rising. These impacts are widely projected to increase dramatically into

the future, even under the most optimistic scenarios. The aviation sector is not reducing emissions but increasing them.

Aviation emissions

1. In the UK, under the Climate Change Act 2008, emissions must be reduced by 80% on 1990 levels by 2050. In order to give effect to this objective, the UK government has committed to publish a new Aviation Strategy in 2019. In line with previous policy commitments, this will need to include a plan to limit UK domestic aviation emissions to around 2005 levels by 2050 (based on an assumption of a 60% increase in demand over that period).
2. Notably, in light of these requirements, the UK's Climate Change Committee has already expressed concern about failures by the UK government to factor GHG implications into its plan to build a new runway at Heathrow Airport (ref: Committee on Climate Change, 'Department for Transport's assessment of the case for a third runway at Heathrow' 22 November 2016).
3. A warning was also given that aviation emissions at 2005 levels in 2050 means other sectors must reduce emissions by more than 80%, and in many cases they will likely need to reach zero and that higher levels of aviation emissions in 2050 must not be planned for, since this would place an unreasonably large burden on other sectors.
4. The Green Paper published 17 December 2018, titled 'Aviation 2050 – the future of UK aviation' states:
 - 4.1. *'UK aviation accounts for around 7% of the UK's total greenhouse gas emissions, an increase from around 5% in 2005. International aviation's carbon emissions currently account for less than 2% of total global emissions, but these could increase by two to four times between now and 2050. Aviation's share of emissions is likely to continue to increase as other sectors, such as energy and manufacturing, decarbonise more quickly. This means that aviation could represent 25% of the UK's greenhouse gas emissions by 2050.'*
 - 4.2. And that the Green Paper 'accepts the Committee on Climate Change's recommendation that emissions from UK-departing flights should be at or below 2005 levels in 2050' which is a target of 37.5 Mt CO₂.
5. In 2017 aviation carbon emissions at Bristol Airport were 746.77 (ktCO₂/yr) and in 2026 they will be 1,183.87 (ktCO₂/yr) an increase of 59%.
6. This figure could well be higher if the modern, less-noisy fleet of aircraft does not materialise. As we have stated elsewhere, every airport is to expand or intends to expand and all airports compete for a modern, less-noisy fleet of aircraft. Ryanair is wedded to the 737-800. All Ryanair aircrafts are of that type and they have ordered more than 100 more, thus there is no likelihood of the new modern fuel-efficient fleet at Bristol in the near future. Ryanair's business model relies on all planes being the same.
7. Importantly, other, broadly concurrent, similar developments (e.g. significant planned expansion at Heathrow, Gatwick, Stansted, Manchester, Birmingham and Luton airports) also need to be taken into account.
8. The airport needs to present its base case around the increase in emissions assuming no modernisation of the fleet which is the most realistic assumption

9. Furthermore, if the Government's approach requires mitigation measures, we do not yet know what mitigation might be required as they are to be announced in the new Aviation Strategy 2019.
10. This document should inform the public whether or not airport growth fits within the Climate Change Act and how emissions from UK departing flights can be held at or below 2005 levels in 2050.

Vehicle emissions from passengers

1. The 2017 baseline figure for vehicle emissions is 184.45 (ktCO₂/yr). In 2026 the future baseline figures for vehicle emissions is 214.23 (Tables 17.3 and 17.4). This is an increase of 16% in the annual level of vehicle emissions.
2. Climate policy for North Somerset Council was updated in 2018 and brought into line with the Draft West of England Local Authorities Joint Spatial Plan (JSP) (2017). The policy states:
 - 2.1. *'A carbon reduction target agreed across West of England local authorities (North Somerset, Bristol, South Gloucestershire & Bath and North East Somerset) is to reduce carbon emissions by 50% by 2035 from a 2014 baseline. This target is set out in the West of England Joint Spatial Plan. UK carbon dioxide emissions have been calculated annually since 2005, through its inventory of UK Greenhouse Gas (GHG) emissions. The purpose is to provide a reliable and consistent breakdown of greenhouse gas emissions across the country. GHG emissions are attributed to three main sectors: Domestic, Transport and the Industrial and Commercial sectors. In North Somerset the largest percentage of emissions is from the transport sector (45%), with a roughly even split attributed to the domestic (28%) and industrial and commercial sectors (25%)'*
3. Local Authorities in the West of England have adopted targets that are in line with or more ambitious than the national targets in the Climate Change Act. Taken in total, these targets require carbon emissions in the West of England to be reduced by 50% by 2035 and by 83% by 2050 on a 2014 baseline.
4. The Transport Paper from the West of England Emerging Findings Consultation November 2018 states that; *'road traffic is one of the most important sources of carbon dioxide (CO₂) emissions, which are contributing to climate change. Transport produces 29% of total carbon emissions in the West of England. There has been an 8% reduction in transport emissions between 2005 and 2014 which closely reflects national progress.'*
5. The paper fails to give an up-to-date figure for transport carbon emissions for 2017 and the PCAA has highlighted this to the West of England.
6. The Transport Papers goes on to state *'The transport programme is forecast to reduce greenhouse gas emissions by reducing the overall volume of travel by car through encouraging mode shift to cycling, public transport and Park & Ride. It will also help reduce greenhouse gas emissions by reducing congestion and idling*

traffic. However, the overall impacts of this programme are likely to be modest:’

7. The West of England’s intention is to incorporate sustainable transportation and surface access measures in particular which **minimise use of the private car**, maximise the use of sustainable transport modes and seek to meet modal shift targets.
8. Under the 106 Agreement of the 2011 planning consent the modal split for passengers using public transport was expected to be 15% at 10 mppa and in the new application the figure remains 15 % at 12 mppa. In 2017 the actual figure was 12.5%. The PCAA do not believe that the modal split for passengers using public transport at 10 mppa or 12 mppa will be 15%, given the failure to reach this level already, the absence of any robust plans to achieve it, and the massive increase in low-cost car parking which will make it easier for people to use private cars to travel to the airport.
9. As stated above, the West of England has set a target for 2035 of reducing carbon emissions by 50%, from a baseline of 2014. North Somerset Council recognises that around 45% of emissions is related to private cars and the intention is to reduce private car travel.
10. Within this period, the airport is anticipating a growth of 16% in carbon emissions from private cars (2017-2026) and this figure relates to travelers to the airport from within the West of England region, see Table 1, below
11. For this to be allowed to happen, there must be much more severe restrictions elsewhere - important questions both for West of England and for North Somerset
 - 11.1. What is the plan?
 - 11.2. Where will the extra reductions come from?
 - 11.3. Is this practical?
 - 11.4. What consultation has taken place?
12. In effect, the airport is assuming ‘business as usual’ with no significant effort to accommodate the need for dramatic reductions in emissions. And this, of course, favours their business model which is so highly reliant on income from car parking. The application reflects:
 - 12.1. Modest increases in the use of public transport (from 12.5 to 15%)
 - 12.2. Massive increase in car parking (on green belt land)
 - 12.3. Traffic congestion as little infrastructure changes are proposed
 - 12.4. Complacency in anticipating 16% growth in private car emissions
13. It is worth noting that, using the airport’s figures, the usage of private vehicles will grow to 10.2m (at 12 mppa). This equates to over 3.5m extra car journeys on the roads around the airport or over 9,500 extra journeys a day, bringing the total to nearly 28,000 private vehicle journeys a day
14. A more responsible strategy, and one that would be closer to NSC policy, would be to restrict car parking at the airport (and in multi-storey car parks to save the green belt) so as to force more people onto public transport, thereby reducing congestion on the roads and vehicle emissions.

• **Table 1**

Private Vehicle Usage (as per Table 17.A9 and 178.A11)

	2017	Future (12 mppa)	%change	Future (10 mppa)	% change
Bristol	1747749	2491932	42.6	2062298	18.0
Gloucestershire	497294	709040	42.6	586794	18.0
B&NES	390492	556761	42.6	140048	-64.1
Weston	155742	222057	42.6	794974	410.4
Portishead	71100	101374	42.6	362923	410.4
Clevedon	54171	77237	42.6	276513	410.4
Nailsea	57775	82064	42.0	293795	408.5
Total	2974323	4240465	42.6	4517345	51.9

* Number of private vehicles based on 87.5% of passengers and average vehicle occupancy

** Number of private vehicles based on 85% of passengers and average vehicle occupancy

15. The PCAA question the accuracy of the figures in Table 1 which are drawn directly from the application. At 10 mppa, how can one reasonably expect private vehicle usage to drop by 64% in B&NES and grow by 410% in North Somerset?
 - a. If these figures are wrong, what confidence can we have in many of the other figures throughout the application?
16. Furthermore, the application states that carbon emissions from passenger car travel will rise by 16% yet vehicle usage will rise by 43% for passengers from the West of England (if the figures above are correct) and 54% for all passengers. Some of the difference may be due to car efficiency but it certainly needs explanation.
17. If the airport is expecting a big increase in the use of electric cars, why have they only allowed for six electric car charging points? And are their assumptions inline with accepted national forecasts?
18. There has been no assessment given of carbon emissions from the buses which connect and circulate between the North and South side, from the main terminal to the Administration block to the employee transport hub. Staff car parking on the south side is a new introduction which has led to an increase in carbon emissions. The PCAA requests that these figures are given and how and when these emissions will be reduced?
19. The Aviation Policy Framework (APF) includes the following:
 - a. *"5.11 All proposals for airport development must be accompanied by clear surface access proposals which demonstrate how the airport will ensure easy and reliable access for passengers, increase the use of public transport by passengers to access the airport, and minimise congestion and other local impacts."*
20. Although, surface access proposals are suggested within the application, the PCAA cannot see how congestion is being be minimised and public transport increased. What has been put forward is almost exactly the same as in the 2009 planning application, and this failed to achieve the target level of 15% and caused increased congestion.

Climate Change Action Plan

1. A proposed condition has been outlined to North Somerset Council which states
1.1. 'A Carbon and Climate Change Action Plan shall be submitted to and approved in writing by the Local Planning Authority 12 months from the date of the permission or before the occupation of any new building or completion of any development included in the application, whichever occurs first. This shall include: (i) a baseline against which carbon management initiatives can be measured; (ii) a timetable with targets for Carbon Management being agreed.'
2. Bristol Airport has stated that it has an ambition to be carbon neutral by 2030. In this context it is perverse that the airport is to provide only up to 6no. Electric Vehicle (EV) charging points across the airport and that there has been no mention of a reduction in the use of red diesel Gas Oil which in 2017 equated to 177,210 CO₂eq (kg). (Ref; Bristol Airport Operations Monitoring Report 2017).
3. As climate change is such an important issue, the Carbon and Climate Change Action Plan should be made available now, to the public, in order that it can be assessed and views put forward on its adequacy.
4. The NSC Executive Member for Environment has written, in respect of this application:
4.1. I'm well aware of the problems concerning global warming, unsustainable world population, pollution of the air we breathe and the adverse effect pollutants are having on the seas and oceans of the world. To make any effect on these issues we must take the remaining 197 countries of the world with us. Radical changes in the UK will have a negative effect on trade and we have more than enough to contend with concerning Brexit.
5. The PCAA challenge this excuse for inaction which ignores the will of the people expressed through the Climate Change Act 2008 and flies in the face of Article 4 of the UNFCCC which makes it clear that high-income countries should take the lead in reducing greenhouse gas emissions.
6. Furthermore, his views ignore the facts surrounding the proposed airport expansion which removes wealth from the UK to the tune of £2.4 bn each year, increasing to a deficit of £3.6bn at 12 mppa. There is no trade and economic argument to justify this expansion – it may contribute increase in the tax take for NSC and be a glory project for North Somerset and the flourishing city of Bristol but the hard economic facts tell a different story (see Economics Section for detail)

Vulnerability of the Development to Climate Change.

1. The vulnerability of the proposed development to climate change was considered in Chapter 2 and focused on the impact of flooding. But Chapter 2 has not considered the vulnerability of the core activity of the airport, the airlines themselves, which will be impacted by climate change, which airlines themselves help to create.

2. The risks within the development need comprehensive assessment by NSC because:
 - 2.1. Any investment of public money into infrastructure or other support must be justified by a proper, risk-informed assessment
 - 2.2. Likewise, the inevitable, negative repercussions endured by local communities must be based on rigorous scrutiny of the proposed development.
3. There are two types of risks: physical and transitional to a low-carbon economy.
 - 3.1. Physical risks:
 - 3.1.1. Increased frequency of extreme weather events, including extreme cycles of precipitation/flooding, drought, and high-intensity tropical storms, which can directly impact flight operations, reduce the handling capacity of airports, close airports, increase flight diversions and increase operating costs
 - 3.1.2. increased sea level rise, leading to loss of airport capacity, impacts to en-route capacity due to lack of ground capacity, loss of airport infrastructure and loss of ground transport access
 - 3.1.3. Wind pattern changes and jet stream disruption, leading to disruptions to route patterns and increases in en-route turbulence
 - 3.1.4. Increased incidence of high temperatures at airports affecting aerodynamic performance of aircraft, leading to requirements on airlines to limit passenger and cargo weights.
 - 3.2. These physical risks to the airlines are already happening. As a result of the implications of these physical, climate-change related risks, there is, at the very least, a reasonably foreseeable risk that airlines will be exposed to: increased operational and capital expenditure costs; loss of revenues; increased exposure to health and safety risks for employees and/or sub-contractors; increased costs of capital and more restricted access to credit markets; and increased insurance premiums and potential for reduced availability of insurance on assets in 'high-risk' locations.
4. Transitional risks
 - 4.1. Transition risks, generally, refer to risks arising from the transition to a low-carbon economy. Extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change are well underway. Fundamental to these activities are steps being taken by governments, investors, companies and consumers to reduce GHG emissions responsible for causing climate change.
5. Aviation is a heavily GHG intensive business and is one of the fastest-growing sources of GHG emissions globally. Currently, direct emissions from aviation account for about 3% of the EU's total GHG emissions and more than 2% of global emissions. By 2020, global international aviation emissions are projected to be around 70% higher than in 2005 and the International Civil Aviation Organization (ICAO) forecasts that by 2050 they could grow by a further 200-360%.
6. In light of these trends, the sector as a whole faces significant challenges related to policy developments aimed at limiting GHG emissions in the sector. Many airline businesses are already adopting technological and operational innovations to pre-

emptively reduce emissions across their business. Evidence indicates however that the deep emissions reductions necessary to meet globally agreed climate change targets will be costly and challenging for the sector, with potential impacts varying significantly between airlines.

7. According to some studies, achieving sufficient reductions in aviation emissions will require reductions in the rate of growth of travel activity through demand management alongside incentivising technological advances. Such measures would have clear financial ramifications for the sector and individual airlines.
8. The uncertainty surrounding the sector must be understood by the decision maker, North Somerset Council. Not least because funding of improvements to the road network may be from public expenditure and the development allows the airport to negatively impact on local communities and the environment.
9. North Somerset Council must also be aware that costs per passenger will rise in future. Reforms to the EU ETS have already seen the price of carbon allowances triple, from a low of €4.38 per tonne in May 2017 to €13.82 per tonne in April 2018. The report from Carbon Tracker finds that prices are on course for €25- €30 per tonne by 2020-21 as reforms squeeze out surplus supply. It also suggests that the EU would need to implement a much tighter squeeze and drive prices still higher in order to align the EU-wide 2030-emissions target — and hence the EU-ETS cap — with the Paris Agreement. In either case, these trends indicate significant potential cost increases for airlines operating in the EU that are required to purchase allowances.
10. This, again, has impacts on the proposed development because if fewer people can afford to fly there would be less need for low-cost parking on the greenbelt.
11. Easyjet PLC is one of the main airlines at Bristol Airport and they have been reported to the Financial Reporting Council (FRC) Conduct Committee (Conduct Committee) by Client Earth for possible breaches of EasyJet's legal duties in reporting to the Committee. Under the relevant laws, EasyJet is legally required to disclose in its annual report and accounts: the principal risks and uncertainties facing its business; the main trends and factors likely to affect the future development, performance and position of its business; and the long-term viability and prospects of the company in light of these risks and trends. Easyjet omitted to mention the risks surrounding climate change. (Ref: Complaint to the FRC Conduct Committee EasyJet PLC)
12. The point the PCAA are trying to make is that the decision maker, North Somerset Council, must show that physical risks and transitional risks in moving to a low carbon economy, which are material considerations, are properly considered.

Lighting:

1. Darkness at night is one the key characteristics of a rural area. The lighting at Bristol Airport is extensive and causes a night glow for the area. It is comparable to the middle of Bristol and of Weston super Mare (reference CPRE Dark Skies).
2. Downside road was considered a dark area impacted only by lights from the A38. There is now considerable light spill from car parking from both the north and south side of the airport. This is due to the height of the lights. For example, from Lighting Part 1.
 - 2.3 3.3.3 *'North Side Road, the Terminal and Hampton Hotel North Side road is lit with column luminaires of varying height. Taller columns (approximately 8m) provide overall illuminance, however, smaller columns (approximately 3m to 4m) provide illuminance along the pathways and adjacent to crossings.'*
 - 2.4 *'Cogloop Parking - The Cogloop parking area is currently lit with temporary, extendable column luminaires. At the time of the survey, these were at a height of 6m to 8m.'*
 - 2.5 4.1 *'Lighting installation for aircraft stands normally consists of high-mast floodlighting from 12m to 30m in height located in specific areas in the airfield apron'.*
3. The PCAA question why the columns have to be so high and request that smaller columns are used such as 3m. The Eastern apron is only just coming into operation and the night light from these aircrafts is going to be immense, adding to light pollution. The measures put forward to reduce light pollution are inadequate.
4. Lighting is referred to in the green belt section. The PCAA reiterate the point that people value 'Dark Skies'. There is a significant visual impact from the Mendips AONB. It is not just light pollution in the sky that is seen from the Mendip Ridge but the airport lights themselves are clearly visible. The Chew Valley Neighbourhood Plan highlights the Policy HDE15: 'Dark Skies Policy' which states *'Design lighting to minimise the risk of light spillage beyond the development site boundary and into the wider countryside'*. The increased lighting on the south side for car parking and an airport apron under application 18/P/4949/RM can only cause more light spill into the wider area.

Proposed Heads of Terms for Section 106 Agreement and Proposed Planning Conditions:

The numbers below relate the numbering in the Planning Statement Document Appendix D. The PCAA comments are in italics.

Proposed Heads of Terms for Section 106 Agreement

2. Major Schemes Fund a) A fund [sum to be agreed] to support the development of major strategic transport schemes within the region that would include major passenger transport improvements to the network serving Bristol Airport. Allocation of funds would be governed by the Surface Access Steering Group.

The sum to be agreed should be made public before the decision makers grant planning consent in order that the public can ensure that the developer is to pay a fair contribution and not disadvantage the public purse.

3. Airport Surface Access Strategy and Workplace Travel Plan

a) Preparation of an updated Airport Surface Access Strategy (ASAS) and a Workplace Travel Plan for Bristol Airport. A draft Workplace Travel Plan is submitted alongside the planning application. A draft ASAS to be submitted prior to commencement.

b) Both the ASAS and the Workplace Travel Plan to include measures to achieve modal share targets for sustainable travel. Definitions and modal share targets to be agreed. Final documents to be developed and agreed with the Airport Transport Forum.

c) Passenger modal share to be monitored and reported annually using CAA surveys, with the methodology to be reviewed by the Surface Access Steering Group.

d) Commitment to a new dedicated full-time Travel Plan Coordinator role for a three year period.

The modal share of public transport and the Work Travel Plan should be a condition under planning consent to 12 mppa.

It is essential that the ASAS is available prior to a decision – it has massive, far-reaching implications.

Targets, definitions and measures to achieve the targets need also to be available prior to the decision

4. Public Transport a) Commitment to maintain the express bus service connections:

i. To Bristol City Centre with at least 6 services per hour. This would increase to 8 services per hour beyond 10mppa, subject to patronage and viability. ii. To Weston-super-Mare with at least an hourly service. This would increase to half-hourly beyond 10mppa, subject to patronage and viability. iii. To Bath, with at least an hourly service from 9mppa onwards. b) Commitment to ongoing promotion and development of long-distance services to destinations in Devon and Wales, subject to patronage and viability. c) A fund [sum to be agreed] for the ongoing development of public

transport serving Bristol Airport. [Note: This would replace the £100,000 per annum contribution that commenced as part of the 10mppa planning consent].

The sum to be agreed should be made public before the decision makers grant planning consent in order that the public can ensure that the developer is to pay a fair contribution and not disadvantage the public purse.

Who judges viability? There must be a minimum period for the service and what about costs to the passenger – it needs to be low cost. What does © really mean? Is this the sum for subsidising the bus services, or something else? They really need to be measured on achievement not level of investment.

A condition needs to be inserted in respect of the commitment to create a public transport interchange and the necessity for space, close by, to be available for local people as well as commuters to park in order to use the facility at a cost equivalent to local park & ride facilities (e.g. at railway stations) in order to achieve more people using public transport not just passengers and staff.

5. Metrobus a) Development of proposals and a contribution [sum to be agreed] towards upgrading the A370 Weston-super-Mare to Bristol bus corridor to enable Metrobus services (e.g. contributions towards raised kerbs, new shelters and iPoints at appropriate stops, including the airport). b) A contribution [sum to be agreed] towards kick-starting a new Metrobus Complimentary Service on the A370 corridor to strengthen connectivity between Bristol Airport, Weston-super-Mare and surrounding villages.

The sum to be agreed should be made public before the decision makers grant planning consent in order that the public can ensure that the developer is to pay a fair contribution and not disadvantage the public purse.

6. Highway Improvements a) Complete the proposed highway improvement scheme at A38/Downside Road/West Lane prior to passenger numbers reaching 12mppa. b) A fund [sum to be agreed] to support the implementation of local highway improvements within the following categories: i. Junction capacity ii. Highway safety iii. Footway and cycleway improvements

BAL should be made to pay for the total cost of these Highway Improvements as the need for them is a direct result of airport growth. If this does not happen then the sum needs to be disclosed as a total figure and as a percentage of the full cost of the works.

7. Parking Controls a) Development of proposals for an Authorised Waiting Area for private hire vehicles combined with an additional drop-off facility at Bristol Airport. This facility would be appropriately charged and time-limited to reduce demand for short-stay waiting off-site. b) A contribution [sum to be agreed] towards the costs of implementing Traffic Regulation Orders and other matters relating to the introduction of new on-street parking controls in the local area. c) A contribution [sum to be agreed] for the purpose of funding 1FTE NSC parking/enforcement officer for a

period of five years. d) Agreement to implement items a), b) and c) above jointly, managed through the Surface Access Steering Group.

As stated under the Parking Controls section, a) there should be no charge or time limitation to the Authorised Waiting Area for private hire vehicles b) the sum to be agreed should be that the developer pays the total cost of Traffic Regulations Orders and a FTE NSC Enforcement Officer as parking activities outside the airport are directly related to the developer. This supports the 'polluter pays' principle which is commonly accepted practice - those who produce pollution should bear the costs of managing it, to prevent damage to human health or the environment.

8. Air Quality Surface Access a) A commitment to provide up to 6no. Electric Vehicle (EV) charging points across the airport, including plans for publicly available charging points, developed in partnership with NSC. Locations to be agreed, subject to feasibility. b) A commitment to establish a zero-emission pool car operation as part of the Workplace Travel Plan, to include at least two zero-emission vehicles and associated infrastructure.

This condition is very weak and needs strengthening. The electric vehicle charging points need to be increased and made known within the application, perhaps linked to the percentage uptake of electric vehicles nationally.

9. Noise - Air

a) To implement a Noise Control Scheme for the Airport within 12 months of the Commencement of the Development

The PCAA questions why there hasn't been a Noise Control Scheme before and the public should see what it contains within the application to ensure that noise is curtailed/reduced. This is one of the most troubling issues for local residents and details should be available at the time of the decision.

b) The Noise Control Scheme shall require BAL to impose penalties for the breach of noise limits and to provide incentives for the use of quieter aircraft. The penalties will be published on an annual basis in a format agreed, and a noise performance league table will be reported in the Annual Operations Monitoring Report

To date no breach of noise limits has ever occurred due to the limits being set too high. Unless the limits are reduced no penalties will ever be imposed. There is a conflict of interest with the airport imposing penalties on airlines who are also customers of BAL. Imposing a penalty may lead to the airline removing its services from the airport.

The PCAA request a condition that the Noise Control Scheme is adjudicated by an independent organisation to take away the conflict of interest.

c) To complete a feasibility study to understand the potential for utilising electric vehicles in airside and landside areas

The removal of diesel vehicles has already been called for by members of the Airport Consultative Committee. And the airport has committed to going carbon neutral by

2030. There is no reason other than cost of changing the fleet of vehicles that is inhibiting the change to an electric fleet.

This condition should state that due to the urgent need to reduce carbon emissions all airside and landside areas should be electric within a short time frame. The condition should also ask for the plan to be shared with NSC for the airport to achieve carbon neutrality.

Noise Ground

9. To review and produce an updated Ground Noise Management Strategy for the Airport (“the Ground Noise Management Strategy”) in consultation with the Council, NATS and airlines within 12 months of the Commencement of the Development which will identify measures to minimise the effects of ground noise, including:

- I. Operational and procedural controls on the ground running of aircraft;
- II. The installation of noise attenuation buildings and screens;
- III. Identification of key performance indicators for monitoring ground noise management.

IV. The installation of a permanent ground noise monitor which will be situated airside at a location to be agreed with the Council.

g) To implement and maintain a Ground Noise Management Strategy by reviewing, producing, maintaining and enforcing standing instructions in relation to activities covered by the Ground Noise Management Strategy and to use reasonable endeavours to procure the implementation by aircraft operators of the Ground Noise Management Strategy, including pursuing follow up action with the operators of aircraft that disregard the standing instructions subject to constraints of safety.

h) To report on progress of the Ground Noise Management Strategy, through the AOMP, to the Consultative Committee and make such reports available to the public.

Ground Noise or background noise to airport activities has become a real problem and NSC was negligent in not having strict control of ground noise for growth to 10 mppa.

Permanent ground noise monitors should be placed as far as 3 km away from the airport in several locations.

All Auxiliary Power Units and Mobile Ground Power Units should be banned and only fixed electrical ground power be available.

Financial penalties should be levied on airlines that breach conditions and implemented by a neutral third party, not the airport which would have a conflict of interest.

10. Environment and Biodiversity

A commitment for BAL to establish an Environmental Steering Group (membership and Terms of Reference to be agreed with NSC)

Agreed.

11. Environmental and Amenity Improvement Fund

To establish prior to the Commencement of Development the Airport Environmental and Amenity Improvement Fund (wording to be agreed) which will be administered by representatives of BAL and the Council on behalf of the local community [geographical area to be agreed] and to be used for the purposes of funding:

Mitigation to address unforeseen adverse environmental impacts or adverse impacts on the amenity of the local community arising from the development.

To pay into the Airport Environmental and Amenity Improvement Fund at the point of it coming into force and on annual basis a fixed rate [sum to be agreed] per annum for 10 years.

The Airport Environmental and Amenity Improvement Fund should make known the sum to be agreed per annum for 10 years. The criteria should be made available to the application.

The PCAA do not believe that representatives of BAL and the Council should administer this fund on behalf of the local community. The PCAA suggest an independent organisation such as Quartet Community Fund which covers the old Avon area. A letter has been sent to Quartet to understand their willingness to administer the fund to ensure that funds are delivered to those who are impacted by airport activities especially the environment damage. This is similar to the scheme set up by EDF in respect of Hinckley Point C. The decision-making panel would include people from the airport, NSC, Quartet and an independent.

13. Regularisation of conditions of 10mppa consent and 12mppa consent A clause will be included to clarify the extent to which certain conditions of the 10mppa and 12mppa permissions will apply where such conditions would otherwise be incompatible on the implementation of both permissions.

It is essential that the application shows the regularisation of conditions of 10mppa consent and 12mppa consent.

There is a risk that the Silver Zone Extension Phase 2 could be brought forward before MSCP 2 and the public transport interchange. From the planning application it states commencement of Phase 2 December 2019 for use in 2020. The MSCP 2 could easily be delayed beyond this date. The MSCP 2 and interchange should be delivered as the condition stated by 10 mppa.

Silver Zone Extension Phase 1 lighting needs to be aligned with phase 2, supported by the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document Adopted January 2018 and both should be no more than 0.5 lux.

Replacement land for the foraging of bats should be allocated to offset the change of land use from agricultural pasture to the Silver Zone Extension phase 1.

Bristol Airport is situated in a rural location and there needs to be a condition on sky glow to limit it, in respect of area and brightness, to aid nature conservation.

Based Aircraft stands should be limited to growth to 12 mppa.

A condition needs to be inserted in respect of the commitment to create a public transport interchange and the necessity for space, close by, to be available for local people as well as commuters to park in order to use the facility at a cost equivalent to local park & ride facilities (e.g. at railway stations)

Proposed Planning Conditions

6. Multi-Storey Car Park (Phase 3)

No phasing has been put in place for MSCP 3 which is needed in order to avoid more green belt being taken and passenger parking within parishes. Parishes request that the MSCP 3 is built for 11 mppa.

7. Silver Zone car park extension (Phase 2)

The PCAA object to the use of 5.1 ha for the Silver Zone car park extension (Phase 2) due to a) the environmental damage and removal of foraging for a protected species the Greater and Lesser Horseshoe Bat and b) low cost parking subsidies the wealthy c) mitigation is weak.

If consent is granted for more low-cost parking on the green belt it should be after the MSCP 2 and public transport interchange have been constructed. This means it would be after 2022.

9. Eastern taxiway link

Due to the proximity of neighbours a noise condition needs to be put in place that this taxiway should not be used during the official definition of night from 23.00 – 0700 hrs.

Taxiway Golf

10. This for improved access and movement of aircraft and will affect the western apron stands 33 -39.

Due to the proximity of neighbours a noise condition needs to be put in place that this taxiway should not be used during the official definition of night from 23.00 – 0700 hrs

Ground noise

15. Auxiliary Power Units shall not be used on stands 33 to 39 between the hours of 23:00 and 06:00.

Stands 33 to 39 should all have fixed electrical ground power not auxiliary power units. Auxiliary Power Units should not be used on stands 33 to 39 between the hours of 23:00 and 07:00 hrs. These are the official hours of night.

17. The total number of take-offs and landings between the hours of 23:30 hours and 06:00 hours for 12 months (for the avoidance of doubt this will be two adjoining seasons of Summer and Winter) shall not exceed 4000 (as defined in condition 17).

For the purposes of this condition, flights falling within the categories listed in condition 17 (k) shall not be included.

The PCAA totally object to this condition. The noise level at night is unacceptable now. The PCAA request there should be a reduction in the night movement limit to 2,500. This would be the first step towards a night time ban. This would allow night flights to be capped at 14 flights per night during the summer months and a total of 400 flights during the winter months.

Landscape and biodiversity

22. For those components where landscaping is a reserved matter, development of each individual component of the approved scheme shall not commence until full landscaping specifications for the relevant element have been submitted to and approved by the Local Planning Authority. The scheme as submitted shall include:

a) proposed finished levels; b) existing trees, shrubs, hedges or other soft features to be retained; c) planting plans, including specifications of species, sizes, planting centres, number and percentage mix; d) location of any service runs; and e) a management plan, which shall include maintenance details and a timescale for implementation of the planting.

There should be another point added to the above. To achieve no loss of biodiversity planting should be in place before any proposed development takes place and allowed to mature for at least five years.

23. All the planting shall be undertaken in accordance with the timescale set out in the management plan (condition 22 e).

The timescale in some planting schemes are too short. See above condition.

25. The landscape bund as detailed on Drawing [approved drawing number to be inserted] should be completed prior to the operation of the Silver Zone car park extension (Phase 2), in accordance with approved plans.

These words should be added to the above point 25 'to allow planting to mature for at least five years to ensure no biodiversity loss.' and 'Silver Zone Extension Phase 1 lighting needs to be aligned with phase 2, supported by the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document Adopted January 2018 and both should be no more than 0.5 lux'. The proposed timetable for development of phase 2 is winter 2019. Mature planting will not be established before opening in spring 2020.

26. The development of each individual component of the approved scheme shall not commence until full lighting details, developed in accordance with the Lighting Impact Assessment, for the relevant element have been submitted to and approved by the Local Planning Authority.

This condition is very weak. There should be a condition limiting the sky glow, defined in terms of area and brightness, suitable for a rural location as the airport is close to the Mendip Hills an AONB and SSSI sites.

27. Prior to the commencement of development, a ten-year Airport Landscape, Biodiversity and Habitat Action Plan shall be submitted to and approved in writing by the Local Planning Authority. The ecological mitigation proposals detailed in Chapter 11 of the Environmental Statement shall be undertaken as set out in the report. gical.

The Airport Landscape, Biodiversity and Habitat Action Plan should be made available to the public before the planning consent is granted especially as the timescale for commencement of development on site is 2019. The ecological mitigation proposals detailed in Chapter 11 of the Environmental Statement shall be undertaken as set out in the report. The report does not detail a ten year plan.

28. Prior to commencement of any development an Off-Site Habitat Management Plan must be submitted to and approved in writing by the Local Planning Authority. The Habitat Management Plan must include details of measures for replacement habitat for horseshoe bats (in accordance with the North Somerset and Mendip Bats Special Area of Conservation Guidance on Development: Supplementary Planning Document dated January 2018) which replacement habitat must be provided before the commencement of any development that results in the loss of horseshoe bat habitat. The Habitat Management Plan must be implemented in full and progress against the Habitat Management Plan must be reported within the Annual Operations Monitoring Report

A detailed Management Plan for ten years needs to be viewed by the public before planning consent is granted. It needs to be draft up front to allow significant effects to be assessed as part of the ES any Appropriate Assessment.

29. Lighting shall not exceed 0.5 lux at the perimeter of the extension to the Silver Zone car park (Phase 2) and 1 lux at the perimeter of the extension to the Silver Zone car park (Phase 1).

Lighting should be aligned for the entire Silver Zone Extension car park Phase 1 and 2 at 0.5 lux or lower. Only those areas close to a major junction and the entrance to the airport should have a lux level greater than 1 due to the rural location of the airport.

Climate Change

36. A Carbon and Climate Change Action Plan shall be submitted to and approved in writing by the Local Planning Authority 12 months from the date of the permission or before the occupation of any new building or completion of any development included in the application, whichever occurs first. This shall include: (i) a baseline against which carbon management initiatives can be measured; (ii) a timetable with targets for Carbon Management being agreed. Progress made against agreed targets and recommendation for reviewing targets where deemed necessary will be included within the Annual Operations Monitoring Report. The Carbon and Climate Change Action Plan will be reviewed every 5 years

A Carbon and Climate Change Action Plan should be made available for the public to view before planning consent is given. There are numerous people who have responded on the issue of Climate Change due to the 'climate emergency' and urgent

need to reduce carbon emissions. The Carbon and Climate Change Action Plan needs to be seen as adequate and the public allowed to give suggestions.

Passenger numbers

39. The passenger throughput at Bristol Airport shall not exceed 12 million passengers in any 12-month period (to be taken from X to X in any calendar year – unless a different 12-month start and end date is agreed). [Dates to be agreed with North Somerset Council].

REASON: To ensure that any adverse environmental, social and economic impacts that may arise from a 12 mppa capacity airport, as identified in the Environmental Statement submitted with the application, are not increased without a proper and formal process to consider any future increase in passenger numbers, in terms of the likely significant impacts and mitigation.

Agreed.

The PCAA request that as 'Bristol Airport forecasts a growth in the number of based aircraft until 2026' that the stands are limited to growth of 12 mppa with permitted development regulations removed. (ref: Planning Statement 5.3.28) Bristol Airport has used permitted development to increase aircraft stands, for example, application 17/P/2360/PAI, to prepare for growth beyond 10 mppa.

40. At the point when any part of the passenger terminal extension hereby granted is brought in to use, Bristol Airport shall provide the Local Planning Authority with a monitoring report to show the total passenger numbers using the airport for the preceding 6-month periods ending 30 June and 31 December each year (unless alternative dates are agreed).

There is a risk that passenger terminal extensions are to take growth beyond 12 mppa. North Somerset Council must ensure that the footprint of the terminal extensions is for a capacity of 12 mppa only.

Permitted development

41. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 1995, or any order amending or revoking and re-enacting that Order, no development, other than that authorised by this planning permission, shall take place outside the 'Airport Operational Boundary' as shown in Drawing number [approved drawing number to be inserted] without the permission, in writing, of the Local Planning Authority.

This condition is meaningless. If Bristol Airport submit an application under Permitted Development Regulations within or outside the Airport Operational Boundary, it will be exceedingly difficult for North Somerset Council to refuse permission. Permitted Development Regulations are exceedingly generous to airports.

All permitted Development Regulations should be taken away from Bristol Airport to 12 mppa to allow control of development to 12 mppa. Please see section titled Permitted Development.

Appendix 8 (For other appendices see separate document)

Compensation and the Treasury Green Book

The Treasury Green Book contains estimates of monetary values to support the assessment of the effects of environmental noise. These are provided for day-time disturbance and night-time disturbance. The levels increase depending on the noise impact, starting at 45dB. The DfT and WHO suggest that the 'Observed Adverse Effect Level' for daytime noise occurs at 51dB for daytime and 45dB for night time. This opinion is understood by the airport (Draft Noise Action Plan, section 5, page 20). However, in their compensation scheme the airport recognises no disturbance until 57dB is reached for daytime noise (LAeq.16).

The Green Book figures can be used to identify the monetary values associated with the noise pollution experienced by a householder close to the airport.

- The Green Book tables indicate that the monetary value associated with a house experiencing 57dB (day) and 52dB (night) would be £754.48 pa. This uses the onset of noise nuisance at 51dB (day) and 45dB (night).
- The number of households suffering noise impacts of 57dB and above (LAeq.16h) was 500 in 2006 and 300 in 2011 and 450 in 2017 (Table 5, Draft Noise Action Plan 2009-24).
- If we take the lowest figure, 300, we can see that the monetary impact on households is a total of $300 \times £754.48 = £226\text{k pa}$. For 2017 this figure would be £339k pa.
 - This is an under-estimate as houses with higher noise impact would be impacted to a higher monetary level.
 - Also, households experiencing noise nuisance between 51dB and 57dB have not been included although DfT and WHO guidelines recognise that they are adversely impacted.
- The airport confirms that 328 households have received insulation grants since 2000.
- If we assume they all received the full grant (which is unlikely) then the airport will have funded $328 \times £5000 = £1,640,000$
- In addition, since 2014 the airport has contributed annual sums of £100k to the Airport Environmental Improvement Fund. Part of this has been used to fund the insulation grants, in fact £200k has been used to insulate 70 properties since 2014 (Draft Noise Action Plan)
- At a generous estimate and since the compensation scheme was launched in 2000, the airport has contributed $£1,640,000 + 5 \times £100,000 - £200,000 = £1,940,000$ towards mitigating the impact of noise on local residents
- If the Green Book figures are used, the monetary value of these noise impacts over this period is at least $£226,000 \times 18 = £4,068,000$, at a very conservative estimate
- The Green Book figure is more than double the value of the airport's scheme.

The purpose of this analysis is to demonstrate to the airport and to NSC a way in which some externalities can be assessed in monetary

terms and to request NSC to negotiate a much-improved scheme for local residents if the application is granted.

GREEN BOOK

Economic valuation tools

Tools have been developed which convert changes in noise exposure to estimated monetary values, to support the assessment of the effects of environmental noise. The central estimates of values for road, rail and aircraft exposure are presented in Table 1 and Table 2. A range of sensitivities are available around these values from the Noise Modelling Tool.

The tables show an estimated value that corresponds to a change in the noise level. These values may not be suitable to use if:

- a decision is likely to have a substantial effect on noise
- the change in noise levels is going to affect the outcome of a decision

In these cases, a more detailed assessment may be justified.

Table 1: Total road, rail and aircraft noise marginal values, £ per household per dB change, Central Values, 2014 prices

Change in noise metric by decibel (dBA) (daytime noise metric)		Total Road (including sleep disturbance)	Total Rail (excluding sleep disturbance)	Total Aircraft (excluding sleep disturbance)
45.0	46.0	£11.28	£3.90	£15.61
46.0	47.0	£11.23	£3.95	£17.72
47.0	48.0	£11.31	£4.11	£19.82
48.0	49.0	£11.52	£4.40	£21.90
49.0	50.0	£18.41	£4.80	£23.96
50.0	51.0	£18.89	£12.46	£38.71
51.0	52.0	£19.49	£13.13	£40.80
52.0	53.0	£20.23	£13.91	£42.88
53.0	54.0	£21.09	£14.81	£44.94
54.0	55.0	£47.78	£15.84	£46.98
55.0	56.0	£51.22	£16.98	£49.01
56.0	57.0	£54.79	£18.24	£51.02
57.0	58.0	£58.49	£19.62	£53.02
58.0	59.0	£63.86	£22.68	£56.56
59.0	60.0	£69.33	£25.82	£60.05
60.0	61.0	£74.69	£28.85	£63.29
61.0	62.0	£80.21	£32.03	£66.54
62.0	63.0	£85.90	£35.37	£69.83
63.0	64.0	£91.75	£38.87	£73.14
64.0	65.0	£97.78	£42.53	£76.47
65.0	66.0	£103.96	£46.34	£79.82

66.0	67.0	£110.32	£50.32	£83.21
67.0	68.0	£116.85	£54.46	£86.61
68.0	69.0	£123.54	£58.76	£90.04
69.0	70.0	£130.39	£63.22	£93.50
70.0	71.0	£137.42	£67.83	£96.98
71.0	72.0	£144.61	£72.61	£100.48
72.0	73.0	£151.97	£77.54	£104.01
73.0	74.0	£159.49	£82.64	£107.57
74.0	75.0	£167.18	£87.89	£111.15
75.0	76.0	£175.04	£93.31	£114.75
76.0	77.0	£183.07	£95.22	£116.66
77.0	78.0	£188.93	£97.17	£118.62
78.0	79.0	£190.93	£99.16	£120.61
79.0	80.0	£192.96	£101.20	£122.64
80.0	81.0	£195.03	£103.27	£124.71

Notes:

- There are no relationships available between the different noise indicators for rail and aircraft noise. If detailed data are not available for the specific indicator of interest, the available results for the daytime indicator can be used as an approximation for the other required indicator (e.g. assume Lden = LAeq,16h). This type of approach cannot be used for night noise.
- Sleep disturbance has been excluded for rail and aircraft but include not applicable for rail and aircraft. Sleep disturbance is presented separately in Table 2 against Night.

Table 2: Sleep disturbance night time noise marginal values £ per household per dB change, Central Values, 2014 prices

Change in Night noise metric by decibel dB(A)		Road	Rail	Aircraft
45	46	£29.20	£13.59	£37.93
46	47	£32.07	£15.06	£40.79
47	48	£34.94	£16.52	£43.65
48	49	£37.81	£17.99	£46.52
49	50	£40.68	£19.46	£49.38
50	51	£43.55	£20.92	£52.24
51	52	£46.42	£22.39	£55.11
52	53	£49.29	£23.86	£57.97
53	54	£52.17	£25.32	£60.83
54	55	£55.04	£26.79	£63.70
55	56	£57.91	£28.25	£66.56
56	57	£60.78	£29.72	£69.42
57	58	£63.65	£31.19	£72.29
58	59	£66.52	£32.65	£75.15
59	60	£69.39	£34.12	£78.01
60	61	£72.26	£35.59	£80.88
61	62	£75.13	£37.05	£83.74
62	63	£78.00	£38.52	£86.60
63	64	£80.88	£39.99	£89.47
64	65	£83.75	£41.45	£92.33
65	66	£86.62	£42.92	£95.19

Parish Councils Airport Association response to Bristol Airport planning application 18/P/5118/OUT
to North Somerset District Council

66	67	£86.62	£42.92	£95.19
67	68	£86.62	£42.92	£95.19
68	69	£86.62	£42.92	£95.19
69	70	£86.62	£42.92	£95.19
70	71	£86.62	£42.92	£95.19
71	72	£86.62	£42.92	£95.19
72	73	£86.62	£42.92	£95.19
73	74	£86.62	£42.92	£95.19
74	75	£86.62	£42.92	£95.19
75	76	£86.62	£42.92	£95.19
76	77	£86.62	£42.92	£95.19
77	78	£86.62	£42.92	£95.19
78	79	£86.62	£42.92	£95.19
79	80	£86.62	£42.92	£95.19
80	81	£86.62	£42.92	£95.19