



Matter Raised		STAL Response
<b>Determination Process</b>		
1.1	Clarity is required confirming the proposal does not fall within the scope of development defined as a Nationally Significant Infrastructure Project by virtue of Section 14(1) of the Planning Act 2008.	The application only seeks an 8mppa increase in passenger numbers. It is clear the application is also made on the basis of limited growth of CATMs (up to 16,000), less than what is already permitted (20,500). Nevertheless, to ensure clarity, the application description has been amended and the Applicant is content to accept a limiting condition in line with the submitted forecasts.
This is now the subject of legal proceedings. It is not only a matter of the increase sought to Stansted Airport's <u>permitted</u> throughput under Section 23(8) of the Planning Act 2008 but also the increase in the <u>capability</u> of Stansted Airport, under Section 23(5) of the Planning Act 2008, that would ensue from the proposed development. Section 35 of the Planning Act 2008 also needs to be considered.		
1.2	How the increased passenger limit is linked to planned infrastructure works.	Section 4.12 of the Planning Statement makes clear the relationship of the planned works to the further growth of the airport.
It is not only Section 4.12 of the Planning Statement which is relevant to this question. The Planning Application, including the Planning Statement, needs to be considered in the round, for example, paras 2.92 and 4.13 to 4.21 of the Planning Statement need to be considered alongside para 4.12. Comparisons with other airports are also relevant.		
1.3	Request for carrying forward a condition to fix existing limits on aircraft noise and aircraft movements	The application makes clear the scale of the development proposed. It is also clear that the operational limits (both aircraft movements, passenger numbers per annum and the maximum noise contour) would be subject to planning conditions.
The requirement is progressively to reduce the impact of aircraft noise upon local communities and not simply maintain the impacts within limits set a decade ago. The Government's overall policy on aviation noise is "to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, as part of a policy of sharing benefits of noise reduction with industry." This policy is currently set down in the 2013 Aviation Policy Framework (para 3.12) and it is expected to be strengthened in the new Aviation White Paper due to be published by the DfT in early 2019.		
1.4	No consultation events were held in Elsenham or High Easter which is in contravention of UDC's published guidelines. In addition, 'November/December consultation events did not include the three parishes which fall within the airport: Stansted Mountfitchet, Takeley and Elsenham. It's believed that residents directly affected by the scheme have not been directly informed and that there were poorly advertised consultation events	STAL's approach to consultation has been consistent with UDC guidance. A series of outreach events have been held over a number of weeks and across various locations in Uttlesford, East Hertfordshire and Harlow. During the November outreach, one event was held on the airport site (at the Radisson Blu Hotel) to cater for residents in close proximity to the airport and onsite stakeholders. There has also been media coverage across the area.
The purpose of the so-called 'outreach' events has never been clear which may explain why attendance was so sparse. As for the nine consultation 'roadshow' events in July 2017, these also were only sparsely attended possibly due to the lack of advance publicity. Moreover, it is unfathomable that roadshow events were provided for communities as far away as Harlow and Braintree, but the nearby communities most affected by the operations of Stansted Airport, including Little Hallingbury, Great Hallingbury, Broxted, Birchanger and Elsenham, were ignored in the July 2017 consultation 'roadshow' programme. Similarly, the communities giving rise to most complaints about airport noise over the past two years, namely Felsted, Stebbing and High Easter, were also ignored in the July 2017 consultation 'roadshow' programme.		
1.5	The 2014 Environmental studies should be published (as part of 2008 planning application conditions) prior to proceeding to determine the current 2018 planning application.	This request is made on a mistaken basis. This S106 obligation related to the effects of 'the Development' permitted in 2008, i.e. an increase beyond 25mppa. As 25mppa was not reached until 2016, the 'effect' in 2014 was unrealised / zero / nil.
STAL could justifiably defer publication of the environmental studies until Stansted's throughput exceeded 25mppa but the studies have still not been published.		
<b>Planning Policy</b>		
1.6	The application has been portrayed by some as being 'premature', with many government documents and reports due in the coming months, such as: <ul style="list-style-type: none"> <li>Aviation Strategy and Final NPS not yet published</li> <li>Uttlesford District Council (UDC) Local Plan not adopted</li> <li>Government update on further recommendations on tackling CO<sub>2</sub> emissions</li> <li>Review on changes to departure routes in 2016</li> <li>Government's Select Committee Draft Report Statement due on 24 July 18.</li> </ul>	In the main submission the accompanying Planning Statement clearly demonstrated and described the context and reason for the submission of the application and the proposed works. Similarly, an analysis of policy compliance was also provided. The case made remains unchanged. However, since the 35+ application was submitted, some key developments in planning and aviation policy have occurred that are material to the determination of the application. Most significantly, the Government has made clear its policy on making best use of existing runways in its publication of 'Beyond the Horizon: The Future of UK Aviation, Making Best Use of Existing Runways' on 5th June 2018. In this document, the Government affirmed its policy to make best use of existing runways subject to 'all relevant considerations, particularly economic and environmental impact proposed mitigations' (paragraph 1.29). On 25th June 2018 Uttlesford District Council Regulation 19 Pre -submission Local Plan was published for consultation. Whilst this plan's status remains as draft and contains policies with unresolved objections, the weight afforded to it needs to be determined in accordance with the NPPF. Nevertheless, the draft plan does

		<p>contain policies that relate to increased airport growth which contain links to the prevailing national aviation policy environment.</p> <p>The application and the additional supporting information provided demonstrate compliance with the draft policies.</p> <p>In summary, the 35+ application is neither premature in respect of national aviation policy nor will it prejudice the preparation of the draft local plan. The application cannot be therefore judged as premature.</p>
<p>The two most important policy documents – namely the new Aviation White Paper and the final (adopted) version of the UDC Local Plan – are expected to be published in early 2019. Meanwhile, many key elements of the policy context are uncertain. Moreover, STAL does not expect to reach 35mppa until 2023 and the infrastructure works are expected to take only 12 months to build. The new NPPF (July 2018) states that an application may be deemed premature where "(a) 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 development that are central to an emerging plan; and (b) the emerging plan is at an advanced stage but is not yet formally part of the development plan for the area". Both of those requirements are met in this case.</p>		
1.7	Timing of application	<p>Section 2 of the Planning Statement addresses the timing of the application and the horizons over which large scale transport infrastructure should be appropriately planned. Timing comparisons with previous planning applications are not relevant.</p>
<p>Section 2 of the Planning Statement includes fundamental inaccuracies – including outright misrepresentation of the Government's clearly stated position – which result in an overstatement of the case for growth at Stansted. For example, STAL wrongly asserts that the Government does not expect the third Heathrow runway to be operational until 2030 (para 2.73) and that Stansted will be "the primary opportunity for aviation growth in the London system for at least the next ten years" (para 2.74). The true position is that the Government expects the third Heathrow runway to be operational by 2026 and expects Heathrow to handle 111m passengers in 2026; 122m in 2027; 130m in 2028 and about 132mppa thereafter – all compared to 78m in 2017. Quite clearly the additional capacity provided to the London system by Heathrow R3 from 2026 onwards is far greater than any additional capacity that Stansted can provide. Moreover, every other London airport has ambitious expansion plans. Gatwick is assumed by STAL to be at capacity but it expects to grow by 7.5mppa over the next five years. Meanwhile, Luton is assumed by STAL to have the potential to grow by just 2mppa (from 16mppa in 2017 to a maximum of 18mppa) but it has announced plans to more than double in size to 36-38mppa.</p>		
1.8	Stansted airport has not been identified by Government for expansion.	<p>This application is not for "airport expansion", but rather for making best use of an existing runway. The Government Policy 'Beyond the Horizon, The Future of UK Aviation: Making Best Use of Existing Runways' published on 5<sup>th</sup> June 2018 provides clear national policy on the matter and reinforces long-standing support for making best-use of existing runway capacity.</p>
<p>The same Government policy document states that, as part of any planning application, airports will need to demonstrate how they will mitigate against local environmental issues, taking account of relevant national policies, including any new environmental policies emerging from the Aviation Strategy. It is difficult to see how the latter can be considered prior to the publication of the new Aviation Strategy, intended for early 2019. It is also important to note that whilst 43mppa may be described as making "better use" of Stansted's existing runway capacity, it cannot be described as making "best use". STAL originally proposed growth to 285,000 aircraft movements and "approximately" 44.5mppa by 2029. Is it now being argued by STAL that its original proposals are not achievable on the existing runway or is it STAL's intention to submit a further planning application in due course to increase the use of the runway to 50mppa or more?</p>		
1.9	Interpretation and weight afforded to the Aviation Policy Framework and Airports Commission Reports.	<p>Since the submission of the planning application and many of the consultation responses that have been submitted to the LPA, the Government has published its policy on making best use of existing runways in June 2018. As such, this latest policy makes clear the Government's support in principle for the application as made, subject to detailed examination of relevant considerations.</p> <p>While the Airports Commission's work provides context to emerging national aviation policy, it is not (and never has been) Government policy. Importantly, it has now been largely superseded by more recent policy development. The latest Government policy statement is its response to the Airport's Commission's recommendation (see para 1.5).</p>
<p>Para 1.38 of the Airports National Policy Statement published in June 2018 clearly states that the "Airports NPS does not affect Government policy on wider aviation issues, for which the 2013 Aviation Policy Framework and any subsequent policy statements still apply." The June 2018 policy document referred to by STAL is a departmental (DfT) policy document and so does not carry the same weight as a Government White Paper, as is the case with the Aviation Policy Framework (APF) and as also will be the case with the new Aviation Strategy, intended for publication as a White Paper in early 2019 (which will supersede the APF). Moreover, the DfT's June 2018 document amounts to just seven pages of text and is extremely limited in scope. The Airport NPS (para 1.39) states that the Government "is supportive of airports beyond Heathrow making best use of their existing runways" but this is qualified as follows "However, we recognize that the development of airports can have positive and negative impacts, including on noise levels. We consider that any proposals should be judged on their individual merits by the relevant planning authority, taking careful account of all relevant considerations, particularly economic and environmental impacts."</p>		
1.10	Interpretation and weight afforded to the Airports National Policy Statement.	<p>The ANPS is not a document that is specific to the 35+ application for making best use of Stansted. Whilst this has always been the case, the final ANPS (June 2018) makes clear in section 1, specifically paragraphs 1.38 and 1.39, that the NPS relates to <i>new</i> runway capacity in the South East of England, while applications for using existing runways are covered by the complementary 'Beyond the Horizon' policy statement.</p>
<p>STAL's response misrepresents the true position. It is plainly wrong for STAL to assert that the Airports NPS only relates to <i>new</i> runway capacity. To quote from para 1.38 of the ANPS: "The Airports NPS sets out Government policy on expanding airport capacity in the South East of England." It also plainly wrong for STAL to assert that the DfT's 'Beyond the Horizon' policy statement is "complementary" to the Airports NPS. As explained above, the June 2018 'Beyond the Horizon' document is just seven pages in length and extremely limited in scope. It is the 2013 Aviation Policy Framework (APF) which is specifically referred to in the Airports NPS (para 1.38) as the source for any 'complementary' Government policy on the expansion of airports other than Heathrow. The APF – as a White Paper – will continue to carry significant weight until superseded by the next Aviation White Paper, expected in early 2019.</p>		
1.11	Address the essential test of 'demonstrable need' posed in the draft Airports National Policy Statement.	<p>Section 2 of the Planning Statement sets out the case for additional capacity. The Government's policy on best use does not require a 'need' case to be central to any application, but rather that the economic, environmental impact and proposed mitigations are taken into account. The application as made and the additional supporting information enable a balanced judgement to be reached.</p> <p>The final NPS (paras 2.10 – 2.18) sets out the 'need case' for airport growth. It does not rely simply upon forecasts, but stresses impact on international and domestic connectivity, prices, competition, delays, resilience and constraining the delivery of wider economic benefits.</p>
<p>Again, STAL's response misrepresents the true position. Quoting in full para 1.42 of the ANPS: "As indicated in paragraph 1.39 above, airports wishing to make more intensive use of existing runways will still need to submit an application for planning permission or development consent to the relevant authority, which should be judged on the application's individual merits. However, in light of the findings of the Airports Commission on the need for more intensive use of existing infrastructure as described at paragraph 1.6 above, the Government accepts <b>that it may well be possible for existing airports to demonstrate sufficient need for their proposals,</b></p>		

<p><b>additional to (or different from) the need which is met by the provision of a Northwest Runway at Heathrow.</b> As indicated in paragraph 1.39 above, the Government's policy on this issue will continue to be considered in the context of developing a new Aviation Strategy. [our emphasis]. STAL must therefore demonstrate the need for its proposals additional to (or different from) the need which is met by the provision of a Northwest Runway at Heathrow. QED.</p>		
1.12	<p>Application fails to address the policy on carbon emissions and does not balance the adverse impacts on climate change with the benefits of air travel.</p>	<p>Chapter 12 of the ES (Carbon Emissions) and Section 6 of the Planning Statement (paragraphs 6.141 to 6.146) addresses carbon emissions in relation to the application and the Planning Benefits associated with the development are set out in Section 8 of the Planning Statement. The Government's Beyond the Horizon paper on next steps towards an aviation strategy sets out the proposed aims and objectives of the new Strategy. This includes "supporting growth while tackling environmental impacts".</p> <p>The Climate Change Act 2008 sets a legally binding target for the UK to reduce its GHG emissions by at least 80% by 2050, compared to 1990 levels. This target includes UK domestic aviation (flights which take off and land in the UK) but does not include emissions from international aviation. The Government has indicated that it will use the Aviation Strategy to re-examine how the aviation sector can best contribute its fair share to emissions reductions at both the UK and global level.</p>
<p>Primarily, we deal with issues relating to carbon emissions and climate change at Section 8 below but in response to the final sentence of STAL's response in 1.12 above, we reiterate that STAL is pressing to have this planning application approved before the Government's new Aviation Strategy is published. Until it is published – expected early next year – it is not possible to say whether the projected increase in CO<sub>2</sub> emissions that would ensue from the proposal can be accommodated and/or managed within the Government's overall framework for addressing aviation CO<sub>2</sub> emissions and the UK's total CO<sub>2</sub> emissions. Importantly, other, broadly concurrent, similar developments (e.g. significant planned expansion at Heathrow and Luton airports) also need to be taken into account. Furthermore, if the Government's approach requires mitigation measures, we do not yet know what mitigation that might be required of STAL.</p>		
1.13	<p>Failure to comply with Policy ENV11 – Noise Generators of the Uttlesford Adopted Local Plan (and therefore ENV10 &amp; GEN4).</p>	<p>Policy ENV11 clearly states that the first stage of the consideration of potentially noise generating development is to establish whether there is likely to be an adverse effect on noise sensitive development. The relevant sections of the ES that consider air, ground and surface access noise reach no such conclusions and therefore the application is in accordance with the policy. The second stage of the policy, to consider whether the need for the development outweighs the degree of noise generated, is not triggered. On the grounds of no adverse effects, the application accords with ENV10 and GEN4.</p>
<p>The above response from STAL is both inadequate and erroneous. For the avoidance of doubt, the exact wording of UDC policies ENV10, ENV11 and GEN4 is as follows:</p> <ul style="list-style-type: none"> <li>• Policy ENV10 – Noise Sensitive Development and Disturbance from aircraft: "Housing and other noise sensitive development will not be permitted if the occupants would experience significant noise disturbance. This will be assessed by using the appropriate noise contours for the type of development and will take into account mitigation by design and sound proofing features."</li> <li>• Policy ENV11 – Noise Generators: "Noise generating development will not be permitted if it would be liable to affect adversely the reasonable occupation of existing or proposed noise sensitive development nearby, unless the need for the development outweighs the degree of noise generated."</li> <li>• Policy GEN4 – Good Neighbourliness: "Development and uses, whether they involve the installation of plant or machinery or not, will not be permitted where: a) noise or vibrations generated, or b) smell, dust, light, fumes, electro-magnetic radiation, exposure to other pollutants; would cause material disturbance or nuisance to occupiers of surrounding properties."</li> </ul> <p>STAL's own numbers show that under the 'do minimum' scenario for 2028 there would be 248,820 aircraft movements whereas the proposed development would generate 274,00 movements, i.e. an increase of 10%, and there would be larger planes since long haul traffic is expected to grow faster than short haul - again, based on STAL's own numbers. Plainly, there will be adverse effects, regardless of STAL's assertion to the contrary, and (in accordance with Policy ENV11) STAL must be able to demonstrate that the need for the development outweighs the degree of noise generated. To date, STAL's position has been to deny that it requires to demonstrate need.</p>		
1.14	<p>The 'permitted capacity' referred to in Objective 2c of the emerging Uttlesford Local Plan means the 2008 planning permission which is 35mppa. The application proposals are not in accordance with this objective.</p>	<p>In draft Objective 2c, 'permitted capacity' is not defined. Some objectors have considered this to mean the current permitted capacity (i.e. that of the 2008 25+ Permission). However, when read as a whole, Section 2 of the draft plan describes the vision for Uttlesford in 2033. Elsewhere in the plan, sustainable growth of the airport is given qualified support. As such we consider that 'permitted capacity' should be read as being the planning permission in force at Stansted at any point in the plan period. Had Uttlesford District Council intended to constrain Stansted throughput to 35mppa until 2033, a draft policy to this effect could have been proposed; rather, we consider that the wording encapsulates the current permission and any other permissions granted for increased operations at Stansted. It is therefore not appropriate or consistent with the plan read as a whole to conclude that the application is in conflict with the objective as currently drafted.</p>
<p>The OED defines "permitted" as "allowed" (an adjective derived from the past tense of the verb) and so the meaning of the phrase "permitted capacity" is clear. To accept STAL's interpretation would be to say that driving faster than the "permitted speed limit" could be excused by arguing that the speed limit might be increased in the future. Moreover, there would otherwise be no point in having a policy which limited the growth of Stansted Airport to its "permitted capacity". There is no need for a policy to say that statutory planning caps must be observed. STAL is perfectly entitled to continue to argue that the policy should be relaxed and will no doubt do so in responding to the Regulation 19 Local Plan and at the Examination in Public. However, as matters presently stand the policy is clear.</p>		
1.15	<p>Compliance with Objective 3b 'Climate Change and Use of Resources' of the Uttlesford draft Local Plan: specifically,</p> <ul style="list-style-type: none"> <li>• Ensuring development is located and designed to be resilient to future climate change and the risk of flooding and</li> </ul> <p>"Ensuring new development promotes the use of sustainable travel".</p>	<p>Objectors have commented on the submitted climate change assessment that forms part of the ES, stating that it is not an assessment of impact on climate change. This is incorrect; ES Chapter 13 (Climate Change) presents both an in-combination climate change assessment and a climate change reliance assessment in accordance with the national Planning Practice Guidance and other technical guidance (e.g. EUROCONTROL, IEMA and the Environment Agency) – see paragraphs 13.15 to 13.21 of the ES. The in-combination assessment considers the combined effects of the proposed development and potential climate change impacts on those aspects of the receiving environment and community which could be affected by climate change (see ES Table 13.8) and concludes that there will be no residual effects.</p> <p>Moreover, it is clear from objective 3b of the draft Local Plan, and more importantly paragraph 99 of the NPPF, that it is necessary to show how the proposed development can be resilient to climate change.</p> <p>The application makes clear in the supporting ES, TA and Planning Statement how the airport currently invests in and promotes the use of sustainable transport for its passengers and staff to access the airport, to maintain its high public transport mode share, and will continue to do so.</p>

No further comment		
1.16	Compliance with Draft Policy SP11 of the emerging Uttlesford Local Plan.	<p>As stated above, limited weight should be afforded to policies that are subject of unresolved objections. In respect of SP11, representations made by STAL concerning the detailed wording of this policy have not been resolved in the latest Regulation 19 Draft Plan, and the policy as drafted remains to be tested at an Examination in Public. However, the proposed development accords with all the relevant criteria of the draft policy.</p> <p>A review of the comments received on the application shows that objectors truncate and selectively quote elements of the criteria in the draft policy in an attempt to substantiate a policy conflict. When each criterion is read as a whole and in the context of the whole Plan, no such conflict exists. Examples of this occur for:</p> <ul style="list-style-type: none"> <li>a) criteria 'd' or '4' (Reg 18 and Reg 19 references respectively) where 'significant increase in air transport movements' is extracted from the policy text. It is suggested that 'significant' can be substantiated from a base of 2017 ATMs, when it is clear that the primary assessment case is a comparison of 'Do Nothing' and the 'Development Case' in 2028. However, the policy criterion as a whole is clearly drafted to consider and judge impacts of increased ATMs 'that would adversely affect the amenities of surrounding occupiers or local environment [...]'. The ES demonstrates that no such adverse effects exist and therefore any discussion over 'significant' is irrelevant.</li> <li>a) Criteria 'h' or '8' (Reg 18 and 19 references respectively) where 'minimise the use of the private car' is extracted and claimed to be a policy conflict. The criterion however requires that an application 'incorporates sustainable transportation and surface access measures which minimise the use of the private car [...] etc'. The ES and accompanying TA demonstrate such measures are already in place (e.g. the Airport Surface Access Plan and Transport Forum) and will remain so if 35+ is granted.</li> </ul>
<p>For STAL to suggest that only limited weight should be attached to a UDC policy simply because it objects to it, is patently illogical and self-serving. STAL's objections to Policy SP11 are well known but STAL was almost alone in asking for a relaxation of Policy SP11 set down in the Regulation 18 Draft of the Local Plan. Altogether, 126 parties commented on Policy SP11 in the course of the consultation on the Regulation 18 Draft and the vast majority proposed a further tightening of the safeguards relating to the expansion of Stansted Airport. Only two parties - STAL and one other – sought a relaxation. The Regulation 18 Draft Local Plan was approved unanimously by UDC Cabinet on 6 July 2017 and then approved by UDC Full Council on 11th July 2017, with just one member of the Council (which comprises 39 members of whom 29 were present at the meeting) voting against. The Regulation 19 Pre-Submission Draft Local Plan (where Policy SP11 was substantially the same as it had been in the Regulation 18 Draft) was approved unanimously by UDC Cabinet on 12 June 2018 and then approved by a clear majority (23 v 13) of UDC Full Council on 19 June 2018.</p> <p>Moreover, the examples given above are misrepresentations.</p> <ul style="list-style-type: none"> <li>a) It is not necessary to refer to the 2017 Base Case to demonstrate that the proposal would give rise to a significant increase in aircraft movements. STAL's own numbers show that under the 'do minimum' scenario for 2028 there would be 248,820 aircraft movements whereas the proposed development would generate 274,00 movements, i.e. an increase of 10%, which equates to an extra 69 aircraft movements per day. By any yardstick this is a significant increase, particularly for residents living close to the airport and under flightpaths.</li> <li>b) Using STAL's own numbers from Table 6.3 in the Transport Assessment, car mode would increase from 50% in 2016 to 51% in 2028. How can this be consistent with minimizing the use of the private car and maximizing the use of sustainable transport modes? A specific example is STAL's policy of operating an exclusive taxi franchise at Stansted – unlike Heathrow, Gatwick and almost all other UK airports. The effect of the exclusive taxi franchise is to create 'empty running' whereby the taxi franchisee is generally unable to obtain a return fare to the airport whereas other licensed taxis deliver passengers to the airport but generally cannot pick up a return fare. At Heathrow, Gatwick and elsewhere, black cabs and other licensed hackney cabs can drop off passengers at the airport and then queue for a return (outbound) fare. The policy at Stansted results in unnecessary double running, creating more road traffic than is necessary and more emissions and air pollution than is necessary. It is analogous to the additional road traffic created by 'kiss &amp; fly' as opposed to 'park &amp; fly' and it is quite obviously inconsistent with criterion 'h' (or '8') in the Local Plan.</li> </ul>		
1.17	Wider relationship between the emerging Uttlesford Local Plan's housing policy and the airport's proposal.	<p>Much has been made by some objectors about the highway impacts when considered alongside the proposed new settlements promoted in the emerging Local Plan for Uttlesford.</p> <p>At a planning application level, it is for each applicant to demonstrate that the development would meet the tests set out in paragraph 32 of the NPPF. The transport modelling undertaken clearly sets out its methodology for factoring in local housing growth. The mitigation proposed and judged necessary to 'limit the significant effects' of the airport's growth (both infrastructure investment and sustainable travel commitments) are related to the application and not to any other third-party development, thus according with the requirements of Regulation 122 of the CIL Regulations 2010.</p>
<p>STAL is correct in saying that its transport modelling sets out its methodology for factoring in local housing growth. The problem is that the factoring in of specific housing growth was limited only to developments in Uttlesford which already had planning consent. This is a tiny proportion of expected housing growth in the local area (including not only Uttlesford but other nearby LA Districts). TEMPro model growth factors were assumed by STAL to be sufficient to reflect the growth in local road traffic relating to new housebuilding over and above the minimal housebuilding specifically allowed for. This is not a satisfactory basis for modelling and thus STAL has failed to properly assess cumulative traffic impacts over the period to 2033. DfT Circular 02/2013, 'The Strategic Road Network and the Delivery of Sustainable Development' states: "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". In short, cumulative road traffic impacts must be assessed to 2033.</p>		
<b>EIA and Alternatives</b>		
1.18	Consideration of the 44.5mppa as a reasonable alternative	<p>At the time of the ES scoping it was made clear that the alteration from 44.5mppa to 43mppa was as a consequence of community consultation clearly indicating a preference for no additional aircraft movements. Please refer to ES Chapter 2 (EIA Methodology), particularly paragraphs 2.13 to 2.19, and ES Chapter 3 (Description of Site, Proposed Development, Policy Context and Alternatives)</p>

		Having made the decision not to apply for any increase in aircraft movements and to set a limit of 43mppa, which STAL fully expect UDC to impose as a planning cap, any increase to 44.5mppa can no longer be considered as a 'reasonable alternative' as such growth would not be permitted under the planning consent which is being sought.
STAL's response above adds to the confusion as to whether or not this is a planning application for "best use". STAL claims that the Government supports its planning application because of the policy set down in 'Beyond the Horizon: Making best use of existing runways', June 2018. A proposal to grow to 43mppa and 274,000 annual aircraft movements is clearly not "best use" if 44.5mppa and 285,000 is considered by STAL to be achievable with the same infrastructure.		
1.19	The methodology used in the ES is considered misleading as it compares the environmental impact of 43mppa against a baseline of 35mppa. In order to understand the basis of the 'Do Minimum' and 'Development Case' scenarios, the Applicant should demonstrate best practice standards on which the EIA methodology is based.	In accordance with convention and best practice standards complying with the Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Impact Assessment 2004, the EIA has focused on assessing the difference in environmental effects between the Do Minimum scenario and the Development Case. Reference to this can be found in Chapter 2 'EIA Methodology' paragraphs 2.33 and 2.39.
Point 1.19 above was not made by SSE and so we have no comment other than to endorse the validity of a comparison between the Base Case and the Development Case and to note that there also needs to be a comparison between the Base Year (i.e. normally 2016 for this planning application) and the Development Case.		
1.20	Planning Horizon: It is considered that an assessment period of just ten years is inadequate and an assessment of the surface access impacts to 2033 should be provided.	The application makes clear the operational limits applied (see the introduction to the Planning Statement) and the assessment period is a consequence of that. An outcome of pre-application public consultation was that no increase in aircraft movements was important to local residents and STAL gave considerable weight to this consideration. The forecasts for the growth of the airport show that the 274,000 aircraft movement limit would be reached in 2028 and therefore it follows that this is the primary assessment year. Air Traffic Forecasts beyond this date would be no higher as the limits would be reached, and therefore impacts of the development no greater. This is explained in the Impact Assessment Assumptions section on ES Chapter 3, in particular paragraph 2.49 which states: "There is no obvious intervening year before 2028, or after, which would derive more pronounced environmental effects than those which would occur in 2028 because this is the year when 43mppa is forecast to be reached". Moreover, as set out in ES Chapter 4 (Aviation Forecasts), STAL's forecasting team, advised by ICF and ACL, has not identified any realistic alternative lower or higher growth forecasts up to 2028. Paragraph 2.51 further explains: "Notwithstanding, even if the growth in passenger numbers and aircraft movements were slower to materialise than currently assumed (e.g. due to unforeseen effects on the economy after Brexit) then the consequence of reaching the upper projections for passenger and aircraft movements (up to the combined limit of 274,000 movements) at a later year would not derive any materially different environmental effects than those which would be expected to occur in 2028. Equally, more ambitious growth projections for Stansted, such that the respective 35mppa and 43mppa thresholds would be achieved before 2022/2023 and 2028, are also considered unlikely, as described in Chapter 4". In any event, a sensitivity test to 2033 for highway surface access is provided at paragraph 7.90 of Vol 3 of the ES (Transport Assessment) to ensure alignment with the end of the draft Local Plan period.
DfT Circular 02/2013, 'The Strategic Road Network and the Delivery of Sustainable Development' states: "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 which ever is the greater". In short, cumulative road traffic impacts must be assessed to 2033. It may be that the airport throughput remains flat at 43mppa from 2028 to 2033 but housebuilding continues and so the overall level of road traffic continues to grow.		
1.21	Cumulative Impacts: The ES need to provide an assessment of Cumulative Impacts through to 2033 so that the impacts of the proposed development of Stansted Airport can be considered alongside the impacts associated with implementation of Uttlesford Local Plan and other local plans in the surrounding area	Cumulative impacts within the ES have been appropriately considered against an agreed list of applications and permissions. Paragraph 5(e) of Schedule 4 of the EIA Regulations 2017 requires an environmental statement to consider: "the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources" [emphasis added] Therefore, there is no requirement for an ES to assess the cumulative effects of future development plans or projects unless such developments are subject to planning permission or are otherwise committed to or approved. Notwithstanding, ES Chapter 17 (Cumulative Effects) examines the potential for cumulative effects from 15 committed schemes (see ES Table 17.1), 5 further developments pending determination by UDC (ES Table 17.2) and the various operational improvements that STAL is pursuing as extant or deemed (permitted development) planning permission under the Stansted Transformation Programme (STP). This detailed assessment identified no significant cumulative effects of the 35+ project in combination with these other developments. Cumulative highway impacts are best considered with the use of TEMPro. This approach, agreed with the relevant Highway Authorities, removes any uncertainty that could arise from the draft allocations (housing and employment) that fail to reach adopted plan status. In particular, it is relevant that none of the local plans for surrounding districts have been adopted and all remain at different stages of the plan making process. The environmental impacts of the development are therefore more accurately and reasonably predicted with the methodology used in the ES and TA. A sensitivity test to 2033 for highway surface access is provided at 7.90 of Vol 3 of the ES (Transport Assessment) to ensure alignment with the end of the draft Local Plan period.
We referred immediately above to the requirements set down in the DfT Circular 02/2013. The rationale behind this Circular is quite clear, namely, to try to ensure that longer term (10+years) cumulative impacts are properly considered. However, the Transport Assessment has sought to minimise the extent to which cumulative road traffic impacts are considered by taking the term "existing and/or approved projects" to mean only those projects for which planning approval has been granted. We submit that it is reasonable to include housing projects set down in Local Plans which have either been adopted or are close to being adopted in the assessment of cumulative impacts. A key purpose of the planning system is to take a forward look at developments and plan for their impacts.		

Aviation Forecasts												
2.1	The Council should not allow more night flights and increased night cargo movements.	The application does not seek to increase night time movements. Night movements are controlled by the Department for Transport for Stansted. The night flight restrictions at Heathrow, Gatwick and Stansted have been continued until October 2022 which will maintain the status quo in terms of movements while encouraging the use of quieter aircraft at all three airports established in the previous five-year regime. The regime sets night flight movement limits and noise quota limits for both the Winter and Summer at Stansted.										
Point 2.1 above was not made by SSE and we do not take issue with STAL's response except for the fact that it is incomplete. In Appendix D of the Planning Statement STAL provides 'Draft Heads of Terms' for a Section 106 Agreement and includes a proposal to remove the existing s106 "Restriction on lobbying for any relaxation on night flights restrictions". The only possible explanation for this proposal is that STAL wishes to seek an increase in the permitted number of night flights at Stansted. STAL correctly points out that the present limits on night flights will remain in force until October 2022 and that any change to these limits is a matter for the DfT. It is however clear that STAL wants to use the opportunity of the current planning application to remove the current restriction so that it is in a position to begin lobbying for a relaxation of the present night flights regime with the objective of being allowed more night flights from October 2022 onwards.												
2.2	An updated 'Beyond the Horizon' paper was published by the DfT in April 2018 for consultation. Significantly, the references cited in ES1 Chapter 4 are omitted from the updated paper	As the ES was submitted on 22 February 2018, the Government's paper published in April 2018 could not have been included within the submission. At the time of writing the ES the applicant can only use papers which are published, they are unable to cite future publications which have not yet been released for consultation. In this document, the latest policy position has been addressed, including the Government's updated position on making best use of existing airports, as of June 2018.										
Self-evidently, STAL could not take account of a DfT paper which had not yet been published. SSE was not being critical of STAL for omitting to do that. SSE was simply pointing out that the DfT's April 2016 paper was more circumspect than its 2017 paper in supporting 'best use' of existing runways. The DfT's June 2018 'Making best use' policy paper includes further refinements.												
2.3	Stansted's forecasts are greater than that of the recent DfT and previously published Airports Commission Forecasts. The level of growth predicted in the application, and the level of 35mppa, is unlikely to be reached as soon as STAL suggests.	<p>Please refer to Chapter 4 Section 4.6.9 of the ES where the differences are highlighted in further detail. Actual growth at Stansted, and other airports, has outstripped both the Airports Commission (AC) and DfT forecasts. For example, the AC (Assessment of Need case, 2015) forecast that by 2017 Gatwick would be handling 38 mppa (actual throughput was 45.5 mppa); and that Luton would be handling 10 mppa (actual throughput was 15.8 mppa). For Stansted, the forecast for 2017 was 22 mppa (actual throughput of 25.9 mppa). Compared with the 2014 baseline, the 6 mppa growth at Stansted between 2015 and 2017 (26 mppa) is double that forecast by the AC. Both DfT and the AC under estimate, by several years, the rate of growth at Stansted: Year in which the current throughput (26mppa) is forecast to be reached at Stansted:</p> <table border="0"> <tr> <td>- Airports Commission (2013)</td> <td>2030</td> </tr> <tr> <td>- Airports Commission (2015)</td> <td>2020</td> </tr> <tr> <td>- Airports Commission Low cost case (2015)</td> <td>2019</td> </tr> <tr> <td>- DfT (2017)</td> <td>2027</td> </tr> <tr> <td>- ACTUAL</td> <td>2017</td> </tr> </table> <p>The DfT has made clear (see Aviation Forecasts document and Explanatory Note) that "the purpose of [its] forecasts is primarily in informing longer term strategic policy rather than in providing detailed forecasts at each individual airport in the short term; the uncertainty reflected by future demand growth scenarios at the national level is compounded at the level of the individual airport". As such, the DfT accept that its forecasts are not intended to be used in a short-term context, in particular over the next ten years.</p> <p>DfT notes that airport-specific forecasts may differ and are likely to reflect local and commercial information that will be relevant to driving growth in the short term. They advise (Aviation Forecasts, para 1.4) that "In some circumstances more recent airport specific data and forecasts might be used, in conjunction with additional relevant information, to inform local planning decisions.</p> <p>This means that where there is an interest in the short -term forecasts, particularly where high levels of competition between airports occur, DfT recommends the use of alternative forecasts or sensitivities (for example, alternative local forecasting) be considered alongside the department's forecast, particularly ones that contain and examine short -term drivers of demand.</p> <p>It is important to recognise the limitations of the DfT's forecasts in relation to the consideration of forecasts of Stansted over the period to 2050.</p>	- Airports Commission (2013)	2030	- Airports Commission (2015)	2020	- Airports Commission Low cost case (2015)	2019	- DfT (2017)	2027	- ACTUAL	2017
- Airports Commission (2013)	2030											
- Airports Commission (2015)	2020											
- Airports Commission Low cost case (2015)	2019											
- DfT (2017)	2027											
- ACTUAL	2017											
STAL has still not provided any explanation of its forecasting model, or any sensitivity analysis. And is it still the case that Stansted's demand forecast is for 44.5mppa by 2029? Moreover, STAL's assumptions regarding the limitations on competitor capacity are in direct contradiction to the available evidence and therefore wholly implausible (see below).												
2.4	STAL / MAG have a poor track record on forecasting	STAL's forecasts have been prepared by credible external specialists and are based on the latest available data for the forecast period at the time of the application, incorporating current traffic levels, route development, Stansted specific airline intelligence and commercial arrangements and an assessment of demand and capacity at other London airports. As such, they are a reasonable basis on which the application can be considered.										
The answer given above is broadly the same as the answer always given but the fact remains that STAL/MAG have an abysmal track record on forecasting. SSE main submission to UDC (para 8.2) showed that the degree of over-estimation in MAG/STAL forecasts over the years has been fairly consistent at about 30%-40%.												
2.5	STAL should justify its 2030 opening date for Heathrow R3 rather than 2026.	Government has a target date of opening a new runway at Heathrow by 2030. Heathrow have announced that investment will be phased, and new terminal capacity brought on stream incrementally up to 2040.										
STAL's response here is simply wrong. The Department for Transport has repeatedly stated that the third Heathrow runway will be ready by 2026. The Heathrow Chief Executive insists it will be ready by late 2025 or 2026 and the DfT forecasts assume that Heathrow's will grow from 84.1m in 2025 to 111.3m in 2026, 121.8m in 2027, 129.5m in 2028, 131.9m in 2029 and 132.4m in 2030. All of this can be easily referenced to DfT forecasts, Ministerial statements, Hansard record of debates in June 2018, the Airports NPS and statements by Heathrow Airport Ltd. What is the basis for STAL's assertions regarding the much later dates for Heathrow R3 becoming operational (2030 – 2040)?												

2.6	Luton has plans to grow beyond the 18mppa that STAL use as a limit in their forecasts.	Luton's 'announcement' should attract limited material weight in considering this application. Luton is limited to 18mppa on the basis of the limitations of the current planning permission. It is expected to reach this figure by 2026/7. On the basis of recent rapid growth, Luton has recently announced its intention to grow the airport beyond this current planning limit. It sees the maximum use of its single runway delivering 36 – 38 mppa in the late 2030s or early 2040s, providing a number of major constraints can be overcome. Although there has been a 'vision' published, there is no published masterplan, planning application or indeed permission, that would substantiate an alternative baseline scenario.
<p>To quote STAL's own words in its response at 1.6 above:</p> <p><i>"Most significantly, the Government has made clear its policy on making best use of existing runways in its publication of 'Beyond the Horizon: The Future of UK Aviation, Making Best Use of Existing Runways' on 5th June 2018. In this document, the Government affirmed its policy to make best use of existing runways subject to 'all relevant considerations, particularly economic and environmental impact proposed mitigations'.</i></p> <p>Insofar as this Government policy applies to Stansted it must apply equally to Luton (and elsewhere) and if planning caps can be raised at Stansted, they can also be raised at Luton (and elsewhere).</p> <p>Apart from the 20-22mppa expansion potential at Luton, STAL's forecasts appear to take little or no account of projected pre-third runway growth at Heathrow of 8.5mppa by 2025 or of the expansion plans of other airports: Gatwick expects to grow its 2016 passenger throughput by 10mppa by 2023 and London City expects to grow by 3.5mppa by 2028, again compared to 2016, whilst Southend (having now attracted Ryanair as well as easyJet) expects to double its passenger throughput next year. Moreover, when HS2 opens (scheduled for 2026) Birmingham Airport will be just 38 minutes from London Euston – some 10 minutes quicker than Liverpool Street to Stansted – and Birmingham Airport has the runway capacity to cater for an increase of around 20mppa over and above the 12.3m passengers handled in 2016. STAL makes no mention of these market competition dynamics in its forecasting narrative.</p>		
2.7	The Applicant should be required to provide sensitivity analysis for the Stansted forecasts, in the event that Ryanair reduced the scale of its operations at Stansted by (say) 25% as a consequence of Brexit.	We have used economic forecasts that incorporate Oxford Economics' central Brexit case so are already accounting for a slower than otherwise economic growth. A 25% reduction by Ryanair is not considered realistic: The demand for 'low cost' travel is not dependent on the identity of the airline.
<p>It is a matter of opinion whether a 25% reduction by Ryanair at Stansted is a realistic possibility in the event of a 'hard' Brexit. The example of Ryanair was given because (a) Ryanair is the dominant airline at Stansted and (b) it is an EU, not UK airline. An alternative Brexit sensitivity test could be a 25% overall reduction (i.e. without regard to the identity of the airline) or even a 10% sensitivity test. However, as matters stand STAL has not been able (or willing) to provide any sensitivity analysis of its demand forecasts – Brexit or otherwise.</p>		
2.8	CATMs are predicted to grow to 16,000 in 2028 (para 4.59) and the Applicant, incorrectly, states the 2016 Baseline to be 12,000 CATMs, implying an increase of 33% by 2028. In fact, there were 11,246 CATMs at Stansted in 2016, according to the official CAA statistics and 10,126 CATMs in 2017. The outlook is therefore for an increase in CATMs of 58% compared to today's level.	There is often discrepancy between airport data and CAA data, mainly due to the rationalisation process of CAA statistics. Actual Stansted airport data for 2016 CATMs was recorded at 11,875, which (when rounded for the purposes of presentation in the ES) is 12,000.
<p>STAL needs to check its statistical records. The annual total shown in the "Summary of Traffic Results" reported quarterly by STAL to the Stansted Airport Consultative Committee is stated to be 13,750 CATMs in 2016. This can readily be checked at <a href="http://www.stacc.info/wp-content/uploads/2017/01/Traffic-Stats-Sep-to-Dec-2016-updated-180117-v2.pdf">http://www.stacc.info/wp-content/uploads/2017/01/Traffic-Stats-Sep-to-Dec-2016-updated-180117-v2.pdf</a> and <a href="http://www.stacc.info/wp-content/uploads/2018/01/STN-Stats-Summary-Sep-to-Dec-2017.pdf">http://www.stacc.info/wp-content/uploads/2018/01/STN-Stats-Summary-Sep-to-Dec-2017.pdf</a>. Which figures are to be believed?</p>		
2.9	No allowance appears to have been made for long-haul PATMs	Modelling has been undertaken to account for the introduction of long haul PATMs, and it assumes that CATMs continue to be a mixture of older variant aircraft types. The model does phase out the older code Ds over time (many are well over 20 years old today).
<p>STAL has provided virtually no transparency to show the basis for its modelling – e.g. specific aircraft types, engine variants, seating/cargo capacity, annual movements for each category etc. This is in stark contrast to the detail and transparency provided by STAL on aircraft types for its G1 application in Volume 16 of the G1 Environmental Statement. The lack of transparency undermines confidence in STAL's modelling.</p>		
2.10	Over optimistic assumptions have been made about the use of 'new generation' aircraft	<p>ICF has projected fleet mix by airline category. These feed assumptions on average aircraft size (seats per ATM) and inform noise and air quality analysis. The methodology for each airline takes the form of a short-term view informed by industry knowledge, known fleet orders, as well as a medium to long term approach using the typical age of the airline's fleet (LCCs typically average 7-10 years), an airline's strategy and high-level transition curves between current and next generation aircraft types. The second approach is required in order to account for future orders and/or leasing strategies that cannot be captured simply by considering today's order book.</p> <p>The assumptions made by objectors that a percentage of an airline's overall fleet is required to match the expected percentage of movements by a given aircraft are not comparable statistics. It takes no account of the same single aircraft flying out the airport and returning (i.e. based aircraft) or vice versa ('away based' flying) several times a day and thus delivering multiple plane loads of passengers. The planning statement (section 2) describes the trend to utilise aircraft for long haul routes that were previously only capable of flying short-haul distances. The air quality and noise assessments contain a mix of aircraft that is a reasonably foreseeable representation of the forecast future fleet for Stansted. For example, 'new generation' B737max and A320neo account for 51.6% of movements in the 2028 development case.</p> <p>For clarity, a typing correction for paragraph 4.58 of the ES Statement Vol 1 is required. The 80% quoted should be 50%. In full the paragraph should read:</p> <p><i>4.58 - The next 10-15 years will also see a significant transition from current generation aircraft to next generation aircraft. From a 2016 baseline of virtually no 'next generation' aircraft, the proportion of these new jets (primarily A320neo and B737Max family aircraft) is forecast to exceed 50% by 2028. This trend is particularly relevant to the calculation of aircraft noise, which is discussed in ES Chapter 7 (Air Noise).</i></p>
<p>We are pleased to note that, in the light of compelling evidence from SSE (main submission, para 8.10) STAL has withdrawn its wildly optimistic claim that more than 80% of the current Stansted fleet would be replaced by new 'next generation' aircraft by 2028. STAL has revised the 80% figure to 50%, with the implausible claim that this was simply a typographical error! If that is the true explanation, why was the error not corrected earlier? UDC officers are aware that SSE emailed the Applicant on three separate occasions during April and May 2018 requesting an errata list. We were told in April that an errata list was at that time in the process of being finalized. As at September 2018, it has still not been provided.</p> <p>None of this alters the fact that STAL's fleet replacement assumptions remain wildly optimistic, having regard to order books as well as normal fleet replacement cycles, as evidenced in Section 8.10 of SSE's main submission. By contrast, STAL has provided no clear evidence to substantiate its position regarding fleet replacement, relying instead on generalized statements rather than the specific underlying assumptions behind the modelling – i.e. aircraft types, engine variants, seating/cargo capacity, and annual movements in each case, in similar fashion to the information provided by STAL in Volume 16 of the G1 Environmental Statement.</p>		

2.11	Nowhere in the ES are helicopters mentioned along with the adverse noise impacts	Helicopters form part of the GA allocation. They also appear in the noise assessment too where relevant (there are none forecast in 2028 as GA declines)
SSE was not alone in pressing for helicopter noise impacts to be separately assessed. UDC made the same request in its December 2017 Scoping Opinion. It is disappointing that STAL refuses to comply. Particular local communities, for example Stansted Mounfitchet and Birchanger, are not overflowed by fixed wing aircraft but can be severely impacted by helicopter noise. Parts of Bishop's Stortford can also be severely affected by helicopter noise. As the CAA notes "Helicopter noise is far more complex to measure and assess than fixed-wing aircraft noise. Helicopters do not have to follow predefined routes; may hover over a specific area (increasing the impact of the noise in that location); and create asymmetric noise distribution because of variations in the speed of rotor blades." STAL argues that there is no need to assess helicopter impacts because there will be no helicopter movements by 2028. STAL provides the same explanation in the Environmental Statement (App. 7.3, para 9.1.15). The end of helicopter operations at Stansted will provide welcome relief to many local communities but 2028 is a long way off and so there still needs to be an assessment of helicopter impacts in the intervening decade. It is also assumed that if permission were to be granted for planning application UTT/18/0460/FUL, there would be a condition requiring the termination of helicopter movements at Stansted by 2028. STAL should confirm that it would be willing to accept such a condition.		
2.12	No information on how a reduction in the number of GA movements is to be achieved.	The airport is controlled under international policy (IATA) for the co-ordination of its runway utilisation whereby regularly planned scheduled operations have priority over ad hoc operations such as GA. Ultimately as the airport grows to its capacity (274,000 movements) operation of GA aircraft (ad-hoc movements) will be reduced.
In October 2017, STAL radically reduced its original (June 2017) GA forecast for 2028 from 15,000 movements to 5,000 movements. The above STAL explanation implies that if Stansted does <i>not</i> grow to a combined total of 269,000 PATMs and CATMs by 2028 (as per the October 2017 forecast), GA movements will not fall to 5,000 and may even increase. STAL should be asked to confirm the position.		
<b>Surface Access – Roads</b>		
3.1	Existing Mode Share Clarification	As a point of clarification concerning Table 10.1: The term "Car" reported from the CAA passenger survey relates to car driver trips, where the passenger number for the trip is 0. This refers to all private car trips, parked at the airport, including hire cars. "Car Passenger" refers to all car trips with a passenger occupancy of 1 or more, where cars are drive to the airport, parked or dropped off. The data is taken directly from the detailed survey analysis, publicly available from the CAA.
The explanation differs from that given in TAA paras 6.9 to 6.12 including Table 6.2. These figures are not considered to be properly justified. These explanations – particularly Table 6.2 – do not resolve the issues identified in SSE's original submission at paras 10.3.4 to 10.3.11. In Table 6.2, the 15% passenger mode share attributed to "Car Driver (car parked at the airport)" is confirmed to be as SSE had assumed, i.e. air passengers arriving by car which is parked at the airport. However, the table now includes 22% mode share for "Car passenger car (parked at the airport or kiss and fly)" whilst the narrative in para 6.9 describes "Car Passenger" as passengers who are driven to airport and dropped off, with the car driven away." This 'explanation' merely adds more confusion. Clarification is still needed. See also comments in paras 3.5 and 3.6 below regarding car occupancy. On the subject of mode share, the TAA states that there has been a 'continuous trend of increasing public transport mode share for passengers and employees over many years' (para. 2.5). This is not strictly correct. The CAA passenger survey for both 2015 and 2016 showed a higher private car mode share than in 2010, 2012, 2013 and 2014 – suggesting that private car mode share may now be increasing rather than decreasing. It is therefore not justifiable for STAL to suggest that the 2016 car mode share data is the 'worst case' scenario.		
3.2	Level of background growth uncertainty assumed within the Traffic Assessment and its distribution	TEMPro is a program developed by the Department for Transport (DfT) providing traffic growth projections used in transport models and intended to act as a nationwide standardised distribution of growth in trip ends held with the Nation Trip End Model (NTEM). It also takes into account trends in the quantity and length of car trips per household. The Current TEMPro growth figures are predominantly associated with NETM increases.  The TEMPro growth assumptions adopted for all future year traffic predictions provided with the 35+ application are based on the 2016 release of TEMPro and based on the most recent NTEM, which is the most up-to-date dataset of trip ends available for use in transport business cases and are acknowledged by DfT as a robust basis for developing forecasts in the vast majority of cases. TEMPro figures adopted for the analysis consider predicted future local housing and employment at a district level. The factors also include assumptions of future general changes in traffic levels resulting in trends of car usage.
The response fails to deal with the points raised in paragraphs 10.5.2 to 10.5.3 of SSE's original submission which point out the incorrect road type selection criteria that have been used for identifying traffic growth.		
3.3	MAG should continue to proactively work with transport operators to develop and support measures that include improvements to public transport accessibility, in order to facilitate sustainable growth at the airport.	Agreed, STAL in conjunction with the Transport Forum will continue to work with the transport operators and local authorities to facilitate sustainable growth.
Point 3.3 above was not made by SSE and we have no comment to make on this.		
3.4	The TA does not account for all key cycle routes that link the Counties.	Cycling at Stansted is only applicable to employees as passengers laden with luggage are more likely to travel by car or public transport modes. Cycling forms 1% of trips by employees at present. Chapter 9 of the TA has set out a number of initiatives that Stansted have set up towards increasing cycling at the Airport. Existing cycle routes were not detailed due to low demand at present. Local Airport initiatives and improvements were alternatively set out as they were considered more relevant to increasing cycle mode share to and from the Airport
Point 3.4 above was not made by SSE and we have no comment to make on this.		
3.5	Clarification required on typical Annual Passenger Profile	Refer to TA Addendum (Annex 6)
SSE's original submission identified the potential underestimation of 07:00-08:00 car trip generation resulting from the simplistic assumptions applied to the timing of passenger arrivals and departures and highlighted the contradiction between, on the one hand, the repeated (and intuitively correct) statement that the intensification of the use of the runway will lead to a levelling off of passenger movements throughout the day and, on the other, the apparent continuation of a significant 'lull' in surface access movement during the AM assessment hour. Figure 2.2 of the TAA shows the variation in air passenger movements and surface access traffic during the day. There is		

a marked peak in traffic movements around 04:00 and a marked peak in passenger movements around 07:00. This 3-hour offset undermines the assumptions that have been adopted to derive changes in hourly traffic flows (2 hours between surface access arrival and air departure and 1 hour between air arrival and surface access departure).

Figure 2.2 shows a lull in traffic around 07:00. This would appear to be associated with a steep decline in air passenger movements between 09:00 and 10:00. It is inevitable that this relatively quiet period of runway use will see a greater increase in use than other, currently busier periods of the day. This point is acknowledged in TAA para 6.6. If the 09:00-11:00 period were to see a level of passenger movements comparable with the average of the following 10 hours, then the level of traffic during the 07:00-08:00 hour could, quite easily, increase from the 50% of busiest traffic shown on Figure 2.2 to 80% of busiest traffic, an increase of 60% in relation to the 07:00-08:00 hour. It should be noted that this increase would be in addition to the increase associated with the overall uplift in passenger numbers. A logic check can be undertaken by comparing the airport-related traffic associated with the 2016 situation with the 35mppa and 43mppa situations. The following table summarises vehicle trips as set out in the flow diagrams in Appendix G6 of the TA (for the information relating to the 07:00-08:00 period) and Appendix F of the TAA (for the 17:00-18:00 period):

**Summary of Total Traffic Movements (showing % increase from 2016)**

		Passengers				Staff				Total	
		arrive	depart	total	% increase	arrive	depart	total	% increase	No.	% increase
<b>2016</b>	07:00-08:00	430*	335*	765	-	509	29	538	-	1303	-
	17:00-18:00	1120	1088	2208	-	39	602	641	-	2849	-
<b>35mppa</b>	07:00-08:00	692	545	1237	61.7%	527	30	557	3.5%	1794	37.7%
	17:00-18:00	999	934	1933	-12.5%	42	602	644	0.5%	2577	-9.5%
<b>43mppa</b>	07:00-08:00	934	475	1409	84.2%	630	36	666	23.8%	2075	59.2%
	17:00-18:00	1251	1159	2410	9.1%	47	734	781	21.8%	3191	12.0%

\*Car movements shown on flow diagrams in Appendix G6 of TA do not agree with those shown in accompanying spreadsheets (spreadsheets show passenger arrivals 395, passenger departures 268)

The overall increase in traffic in the 07:00-08:00 peak hour is shown to be slightly more than the overall annual increases in passengers predicted with airport expansion (44% to 35mppa and 77% to 43mppa). Tables 6.6 to 6.8 in the TA show that car drivers, car passengers and taxi movements are all predicted to increase by over 140% between the 2016 Base situation and the 43mppa situation during the 07:00-08:00 period. Similarly, Figure 6.2 of the TAA shows around 1,600 surface access passenger arrivals and departures (all modes) in 2016 and Figure 6.4 of the TAA shows around 3,900 surface access passenger arrivals and departures in the 43mppa situation in the 07:00-08:00 period, confirming the increase of around 140%. The Applicant has not provided any clear explanation of how increases in surface access passenger movements of 140% translate into increases in vehicle movements of 84% in the 43mppa situation in the 07:00-08:00 period.

The table above clearly shows that the Applicant assumes the increase in staff car movements in the peak hours is significantly below the increase in staff numbers, particularly during the 17:00-18:00 period. This further underestimates the impact of the proposed expansion on the external network during the peak hours. It is clearly ludicrous to suggest that expansion to 35mppa will lead to significant reductions in staff car movements in the 17:00-18:00 period.

<b>3.6</b>	Capacity issues between M11 Junction 9 and M11 Junction 13 and models used to understand junction relationship	There has been engagement with Highways England prior to the planning submission to agree the extent of analysis on the trunk road network. This scoping process identified the anticipated traffic levels on the M11 north of junction 8, the impact of the extra 8million passengers associated with the application is +2.4%. On this basis it was confirmed by HE that no further analysis was required.
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See SSE comments at 3.17 below.

<b>3.7</b>	The health and safety impacts of additional traffic have not been considered within the ES.	<p>Table 6.21 Chapter 6 provides assessment on 'Accident and Safety'. It is shown that there is minimal change in collision risk for links/junctions.</p> <p>Chapter 14 (Public Health and Wellbeing) considers the potential for adverse health effects from both construction traffic (with regards to safety, amenity, severance) and operational access road traffic generation. For the latter, the following operational effects were considered (see ES Table 14.1):</p> <ul style="list-style-type: none"> <li>• Contribution to air pollutant and noise exposure</li> <li>• Change in amenity value of green / recreational space</li> <li>• Change in road safety</li> <li>• Change in capacity or demand for public transport</li> <li>• Community severance</li> <li>• Impacts on non-motorised users (NMUs)</li> <li>• Change in congestion, access to services</li> </ul>
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		This assessment concluded that the residual health and wellbeing effects through all air quality and surface access transport pathways are not significant. (Paragraph 14.77).
Paragraphs 10.7.1 to 10.7.5 of SSE's original submission point out the failure in the ES to identify sensitive receptors that could be adversely affected by the proposals. No further work has been undertaken to correct this error. (see also SSE response to 3.24 below).		
3.8	There is a lack of detail on the impact on the B1256. The B1256 route will be severely impacted if A120 cannot sustain traffic.	See Chapter 7 of the TA and Chapter 5 of the corresponding TA Addendum. The B1256 Dunmow Road has been assessed to consider the local road impact.
This particular point was not raised by SSE but SSE did raise a number of concerns about the reliability of the assessment of the road traffic impact on local roads – see 3.23 below.		
3.9	Non-compliance with current planning permission to contain all airport related parking on site	All STAL operated car parks are located within the airport's operational area and as such comply with the Uttlesford Adopted Local Plan (2005). Other car parks operating outside the operational boundary are operated by Third Parties and therefore not controlled by STAL.
Section 10.4 of SSE's original submission set out a detailed assessment of the level of additional car parking required to accommodate the predicted increase in parking demand resulting from the proposed expansion and outlined the consequences both in terms of land requirements and environmental impacts. The Applicant fails to address either of these points.		
3.10	There is a 10% decrease in car driver trips – this trend cannot continue indefinitely and must flatten out. This assumption lacks adequate justification. This is also the case for staff car journeys.	<p>The 10% has been derived from the observed trends in previous years (2002 -2015 decrease). The introduction of the 2015 SDP Employee Mode Share is predicted to drive this number further.</p> <p>As set out in Paragraph 6.29 in the TA, there has been a 23% reduction in employee car driver mode share between 2002 and 2015, representing, on average, a 1.8% reduction per year over the 13 years. Based on this trend and in line with the aims and objectives of the SDP (to reduce single car occupancy trips), a 10% reduction in car driver trips was considered a realistic target and has been assumed between 2016 and 2028 to illustrate a maintained reduction in car trips from 2019 onwards. All these trips have been allocated to public transport modes.</p> <p>Based on the initiatives to reduce single car trips, for example, the Liftshare scheme (an incentive for employees to car-pool for preferential car parking spaces) the Travelcard scheme (unlimited public transport travel to/from the Airport at a discounted price) and walking and cycling strategies and improvements (employee cycling is at its highest in 13 years), it is considered justified to maintain and sustain the reduction in car trips at its current rate until 2028.</p>
The response fails to deal with the point set out in SSE's original submission that there is no target to reduce car driver mode share by 10%, no clear strategy for achieving this and no incentive to do so. It cannot be assumed that STAL will be able to reduce car driver mode share by 10%. The TA cannot reasonably treat aspirations as planning assumptions.		
3.11	Employee number differences between Scoping Report and ES.	At the time of the Scoping report, precise future employee numbers were not available. In their absence it was suggested that a robust assessment could be provided by assuming a linear increase in employment in relation to passenger numbers. At the time of preparing the TA, more detailed figures were available as reported in in ES Chapter 11 (Socio-economic Effects) and these numbers were hence used for the TA and EA analysis. Other assumptions of staffing attendance and car occupancy and mode of travel have been agreed with ECC and HE, the two relevant highway authorities.
The information on the planning application form and that used in the TA do not agree and so there remains confusion as to staffing levels. The Applicant needs to provide a definitive statement about the existing and future number of staff.		
3.12	Generalisation of an average daily staff attendance of 50% at the airport.	As set out in the 2015 Employee Travel Survey and Chapter 4 of the TA, only 66.2% of staff are fulltime. 25% of staff work a three to four-day week. When considering additional factors including annual leave, sick leave, increasing remote/flexible working (a 1% increase per year) and staff layover abroad, a 50% employee daily attendance at the airport is considered justified and robust based on these trends. See Chapter 6 (Paragraph 6.32-6.34) for further detail.
Information pertinent to the calculation of the proportion of total staff present on any one day is set out in Table 4.12 of the TA. Part-time workers (1-2 days) account for 2.0% of staff. If it is assumed that these workers are present, on average, 1.5 days a week, 0.4% can be assumed to be present on any single day (1.5/7 x 2.0%). Part-time workers (3-4 days) account for 25.2% of staff. If it is assumed that these workers are present, on average, 3.5 days a week, 12.6% can be assumed to be present on any single day (3.5/7 x 25.2%). Full-time workers (5 days per week) account for 66.2% of the workforce. Of these, 47.3% would be present on any one day (5/7 x 66.2%). A total of 6.0% of workers are present for 6 days or more. If it is assumed that the average for this group is 6.5 days, then 5.6% will be present on any one day (6/7 x 6.0%). The total of part-time, full-time and 'over' full-time is therefore 65.9% present on any one day (0.4% + 12.6% + 47.3% + 5.6%). If it is assumed that 10% of workers are non-working (absent, leave etc), then 59.3% of workers would be present on any one day. This is over 9% higher than that assumed for the purposes of assessing traffic impact. In terms of changing the level of impact, a change from 50% to 59% represents an 18% uplift in staff movements and in staff parking demand (9%/50% x 100%). This will have a significant impact on the outcome of the assessments.		
3.13	Staff Mode Share – If a staff occupancy of 1.6 has been assumed then the number of car trips associated with staff have been underestimated by 30%.	<p>A ratio of 1.6 is a reasonable occupancy assumption for overall car-based staff travel, which includes taxis that can contain multiple passengers. By way of example, if a lower figure of 1.1 were to be adopted for staff car occupancy, this would only result in 24 additional car trips during the PM peak hour which would be 0.57% increase on the forecast movements in 2028.</p> <p>Such a limited impact would be offset by already robust (overestimated) assumptions about passenger car occupancy. Moreover, the stress test of a further 10% of cars on the road network as set out in the TA Addendum, shows that an additional 419 car trips might be generated, with staff car trips accounting for just 6% of this additional</p>

		volume. The TA Addendum shows that the mitigation works proposed would result in nil detriment to the SRN, and no material impact on the local road network.
<p>The TAA confirms that staff car occupancy of 1.6 has been used in the assessments. As stated in SSE's original submission, staff car occupancy is less than 1.1. The TAA states that staff car occupancy of 1.1 would only result in 24 additional car movements during the PM peak hour. However, the overall implication of correcting the staff car occupancy is to increase staff car numbers and staff car parking demand by 45% (0.5/1.1 x 100%). This would increase the peak hour staff car trip generation in the 43mppa situation from 781 to 1,136*, an increase of 355 car movements. This is a very significant increase in car travel demand that has not been properly taken into account.</p> <p>*Flow diagrams in Appendix F of the TAA show 47 staff car arrivals and 734 staff car departures during 17:00-18:00 period in the 43mppa case.</p>		
3.14	STAL should subsidise and increase local bus services.	As set out in the TA and Planning Statement, it is already proposed to continue the local bus subsidy via the Transport Forum.
<p>Point 3.14 above was not made by SSE. However, we are disappointed to have recently learned that, shortly after being acquired by MAG in 2013, STAL unilaterally decided to reduce its levy contribution per car parking transaction (as provided for in the 2003 Section 106 Agreement with UDC), thereby providing less funding to support initiatives – including local bus services – aimed at encouraging more sustainable means of travel to and from the airport. We have also now learned that there is an absence of transparency and accountability as to the revenues collected annually from the car parking levy and the sums of money disbursed by STAL to support initiatives aimed at encouraging more sustainable means of travel to and from the airport. We consider it a dereliction of duty that UDC has never monitored the implementation of this key STAL obligation in the 2003 Section 106 Agreement and has no proper records as to receipts, disbursements, the annual number of transactions subject to the levy, or the monetary value of the levy per transaction.</p> <p><u>Note</u> (for information): STAL latest published accounts (for the financial year ending 31 March 2017) show that it earned £61.5m from car parking, compared to £26.7m during the final year under BAA's ownership. The £61.5m includes revenues from forecourt drop-off/pick-up but STAL does not pay the public transport levy on this. It is understood that forecourt drop-off and pick-up ('kiss and fly') accounts for more annual transactions than 'park and fly' and currently generates an estimated £12-£14m annual revenue for STAL.</p>		
3.15	Cumulative road traffic impacts are a particular important consideration in relation to the planning application. The 2017 Uttlesford Local Plan (2017) is for the period to 2033 and therefore under DfT Circular 02/2013 " overall forecast demand should be compared up to 10 years after date of planning application or the end of the relevant Local Plan" The ES and TA should cover the period to 2033 at a minimum.	Refer to TA Addendum (Annex 6)
<p>The substantial new housebuilding included in the emerging Local Plans for Uttlesford, East Herts and Braintree which will greatly add to the pressure on Junction 8 of the M11. This cannot be ignored simply because Local Plans have not yet been adopted and/or planning permission has not yet been granted. There is a need to demonstrate that proper consideration has been given to the potential impacts of these major developments on the strategic highway network in the vicinity of the airport (see also 3.17 below).</p>		
3.16	Government Transport Policy in the 'Highways England ('HE') Strategic Road Network Initial Report (2017) makes no mention of improvements to the M11 in the vicinity of the Airport, specifically J8, which would be essential for any further growth of the Airport.	The Highways England ('HE') Strategic Road Network Initial Report (2017) sets out proposals and recommendations. The Policy as a whole relates to the impacts that would be felt as a consequence. The ES deals with this point and demonstrates no impacts. Therefore, the Application is not in conflict.
<p>The improvements to J8 slip roads currently proposed will only provide a short-term sticking plaster to the under-capacity problem on J8 of the M11. There is no commitment to the more fundamental long term improvements that are needed to cope – inter alia – with the projected higher volumes of airport-related traffic.</p>		
3.17	M11 and A120 Modelling and Impact Concerns	Further modelling of Junction 8 of the M11 and the A120 link road has been undertaken in collaboration with ECC and HE. It is considered that these two relevant highway authorities will provide the appropriate input to the planning process regarding junction modelling and the appropriateness of suggested mitigation measures acknowledged as being applicable in response to the increase in passenger and employee traffic through this junction. Refer to TA Addendum (Annex 6)
<p>We note that Junction 8 of the M11 has been re-modelled with a 10% uplift in traffic generation. As demonstrated above, a 10% uplift in traffic generation is inadequate to allow for the numerous sources of error in the calculation of future traffic levels. Very substantial new housebuilding is included in the emerging Local Plans for Uttlesford, East Herts and Braintree which will greatly add to the pressure on Junction 8 of the M11. This cannot be ignored simply because Local Plans have not yet been adopted and/or planning permission has not yet been granted. There is a need to demonstrate that proper consideration has been given to the potential impacts of these major developments on the strategic highway network in the vicinity of the airport. We note (para 3.14 of the TAA) that some amendments have been made to the Further Improvement Scheme, reflecting, in most cases, safety concerns set out in SSE's original submission.</p> <p>Table 4.7 in the TAA shows that even with the proposed Further Mitigation Scheme and only a 10% uplift, traffic queues on the circulatory carriageway exceed the available storage in several cases (Services in both peak hours, A120 West in both peak hours, M11 southbound Off-slip in the AM peak hour, Dunmow Road in the AM peak, M11 Southbound Exit in the AM peak). The TAA does not acknowledge these exceedances and there is no assessment made of the implications in terms of traffic blocking back around the junction during peak periods.</p> <p>STAL has provided no additional information relating to the safety concerns at the A120 weaving sections as described in the SSE submission. This was identified as a matter of concern at the time of the G1 Public Inquiry (2007) and no improvements have since been made. STAL needs to explain the position regarding the safety concerns at the A120 weaving sections, as identified in SSE's original submission.</p>		
3.18	No evidence of an impact assessment in relation to airport-related HGV movements.	Construction traffic associated with works to deliver infrastructure associated with the planning application has been calculated and fully assessed in the TA. An estimate of construction HGV movements is also provided in ES Chapter 5 (Development Programme and Construction Environmental Management) which proposes that a Construction Traffic Management Plan (CTMP) is adopted for the construction works.
<p>STAL's response fails to deal with the point raised in SSE's original submission relating to the environmental implications of the construction of significant new car parking, directly related to this planning application although not specifically included in this planning application.</p>		
3.19	CAA Passenger Survey and Vehicle Occupancy queries	The CAA survey data provides a highly reliable and large database of travel behaviours. It is the standard means of assessing travel behaviours for UK airports and adopted for all surface access analysis. The detailed issues relating to CAA data are covered in TA Addendum (Annex 6).

<p>The additional information provided by the Applicant fails entirely to explain the clear error in the approach to the calculation of car occupancy adopted in the TA. SSE's original submission pointed out that the CAA survey question on vehicle occupancy is clear and unambiguous and leads to a negligible number of passengers reporting that their group size is 0. Table 3 of the Car Occupancy Technical Note (Appendix F of TA) indicates that 5,357 respondents out of 8,121 (66%) reported a group size of 0. When the CAA undertook a survey on behalf of SSE, out of 4,232 responses, only 4 (0.1%) reported a group size of 0. In this context, the information in Appendix F of the TA is not credible. The Applicant provides no further information that explains this significant discrepancy.</p> <p>Para 2.7 in the TAA states that a recalculation of car occupancy excluding those respondents who reported group size as 0 gives an average group size of 1.8. Given the comments above it is essential for details of the background calculation to be provided. The supporting information would need to provide a reasonable explanation for the extremely high number of respondents (66%) who could have misunderstood what is a simple and unambiguous question.</p>		
3.20	No evidence is presented in the TA to show predicted staff car movements reducing by 1% with increasing staff numbers on site	The reduction of 1% employee car driver trips from 2016 to 2028 (35mppa) is a consequence of modelling. Between the 2016 and 2028 35mppa scenarios, the growth in employees is gradual, whilst the proportion of car driver trips decreases by 10%. There is also a daily variation in employee arrivals and departures. In 2016, compared to the 2028 (35mppa) scenario, the population is smaller, with a greater proportion of car driver trips.
<p>STAL's response fails to provide a clear explanation as to the reason for staff car driver trips reducing by 1% in the peak hours when there is a 14% increase in staff numbers predicted. Even if it is assumed that there is a 10% mode shift away from car driver (an unlikely outcome given the lack of any clear proposals for achieving it), there remains some further reduction in staff car drivers that is not explained.</p>		
3.21	In the 17:00-18:00 period with an increase to 35mppa overall movements are shown to reduce compared with the existing situation despite an overall 44% increase in passenger numbers, a 14% increase in staff and the 17:00-18:00 period being shown to be the peak period for employee departures. This result is intuitively wrong and no evidence is presented to justify it.	The reduction of 1% employee car driver trips from 2016 to 2028 (35mppa) is a consequence of modelling. Between the 2016 and 2028 35mppa scenarios, the growth in employees is gradual, whilst the proportion of car driver trips decreases by 10%. There is also a daily variation in employee arrivals and departures. In 2016, compared to the 2028 (35mppa) scenario, the population is smaller, with a greater proportion of car driver trips.
<p>This is a repeat of the response to the previous point and it does not answer the point made here. It refers only to staff car trips. No further explanation is given as to why total trips (passengers plus staff) reduce in the PM peak hour in the 35mppa situation. The response is wholly inadequate because it does not explain how – with an increase to 35mppa – overall movements reduce compared to the baseline despite an overall 44% increase in passenger numbers and a 14% increase in staff. This is intuitively wrong and, despite being given the opportunity, STAL has provided no evidence to suggest otherwise.</p>		
3.22	<p><u>Peak Hour Passenger Movements</u> Tables 4.7 and 6.6 should show the same data but do not entirely agree.</p> <p>The figures in Appendix G4 entitled 'vehicles' are higher than other sources of daily vehicle movements. There is no obvious explanation for this.</p> <p>The peak hour vehicle flows in the tables and flow diagrams in Appendix G5 to G8 agree in some cases and disagree in others.</p> <p>The figures in Appendix G5 include some allowance for change of mode as seen in the final tables entitled 'Inc. Mode Share shift and two-way allowance' which contradicts the statement that 'current mode shares will remain constant'.</p> <p>The proportion of passengers using drop-off is shown to reduce from 43% to 32% in the 35mppa situation and 26% in the 43mppa situation. This results in a significant reduction in the increase in vehicle movements in future situations. No explanation is provided to justify this significant alteration of passenger behaviour.</p>	<p>Table 4.7 and Table 6.6 illustrates the same number of total trips per assessment period but discrepancies within the mode of travel. This is because differences when considering two-way allowance. Table 4.7 considers the hourly profile derived from the average flight profiles aggregated into rail, bus/coach and car/taxi trips, divided by the mode split. Table 6.6 works out the proportion of arrivals and departures from the landside trips and divides by the mode share (car drivers, passengers, rail bus and other).</p> <p>It is necessary to understand the variances in data before comparisons can be made. Some of the two-way figures presented in the TA are reflective of two-way passenger movements (by car/taxi) whereas others are by vehicle (taking into account occupancy factors). The 'vehicles' comment in G5 represents an earlier check/crude analysis to work out vehicle numbers.</p> <p>This analysis was not included in any further assessment, as alternative detailed modelling was undertaken to better represent vehicle numbers as shown in Appendix G6.</p> <p>There 2016 daily value shown in G3 is incorrectly reported as 24,777, when the appendix shows the value 24,371 as also reported in G1. The G1/G3 vehicle values differ slightly from those shown in G6 as they are derived from different data sources.</p> <p>The 07:00-08:00 was incorrectly reproduced in the 16:00-17:00 future year scenarios, and the 16:00-17:00 2028 results were shown in the 17:00-18:00 future year assessments. The correct G6 to G8 appendices have therefore been attached in the TA Addendum (Annex 6). The analysis and reported results were for the correct hour and traffic demands.</p> <p>The mode share does not change in the scenarios, but there is a reduction in the number of two-way car trips to the drop-off services. The proportion of trips which are made to the terminal drop-off compared to car park locations shifts in the future scenarios, not the total proportion of trips by car. These targets will be reflected in the planning agreement anticipated with any permission.</p> <p>A key objective of the SPD is to reduce the percentage of 'Kiss and Fly' trips by 30%, and hence the total number of car trips, by providing an effective and attractive premium parking location at a lower cost. The Meet and Greet car park option meets this criteria by offering a service where drivers park adjacent to the front of the terminal building; and unload passengers/bags and depart. The vehicle is transferred to a remote storage area by airport employees for the duration of the passenger's trip, and returned to the terminal pick up area upon the passenger's return. This is a service which has seen significant success in matching the convenience of taxis and kiss and fly and halving the number of vehicle trips from 4 per round air trip to two per round trip.</p>
<p>It is noted that a number of errors in the TA and Appendices have now been acknowledged. It is a matter of concern that Appendix G5 is now described as 'an earlier check/crude analysis'. If this is the case it should be removed from the analyses.</p> <p>Para. 2.4 of the TAA shows that passenger traffic on Mondays and Fridays is higher than the 7-day average used in the assessments. The number of passengers on a Friday appears to be about 4% higher than the 7-day average used in the assessments. Normal practice, in relation to the assessment of the potential impact on the external highway network, is to focus on the worst-case busiest weekday period of operation (Friday). Clearly, this has not been done.</p> <p>The final para in STAL's response above states that "A key objective of the SPD' [sic] is to reduce Kiss and Fly' trips by 30%". This does not concur with the TA that states that the aim of the Sustainable Development Plan ('SDP') is to reduce kiss and fly trips to below 30% by 2019. Notwithstanding this confusion, it is unlikely that such a significant reduction could be achieved through changes in parking pricing and the offer and promotion of the 'Meet and Greet' service. It is, after all, more convenient and significantly cheaper for many passengers to be dropped off or picked up at the airport than to pay for parking. There also remains the very significant impact on on-site parking demand that would be generated by an increase in 'Meet and Greet'.</p>		
3.23	Potential impact to local roads in the vicinity of the Airport including Parsonage Road, Church Road and Bury Lodge Lane.	Refer to TA Addendum (Annex 6)

The TAA sets out a methodology for identifying the number of additional car trips using local roads from a number of local catchment areas.

The results of this exercise suggest that extremely few staff and passengers will use local roads to access the airport. SSE's original submission presented evidence that Parsonage Road is currently being used by large numbers of vehicles accessing the airport. The route is obviously far more attractive as a means of accessing the airport than suggested by the Applicant in both the TA and the TAA.

The TA suggests that Parsonage Road carries only 126 car movements associated with the airport per day. Table 5.7 of the TAA suggests that 619 daily car movements (the sum of traffic through Mole Hill Green, Takeley and Hall Road, Elsenham) converge on Cooper's End roundabout via Parsonage Road or Hall Road.

Peak hour traffic counts were undertaken at the Parsonage Road mini-roundabout and the Coopers End Roundabout in 2008 in support of a separate planning application (ref. 14/3463). The amount of traffic using Parsonage Road or Hall Road to access the airport can be derived from the movements between the Parsonage Road mini-roundabout arm of the Cooper's End roundabout and the arms that provide access to the airport (Terminal North exit only, Terminal South, Coopers End Road and Thremhall Avenue). The information is summarised in the following table:

#### Use of Parsonage Road and Hall Road to Access Airport

To or from	08:00-09:00			17:00-18:00			2-Hour Total
	to	from	total	to	from	total	
Thremhall Avenue	227	115	342	137	189	326	668
Coopers End Road	129	37	166	52	139	191	357
Terminal North	31	0	31	43	0	43	74
Terminal South	46	95	141	63	122	185	326
Total excluding Thremhall Avenue	206	132	338	158	261	419	757
Total including Thremhall Avenue	433	247	680	295	450	745	1425

Source: Arcady operational assessments submitted in support of planning application ref. 14/3463

A proportion of the vehicle trips between the Parsonage Road mini-roundabout and Thremhall Avenue will be associated with drivers seeking access to the A120 and thus not associated with the airport. The number of vehicle movements between Parsonage Road/Hall Road and the airport is therefore between 338 and 680 during the 08:00-09:00 period and between 419 and 745 during the 17:00-18:00 period. The 2-hour total is therefore between 757 and 1,425 movements. **Note that even the lower estimate is higher than the total daily vehicle movements predicted in the TA Addendum (619 daily car movements). It can only be concluded that the projections in the TA vastly underestimate the impact of airport expansion on Parsonage Road.**

3.24	Chapter 6 of the ES fails to reference DMRB Volume 11, 'Environmental Assessment' that constitutes the most important current guidance and fails to identify a sensitive receptor.	Please refer to Chapter 6 paragraphs 6.32- 6.36 where the applicability of the IEMA guidelines with regard to sensitive receptors is described, together with justification for the screening out of any further analysis in the EIA.
Chapter 6 of the ES screens out the need for any consideration of sensitive receptors. SSE's original submission identified numerous reasons why, where sensitive receptors are located, traffic impact on local roads has been significantly underestimated. It is therefore considered that the screening process is flawed and has led to a failure to properly assess the potential impacts of the proposed development on sensitive receptors.		
3.25	Local residents using the airport as a transport hub should be inconvenienced as little as possible in seeking to obtain direct access to the terminus. There should be a clear vision as to how the local services will be developed to cater for the significant increase in passenger numbers.	STAL supports this aim. The application as submitted took this into account through, for example, providing a re-worked Rail Commuter Parking Scheme and Express Drop Off Discount Scheme for local residents that facilitates access to the train station. Continuing local bus network development subsidies are offered as well (see section 7 of Planning Statement).
Point 3.25 above was not made by SSE and we have no comment to make on this.		
3.26	The airport should provide a progress report on meeting the aims and targets set out in the Economy and Surface Access section of the 2015 Sustainable Development Plan.	Transport Assessment (Vol 3 of the ES) provides the current (full year) baseline data of surface access performance. The next revision to the Sustainable Development Plan, which includes the Surface Access Strategy will be published in 2020, in line with current national aviation policy.
Point 3.26 above was not made by SSE and we have no comment to make on this.		
SSE 1	Stress Testing (paras 2.15-2.16 of the TAA)	
The Stress Test is based on an uplift in traffic demand of 10%. SSE's original submission identifies a number of issues that suggest that the impact of the proposed expansion may be significantly underestimated. The following table summarises the issues that are identified in the TAA as potentially affecting traffic assumptions and those identified by SSE:		

### Issues Affecting Peak Car Trip generation

Issue	TAA Comment/Approach	SSE Comment	Potential Impact on Car Trip Generation*
Passenger Mode Share	Passenger car mode share shows decreasing trend	Data shows no clear downward trend in passenger car mode share	Reasonable approach is to apply existing car mode share (not a worst case)
Kiss and Fly	There will be a 30% reduction in kiss and fly trips	This is an unrealistic target. The implications are significant because vehicle trips for kiss and fly are double car park/drop-off trips.	If kiss and fly trips remain constant, passenger car trip generation is increased by 13%.
Daily passenger numbers	Appropriate to use annual 7-day average	Data shows passenger numbers on Fridays to be 4% higher than 7-day average	+4%
Seasonal variation in demand	No allowance in assessments	Data clearly shows that peak Summer period of demand extends well beyond school holiday periods.	Peak months (May/June-October) 20% higher traffic generation than average months (see Figure 4.2 of TA)
Hourly variation in passenger demand	Prediction of vehicle movements assumes air passengers arrive two hours before departure and leave one hour after arrival	Mathematical model is simplistic and leads to outcomes that are inconsistent with a levelling off of demand throughout the day	Potential very significant impact on 07:00-08:00 car trip generation
Daily staff attendance	Assumes 50% attendance	Data indicate 59% daily staff attendance representing an overall uplift in staff numbers of 18%	Overall impact on car trip generation likely to be increases of between 4% and 6% in the peak hours*
Hourly distribution of staff trips	TAA provides no response to SSE's Submission on this point.	Increase in staff movements during peak hours likely to mirror overall increase in staff	15% - 18% increase in staff movements likely to lead to 4%-5% overall increase in car movements in the peak hours*
Staff car occupancy	TAA acknowledges mistake in allocation of 1.6 staff car occupancy but dismisses impacts as insignificant	Staff car trips have been underestimated by 45%	Overall impact on car trip generation likely to be increases of between 11% and 15% in the peak hours*
Staff mode share	Assumes 10% reduction in staff car mode share	No target in place to achieve 10% reduction in staff mode share	If target not achieved peak hour trip generation could be increased by between 2% and 4%*
Background traffic growth	Growth rates unchanged in TAA	Use of correct highway definitions would lead to an increase in background growth of 2%-3%	+2% - 3% increase in background flows
Car occupancy	TAA reasserts that 1.6 car occupancy is justified by data	Applicant has failed to provide proper justification for the methodology used to derive car occupancy	Unknown since inadequate information submitted by Applicant

\*Allows for the fact that staff movements comprise approximately 1/4 to 1/3 of all movements during assessment periods (derived from car movements shown in TA App. G6 (07:00-08:00) and TAA App. F (17:00-18:00))

It is clear from the above that a 10% Stress Test fails to encompass the numerous likely increases in trip generation resulting from the various points identified above. A 10% uplift is unlikely to account for the error in staff car occupancy, let alone, for example, the uplift required to test the effects of the summer peak period or the consequences of adjusting the assumptions that retain a significant lull in traffic during the 07:00-08:00 assessment period.

On the basis of a detailed consideration of patterns of passenger movement and from a logic check that considers the peak hour traffic generation in the context of overall changes in passenger numbers, it is apparent that the assessments set out in the TA and TAA significantly underestimate the traffic generation of the proposed development during the 07:00-08:00 and 17:00-18:00 periods.

Although the Applicant has acknowledged that the data provided for the 16:00-17:00 and 17:00-18:00 periods were incorrect in the TA and additional information has been provided, there remains a clear discrepancy between the 2016 07:00-08:00 passenger traffic flows shown in the spreadsheets attached to the TA and those shown in the flow diagrams. The Applicant needs to explain this and identify whether it has implications for subsequent calculations.

**SSE 2** Summary of SSE comments on the Transport Assessment Addendum

- A review of the additional information submitted by the Applicant reveals that there remain a number of issues where assessments are lacking, inconsistent, contradictory or misleading.
- The Applicant has failed to provide any further information regarding the significant increase in car parking required in support of the application and the implications of this in relation to construction and HGV movements.
- The Applicant continues to predict a 10% reduction in staff car mode share despite providing no evidence or explanation of the means by which that will be achieved.
- There remains confusion about both the existing and future levels of staffing.
- The assumption of 50% staff attendance on any one day is incorrect and, based on the Applicant's own evidence, should be 59%. This will have the effect of increasing daily staff movements by 18%.
- The TAA acknowledges that the assumed staff car occupancy of 1.6 is incorrect and should be in the region of 1.1. The correction increases overall staff car movements by 45%.
- The TAA fails to provide any convincing justification for assuming that passengers arriving or departing via Kiss and Fly will reduce by 30% and no assessment is made of the implications of this for car parking provision.
- The averaging of annual passenger numbers means that there has been no assessment of the higher level of impact that will occur on Fridays and Mondays.
- Contrary to assertions in the TAA, records do not show that there has been a continuous reduction in passenger car mode share. Use of the private car in both 2015 and 2016 (the most recent years where data are available) was higher than in 2010, 2012, 2013 and 2014.
- The Applicant fails to provide any clear explanation as to how car occupancy has been calculated.
- The 'Stress Testing' falls significantly short of properly accounting for the numerous likely sources of error in the calculations of future year flows.
- The assessments set out in the TA and TAA significantly underestimate the traffic generation of the proposed development, particularly during the 07:00-08:00 period.
- There remain unexplained discrepancies between the 2016 07:00-08:00 passenger traffic flows identified in the spreadsheets in the TA and those shown in the flow diagrams. These discrepancies need to be explained and the implications for subsequent calculations identified.
- Modelling of Junction 8 of the M11, even though based on understated traffic movements, shows that even with the Further Mitigation Scheme, vehicle queues within the junction exceed the available storage space and will thus lead to traffic blocking back around the junction and potentially down slip roads.
- No further information has been submitted with regard to the inadequacy of the A120 weaving sections to accommodate future traffic flows.
- The assessment of impact on local roads is not credible since it underestimates the total increase in car traffic associated with airport expansion and fails to acknowledge the importance of Parsonage Road as a means of accessing the airport. Given that sensitive receptors are concentrated around local roads, the assessments have failed to properly assess the environmental impacts of the proposed development.
- Overall it is concluded that the transport work submitted in support of the proposed expansion is flawed and inadequate. The impact of the proposals will be significantly greater than currently suggested and could lead to severe impacts that have not currently been taken into account.

#### Surface Access - Rail

4.1	Potential impacts on the rail network and improvements required to cater for the increased passenger numbers	The rail operations to and from Stansted Airport are linked with other operations on the rail network and the infrastructure and investment being made to the West Anglian Main Line and train services on the rail network. The potential impacts of the expansion of operations at the airport on the rail network have been assessed by Network Rail, as the appropriate transport authority. This includes their consideration of sensitivity testing to provide comfort that if the mode share assumptions set out in the TA are exceeded, i.e. that there is a higher take up of rail travel than current recorded, then services will remain satisfactory both for those travelling to Stansted and other users of the Stansted Express trains. They have confirmed they have no objections to the expansion of operations at the airport from 35mppa to 43mppa. Refer to TA Addendum (Annex 6).
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We note that – as requested by SSE - a sensitivity test for a 35% rail mode share for Stansted passengers has now been carried out. See also below.

4.2	Ely Railway Station connects several lines together (incl. Cambridge, Ipswich, Norwich, Kings Lynn and Peterborough), however during peak times, due to the bottleneck there can be congestion and therefore journey times are increased. As part of the expansion, contributions from the developer to alleviate this issue should be sought as the expansion would result in more services travelling through Ely Railway Station.	The impact on Cross-Country and Abellio Greater Anglia services between Stansted Airport and Cambridge was assessed in the Chapter 8 of the TA. This concluded that future airport passenger demand could be accommodated on existing services. Whilst passenger throughput at Ely Railway Station may increase, there are no proposals to increase the number of services travelling through Ely.
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Point 4.2 above was not made by SSE and we have no comment to make on this.

SSE 3	<p>STAL has provided no response to a number of key points raised in Chapter 11 of SSE's main submission (April 2018). In summary these are as follows:</p> <ul style="list-style-type: none"> <li>• The DfT guidelines on Passengers in Excess of Capacity (PiXC) – i.e. the acceptable number of standing passengers and maximum length of time they should need to stand (20 minutes) – has been wrongly interpreted. As a result, the capacity of the existing fleet and its proposed replacement has been significantly overstated.</li> <li>• The existing service is operating close to capacity in both the morning and evening peaks but in the absence of detailed loading data, we do not know the extent to which PiXC guidelines are being breached.</li> <li>• The capability of Tottenham Hale station to handle the increase in passengers which is already severely congested at peaks and its platforms sometimes dangerously so.</li> <li>• Unexplained discrepancies in the information provided by STAL on the projected peaks in demand for rail services by airport passengers. In the absence of a valid explanation it can</li> </ul>	
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<p>only be concluded that forecasted demand under the 43 mppa option has been artificially suppressed.</p> <ul style="list-style-type: none"> <li>• Significant improvements in journey times do not seem to be realistically achievable within the constraints of the existing infrastructure.</li> <li>• No infrastructure enhancements are proposed or likely to materialise during the time horizon of this application. In practice this means that no improvements in service frequencies are likely to occur either.</li> <li>• The application proposes that additional rail demand should be met simply by operating longer (12 coach) trains. No consideration had been given to the adverse impact this might have on boarding times and the reliability of train operations.</li> <li>• There appears to be no aspiration in the application to enhance rail's market share beyond the 26% experienced in the base year.</li> <li>• The need for STAL to take the lead in the promotion of an extension of the Stansted Airport rail spur westwards towards Dunmow and Braintree.</li> </ul>	<p>STAL has provided no explanations or further information regarding these issues.</p>
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In the absence of a response from STAL on these issues we remain particularly concerned with regard to the following:

- STAL has provided no evidence of compliance with PiXC and – on the basis of the information we have – has used loading factors which are unacceptable under the DfT's PiXC rules.
- The apparent discrepancies in projections of peak rail demand by airport passengers are still unexplained and all the indications are that peak demand has been significantly understated in the 43mppa case.
- There are no plans for journey time or frequency improvements.

The combined effect of the 3 points above leads to the conclusion that the proposed capacity enhancement will be insufficient to cater for rail demand in the Development Case even at 30% rail mode share and even before the airport demand is combined with the substantial new housing developments planned for East Herts and Uttlesford over the next 10 years and beyond.

With regard to the prospect of a 35% rail mode share, SSE requested a sensitivity test for this higher level of rail mode share and we note that, coincidentally, Network Rail also asked for a 35% sensitivity test. It is difficult to interrogate the results because the train loading data has not been provided. Nevertheless, Table 3.1 indicates that with a 35% mode share Stansted Express services would have an occupancy of 86% of seating capacity in the pm peak. This almost certainly means that some services would be more than fully occupied during the pm peak, if this is the average occupancy of all of them, as para 3.20 acknowledges. Regardless of the outcome of this planning application, STAL needs to work with Network Rail and the TOCs towards achieving 35% rail mode share within five years. Moreover, this should be viewed by STAL as a key objective within its sustainability agenda rather than a potential problem. By way of comparison, Gatwick already has a 39% rail mode share and has a target of reaching 45% rail mode share by 2030 – see <https://www.gatwickairport.com/globalassets/business--community/new-community--sustainability/sustainability/gatwick.asas.may18.pdf>.

**Noise**

<p>5.1 The methodology for assessing additional noise has been considered inadequate, a number of matters were raised on this point:</p> <ul style="list-style-type: none"> <li>• The Secretary of State for Transport's letter sets out the reasons why the 16 -hour day and 8-hour night LAeq average noise metrics are not wholly appropriate to assess all aspects of aircraft noise</li> <li>• The assessment does not include the normal methodology of including absolute noise level thresholds and only bases its assessment on changes compared with the 2016 Baseline year and 2028 Do Minimum for which it says the increases are negligible.</li> <li>• The ground noise assessment metrics are solely based on the equivalent average LAeq noise levels over 16 hours in the day and 8 hours at night</li> <li>• The measurement of background noise levels (LA90) together with maximum noise levels (LAm<sub>ax</sub>) (ES2 Appendix 7.4) at a number of locations around Stansted Airport provides a more effective assessment of likely noise annoyance in the daytime and night time than just the 16-hour day and 8-hour night average noise metrics.</li> </ul>	<p>Please refer to Annex 2 for technical notes.</p> <p>The treatment of atmospheric conditions is in accordance with ISO 9613, which is accepted as being an appropriate method of analysing environmental noise, especially over the long term during which conditions can change on a day to day basis. To provide results only for individual occasions (of unknown frequency or timing) for which specific temperature inversion or wind conditions apply would be to misrepresent the typical ground noise conditions.</p> <ul style="list-style-type: none"> <li>• Average day and night noise levels, expressed as LAeq, are not the only metrics used in the noise assessment. In line with Government guidance several other emerging metrics including N65 daytime and N60 night time are reported. Importantly, SoNA 2014 identifies that the LAeq,16h noise metric is most closely correlated with community response and shall be used when making evidence-based decisions.</li> <li>• The assessment does not apply thresholds, but if this has any effect on the assessment, it is to make it more robust, not less. In this case it would have no effect (because all noise levels alongside the roads assessed are above the potential 55 dB(A) threshold identified in paragraph 9.42 of ES Chapter 9). The application of thresholds is redundant in this situation.</li> <li>• Ground noise is different in character to air noise in that it is predominantly audible as a relatively steady state noise, which may fluctuate in level over a typical 24-hour day. It is the relatively continuous comings and goings of aircraft on the ground mixed in with the noise of aircraft at stand that characterises ground noise. It is quite different to the clearly defined series of transient noise events associated with aircraft in flight. Indeed, as ES Appendix A8.1 identifies, airport ground noise has generally been undertaken in accordance with the provisions of BS4142:2014 which deals with industrial or commercial noise sources, reflecting the nature of noise from aircraft on the ground. The standard does not rely on a study of LAm<sub>ax</sub> values being undertaken.</li> <li>• It is unscientific to state that the difference between aircraft noise level (whether measured as LAeq or LAm<sub>ax</sub>) and background noise level (usually measured as LA90) is key to determining the effect on people in the community. SoNA 2014 came to no such conclusion and was clear in its advice that the best correlation of community response is with the absolute value of LAeq,16h. SoNA 2014 derived its results on the basis of responses from individuals exposed to aircraft noise in the vicinity of 9 UK airports, including Stansted.</li> </ul>
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With regard to atmospheric conditions, STAL's methodology does not provide information for the actual impacts of Ground Noise for people living around the airport. It is not disputed that conditions can change on a daily basis. Plainly, local residents will hear actual aircraft noise on a day-to-day basis to a greater or lesser extent and to a varying intensity depending on wind direction. The lack of provision of figures for what STAL terms "moderate downwind conditions" and the lack of provision of any quantified details of what "moderate downwind conditions" are assumed in the modelling is unhelpful. This does not enable any assessment to be made of the likely worst and best case situations. It should be noted that downwind adjustment for the maximum noise level of an aircraft on the ground is an increase of 10dB which is a doubling of loudness.

SSE reiterates that the ES assessment for Surface Access Noise disguises the high noise levels currently experienced on all the 38 link roads surveyed around the airport. SSE notes that STAL accepts that "all noise levels alongside the roads assessed are above the potential 55dBA threshold". It can be clearly seen in ES Appendix 9.1 that all 38 locations currently exceed the WHO value for serious annoyance of 55dB LAeq.16hour and many of these locations exceed the 55dBA value by a considerable margin. Additionally all 38 locations will further increase their noise levels in the forecast 2028 43mppa Development Case.

BS 4142:2014 is the standard for the methods for rating and assessing industrial and commercial sound. Two of the key measurements in BS 4142:2014 are the LA90 metric of background noise level and the LAeq noise level. If the rating level exceeds background level by around 10 dBA or more this indicates a significant adverse impact and complaints are likely. It is misleading for STAL to assert "It is unscientific to state that the difference between aircraft noise level (whether measured as LAeq or LAmax) and background noise level (usually measured as LA90) is key to determining the effect on people in the community".

STAL says "SoNA 2014 derived its results on the basis of responses from individuals exposed to aircraft noise in the vicinity of 9 UK airports, including Stansted". What STAL fails to say is that the responses were from circa 2,000 individuals around UK airports all of whom had addresses within contour bands of 51-54dB LAeq.16h (one third) and +54dB LAeq.16h (two thirds). The total number of addresses selected around Stansted within these noise contour bands was 30. While SoNA found that the results correlated well with LAeq.16h within these contour bands, no individuals were interviewed outside these contour bands. This study area does not reflect the large number of locations both close to and under flight paths to the east and west of the airport and additionally from where the vast majority of noise annoyance complaints concerning Stansted operations are made. This is particularly the case for Performance Based Navigation (PBN) routes. In fact SoNA 2014 was silent on the effects outside the 51dB LAeq.16hr contour areas. The scope of the SoNA study did not address this.

SoNA 2014 also made clear that one of the aims of the study was to check whether Leq was the appropriate measure of annoyance for measuring the impact of aircraft noise for people living around major airports. Its conclusions were based solely on the results of the interviews of individuals within the contours bands stated above and in so doing excluded people living outside these contour bands.

SSE continues to maintain that people hear aircraft noise as a discrete number of noisy events with associated noise levels, durations and noise characteristics as well as 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 the day and 8 hours at night. The Department for Transport acknowledges that in the assessment of noise, the number of flights have to be taken into account which can be a more significant factor than average noise levels. This was also reinforced by the Secretary of State for Transport's letter referred to and reiterated below.

SoNA 2014 also identified that the degree of annoyance (based on the percentage of respondents highly annoyed) previously occurring at the LAeq.16h noise metric of 57 dBA, now occurs at the lower metric value of 54 dBA. The CAA ERCD Report 1803 Noise Exposure Contours for Stansted Airport dated June 2018 stated that the 54dB LAeq.16h contour had an area of 49.5sq km and enclosed a population of 6,100. While LAeq.16 hour is not the sole metric used in noise assessment, if STAL is relying on it being closely correlated with community response then the number of people highly annoyed in 2017 has virtually trebled from the 2,050 number of highly annoyed people in 2016.

The Secretary of State for Transport's letter dated 10 December 2013 said "*However, the APF [Aviation Policy Framework] also recognises that people do not experience noise in an averaged manner and that the value of the LAeq indicator does not necessarily reflect all aspects of the perception of aircraft noise. This may be especially true for rural airports such as Stansted where the ambient or background noise levels are relatively low*" [emphasis added].

5.2	Increased number of flights will generate more aircraft noise (night time impacts).	<p>This application does not seek an increase in the 274,000 aircraft movements currently permitted. Airport traffic uses similar routes at night as during the day. Therefore, the effects at night will be localised along the same routes, those being predominantly roads with no dwellings on them.</p> <p>In the case of HGV traffic, the numbers are expected to remain in the same proportion to the overall traffic flows. The only exception is on Round Coppice Road, where the proportion of HGV's is predicted to increase as a result of the cumulative impact of Northside. As there are no dwellings on that road, this will not have any effect. It is reasonable to assume that all HGV routing is direct between facilities on the airport and the strategic road network, avoiding passing any sensitive receptors.</p> <p>It is also worth noting that the spread of passenger aircraft movements over the 24 -hour day is not predicted to alter significantly in terms of the proportion that take place at night (the proportion taking place at night is actually predicted to reduce slightly).</p> <p>As set out in detail with the Transport Assessment, the total passenger numbers passing through the airport are predicted to increase but the runway becomes more evenly used throughout the day as the airport becomes busier. The current use of the runway is close to capacity first thing in the morning and last thing in the evening. Accordingly, the early morning departures and late-night arrivals grow significantly less than other periods of the day as the runway use becomes more evenly distributed. Passenger and employee movements associated with these early and late flight movements are hence equally predicted to increase by lower proportions than the daily totals.</p> <p>Therefore, taking account of these factors, impacts at night are expected to be no greater than during the day.</p>
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STAL's response is economical with the truth. Firstly, STAL acknowledges that a maximum of 248,800 aircraft movements can be achieved under the current permission and that its planning application, if approved, would enable another 69 flights per day. Secondly, Appendix D of the STAL Planning Statement contains 'Draft Heads of Terms' for a Section 106 Agreement which include a proposal to remove the existing s.106 "Restriction on lobbying for any relaxation on night flights restrictions". The only possible explanation for this proposal is that STAL wishes to seek an increase in the permitted number of night flights at Stansted. STAL correctly points out that the present control regime on night flights will remain in force until October 2022 and that any change to the present arrangements will be a matter for the DfT. It is however clear that STAL wants to use the current planning application to remove the current restriction so that it can begin lobbying for a relaxation of the present night flights regime with the objective of being allowed more night flights from October 2022 onwards.

5.3	Noise assessment should be based on the Government's latest regulation to be formalized in July 2018.	<p>This application does not seek an increase on the noise levels currently permitted.</p> <p>The study area is more than sufficient to completely encapsulate noise contours down to the LOAEL value, where this is defined, for all operating scenarios. Below the LOAEL, aircraft noise is determined not to have an adverse effect, and there is consequently no need to quantify the noise levels below this value.</p> <p>SoNA 2014 states:  <i>Adverse effects are considered to be those related to health and quality of life. They should be assessed using a risk-based approach above LOAEL (Lowest Observed Adverse Effect Level). In order to properly assess the potential adverse effects of airspace change:</i></p>
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		<ul style="list-style-type: none"> <li>• 51 dB LAeq,16h should be regarded as the LOAEL;</li> <li>• 45 dB Lnight should be regarded as the LOAEL.</li> </ul> <p>The government's Consultation Response on UK Airspace Policy confirmed adoption of these values to establish daytime and night-time LOAEL value for aircraft air noise.</p>										
<p>STAL's statement that "This application does not seek an increase on the noise levels currently permitted" is disingenuous and misleading. SoNA 2014 does indeed provide values for LOAEL (Lowest Observed Adverse Effect Level). SSE agrees that the government's Consultation Response on UK Airspace Policy confirmed adoption of these values to establish daytime and night-time LOAEL values for aircraft air noise.</p> <p>The daytime and night-time LOAEL values given in Chapter 7 of the ES encompass the areas and populations in the tables below:</p>												
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>DAYTIME (51 dB LAeq,16h)</th> <th>AREA (Km<sup>2</sup>)</th> <th>POPULATION</th> </tr> </thead> <tbody> <tr> <td>2016 Baseline Year</td> <td>82.9</td> <td>12,600</td> </tr> <tr> <td>2028 Development Case</td> <td>97.0</td> <td>15,250</td> </tr> </tbody> </table>			DAYTIME (51 dB LAeq,16h)	AREA (Km <sup>2</sup> )	POPULATION	2016 Baseline Year	82.9	12,600	2028 Development Case	97.0	15,250	
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<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>NIGHT-TIME (45 dB Lnight)</th> <th>AREA (Km<sup>2</sup>)</th> <th>POPULATION</th> </tr> </thead> <tbody> <tr> <td>2016 Baseline Year</td> <td>89.7</td> <td>13,550</td> </tr> <tr> <td>2028 Development Case</td> <td>106.2</td> <td>16,950</td> </tr> </tbody> </table>			NIGHT-TIME (45 dB Lnight)	AREA (Km <sup>2</sup> )	POPULATION	2016 Baseline Year	89.7	13,550	2028 Development Case	106.2	16,950	
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2016 Baseline Year	89.7	13,550										
2028 Development Case	106.2	16,950										
<p>It can be noted that these areas are considerably larger than the AN1 planning limit area of 33.9 Km<sup>2</sup> currently permitted for 57dB LAeq.16h.</p>												
5.4	MAG states new aircraft will be up to 60% quieter but that equates to only approximately 3 decibels, a difference which is not detectable by the human ear.	The perceptibility of the difference in level between any specific aircraft types is not directly relevant to this assessment. The level changes applied to new generation aircraft are stated within the ES Noise Chapter which confirm the source levels utilised in the noise assessment. The appropriate comparator, as assessed, is the overall change in noise level for the reference periods due to the change in aircraft numbers and types for each operational scenario. This change in noise level, including reference to perceptibility where relevant, is included in the ES Chapter and Appendix.										
<p>STAL's response suggests a basic misunderstanding of the matter raised. In ES Chapter 7, STAL relies on the introduction of new generation aircraft and gives figures for reductions in noise emissions in Table 7.6. For the new generation B737-MAX8 the reductions are stated as being 3.0dB on departure and 2.2dB on arrival. These reductions would be effectively imperceptible since a change of 3dB is the minimum perceptible under normal conditions. That is highly relevant since it means that the introduction of new generation so-called "quieter aircraft" will have no perceived benefit in noise reduction for people living under the flight paths.</p>												
5.5	The ES dismisses the importance of noise complaints.	<p>STAL recognises the importance of noise complaints. However, ES Appendix A7.5 correctly concludes that complaints are a poor indicator of the degree of noise exposure experienced by people. If this were not true, then the incidence of complaints would be higher in areas where people are exposed to higher level of noise, and vice versa. This, in practice, is not the case as the highest incidence of complaints came from people exposed to (relatively) low noise levels.</p> <p>It is not disputed that noise triggers the complaint, but it is not the level per se that is critical. Noise complaints can be triggered by a range of factors, including single events, longer term changes and factors personal to the complainant. It is more likely the perceived intrusion or annoyance associated with observed or heard operations when these have increased noticeably in number over a short period of time. That is the point of the analysis in Appendix A7.5.</p>										
<p>STAL's response misunderstands and misrepresents the matter raised. It is not about the degree of noise exposure, it is about the degree of noise annoyance and sleep disturbance. The number of complaints is a good indicator of the degree of noise annoyance and sleep disturbance. The numbers of complaints made to Stansted Airport has increased, especially in the last two years, and are shown below:</p> <table style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td>2017</td> <td>8,411</td> </tr> <tr> <td>2016</td> <td>4,170</td> </tr> <tr> <td>2015</td> <td>747</td> </tr> <tr> <td>2014</td> <td>1,022</td> </tr> <tr> <td>2013</td> <td>907</td> </tr> </tbody> </table> <p>Furthermore the number of complaints listed above are the numbers of communications received by STAL from complainants. This is not the same as the number of noisy events that caused the communications. Each communication can refer to a single aircraft event or list a number of aircraft events, in some cases a large number which caused noise annoyance and sleep disturbance. The real number of aircraft noise events which caused annoyance or sleep disturbance is likely to be far higher than the numbers listed above.</p>			2017	8,411	2016	4,170	2015	747	2014	1,022	2013	907
2017	8,411											
2016	4,170											
2015	747											
2014	1,022											
2013	907											
5.6	The noise assessment does not take into account emerging government guidance in CAP1498	CAP 1498 is not referred to in the noise assessment as the guidance it contains is aimed at evaluating airspace change proposals (see 1st paragraph of Executive Summary). The 35+ application involves a change in the annual passenger limit and does not require a change in the permitted number of flights, nor is it associated with any changes to flight paths.										
<p>STAL appears to avoid taking responsibility for aircraft noise impacts on local communities living outside the 57dB LAeq.16 hour noise contours. The CAA CAP 1498 'Definition of Overflight' seeks to represent the communities affected and to propose a metric to quantify overflight both inside and outside of the standard noise contours for communities exposed to aircraft noise up to 7,000ft. While the metric is for assessing aircraft overflights primarily in the context of evaluating airspace change proposals, it has particular relevance to communities living further away under flight paths up to 7,000ft.</p>												
5.7	The Applicant is requested to provide detail of mechanisms to influence the use of quieter aircraft and the impacts of night flights.	Night movements are controlled by the Department for Transport for Stansted. The night flight restrictions at Heathrow, Gatwick and Stansted have been continued until October 2022 which will maintain the status quo in terms of movements while encouraging the use of quieter aircraft at all three airports established in the previous five-year										

		regime. The regime sets night flight movement limits and noise quota limits for both the Winter and Summer at Stansted.
Point 5.7 was not made by SSE. We note that STAL's response addresses only the night flights issue and is silent regarding any mechanisms to influence the use of 'quieter' aircraft.		
5.8	Land Compensation should have been included in the EIA. Update required and further consultation.	Land Compensation is governed under Part 1 of the Land Compensation Act 1973 which is not relevant to the EIA process. The airport's Consultative Committee are regularly briefed on the issue.
Point 5.8 was not made by SSE but we agree with the sentiments of the comment. STAL has behaved shamefully over the past 17+ years in not meeting its obligations to compensate local residents whose properties have been devalued by airport expansion. However, we agree that this is not an admissible consideration with regard to the current planning application.		
5.9	At a Stansted Airport Parish Councils Forum (Oct 17), MAG stated there would be a phasing out of the noisier QC/2 aircraft and no consideration would be given to extending the night flight numbers. Either provided false information or MAG position has now changed. Ukraine operators have now opened base for the Antonov An-225 Mriya. Questions how this is an effort to phase out Q/C2 aircraft.	Consistent with the quoted statement, there is now no longer any new scheduling of QC2 aircraft during the night quota period. Operation of such aircraft during the day would be subject to the controls over the daytime noise contour limits that are currently in force at the airport, and as may be amended on the basis of any future grant of planning permission.  To reiterate, there is no planned increase in the already approved number of night time or annual aircraft movements.
Point 5.9 was not made by SSE. However, as stated under 5.2 above, STAL's response is economical with the truth. Appendix D of the STAL Planning Statement contains 'Draft Heads of Terms' for a s.106 Agreement which include a proposal to remove the existing Section 106 "Restriction on lobbying for any relaxation on night flights restrictions". The only possible explanation for this is that STAL wishes to seek an increase in the permitted number of night flights at Stansted. STAL correctly points out that the present control regime on night flights will remain in force until October 2022 and that any change to the present arrangements is a matter for the DfT. It is however clear that STAL wants to use the opportunity of the current planning application to remove this restriction so that it can begin lobbying for a relaxation of the present night flights regime with the objective of being allowed more night flights from October 2022.		
5.10	Disturbance to the rural surroundings	This paragraph alludes to the fact that the area around Stansted is rural, thereby enjoying low background noise levels and a degree of tranquility that should afford it special consideration in respect of aircraft operations.  Analysis of the background noise data that were measured at a number of locations within the study area (reported in Appendix A7.4) suggests that on aggregate the daytime and night -time background noise levels are slightly higher than the national average reported in the BRE National Noise Incidence Study 2000. This is determined by considering the 50th percentile value of LA90 noise levels measured at all locations both nationally and around Stansted. Please see attached Annex 3A and 3B for further analysis of this point.  To reiterate, there is no planned increase in the already approved number of night time or annual aircraft movements.
It is important to have current background noise measurements for a number of locations around Stansted Airport since local residents will hear aircraft noise events as a distinct number of noisy disturbances against the ambient or background noise levels. This is particularly the case at night where aircraft emitted noise levels, type for type, are generally of the same intensity whereas background noise levels are generally lower than in the daytime. Furthermore, 35% of Stansted's night movements are freight services which is a significant proportion; many of which are large, noisy and old aircraft. It is entirely unhelpful to compare background noise levels with the BRE National Noise Incidence Study 2000 since this study compared changes at certain UK locations between 1990 and 2000. The results of the BRE study are 18 years out of date. The STAL statement in paras A2.1.5 and A2.2.5 that the day-time and night-time noise levels around Stansted Airport "are not unusually low compared to the country as a whole" is misleading since up-to-date comparisons are not provided. Similarly the 50th percentile figures are misleading and do not provide an up to date rigorous basis for comparison. And to reiterate: (1) A maximum of 248,800 aircraft movements can be achieved under the current permission and STAL's planning application, if approved, would enable another 69 flights per day and (2) STAL is seeking removal of the existing Section 106 "Restriction on lobbying for any relaxation on night flights restrictions". The only possible explanation is that STAL wishes to seek an increase in the permitted number of night flights at Stansted. The present limits apply until October 2022. STAL clearly wants to remove the current restriction so that it can begin lobbying to be allowed more night flights from October 2022 onwards.		
5.11	The assessment does not attempt to assess cumulative noise effects and ES2 Appendix 7.3 ignores the effects of the London Airspace Management Programme ('LAMP')	It is misleading to suggest that LAMP, or LAMP 2, need to be taken into account in determining cumulative effects. Area wide airspace restrictions are reflected in the operating procedures adopted at Stansted and these have been modelled by the CAA using the accepted methodology. The extent of the noise contours affecting the community around Stansted is determined by aircraft on departure or arrival at the airport and in airspace typically below 4,000ft and definitely below 7,000ft. Aircraft flying to or from other airports in the south east are at much greater altitudes and do not materially contribute to overall aircraft noise levels within the contour areas.  Paragraph 9.55 of ES Chapter 9 refers to Chapter 7 with regard to cumulative effects, which are considered in paragraphs 7.308 – 7.312. They set out the reasons that each of the noise sources are dealt with separately and that it is not feasible to derive a 'cumulative noise impact' (nor is it conventional). This is the approach that has been used for the noise assessment at recent airport planning applications; the Heathrow Cranford Agreement application (determined on appeal in February 2017), and the London City Airport application (determined on appeal in July 2016) and this application follows that adopted approach.
The significance of the LAMP programme is that it is currently being implemented. For airspace up to 7,000ft the priority is to minimise the impact of aviation noise in a manner consistent with the Government's overall policy. There will be cumulative effects of the LAMP programme changes at Stansted together with changes to routes for traffic operating from other airports in the south east of England. No account has been taken of the impacts of this cumulative effect. The impacts will be exacerbated under concentrated flight paths as a result of Performance Based Navigation (PBN) being implemented.		
5.12	100% single mode contours should be provided for a proper assessment to be carried out.	100% mode contours do indeed reflect the experience of people in the community on any given day, but SoNA 2014 is silent on the relationship between 100% mode noise levels and the response of people so affected. The noise response relationships are all derived from aggregate mode operations that allow for the daily variation in operating direction over a summer season (the busiest time of year).  Table 2.2 in ES Chapter 2 ES Methodology responds specifically to the scoping opinion point that 100% Leq single direction runway usage contours should be provided. The approach adopted carefully considers what additional assistance the provision of 100% mode contours would provide to the noise assessment and concludes that it is minimal. This approach is reinforced by the position taken by the inspector in the 2008

		inquiry into the 25+ application at Stansted, namely that such contours are of interest but add little to the assessment.
Importantly, STAL agrees that 100% mode contours do indeed reflect the experience in the community on any given day. Since the runway can only be used in one of two directions at any one time, there will be two 100% mode noise contours, one for each runway direction. They reflect aircraft noise experienced by the community on a day to day basis to a greater or lesser extent. Thus 100% single mode contours should be provided so that we can have a proper assessment of noise impacts.		
5.13	No figures are provided for "moderate downwind conditions"	The treatment of atmospheric conditions is in accordance with ISO 9612, which is accepted as being an appropriate method of analysing environmental noise, especially over the long term during which conditions can change on a day to day basis. To provide results only for individual occasions (of unknown frequency or timing) for which specific temperature inversion or wind conditions apply would be to misrepresent the typical ground noise conditions.
With regard to atmospheric conditions, the STAL methodology does not provide information for the actual impacts of ground noise for people living around the airport. It is not disputed that conditions can change on a day to day basis. What is surely not at issue is that local residents will hear actual aircraft noise on a day-to-day basis to a greater or lesser extent and at varying intensity depending on wind direction. The lack of provision of figures for what STAL terms "moderate downwind conditions" and the lack of any quantified details of what "moderate downwind conditions" are assumed in the modelling is unhelpful. This does not enable any assessment to be made of the likely worst-case and best-case situations. The downwind adjustment for the maximum noise level of an aircraft is an increase of 10dB which is a doubling of loudness. The requested data should be provided.		
5.14	The WHO Guidelines for Community Noise provide values for moderate (50dB) and serious (55dB) annoyance over the 16-hour day period as well as maximum noise levels at night. The ES ignores the WHO guideline value for moderate annoyance level of 50dB LAeq and additionally ignores the WHO Night Noise Guidelines where it recommends an Lnight level of 40dB. The assessment also does not provide any maximum noise levels at night where WHO provides the value of 60dB LAmx	<p>The WHO guideline values used for assessing community disturbance effects are consistent with the approach used for the previous 25+ application and, as noted, other UK airports. The thresholds of 55 dB LAeq,16h and 45 dB LAeq,8h have been selected to represent the threshold of significant community disturbance in the manner that 54 dB LAeq,16h (formerly 57 dB) is determined to mark the onset of significant community disturbance for air noise.</p> <p>It is recognised that annoyance at an individual level can arise at levels below these thresholds and that is why ground noise contours are plotted down to values of 50 dB LAeq,16h daytime and 40 dB LAeq,8h night -time.</p> <p>Government guidance on mitigating aircraft noise, as set out in the Aviation Policy Framework and the more recent consultation documents, indicates that it is not necessary to provide sound insulation merely because noise is at a level deemed to constitute an Adverse Effect. For air noise, the LOAEL is defined to be 51 dB LAeq,16h while current policy is that airport operators shall be required to protect residences and other noise sensitive dwellings at a level of 63 dB LAeq,16h or above.</p> <p>One of the qualification criteria for the SIGS scheme is 55 dB LAeq,16h for ground noise, clearly underlining the fact that this is considered to constitute a sound level requiring mitigation, where appropriate, and not the point at which Adverse Effects are likely to be felt.</p>
STAL has not provided a response to the matters raised concerning the WHO Night Noise Guidelines where WHO recommends an Lnight level of 40dB and concerning the lack of provision of any maximum noise levels at night where WHO provides the value of 60dB LAmx. Regarding noise mitigation measures, STAL should be asked to justify setting the qualifying criteria at a significantly higher level than is the case at Heathrow.		
5.15	The assessment disguises the high noise levels currently experienced on all the 38 link roads surveyed around the airport.	This does not explain how the judgement was reached that the assessment disguises high noise levels.
See comments at 5.16 below.		
5.16	All 38 locations currently exceed the WHO value for serious annoyance of 55dB LAeq.16 - hour and many of these locations exceed the 55dBA value by a considerable margin	We have conducted the impact assessment in accordance with relevant guidance (DMRB), in terms of changes in noise level.
It can be clearly seen in ES Appendix 9.1 SCH2.2 that all 38 link road locations currently exceed the WHO value for serious annoyance of 55dB LAeq.16hour and many of these locations exceed the 55dBA value by a considerable margin. Additionally all 38 locations will increase their noise levels in the forecast 2028 43mpps Development Case. STAL's 'salami slicing' approach to planning applications over the years has the effect of reducing the incremental impacts at each stage. It can only be hoped that if UDC insists on determining this planning application, STAL will not be allowed to evade its responsibilities to the community by continuing to game the planning system in this way.		
5.17	This further increase of ground noise disturbance would be experienced for people living around the airport and the cumulative impacts are not shown to have been assessed in the ES.	<p>Paragraph 9.55 of ES Chapter 9 refers to Chapter 7 with regard to cumulative effects, which are considered in paragraphs 7.308 – 7.312. They set out the reasons that each of the noise sources are dealt with separately and that it is not feasible to derive a 'cumulative noise impact' (nor is it conventional). This is the approach that has been used for the noise assessment at recent airport planning applications; the Heathrow Cranford Agreement application (determined on appeal in February 2017), and the London City Airport application (determined on appeal in July 2016). It is the approach adopted for this application.</p> <p>The trip modelling presented in the Transport Assessment has been agreed with Essex County Council and Highways England as a sound basis for understanding the potential impact of the expansion of operations at the airport. The trip modelling incorporates a series of robust assumptions that generally overestimate likely traffic generation. These robust assumptions include:</p> <ul style="list-style-type: none"> <li>• Making no reduction in external network (surface access) trips for passengers using the airport for internal flight transfers - currently understood to be around 1-2 million per annum. i.e. all future passengers have been assumed to result in an external trip(s);</li> <li>• Adopting a car occupancy of 1.6 passengers per car while CAA advice on interpretation of its passenger surveys is that a figure of 1.8 may be appropriate; and</li> <li>• Adopting current travel modes for future trip modelling, i.e. making no allowance for a general trend of decreasing car proportion as has been historically the case.</li> </ul> <p>Notwithstanding the above, additional sensitivity testing is being provided by SDG to provide comfort that the highway mitigation proposals for the key M11 Junction 8 have sufficient spare capacity to accommodate additional traffic</p>

levels. Similarly, ECC is auditing the proposals using their own independent modelling, developed for the ECC J8 improvement scheme.

The above matter, as raised by SSE in its original submission, is reiterated. The forecast further increase in surface access noise will increase noise disturbance for people living around the airport in addition to the ground noise of aircraft operations, and the cumulative impacts are not provided in the ES. People perceive the cumulative effects of noise disturbance differently. The response from STAL above is nothing short of obfuscation. STAL must be made to comply with its statutory obligation under Schedule 4 of the Town and Country Planning Act (Environmental Impact Assessment) Regulations 2017, to assess cumulative impacts.

**5.18** In order to minimise unnecessary overflights over existing and planned new communities, including the Harlow and Gilston Garden Town proposals, increasing use of Continuous Descent Approach should be used wherever practicable.

Airspace change is not part of the planning application and remains subject to separate regulatory processes. Although CDA operates on Runway 22 over 90% of the time, CDA is not currently possible on Runway 04 approaches due to airspace restrictions. The Stansted Noise Action Plan sets out a commitment to achieve CDA compliance when possible.

Point 5.18 was not made by SSE but for many years we have consistently argued for maximum use of CDA.

**SSE 4** SSE comments on the additional information provided in ANNEX 3B: Noise Technical Note

**Para 2.2** states that “The lower LAmax values attributable to the new generation of aircraft on departure can be seen, with computed differences consistent with the 3dB lower noise levels on departure used in the modelling for the 737 Max compared to the 737-800”. It must be recognised that this 3dB lower maximum noise level would hardly be noticed since a change of 3dB is the minimum perceptible under normal conditions. What would be noticed is an increase in the number of flights.

**Para 2.7** states that “The lower LAmax values attributable to the new generation of aircraft on arrival can be seen, with computed differences consistent with the > 2dB lower noise levels on arrival”. It must be recognised that this > 2dB lower maximum noise level would not be noticed since a change of 3dB is the minimum perceptible under normal conditions. What would be noticed is an increase in the number of flights.

**Para 2.12 Scale of Effects**

It is entirely disingenuous to state that “What is notable.....the frequency of flyovers by noisier, current generation aircraft narrow body single aisle aircraft will reduce in favour of quieter new generation variants”. As clearly shown above the reduction in flyover noise will be either hardly noticed (for departures) or not noticed (for arrivals). What would be noticed is an increase in the number of flights. The RANCH study conducted near major airports in the U.K, Spain and the Netherlands amongst primary school children reported cognitive defects in reading and learning. These studies are of particular importance since unlike many studies among adults they represented a population group of a similar age distribution and found that confounding factors did not alter the association. Teachers at schools near airports state that aircraft flyover noise (jet pause) interferes with pupils’ communication and concentration. It is not only the noise intensity of each flyover that interferes with pupils’ communication and concentration but also the frequency of flyovers.

**Para 3.1.4 Air Noise 55dB Lnight**

While 55dB Lnight is the WHO interim target for night noise, WHO is quite clear when it states that the 55dB Lnight interim target “is recommended as a target for the countries where the Night Noise Guidelines cannot be achieved in the short term”. The WHO states that “an Lnight, outside of 40 dB should be the target of the night noise guideline (NNG) to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly” It is unacceptable to simply rely on the interim target.

Noise level measurements should take full account of the recommendations set down in the WHO Guidelines for Community Noise and the WHO Night Noise Guidelines for Europe. The Department for Transport gave a commitment in July 2004 when it said “The [WHO] guideline values are very low. It would be very difficult, if not impossible, to achieve them in the short to medium term without draconian measures – but that is not what the WHO proposed. The recommendation was that the Guidelines for Community Noise should be adopted as long term targets for improving human health. This is also consistent with the advice above. The UK Government is committed to take account of this. In respect of aircraft noise at night, the 30 year time horizon of the White Paper, provides a suitable time parameter for longer term.”

This Government commitment given 14 years ago was to achieve compliance with the WHO Guidelines for Community Noise in the longer term, defined as by 2030. We are now more than halfway towards 2030 and the interim target of 55dB Lnight is clearly at variance with Government’s commitment to achieve the 40dB Lnight target. In the 2028 timescale of the present planning application, 40 dB Lnight should be the target.

**3.1.6 to 3.1.9 Ground Noise 45dB LAeq.8h**

It entirely reasonable for BAP to suggest that since the 2028 DC 45dB LAeq.8h ground noise contours covered a greater extent than those indicated for the 25+ consented case, consideration should be given to extending the SIGS qualification criteria to include residents falling within this band. It is immaterial whether the 43mppa application seeks or does not seek to increase the permitted number of aircraft movements. The predictions of night-time ground noise are higher in 2028 and this must be taken into account.

**Para 5 Noise Envelope Condition**

It is entirely feasible to apply conditions that, over the years, reduce the adverse noise impacts for people living around the airport and under flight paths. Extant Government policy set down in the 2013 Aviation Policy Framework states that the Government “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” It can be seen from the table below that since 2013 the area and population figures within the 57 dB LAeq.16h contour at Stansted Airport have continued to increase.

YEAR	DAY	
	AREA (Km <sup>2</sup> )	POPULATION
2017	26.5	2,450
2016	24.8	2,050
2015	23.6	1,650
2014	21.6	1,650
2013	20.0	1,250

Source: CAA ERCD Reports for noise exposure contours

As the airport throughput has grown from circa 17mppa in 2013 to circa 25mppa in 2017 STAL has failed to reduce and mitigate noise at Stansted Airport. In the period from 2013 to 2017, capacity has grown by about 47% whereas the number of people significantly annoyed by aircraft noise has increased by 96% - nearly double. Furthermore, emerging policy based upon the CAA SoNA report is that significant community annoyance previously observed at 57 dB LAeq.16hb is now observed from 54 dB LAeq.16h.

Air Quality		
There is no point 6.1 in the STAL schedule in what appears to be an accidental omission.		
6.2	<p>A number of guidance reference matters have been raised below:</p> <ul style="list-style-type: none"> <li>The 2014 NAEI has been used, 2016 is now available.</li> <li>Our old H1 guidance for assessing significance has been used; however, this only applies to industrial installation. Elsewhere the DRMB guidance and the ADMS Airports model are referenced which are acceptable.</li> </ul>	<p>The latest data available at the time of the preparation of the Air Quality chapter and appendices were used. 2016 NAEI data was only available from 12 June 2018.</p> <p>This is a reference to paragraphs 10.82 to 10.84. Both H1 (now withdrawn) and DMRB guidance are referenced and indeed the DRMB guidance on significance of effects on ecological receptors is based on H1. Both sets of guidance use the same test for effects to be not significant: 1%.</p>
Self-evidently, the 2016 National Atmospheric Emissions Inventory (NAEI) data could not be used for the AQ assessment because these data were only available from April 2018 (not June 2018). But this does not explain why the 2015 NAEI data were not used. The 2015 report was available from 15 May 2017, before STAL had even submitted its first Scoping Report. The ES was not published until February 2018 – i.e. nine months later – leaving ample time to use the 2015 emissions inventory data. STAL claims that the use of the 2014 data results in a more conservative approach. In the time available we have only been able to look at comparative NOx where emissions attributable to road transport <b>increased</b> between 2014 and 2015. The projections should be re-worked using the more recent data and an explanation provided as to why the 2015 data were not used for the February 2018 ES.		
6.3	Rural background data clarification	<p>The estimates for rural background concentration are from Wicken Fen, St Osyth, Rochester Stoke and Harwell. The rural background concentrations closer to London were calculated using these rural backgrounds plus NAEI emissions data. As commented by the Environment Agency, NAEI data for 2014 were used as the latest available. Use of 2014 data rather than 2016 is likely to be a conservative (pessimistic) estimate as NAEI 2014 emissions are likely to be higher overall than NAEI 2015/2016 emissions.</p> <p>Wicken Fen is the only site that is downwind of London in the prevailing wind direction and it is approximately 95km from the centre of London. If data from Wicken Fen were under-estimating, data from Wicken Fen is used when the wind is from wind directions between 307° and 52°, which is a small proportion of the time (as shown in Figure 10.4.1, the Windroses).</p>
Point 6.3 was not made by SSE. However we would challenge STAL's assertion that "Use of 2014 data rather than 2016 is likely to be a conservative (pessimistic) estimate as NAEI 2014 emissions are likely to be higher overall than NAEI 2015/2016 emissions". As set out at above, our limited review of the comparative data suggests otherwise.		
6.4	Construction should follow the standards and practices in the IAQM's or London Mayor's guidance for construction/demolition and air quality.	<p>Paragraph 10.42 outlines the construction activity which involves only minor changes to airfield infrastructure. The Institute of Air Quality Management (IAQM) construction dust guidance (IAQM (2016) Guidance on the assessment of dust from demolition and construction, version 1.1) will be appropriate and will be used in the development of a Construction Environmental Management Plan (CEMP) and Construction Dust Management Plan (DMP) as described in ES Chapter 5 and 10. These will be used to govern construction activity.</p>
Point 6.4 was not made by SSE. We have no comment on this.		
6.5	Concerns regarding the significance of effects at human receptors	<p>The significance of effects at human receptors has been assessed following the IAQM/EPUK guidance as described in paragraphs 10.79 to 10.81 and Table 10.5. Although impacts of up to 1.0ug/m<sup>3</sup> are predicted at a few receptors, at those receptors the background concentration is predicted to be well below air quality objectives and therefore the impact has been assessed as negligible.</p>
Point 6.5 was not specifically made by SSE but we do have concerns of a similar nature which we deal with below.		
6.6	<p>The AQ predictions are based upon assumptions (e.g. cleaner fuel, electric vehicles, abatement equipment) and monitoring data from Hatfield Forest has not been used. Baseline data and predictions may not be accurate and may be underestimated. The 5-year data (2011-16) for NO<sub>2</sub> levels at the two diffusion tubes closest to Hatfield Forest shows an increasing trend. Therefore, concern is raised about the reliability of the predicted forecasts.</p> <p>It is noted that the ES indicates that predicted change to lower critical load is less than 1% for Hatfield Forest, however, clearly some critical loads will continue to be exceeded. It is however, acknowledged that this cannot be solely attributed to road traffic associated with the airport.</p>	<p>Please refer to Annex 2: Information on SSSI impacts for clarifications on this point.</p>
Annex 2 deals only with Hatfield Forest SSSI. SSE specifically raised concerns about pollution impacts on East End Wood (part of Elsenham Woods SSSI) caused by a combination of an increase in the number of ATMs, an increase in airport-related road traffic and an increase in non-airport related road traffic. No new information has been provided by STAL to allay these concerns, or even address them.		
6.7	Request of a condition to ensure a robust and regular method of air quality monitoring, reporting and assessment against baseline information. It is requested that this includes the monitoring stations at Hatfield Forest with regular reporting to the National Trust and Natural England.	<p>As part of the on-going and current S106 commitments, STAL produces all the data on an annual basis in a publicly available report published on the website. This commitment will be continued and will include the new monitoring point in Hatfield Forest.</p>
Point 6.7 was not made by SSE but, in the event that this application were to be approved, we would, of course, support the recommendations of Natural England regarding the need for robust conditions. However, based on its past record, we do not have a high degree of confidence that UDC would properly monitor STAL's compliance with any conditions set, and even if proper monitoring did take place, we are doubtful that UDC would take effective action if STAL failed to comply with the conditions.		
6.8	Air pollution could have a possible detriment on the adjacent SSSI of Epping Forest.	<p>The Applicant sets out further clarification on the 'Preliminary Ecological Appraisal - Incorporating Information to Inform a Habitats Regulation Assessment (HRA)', originally found in Chapter 16 Appendix 16.1 of the Environmental Statement. This is founded on three pieces of further supporting information associated with Epping Forest Special Area of Conservation (SAC) (Ecological surveys, Nitrogen deposition modelling and</p>

		traffic modelling) which we hope satisfy the objector. The original conclusions still stand; no significant effect on the SAC is predicted as a result of the 35+ Project. The full technical report can be found in Annex 1.
We note the further information provided on AQ impact on Epping Forest. We defer to Natural England with regard to the need for ongoing monitoring.		
6.9	No firm evidence or guarantee that in the period to 2028 'new 'cleaner' aircraft types will in the future replace current models	Examples of Stansted based airlines' plans for replacing their existing fleets with 'new generation' aircraft is provided in ES Chapter 4 (Aviation Forecasts), paragraphs 4.33, 4.34 and Figure 4.7. Please also refer to Chapter 10 Section 10.117 where emission factors for the Airbus A320 have been taken from the ICAO databank (issue 23c June 2017) which uses the evidence of data from real engine testing. For the B737 MAX8, emissions were taken from IATA's long-term traffic and emission forecasts for Hong Kong Airport (2014).
See our response to Item 2.10 above. This is not about questioning the emissions performance of particular aircraft types. This is about questioning the timetable assumed by STAL for the introduction of new cleaner aircraft types. Our evidence for concluding that STAL's assumed timetable is wholly implausible is set out in Section 8.10 of our main submission. It is clearly in STAL's interests to make optimistic assumptions with regard to the pace of introduction of cleaner aircraft but this has the effect of understating the true AQ impacts. The AQ assessment results presented by STAL must not be taken at face value by those who have the responsibility for determining this planning application.		
6.10	Dismissal of the International Civil Aviation Authority ('ICAO') 3,000 feet assessment for dispersion modelling.	The normal approach to modelling airport and aircraft emissions is not to model emissions over 1,500ft as their impact on ground level concentrations is negligible. The maximum impact of aircraft emissions above 1,500ft is estimated to be less than 0.0005µg/m <sup>3</sup> of NO <sub>2</sub> and it would occur at a distance of over 5km from the airport. Therefore, the impact of these elevated emissions is negligible for ground level concentrations.
<p>What is STAL's evidence for claiming that "The normal approach to modelling airport and aircraft emissions is not to model emissions over 1,500ft as their impact on ground level concentrations is negligible."? ICAO is the UN agency with global responsibility for developing "international civil aviation Standards and Recommended Practices ('SARPs') and policies in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector."</p> <p>To quote again from ICAO "One of ICAO's Environmental Protection Strategic Objectives is to limit or reduce the impact of aircraft engine emissions on local air quality. Due to the increasing amount of residential development surrounding airports and the continued growth of commercial air travel, air pollution surrounding airports has become a significant concern for local/ regional governments. <b>Local air quality concerns concentrate on effects created during the landing and take-off (LTO) cycle as these emissions are released below 3,000 feet (915 metres) and releases from airport sources (such as airport traffic, ground service equipment, and de-icing).</b>" [emphasis added]</p> <p>It is not accepted that aircraft emissions over 1,500ft and up to 3,000ft can be considered to have a negligible impact on ground concentrations in the vicinity of the airport beneath flight paths. There is clear evidence that for short haul flights of between 500km and 1,000km, i.e. typical of Stansted, NO<sub>2</sub> emissions during the LTO cycle account for 18%-26% of total flight emissions and PM emissions for 17%-26% of total flight emissions (ICAO default estimates)<sup>1</sup>.</p> <p><sup>1</sup>Emissions Calculator which accompanies the Air Pollutant EMEP/EEA Aviation Emission Inventory Guidebook 2016, Chapter 1.A.3a.</p>		
6.11	Consideration to be given to associated damage costs from the proposed development.	Damage costs associated with the proposed development have been explored and is considered to be addressed already through the ongoing public transport support funded by the car parking levy in operation at the airport. Greater use of the car parks - with increased passenger throughput - will result in a greater cross subsidy to public transport initiatives. This strategy of increasing public transport use contributes to meeting air quality objectives.
<p>Point 6.11 was not made by SSE but, we have made a number of comments above with regard to increasing public transport use and minimizing use of the car which have a direct bearing on the issue, and which are ignored in STAL's response. To give two examples:</p> <p>(i) Shortly after being acquired by MAG in 2013, STAL unilaterally decided to reduce its levy contribution per car parking transaction (as provided for in the 2003 Section 106 Agreement with UDC), thereby providing less funding to support initiatives – including local bus services – aimed at encouraging more sustainable means of travel to and from the airport; and</p> <p>(ii) STAL's policy of operating an exclusive taxi franchise at Stansted – unlike Heathrow, Gatwick and most other UK airports – creates unnecessary road traffic through 'empty running' whereby the taxi franchisee is generally unable to obtain a return fare to the airport whereas other licensed taxis deliver passengers to the airport but generally cannot pick up a return fare. At Heathrow, Gatwick and elsewhere, black cabs and other licensed hackney cabs can drop off passengers at the airport and then queue for a return (outbound) fare. The policy at Stansted results in unnecessary double running, creating more road traffic than is necessary and more emissions and air pollution than is necessary.</p>		
6.12	It is requested that the AQ monitoring station results from inside the airport should be made available.	Monitoring data from monitoring stations inside the airport boundary are given in Table 10.7 of Air Quality Chapter for the years 2012 to 2016. There are no exceedances of the air quality objectives between 2012 and 2016. As part of the on-going and current S106 commitments, STAL produces all the data on an annual basis in a publicly available report published on its website. This commitment will be continued.
Noted		
6.13	Concerns in relation to NO <sub>2</sub> levels at Bishops Stortford AQMA	The Bishops Stortford AQMA is referenced in paragraph 10.96 of ChAQ and concentrations have been calculated at receptors in the AQMA (Table 10.1 and Figure 10.1 of A10.1). Traffic data for roads for roads in Bishops Stortford is provided in Table 10.33 of A10.3.
The proposed development will increase AQMA traffic levels. What is the action plan to mitigate impacts at Hockerhill AQMA?		
6.14	Existing exceedance of Burton End monitoring site close to both the airport perimeter and the M11 motorway.	Diffusion tube UT009 is a roadside site which is 3.1m from kerbside (Table 10.7 of ChAQ) and 142m from a location of relevant exposure (Uttlesford District Council, 2015 LAQM Updating and Screening Assessment). The concentration recorded in 2016 (43µg/m <sup>3</sup> ) is much higher than that recorded in the preceding years (2014-2015) and 2016 was the only year in which an exceedance of the objective was measured. In comparison, the Stansted West monitor at the Radar tower, Burton End, which is on the airport, recorded a concentration of 15.7µg/m <sup>3</sup> .
Is STAL saying that this exceedance was a one-off and should be dis-regarded? It is not a one-off. STAL should check the results that were reported at Burton End, adjacent to the airport perimeter, at the time of the G1 application.		

6.15	Concerns with current monitoring sites showing results very close to the AQ limit.	The predicted NO <sub>2</sub> concentrations for The Four Ashes (receptor R53) and Chapel Hill (R139, R140, R141) are given in Tables 10.32, 10.34 and 10.36 of Appendix 10.5. At all the receptors significant reductions are predicted in 2023 and 2028 compared with the 2016 base case.
We do not have confidence in STAL's modelling of vehicular emissions because it is based on a significant understatement of the <u>volume</u> of road traffic on local roads – both airport-related (passengers and staff) and non-airport related (by not taking full account of the quantum of new housebuilding planned for the local area over the period to 2033). For more evidential details, see Section 2 above.		
6.16	Overly optimistic DfT forecasts regarding the future composition of road traffic - there is an assumption that the recent exposures over doctored diesel engine emissions test results by vehicle manufactures will prevent any future recurrence.	The version of the EFT used was version 8.0 which is based on the COPERT 5 emissions data. This emission data is the data used in Defra/DfT's latest Air Quality Plan: Air quality plan for nitrogen dioxide (NO <sub>2</sub> ) in UK (2017). Please refer to Annex 4A where this point is discussed further.
As stated above, SSE's principal concern with regard to STAL's modelling of vehicular emissions is because it is based on a significant understatement of the <u>volume</u> of road traffic on local roads – both airport-related (passengers and staff) and non-airport related (by not taking full account of the quantum of new housebuilding planned for the local area over the period to 2033). For more evidential details, see Section 2 above.		
6.17	Environmental legislation is currently based on EU law and cannot be modified in the UK until after the 'Brexit' transition period, i.e. until 2021.	The EU air quality limit values were transposed into domestic legislation via the Air Quality Standards Regulations 2010.
The point being?		
6.18	Clarification required to determine whether or not the AQ impacts of the proposed development are acceptable	The predicted impacts of the proposed development on human and ecological receptors are given in A10.5. Impacts at human receptors have been compared to the UK's health-based air quality objectives. The methodology used (paragraphs 10.24 and 10.25 of ChAQ) is that used in the UK for the assessment of airport air quality impacts.
We simply do not know whether the AQ impacts of the proposed development are acceptable. STAL's modelling is only as good as the input assumptions and it is clear that these have been unrealistically optimistic, particularly in relation to the timetable for introducing cleaner aircraft and in relation to traffic volumes on local roads.		
6.19	The ES used meteorological data, air quality monitoring data, background concentration data, airport and road traffic activity data and emission factors for the baseline year 2016. The Council request an assessment be undertaken, using three or more years of meteorological data.	Please refer to Annex 4B where this point is clarified.
This point was not raised by SSE and we have no comment to make.		
6.20	The Council has raised potential issue of odour at the boundary of the airport causing nuisance and possibility of carrying out boundary monitoring.	Please refer to Annex 4C where this point is clarified.
This point was not raised by SSE. We can however confirm that, from time to time, SSE receives multiple reports from local residents describing kerosene odours downwind from the airport and occasionally also oily 'films' on the surfaces of fishponds etc. We have in the past taken these matters up with the airport and it appears that the problem arises on the rare occasions when there are fuel spillages and when (more frequently) fuel vapours are vented from storage tanks on the airport fuel farm, or from an aircraft during refueling, when there is warm weather. Annex 4C points out that there are relatively few complaints. This may be partly because of complaints fatigue ("What's the point of complaining when nothing ever gets done?") and partly because it's not an everyday problem. It is interesting to note that the odour study undertaken by STAL over a period of three months in 2005 resulted in 99 reports from local residents – mostly in Birchanger and Stansted Mountfitchet – i.e. the two communities nearest the fuel farm. We would propose repeating this survey to gauge whether the problem has lessened in the years since 2005.		
<b>Socio-Economics</b>		
7.1	The socio-economics assessment is considered unbalanced with no economic downsides associated with the proposed development (e.g. net tourism defect, impact on residential property market).	The socio-economic impact assessment of the proposed development (Chapter 11 of the ES) is considered to be balanced, rigorous and accurate. The impact of the Development Case vs. the Do Minimum (without development scenario) on population is in fact very small. Any societal impacts could only come from population growth associated with the development which has been shown to be insignificant. Optimal Economics conclude that the scale of any consequential effects on the net demand for housing in the study area can only be very minor (see ES Chapter 11, paragraph 11.163).
STAL refers to the impact on the residential property market without addressing the only point that SSE made on the subject of housing, as follows: "Finally, there are also housing pressures to consider. We do not intend to make submissions in this regard but we cannot avoid making the observation that an average airport salary of £24,200 does not go very far in the local housing market." (SSE main submission, para 13.2.33). More widely, the Applicant's focus on employment generation and neglect of ecological and societal impacts of the proposed expansion means that a skewed picture of impacts is presented rather than a thorough appraisal of the relative significance of different socio-economic and biophysical impacts. The socio-economic assessment is narrowly focused. It fails to take account of the wider, mainly social, impacts resulting from the development. It ignores (for example) the changes in community character and cohesion associated with the proposed expansion, for example from additional aircraft noise (especially from larger aircraft) and road traffic with the related adverse environmental impacts which in time would be reflected through impacts on property values and community health and well-being. It is not sufficient to rely on discussion of these latter factors elsewhere in the ES as this results in inadequate quantification of adverse impacts. Only positive benefits are presented, relating to those outside the areas which would be adversely impacted by increased passenger numbers.		
7.2	The socio-economic assessment relies on research published by economic forecasting bodies in 2006 and 2009; and does not take account of the financial crisis or Brexit vote, with the methodology underpinning the studies not included.	This is not correct. Optimal Economics' impact estimates are based on current forecast passenger numbers and relationships between passenger numbers and direct indirect and induced employment, as explained in the methodology section of ES Chapter 11 (Socio-economic Effects). The forecasts prepared by ICF are summarised in ES Chapter 4. As explained at paragraph 4.45 the economic forecasts that underpin the ICF traffic forecast were provided by Oxford Economics in July 2016, following the Brexit Referendum result. The economic forecasts were predicated on Oxford Economics' central case. This is where the UK leaves the EU on unfavourable terms, without negotiating a significant trade deal and the trade relationship between the UK and the EU therefore reverts to WTO rules. Moreover, were Brexit to depress national/ regional growth then the economic impacts of more traffic at Stansted will be relatively more important than presented.

SSE's point that the socio-economic assessment relies on research published by economic forecasting bodies in 2006 and 2009 is completely correct. Moreover, what STAL does not say is that both the 2006 OEF study and the Oxera study were commissioned and funded by the Airport Operators Association (AOA). Optimal's reliance on the 2006 OEF report and the 2009 Oxera report is clearly acknowledged in STAL's Environmental Statement, Vol.1, Chapter 8:

11.135 A number of studies have found that expansion of air passenger traffic has a positive impact on economic growth and productivity. A study undertaken by **Oxford Economic Forecasting (OEF) in 2006** found that increased use of air services helps to improve the competitiveness of almost all aspects of companies' operations, including sales, logistics and inventory management, production and customer support. Moreover, by expanding the market in which firms operate, air services also act as a spur to innovation, increased sales and profits, and improved efficiency.

11.136 The OEF report set out calculations of impact which indicate that every additional business air passenger travelling will result in an increase of annual national income (GDP) after 10 years of approximately £1,000 (in 2016 prices).

11.137 A report produced by **Oxera in 2009** set out various calculations of the wider impact of alternative policies (and thus passenger numbers) on the UK economy. These calculations implied that every additional passenger (of all types) would eventually create an impact on GVA of over £700 per annum through impacts on trade, investment and transport efficiency.

...

11.139 **If the figure derived from the OEF work referred to above is adopted, the wider impacts on business efficiency and productivity from the proposed expansion at Stansted would produce an increase in annual UK GVA of £1.2 billion. As around 79% of the passengers will be from the East of England and London the impact at that level is estimated to be £0.95 billion.**

11.140 **Were the figures implied by the Oxera work to be adopted, the wider impact would be even greater at around £5.6 billion at the UK level and £4.4 billion at the London and East of England level.**

11.141 **On this basis, and using the criteria in Table 11.4, the effect of the Development Case is assessed as major beneficial.**

The final paragraph in STAL's response above indicates a level of economic naivety which is barely credible. The fundamental driver of demand for air travel is GDP growth. Self-evidently, if Brexit depresses UK GDP growth it will depress the demand for air travel. Moreover, STAL has completely disregarded the two key points about Brexit made by SSE in its main submission to UDC in April 2018:

"6.4.26 The aviation forecasts in ES1, Chapter 4 produced by consultants ICF on behalf of MAG, also fail to address the essential question of demonstrable need and rely upon a relatively optimistic forecast for the UK economy by Oxford Economics ('OE') undertaken in July 2016, just a month after the Brexit referendum. The OE report did not look specifically at the aviation sector and is at odds with almost all mainstream economic forecasts published since July 2016.

6.4.27 The ICF forecasts do not even acknowledge that Brexit has created significant uncertainty for the future of the UK aviation sector, not least non-UK airlines in the EU such as Ryanair, although ICF does acknowledge that Ryanair accounted for 82% of all Stansted passengers in 2016."

These fundamental questions remain unanswered.

7.3	It is noted that there is a significant difference between the type of jobs on offer at the airport and the type of jobs available to local residents.	Comparison of jobs with local occupational structure does not establish that jobs provided by Stansted are not needed nor are not beneficial from a social and economic point of view in the study area. As set out in paragraph 11.166 of the ES, STAL will continue to develop some key initiatives including the Stansted Airport Employment and Skills Academy with a particular focus on attracting employees from disadvantaged areas including Harlow, Braintree, other parts of Essex and North-East London. By 2028 STAL's aim is to increase employment of local people, at a range of skill levels, in line with airport employment growth of 700 per year.
<p>Between 2003 and 2015 Stansted Airport passenger traffic <b>grew by 20%</b> (from 18.7m to 22.5m) but the number of Uttlesford residents employed at the airport <b>fell by 20%</b> (from 2,519 to 2,007). This demonstrates the growing mismatch between the types of jobs on offer at the airport (mostly low-skilled and low-paid) and the types of jobs needed by local residents. Over the same period the proportion of skilled jobs at the airport (Standard Occupation Categories 1-3) fell from 31.2% to 18.9% - again using STAL's own data and labour productivity grew at less than 1% per annum. SSE made it clear "That is not in any sense to denigrate the many vital unskilled jobs carried out by airport employees. It is however important to understand the mix of jobs at Stansted and how the balance is changing as the airport grows." (SSE main submission paras 13.2.9-13.2.12).</p> <p>Significantly, STAL has neither contradicted nor countered any of these key factual points made by SSE.</p> <p>STAL has also failed to answer the central point in economics that labour is a valuable commodity and should be used as productively as possible. Average earnings are a good indicator of the productive use of labour and so it is clearly to the advantage of the local, regional and UK economy (as well as to the individual) if labour is deployed in highly paid occupations rather than low paid occupations. It is also better to 'create' jobs where they are most needed, which is why the opportunity costs of expanding Stansted (as opposed to expansion elsewhere) should be considered.</p>		
7.4	In arriving at the above average earnings figures the ES has used an average of part-time and full-time earnings, resulting in figures that are quite meaningless for this type of comparison	The ES used the ONS data for median earnings. Optimal Economics consider the numbers to be a fair comparison and refute the SSE figures.
<p>On what basis are SSE's figures – specifically agreed with the ONS – refuted by Optimal? And how can Optimal possibly still maintain that its numbers are a fair comparison? Optimal should be required to provide corrected figures. SSE has never disputed that Optimal Economics used ONS data for median earnings. However, Optimal misdescribed the data it presented. Optimal used the ONS dataset for the combined median earnings for part-time and full-time employees and presented this as average earnings for the local area. This meaningless 'apples &amp; oranges' statistic takes no account of the number of hours worked by part-time workers. The correct approach is to compare median earnings for full-time employees, or full-time equivalents, so as to ensure a like-with-like comparison. Optimal selected the only ONS dataset which served its purpose i.e. to create the impression that airport earnings were higher than the average in the locality. Nowhere in the Optimal Economics chapter of the ES is the word 'median' even mentioned. One can only describe this piece of work by Optimal as - at best - 'shoddy' and - at worst - a deliberate attempt to mislead. It was uncovered only as a result of considerable investigative work by SSE, including discussions with the ONS to try to establish how Optimal how arrived at its so-called average earnings comparisons. This particular example must raise questions about the credibility of other economic and employment evidence presented by Optimal.</p>		
7.5	Query on significant net economic benefits to the UK in relation to Ryanair staffing.	Employment of non-UK staff by Ryanair is not a substantive point and no evidence is provided. Aircrew of any nationality based out of Stansted will live and spend in the normal staff catchment area.

The economic contribution of Ryanair is a very substantive point because Ryanair is so dominant at Stansted, accounting for 82% of all Stansted passengers and 78% of PATMs in 2016. SSE's questioning of the net economic benefits that Ryanair brings to the UK economy is about much more than the nationality of its employees., SSE raised Ryanair's tax status, purchasing policy and primary function. SSE provided top line evidence on all these matters. Notably, STAL has not produced any evidence to the contrary. SSE has always acknowledged that Ryanair provided important social benefits.

7.6	The proposed development would have an adverse impact on the UK trade balance of £910 million in 2028 compared to the base case, and of £2,940 million compared to the 2016 Baseline.	While this reflects a simplistic “static” approach to Bottom of the Pyramid (BoP) economic analysis, Optimal Economics assessment of the economic benefits and costs of the 35+ project provides a greater complexity of analysis. Please refer to Section 11.146 onwards; the Applicant maintains its position on trade balance.
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We are puzzled by the use of the term Bottom of the Pyramid (BoP) economic analysis. This term is used in economics to denote the world's poorest citizens (the approximately 4 billion people who earn less than \$2.50 per day). We suspect that the writer's intention was to refer to Balance of Payments (BoP) economic analysis. Moreover, it is ludicrous for Optimal to argue that its assessment should be accepted because it provides "a greater complexity of analysis". Optimal needs to explain why it considers SSE's projections of an adverse impact on the UK trade balance are wrong (£910m negative in 2028 compared to the base case, and £2,940m negative compared to the 2016 baseline), bearing in mind that SSE evidenced these projections (Table 13.8 of SSE's main submission) using STAL's own figures for inward/outward tourism and spend. The numbers shown in columns 1-5 below are all Optimal's own numbers. Column 6 is purely arithmetic.

	1	2	3	4	5	6
Scenario	MPPA	Visits Abroad by UK Residents (Million)	Foreign Visits to UK (Million)	Difference (Million)	Average Spend per Visit	Resultant Trade Deficit (Col 4 x Col 5)
Baseline (2016)	24.3	6.1	3.6	2.5	£700	£1,750m.
Base Case (2028)	35.0	10.1	4.7	5.4	£700	£3,780m.
Development Case (2028)	43.0	12.5	5.8	6.7	£700	£4,690m.

7.7	Commitments to construction skills / work force opportunity.	STAL is committed to developing skills and its workforce locally and this can be seen through the development of the on-site Stansted Airport College. STAL and the College will work with ECC as appropriate to develop future opportunities. The physical works directly related to this application are limited however, and other airport development work such as Arrivals Building are larger and offer greater opportunities in respect of construction work.
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This point was not raised by SSE and we have no comment.

SSE 5	<p>STAL has provided no response to a fundamental omission in Optimal's economic analysis, which was highlighted in SSE's main submission (April 2018). Optimal provided the following 'explanation' for its failure to quantify user benefits:</p> <p><i>“Quantifying these user benefits would require a detailed analysis of traffic patterns and surface transport costs under alternative capacity assumptions and using a UK wide airport system model which can allocate passengers to airports in response to changes in capacity. DfT has a model which can analyse major changes in capacity but, given the scale of the proposed development, this level of analysis is not practical. Therefore, a qualitative assessment of such benefits, using professional judgment and experience, is provided below. This approach has been agreed by UDC by virtue of its scoping opinion (see Appendix 2.1 in ES Volume 2).”</i></p> <p>As far as we are aware, it is not true to say that UDC agreed that there was no need for STAL to quantify user benefits. Unsurprisingly UDC did not comment on this matter in its Scoping Opinion. It is for the Applicant to decide what evidence of economic benefits to provide in support of its proposal. Planning applications can only be determined on the basis of the information made available, and planning decisions must be evidence-based. An Applicant unable to quantify the economic benefits of its proposal will be at a severe disadvantage.</p>	STAL has still not provided any quantification of user/consumer benefits.
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Economic benefits cannot be assumed and little weight can be attached to any qualitative assessment presented by or on behalf of an Applicant which will inevitably be highly subjective and based on broad assertions and generalizations. The inability of STAL to provide any quantification of the user benefits arising from the proposed development is a major weakness in the Applicant's case. The failure to demonstrate the need for the development is another major weakness in the Applicant's case. The reason given by Optimal above alludes to a highly significant issue that has not been addressed, namely, the opportunity cost of expanding Stansted by 8mppa rather than accommodating this level of expansion elsewhere. In this regard it is not only user benefits which need to be considered but also wider economic and employment impacts on a comparative basis.

**Carbon Emissions and Climate Change**

8.1	The CO <sub>2</sub> emissions projections have only been provided to 2028.	The scope of the GHG assessment extends to 2050. The 2028 forecast year is the first year that the anticipated maximum aircraft movements would be reached. The GHG emissions assessment then incorporates airport operations at this limit in the years leading to 2050 (see ES Chapter 12 paragraphs 12.82 to 12.86).
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When STAL's CO<sub>2</sub> emissions projections are compared with the DfT's CO<sub>2</sub> emissions projections for Stansted, it becomes clear that even in the 'pessimistic' case STAL has taken an optimistic view of improvements that can be achieved with regard to aircraft efficiency (including the speed with which new “cleaner” aircraft will come into service), increased use of biofuels and modernization of air traffic control. Over the period 2028-2050, the DfT

<p>assumes a 16% reduction in CO<sub>2</sub> emissions per ATM at Stansted (an average of a 0.8% efficiency improvement per annum) whereas STAL assumes a 29% reduction in CO<sub>2</sub> emissions per ATM (an average of 1.6% efficiency improvement per annum) despite STAL's focus on growing long haul. STAL's projections are based on "road-maps" produced by Sustainable Aviation ('SA') and, as demonstrated in SSE's main submission, the predictions quoted in the three road-maps produced previously by SA proved to be wildly optimistic. Each new forecast from SA has showed much lower reductions in emissions than the previous forecast. Even so, the most recent forecast is still considered highly optimistic. STAL should be made to explain the difference between its projections for Stansted's CO<sub>2</sub> emissions to 2050 and the DfT's projections (which also assume improvements in aircraft efficiency, increased use of biofuels and more efficient ATC). STAL should also provide its projections for the intervening years between 2028 and 2050 (as is the case with the DfT projections) and analysis showing CO<sub>2</sub> emissions per seat kilometre (again, as provided in the DfT modelling of aviation carbon emissions). As matters stand, STAL's projection for the central case in 2050 is simply not credible.</p>		
8.2	<p>It seems reasonable to predict that relaxation of the UK aviation industry's 37.5 MtCO<sub>2</sub> cap is unlikely to be realised. Indeed, it may be that in the light of the Paris Agreement the cap has to be reduced.</p>	<p>The Applicant agrees that the Paris Agreement demands more significant reductions in emissions. The CCC in its "UK climate action following the Paris Agreement" response stated that the UK already has stretching targets to reduce GHG emissions and that these will achieve positive contributions to global climate action.</p>
<p>The CCC in its "UK climate action following the Paris Agreement" report also notes as follows: "Ways to further reduce residual emissions from hard-to-treat sectors (aviation, agriculture and industry) are also an innovation priority. Options could, for example, include support for new technologies, products and innovation in each of these areas and shifting demand to lower emissions alternatives (e.g. increased re-use of products and materials, and further shifts towards virtual conferencing in place of international travel)." It is encouraging to note that the Applicant agrees that the Paris Agreement demands more significant reductions in emissions. However, this planning application would result in increased emissions, not only compared to the base case, but also compared to the careful modelling carried out by the DfT aimed at staying within a 37.5 MtCO<sub>2</sub> cap.</p>		
8.3	<p>The claims of reduction through aviation in the EU Emissions Trading Scheme ('EU ETS') is not recognised by the consultee</p>	<p>The objector does not recognise the claims made in terms of carbon reduction in the aviation sector as a result of EU ETS. The source of this statement is the European Commission: <a href="https://ec.europa.eu/clima/policies/transport/aviation_en">https://ec.europa.eu/clima/policies/transport/aviation_en</a></p>
<p>The EU Commission claims that the EU ETS has contributed to reducing the carbon footprint of the aviation sector. The key word is "contributed". Many other factors have contributed to the reduced carbon footprint of the EU aviation sector. Moreover, the claimed reduction is relative (i.e. compared to a 'do nothing' scenario) and EU aviation CO<sub>2</sub> emissions continue to increase. The EU ETS is widely regarded as ineffectual and it may not even apply to the UK post-Brexit.</p>		
8.4	<p>We assume that the Applicant's assessment of CO<sub>2</sub> emissions takes no account of any effect that CORSIA, if implemented, might have.</p>	<p>We can confirm STAL's emissions are not presented with CORSIA implemented (i.e. 'residual' emissions following CORSIA off-sets)</p>
<p>Noted, which makes it even more difficult to understand how STAL arrived at such optimistic projections for Stansted's CO<sub>2</sub> emissions. As stated above, further explanation is needed including seat kilometre data</p>		
8.5	<p>MAG has not provided the information we would need in order to re-assess the projected carbon emissions for the base case and the development case, and only a limited amount of the information can be obtained, or confidently estimated from other sources. The provisional view is that the projected carbon emissions (but not the Baseline) have been underestimated by about 15-20%.</p>	<p>DfT estimated 1.6Mt for Stansted in 2030 (35mppa), which demonstrates that MAG's estimation of 2.3Mt in 2030 (35mppa) is a pessimistic estimation. Therefore, it is not unreasonable to suggest that MAG's projection for 2050, which is 1.5-2Mt, is likely to be realised towards the lower end of the range, which is in line with DfT's projection of 1.5Mt for Stansted in 2050.</p>
<p>The latest DfT forecasts project CO<sub>2</sub> emissions of 1.64Mt at Stansted in 2050 based on 204,800 ATMs and 36.1mppa. STAL's projection is based on 274,000 ATMs and 43mppa – i.e. 34% more ATMs and 19% more passengers. The DfT estimate of 1.64Mt would therefore need to be increased by between 19% and 34% to reflect STAL's higher projections for ATMs and passengers. This would give a figure of between 2.0 MtCO<sub>2</sub> and 2.2 MtCO<sub>2</sub> – probably at the top end of that range in view of STAL's emphasis on expanding its long-haul operations. On this basis, SSE's estimate of a 15-20% understatement of projected carbon emissions is conservative. See also SSE comments at 8.1 above showing that the DfT has made an efficiency improvement assumption of 16% for the period 2028-2050 compared to STAL's efficiency improvement assumption of 29% for the same period. Mathematically this delivers an 18% differential in the projections – i.e. in the middle of SSE's 15%-20% range. STAL's projections are simply not credible when compared to the comparative DfT data. Moreover, to assist in estimating the impact of increased long-haul traffic on carbon emissions, comparative seat kilometres should be provided. The DfT has provided its projections for seat kilometres at Stansted for each year to 2050 and STAL should also be required to do so.</p>		
8.6	<p>Both DfT and Airports Commission have assumed that Stansted was capped at 35mppa and this equated to CO<sub>2</sub> emissions of about 1.6Mt in 2030, falling slightly to 1.5Mt by 2050. It is not unreasonable to look upon these figures as budgets because they form part of the overall UK budget – or planning assumption – for UK aviation carbon emissions to be limited to 37.5Mt CO<sub>2</sub> by 2050</p>	<p>Paragraph 12.21 of the ES states the CCC has only advised government that UK domestic and international aviation emissions should be limited to 37.5 MtCO<sub>2</sub>e. The CCC has made an allowance to include these emissions within its 5<sup>th</sup> Carbon Budget but Government has not explicitly included these in its budgets.</p>
<p>The cap of 37.5MtCO<sub>2</sub> did not originate with the CCC. It was originated by a commitment from the Secretary of State for Transport to reduce aviation carbon emissions to below their 2005 level of 37.5MtCO<sub>2</sub> by 2050. The CCC was then asked to use this figure as a planning assumption and to advise the Secretary of State how best to achieve it. The CCC subsequently advised the Secretary of State that demand management measures would be necessary to contain the growth in ATMs and passenger to 2050. The ceilings on ATMs and passengers were later refined on the advice of the Airports Commission but the target of 37.5MtCO<sub>2</sub> by 2050 is still the keystone of the DfT's carbon capped scenario. It is unclear as to how STAL's proposals for substantially higher CO<sub>2</sub> emissions at Stansted than assumed by the DfT can be reconciled with this.</p>		
8.7	<p>MAG states that it has based its emissions projections on the 'CO<sub>2</sub> Roadmaps' produced by 'Sustainable Aviation', an industry-sponsored organisation which has produced three of these Roadmaps over the past ten years and has a record of optimistic projections.</p>	<p>Table 12.4 in the ES illustrates how the projected improvements in the aviation sector presented by Sustainable Aviation are in line with the CCC's report on Meeting the UK Aviation Targets. We acknowledge there are uncertainties connected with projecting changes in the efficiency of the aviation sector and we addressed this uncertainty by presenting three scenarios (pessimistic, central and best practice). The DfT also acknowledges that its latest (2017) forecasts are there primarily to inform long term strategies rather than detailed forecasts at each individual airport. Table 8 (p55) of the DfT's UK Aviation Forecasts presents the assumed fuel efficiency improvements to 2050. The Central case of annual improvements ranges from 0.62% (2016/30), 1.31% (2030/40) to 1.45% (2040/50) and hence are more optimistic than our assumptions on fuel efficiency (see Table 12.4 in the ES – range of 0.9 to 1.22% annual efficiency improvement).</p>
<p>STAL's response is factually wrong. STAL assumes an efficiency improvement of 29% over the period 2028-2050, based on 274,000 ATMs. This equates to 1.6% per annum. DfT assumes an efficiency improvement of 16% over the period 2028-2050, which equates to 0.8% per annum.</p>		
8.8	<p>The increase in carbon emissions compared to the base case would amount to approximately 6Mt of CO<sub>2</sub> over the 32-year period to 2050. This is not far short of the emissions that would have been generated over the lifespan of the proposed open -cast mining operation at Highthorn in Northumberland. Significantly the Secretary of State rejected that application, overturning the decision of the Planning Inspector, principally on the grounds of its effect on GHG emissions and the need to combat climate change.</p>	<p>The appropriate comparison in terms of absolute cumulative emissions is between the Do Minimum (DM) and Development Case (DC). Paragraph 12.77 of the ES presents the difference in cumulative emissions between the DM and DC scenarios (2016 – 2028) at 1.1 MtCO<sub>2</sub>. It is acknowledged that all "GHG emissions from all projects will contribute to climate change; the largest interrelated cumulative environmental effects...as such any GHG emissions or reductions from a project might be considered to be significant..." in paragraph 12.56, in line with IEMA guidance. Each scheme needs to be considered individually and the proposed development at Stansted has been considered and the impact compared to relevant benchmarks. The CCC's UK carbon budgets and the DfT's forecasts exclude radiative forecasts. There is a high level of uncertainty as acknowledged by all.</p>

<p>It is also important to compare STAL's projected emissions with the DfT's projected emissions for Stansted because the latter are used to inform Government policy by enabling reasoned consideration as to whether UK aviation emissions can be contained to 37.5MtCO<sub>2</sub> under a carbon capped scenario. For the period 2018-2027 (with interpolation for 2025 and 2026), STAL projects emissions of 22.0MtCO<sub>2</sub> whereas the DfT projects 14.6MtCO<sub>2</sub> for the same period – i.e. a difference of 7.4MtCO<sub>2</sub>. Moreover, emissions beyond 2028 cannot be disregarded. STAL projects 48.7MtCO<sub>2</sub> over this 22-year period, whereas the DfT projects 31.6MtCO<sub>2</sub> – a difference of 17Mt. For the full 32-year period the excess is 24.4MtCO<sub>2</sub>. The cumulative position is significant not least because CO<sub>2</sub> stays in the atmosphere for between 50 and 200 years, as set out in SSE's original submission to UDC (para 14.3.21).</p>		
8.9	<p>Further details are required to show how any additional carbon emissions will be reduced and the offset. Stansted Airport needs to produce a climate action plan of their own, which outlines how carbon emissions will be reduced and offset.</p>	<p>The Incorporated Mitigation section of the Carbon chapter presents the various actions undertaken by Stansted Airport to manage and reduce carbon emissions.</p> <p>Specific to construction carbon emissions, a Construction Environmental Management Plan (CEMP) and Code of Construction Practices (CoCP) plan will be produced to manage the environmental impacts of construction and establish responsibilities for contractors and developers.</p> <p>Stansted Airport has also been measuring and reporting its carbon footprint since 2009 and reporting it in its Corporate and Social Responsibility (CSR) Report. Stansted's 2015/16 CSR Report explicitly describes the airport's carbon management strategy, which identifies carbon emissions within its sphere of influence, such as focusing on reducing airport and surface access carbon emissions, whilst working in partnership to influence flight emissions.</p> <p>In parallel Stansted is pursuing a range of activities including, but not limited to:</p> <ul style="list-style-type: none"> <li>- Achieving Level 3 (Optimisation) under the ACI ACA Programme</li> <li>- Investing in low energy and low carbon technology such as low / ultra-low energy lighting and fuel-efficient vehicles, and where possible sourcing on-site renewable energy sources</li> <li>- Setting itself energy reduction targets and building performance rating targets (BREEAM Excellent)</li> </ul>
<p>This point was not raised by SSE and we have no comment to make on STAL's response except to observe that it contains little of substance.</p>		
<p><b>Public Health and Wellbeing</b></p>		
9.1	<p>The requirement for a Health Impact Assessment ('HIA') for this planning application stems, not from UDC policy, but from EU Directive 2014/52/EU (April 2014) (amending Directive 2011/92/EU)</p>	<p>While the objector suggests that the Applicant has sought to claim an exemption from the need to assess health impacts based on the limited requirements for health impact assessment (HIA) in local planning policy. This is incorrect, given that an HIA was conducted and submitted with the application.</p>
<p>SSE did not suggest that STAL "sought to claim an exemption from the need to assess health impacts". SSE did however draw attention to the following statements by the Applicant in Chapter 14 of the ES:</p> <ul style="list-style-type: none"> <li>• <i>"Although not explicitly required by the Aviation Policy Framework, HIA is often regarded as good practice for major developments."</i></li> <li>• <i>"The policy [INF3 in the draft UDC Local Plan] indicates that HIA should be undertaken for various development types, although none listed in the policy are directly applicable to the proposed development of Stansted Airport."</i></li> </ul> <p>SSE pointed out that the requirement for a Health Impact Assessment for this planning application stems, not from UDC policy, but from EU Directive 2014/52/EU as transposed into UK law, making it a statutory requirement (not a voluntary option) for the Applicant to carry out an assessment of 'the risks to human health' in respect of this Stansted Airport planning application.</p>		
9.2	<p>A statutory HIA should not be undertaken lightly nor overlap with socio-economic benefit</p>	<p>This is a key principle within HIA is to facilitate more health-conscious planning and development, and a fundamental requirement for a balanced, evidence-based health assessment.</p>
<p>SSE's first criticism of the HIA was that it was conducted by RPS. SSE highlighted a particular problem with RPS whose track record at Stansted (see Appendix F in SSE's main submission) raised serious questions about the ability of this firm of consultants to conduct a "balanced, evidence-based health assessment." Where the assessor is on record declaring an unconditional sense of loyalty to STAL, there are bound to be concerns about objectivity and whether safeguarding the welfare of the community will be given the priority it deserves.</p>		
9.3	<p>It is considered that the quantification is lacking within the HIA, and many key assertions are put forward with no supporting evidence</p>	<p>For clarity, and as stated in paragraph 14.22 of Chapter 14, health impacts have been assessed quantitatively for changes in noise and air pollution, and qualitatively for other health pathways. This is in accordance with the established health evidence and assessment methodologies that are referenced. Quantified impacts can be readily found in Tables 14.5 and 14.6 of Chapter 14. Not all health outcomes can be fully quantified with the current state of scientific knowledge, but qualitative assessments are nevertheless evidence-based, following the methodology set out in Chapter 14. References to the supporting scientific evidence and guidance on quantitative assessment approaches are detailed thoroughly in the Health Evidence Base at Annex 14.1.3. It must be understood that comments "of a general nature" have quite limited relevance to the assessment of health and wellbeing impacts associated with the development that is proposed.</p>
<p>It is understood that sometimes only qualitative assessments are possible. However, the first priority should be to carry out <u>quantitative</u> assessments of health impacts arising from airport-related noise and pollution impacts, particularly for those most likely to be exposed to airport-related health risks – i.e. those living close to the airport and under flightpaths. The noise and pollution impacts of airport-related road traffic, including HGV traffic, on local roads used for airport access and egress need to be included in these assessments, so that cumulative health impacts are properly considered.</p>		
9.4	<p>The Applicant has not assessed health risks from all of potentially relevant sources of pollution listed in the NPPF. An example is light pollution, where the two new taxiways and nine new aircraft stands will give rise to increased "night glow" from the airport.</p>	<p>Chapter 16 of the ES summarises non-significant environmental effects, which were scoped out of the EIA in accordance with the UDC Scoping Opinion. Paragraph 16.55 states that there will be no discernible change or impact to the visual character or visibility of the airport as a result of the proposed development, as the new infrastructure (which includes the lighting required) would be in keeping with the scale and appearance of existing infrastructure. Paragraph 15.52 states that temporary construction lighting would be directional and not expected to be noticeable beyond the airport boundary. Change in visibility of lighting is therefore not a relevant health pathway in the case of the proposed development.</p> <p>Assessment of cumulative impacts has been undertaken as part of the EIA: Chapter 17 of the ES sets out the relevant cumulative developments that have been assessed and potential for cumulative impacts arising. The assessment of health impacts in Chapter 14 is based on the predicted changes in relevant health pathways (e.g. noise, traffic, air pollution), which as described in each topic chapter of the ES, take into account committed</p>

		<p>developments and also increases in the future road traffic baseline. With regard to cumulative developments on the airport site, paragraph 2.69 of Chapter 2 and Chapter 17 describe how such 'on-airport' cumulative schemes have been considered, noting that these are expected to have been completed prior to construction of the proposed development. The increase in passenger numbers facilitated by such on-airport developments is within the proposed development scenario case that has been assessed in the EIA and HIA.</p> <p>In summary, the assessment of health and wellbeing impacts, drawing from the evidence of changes in environmental and social health pathways reported in the ES, has included relevant cumulative developments.</p> <p>The HIA discusses this at paragraph 14.1.93 (with further detail in the Health Evidence Base at Annex 14.1.3), noting that there is some risk of double-counting the quantified impacts of change in noise and air pollutant exposure, as these are sometimes correlated in the health evidence (due to often being associated with the same exposure sources). Paragraph 14.1.87 of the HIA explains that no significant impact from cumulative ground, road and air noise is predicted; further detail is given in Chapters 7, 8 and 9 of the ES.</p> <p>The maximum impact (adverse or beneficial) via each potential health pathway would not coincide at any one individual receptor. The assessment of health and wellbeing impacts is made at a population level: it is not possible to assess inter-related impacts for any one specific individual or attempt to present a 'net' effect (from the balance of adverse and beneficial impacts), as this would depend upon the individual's personal health. This is discussed for example in paras 14.1.83, 14.1.91 and 14.1.125 in the HIA.</p>
<p>We totally disagree that there is no need to consider light pollution as an issue. The response appears to acknowledge that the new taxiways and stands will be illuminated at night. The new arrivals building will also be illuminated at night and we now understand that additional car parking is planned – which will also be illuminated. Light pollution is not simply an aesthetic matter, it can give rise to sleep disturbance and therefore have significant health impacts. We are dismayed that UDC apparently agreed that no assessment of light pollution was required and, regardless of UDC's position, we urge STAL to carry out such an assessment, out of consideration for the health and wellbeing of the Airport's near neighbours. Such an assessment could assist in identifying potential mitigation measures to reduce the impact of adverse environmental effects.</p>		
9.5	The HIA makes no mention of the WHO Charter on Transport, Environment and Health.	<p>Relevant health pathways were considered and consulted upon during EIA scoping, and the pathways taken forward for assessment are listed in Table 14.1 of Chapter 14 and all relevant issues have been included in the ES and HIA. Evidence reviews that had been published to inform the forthcoming 2018 WHO noise guidelines were discussed in Annex 14.1.3. All references were correct at the time of writing.</p>
<p>The WHO charter emphasises the importance of protecting high risk groups which include children, the elderly, handicapped and the socially disadvantaged. The number of groups at risk of noise from transport should not only be listed but measures to reduce the impact of adverse environmental factors should be identified. Many elderly people suffer from hearing impairment and noise from transport, whether road or aviation, will add further deterioration to existing hearing defects. There are also reports locally of a considerable increase in asthma, particularly among schoolchildren. Regardless of the outcome of this planning application we call upon UDC and STAL to agree a basis for investigating localized health issues through surveillance measures involving the cooperation of those in primary care.</p>		
9.6	HIA's need to be conducted independently and seen to be transparent and impartial. HIA reports are otherwise likely to lack credibility	<p>The assessment of health impacts has been undertaken by competent experts (identified in Appendix 1.1 of the ES) following a well-established process, and has involved both statutory and public consultation, including with the Hertfordshire Director of Public Health (as set out in the HIA on pages 14.1 -15 to 14.1-16), to inform and refine the scope and focus of the assessment.</p>
<p>We refer again to the comments made by RPS, as reproduced in Appendix F in SSE's main submission. We need say nothing further about this.</p>		
9.7	The accumulated data from a number of studies strongly suggests that those living in the vicinity of airports may experience cardiovascular damage and this is also supported by experimental evidence. It is likely that further damage may occur in those who already have compromised cardiac function.	<p>This is discussed extensively in Annex 14.1.3, and has informed the assessment of health and wellbeing impacts as documented fully in the HIA (see e.g. Table 14.1.7 listing exposure -response factors applied and the literature sources).</p>
<p>STAL needs to recognise that recent research has shown that the mechanism for damage caused by noise and poor air quality is similar. Environmental stressors may have added adverse cardiovascular effects. Living near airports is therefore unhealthy and even more so for local residents who live directly under flightpaths. Some of the relevant publications relating to cardiovascular disease and aviation have only very recently been published and it may be that neither STAL, RPS nor UDC has yet had an opportunity to review this information. SSE can arrange to provide references upon request.</p>		
9.8	The HIA provides no information as to the split between long -haul and short-haul ATMs, or on the comparative passenger seat kilometers. It is therefore not possible to examine and assess (i.e. audit) the results which are asserted by MAG/RPS in the HIA.	<p>The HIA is not intended to be read in isolation to the ES, please refer to Chapter 4 'Aviation Forecasts' for further information.</p>
<p>The information sought – i.e. the split between long-haul and short-haul ATMs and the comparative passenger seat kilometers – does not appear to be provided in Chapter 4 of the ES ('Aviation Forecasts'). Will STAL please now provide this information?</p>		
9.9	The risk to the health of those living in the vicinity of airports and airport access roads, and being affected by poor air quality, arises in particular from emissions of nitrogen dioxide (NO2) and particulate matter (PM10 and PM2.5)	<p>The evidence in this area is acknowledged, discussed extensively in Annex 14.1.3, and has informed the assessment of health and wellbeing impacts as documented fully in the HIA (see e.g. Table 14.1.10 listing exposure -response factors applied and the literature sources).</p>
<p>See our response to 9.7 above.</p>		
9.10	Health Impacts of Climate Change and international travel not fully assessed	<p>Climate change risks and resilience measures were assessed in Chapter 13 and Appendix 13.1 in the ES. Potential in - combination impacts, including public health and wellbeing, were assessed in Chapter 13 and Appendix 13.2. The factors mentioned as risks in the UK, such as flooding and heat waves, were considered.</p> <p>With regard to the points about introduction or spread of vector -borne diseases in the UK (due to climate changes allowing greater spread of the vectors, e.g. mosquitoes), the proposed development does not include creation of any new surface water ponds that could, hypothetically, provide a habitat for mosquito disease vectors.</p> <p>As stated by the UK Climate Change Risk Assessment (CCRA) 2017, the risk of introduction of malaria to the UK is low, and projections for 2080 under a range of emission scenarios only indicating a small risk of malaria transmission in the UK. Risks associated with other mosquito-borne diseases such as Dengue and Chikungunya</p>

		<p>are dependent on risk of invasion of non - native mosquito species to the UK, which remains low in the near term, although may increase with more significant warming in the future (UK CCRA, 2017).</p> <p>The potential for international travel to facilitate spread of disease is by no means a new concern, and healthcare measures are in place nationally to mitigate this risk. Airlines can refuse travel for passengers with an infectious disease and quarantine is available if required for arriving passengers. Public Health England (PHE) monitors risks from diseases such as MERS-CoV, and its February 2018 risk assessment states that the risk of infection to people in the UK is very low. PHE also has various specialist advice and diagnostic units (such as the Imported Fever Service or Rare and Imported Pathogens Laboratory) to assist doctors with managing cases where travellers have returned to the UK with infectious diseases.</p> <p>While Incident Management Plans are an operational matter between the airport and PHE or local health authority, and is not a land-use planning matter, to address any concerns by the PHE we will commit to an updating the Management Plan as part of this planning application.</p>
<p>STAL is taking a narrow viewpoint on the risks of imported infections. Scarcely a year or two goes by when a newly emerging infection has been recognized. Some are vector borne; some are not, for example SARS and more recently MERS-CoV. Risks from newly emerging strains of influenza which may cause major pandemics must also be borne in mind as must the risks, which are very real, from pathogens arising from laboratory manipulation. Thus, for example, strains of influenza as well as other pathogens could be manufactured to enhance virulence and transmission. This is now recognised as a very real threat.</p>		
9.11	<p>The Applicant has failed to carry out any proper assessment of the cumulative effects which means including other developments taking place locally at this time, and of the combined adverse effect of the additional noise, emissions, road traffic, light pollution and other impacts upon particular receptors (local residents) that would bear the brunt of the impacts.</p>	<p>The health assessment has followed a balanced, evidence-based approach to consider all relevant pathways that may give rise to either beneficial or adverse impacts. It acknowledges that some people will be affected positively or negatively, and does not attempt to combine this only as a single 'net' effect – recognising that people will be affected in different ways.</p> <p>Significant health and wellbeing benefits arising from employment opportunities (especially for disadvantaged people) are identified in the HIA. Negative impacts via other health pathways including change in noise and air pollutant exposure have been thoroughly assessed and predicted to be negligible or minor, non -significant in EIA terms. It is worth reviewing the HIA conclusions (paragraphs 14.1. 179-182), which shows the balanced approach that has been taken.</p>
<p>For reasons previously explained we reject STAL's assertion that the HIA has followed "a balanced, evidence-based approach". We also reject STAL's assertion that it is not appropriate or necessary to assess the cumulative adverse effect of the additional noise, emissions, road traffic, light pollution and other impacts upon particular receptors (local residents) that would bear the brunt of the impacts. These are precisely the people who are most at risk from the airport-related adverse health impacts. We fully expect UDC to insist that STAL rectifies this deficiency in the HIA.</p>		
9.12	<p>In the case of the G1 application, an extensive 'Quality of Life' survey, including a questionnaire provided to local residents, was carried out on behalf of STAL to assess the impact that expansion would have on community wellbeing. The results of that survey showed general opposition to the airport expansion proposal; much of this based on concerns about health and reduced quality of life. These results may or may not be the reason why no similar such survey was carried out on this occasion.</p>	<p>The potential to undertake a separate 'Quality of Life' assessment was discussed in the EIA Scoping Report. The lack of current guidance to define a scope or approach for a stand -alone assessment was noted, and on review of the potential quality of life indicators, we concluded that these were well-covered already by the proposed scope of the health and well-being assessment. Appendix 14.1.1 of the ES, "Quality of Life' Within HIA and EIA", documents this review and the way in which quality of life indicators have been fully included in the impact pathways assessed in the HIA and in Chapter 14 of the ES.</p>
<p>We referred specifically to the wide-ranging 'Quality of Life' survey carried out at the time of the last major planning application (G1) under BAA's tenure, the starting point for which was a questionnaire to local households aimed at assessing the impact that airport expansion would have on community wellbeing. Under MAG's tenure, there has been no such attempt to seek the opinion of local households on the impact that further airport expansion would have on their wellbeing. We would encourage STAL to reconsider rather than simply dismiss/ignore the need for a community QoL survey. Hopefully UDC will also encourage STAL to reconsider.</p>		
<p><b>Water Resources and Flood Risk</b></p>		
<p>SSE did not submit evidence on Water Resources and Flood Risk and we have no comments to make on this section.</p>		
<p><b>Ecology</b></p>		
11.1	<p>Insufficient ecological information on Epping Forest SAC.</p>	<p>STAL sets out further clarification on the 'Preliminary Ecological Appraisal - Incorporating Information to Inform a Habitats Regulations Assessment (HRA)', originally found in Chapter 16 Appendix 16.1 of the Environmental Statement. This is founded on three pieces of further supporting information associated with Epping Forest Special Area of Conservation (SAC) (Ecological surveys, Nitrogen deposition modelling and traffic modelling). This information confirms the conclusions set out in the; no significant effect on the SAC is predicted as a result of the 35+ Project. The full technical report can be found in Annex 1.</p>
<p>Point 11.1 above was not made by SSE and we have no comment to make on this.</p>		
11.2	<p>Ecology and biodiversity impacts, both on-airport – where existing grass-lands would need to be ploughed up to make way for the new aircraft stands and taxiways – and off-airport, with particular regard to potential impacts upon Hatfield Forest and East End Wood SSSIs.</p>	<p>Please refer to Annex 2, where further clarification on this concern is provided.</p>
<p>Annex 2 deals only with nitrogen deposition impacts on Hatfield Forest SSSI in response to specific concerns raised by Natural England. Both SSE and Natural England called for assessment of wider ecological impacts, including for East End (Elsenham) Wood SSSI. Also, STAL has still not provided any assessment of the ecology and biodiversity impacts within the airport site where existing grasslands would need to be ploughed up to make way for the new aircraft stands and taxiways. We note the contents of the letter from Natural England to UDC dated 31 August 2018 and, regardless of the outcome of the current planning application, STAL should be asked to give a clear commitment to implement the recommendations therein.</p>		