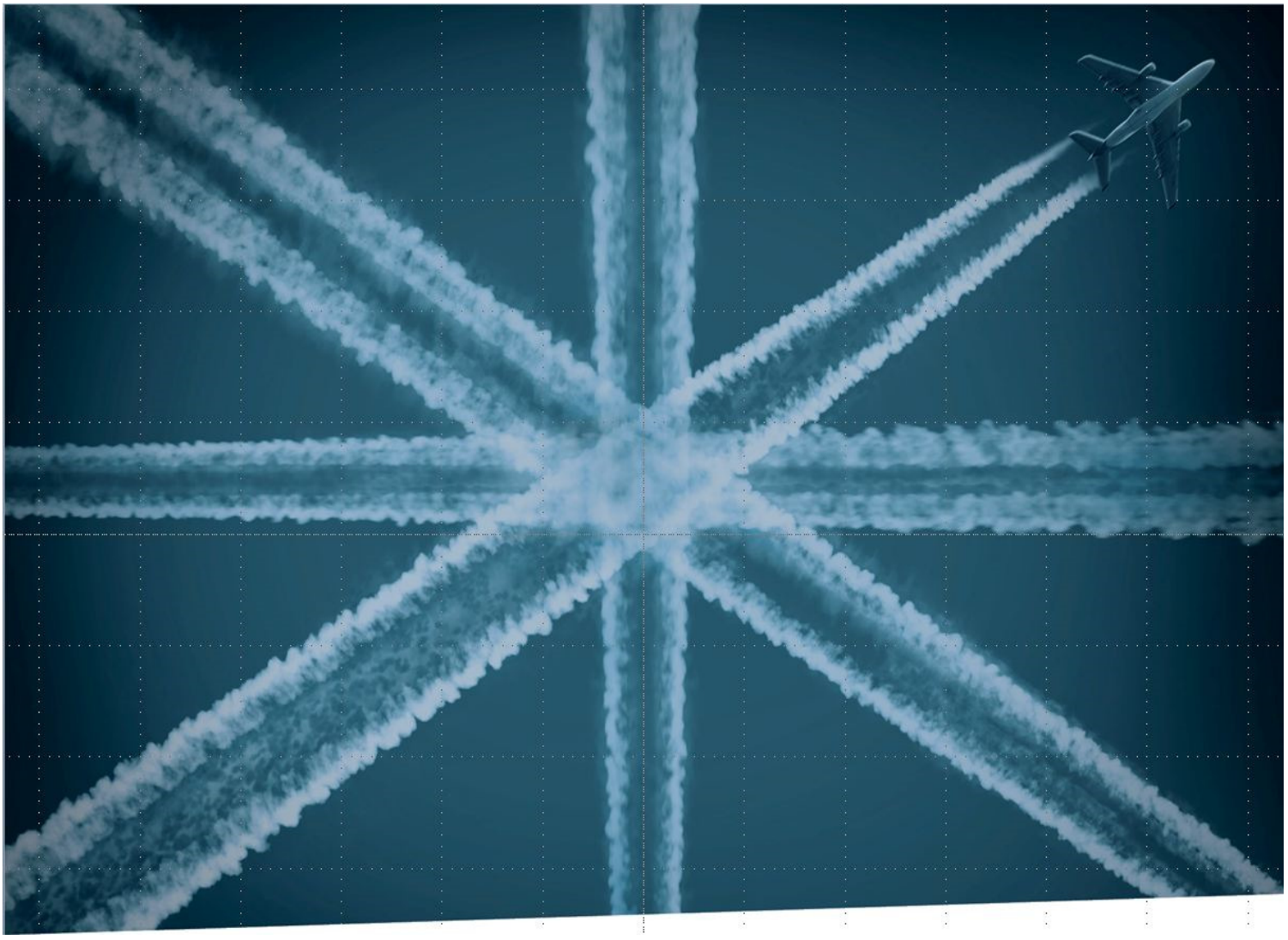
Introducing RNP1 (RF) SIDs

Consultation Feedback Report

London Stansted Airport – January 2016



Executive Summary

Aircraft noise can sometimes be seen as intrusive and disruptive, particularly for those people that live closest to the Airport and its flight paths. Stansted Airport has a long-term aim and commitment to manage, and reduce where possible, the number of people affected by noise as a result of aircraft operations.

For over two years, Stansted Airport trialled new technology in collaboration with the local community and our industry partners. The purpose of the trial was to reduce the number of people directly overflown by departing aircraft and we believe that the results represent significant benefits for the local area.

As an airport, we also want to engage with and consider the views of our local communities in the decisions we make. In September 2015 we launched a full public consultation to understand local feeling around the use of Performance Based Navigation technology. I am delighted that feedback from local government, industry and communities alike have been broadly supportive and recognise the benefits of this technology for the areas around the airport.

The following report presents the responses received and I would like to thank all who took the time to share their views with us. Stansted Airport are committed to keeping the community engaged in any future projects.

John Farrow

Operations Director

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1. Introduction

On 1 September 2015, London Stansted Airport ('Stansted') commenced a consultation to introduce two Performance Based Navigations (PBN) Standard Instrument Departures ('SIDs') that have been trialled for over 2 years. The consultation ended on 27 November 2015 after just over 12 weeks and this report summarises the feedback to this consultation.

The proposal to introduce these two SIDs, which were designed to Required Navigational Performance of 1 Nautical Mile (RNP1), is the culmination of several years working with our local communities and the airport consultative committee to develop solutions, where possible, to minimise the impact of our aircraft operations.

The consultation material can be found at;
http://www.stanstedairport.com/community/local-environmental-impacts/performance-based-navigation/

The consultation material was developed in three separate documents that describe the introduction of RNP1 SIDs: Consultation Summary Document, Full Consultation Document, and Trial Technical Report. This was to enable readers with all levels of understanding relating to Performance Based Navigation (PBN) to be able to engage in the consultation process. These three documents were complimented by additional materials, including a document of Frequently Asked Questions and an informative video demonstrating how the RNP1 technology had been trialled at Stansted.

2. RNP1 Trial and Consultation Objectives

The initial RNP1 trial commenced on 7 May 2013 following a period of engagement and feedback from the community. The trial concerned the 22 Clacton and 04 Detling routes, which were designed as close as possible to the existing conventional SID. The trial's main objective was to enable aircraft to avoid the overflight of several local communities. We believe this trial has been successful in achieving its principle objective as demonstrated through the results from the trial technical report and consultation material. The RNP1 procedures have led to a significant reduction (up to 85%) in the number of people overflown below 4,000ft, which is in line with the current Government Aviation Policy Framework[1] which states:

"Consistent with its overall policy to limit and where possible reduce the number of people adversely affected by aircraft noise, the Government believes that, in most circumstances, it is desirable to concentrate aircraft along the fewest possible number of specified routes in the vicinity of airports and that these routes should avoid densely populated areas as far as possible.".

The subsequent consultation's objective was to gather community feedback with a view to adopting the two trial SIDs permanently. The two trialled RNP1 SIDs were designed to replicate two of our exisiting SIDs: 22 Clacton and 04 Detling. As such, in order to seek the permanent adoption of this technology, Stansted Airport (as the change sponsor) is required to follow the CAA's CAP 725 'Guidance on the Application of the Airspace Change Process'[2] and its derivative, Directorate of Airspace Policy Statement 'Guidance on PBN Replication for Conventional SID Replacement'[3].

This CAA guidance states that depending on the degree to which PBN SIDs are able to replicate conventional SIDs, it is expected that in most circumstances consultation can be satisfied through the established Airport Consultative Committee. The CAA advised

[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/153776/aviation-policy-framework.pdf
[2] http://publicapps.caa.co.uk/docs/33/CAP725.PDF
[3] http://publicapps.caa.co.uk/docs/33/20130819PBNSIDReplacementReviewProcessFinal.pdf

Stansted Airport that they were satisfied the RNP1 SIDs adequately replicated the conventional SIDs.

Despite sufficient approval from the Airport's Consultative Committee, as part of Manchester Airport Group's wider corporate responsibility program, in conjunction with its commitment to engage with the local community and be a responsible neighbour, the airport pursued a full public consultation to allow the maximum opportunity for community feedback.

3. Consultation - Media Coverage

The public consultation was launched on 1 September 2015 and marked by a press release from the Stansted Media Team. Consultation materials were also published on the airport's website on this date. The public consultation received extensive media coverage from both print and broadcast media, as recorded in the Media Coverage table in Appendix A. A second Stansted press release was issued towards the end of the consultation period on 18 November 2015 to remind local residents of their opportunity to respond to the consultation.

A comprehensive list of media coverage can be found in Appendix A.

4. Consultation - Community Outreach

Activities Prior to Public Consultation

In June 2015, Stansted Airport presented its RNP1 trial data to the Stansted Airport Consultative Committee (STACC). This was an opportunity, ahead of the wider public consultation, to outline the airport's intentions to make the trial SIDs permanent and to allow consultative committee members to question the airport on the initiative. STACC commented that the public consultation should take place outside of the school holiday period and the airport subsequently delayed the intended start of the consultation from 6 July 2015 to 1 September 2015. A further presentation was given to the Environmental Issues Group (a sub group of STACC focussing on environmental and noise-related issues) in July 2015.

Stansted Airport also wrote to local MPs along with Parish, District, Town and County Councils to advise them of the upcoming consultation.

Public Consultation

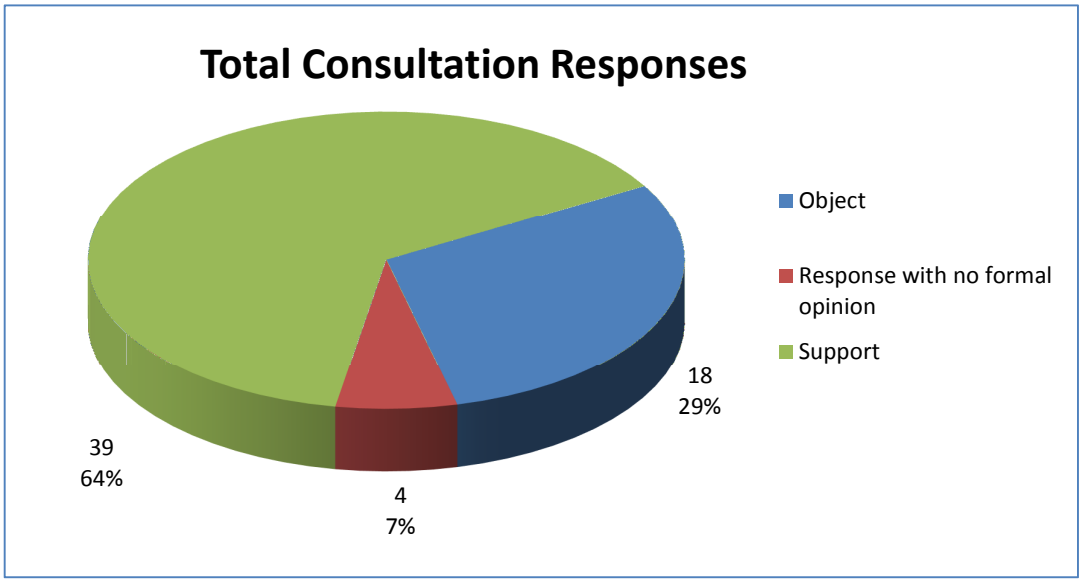
A number of local community roadshows were organised where members of the Airport Management Team were available to discuss any airport related topics including this consultation. Locations were chosen based on areas affected by the trial, along with another major town close to the airport where the airport has previously held busy community roadshows. Materials were displayed at each event with members of the Airport Team available to discuss in detail with visitors the trial and any questions raised.

Stansted Airport also received invitations from Great Hallingbury Parish Council and Uttlesford District Council's Stansted Airport Advisory Panel (STAAP) group respectively, to present the RNP1 trial results. Both invitations were accepted.

A full list of community engagement events can be found in Appendix B.

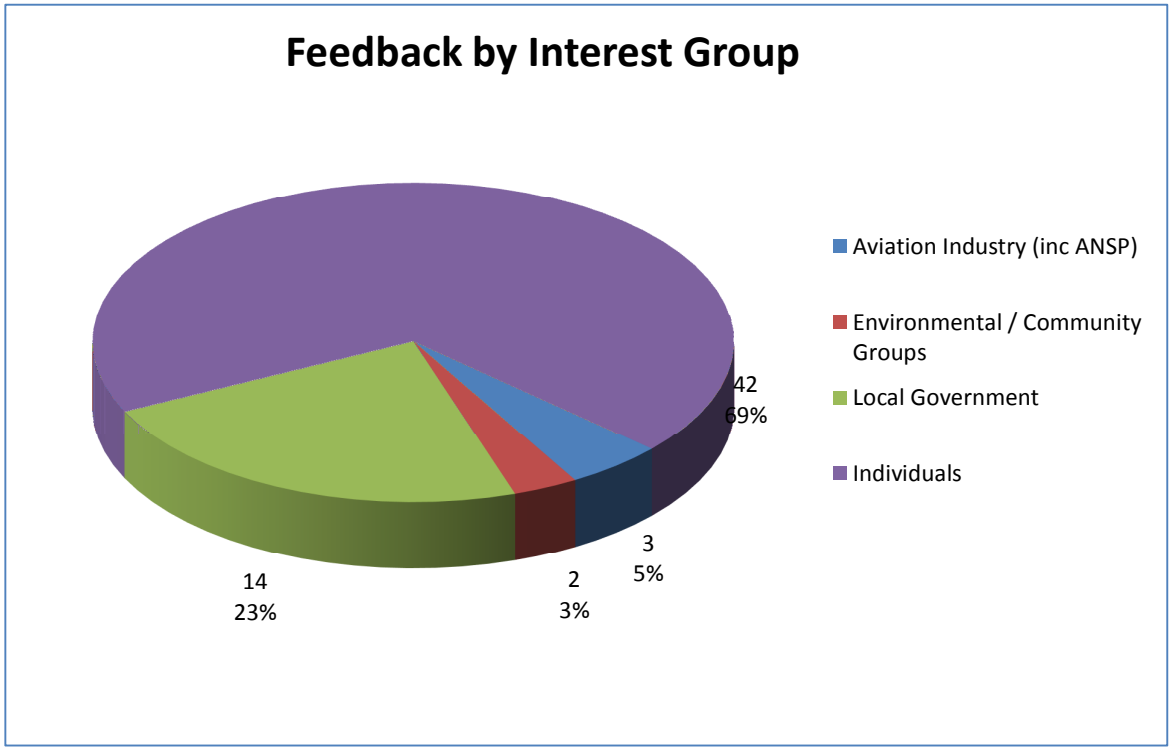
5. Overview of Responses

All responses received are presented in the data within this report. Responses have been analysed in terms of geographical location and interest (i.e. a comment that represents an individual or other interest group such as local authority or industry body).



The total number of responses received during this consultation was 61. Of 61, approximately two-thirds of these were in support of adopting the trial technology permanently. A small number of responses had no formal opinion (neither support nor object) and approximately one third of responses were in objection to the adoption of current trial procedures.

Interest Groups



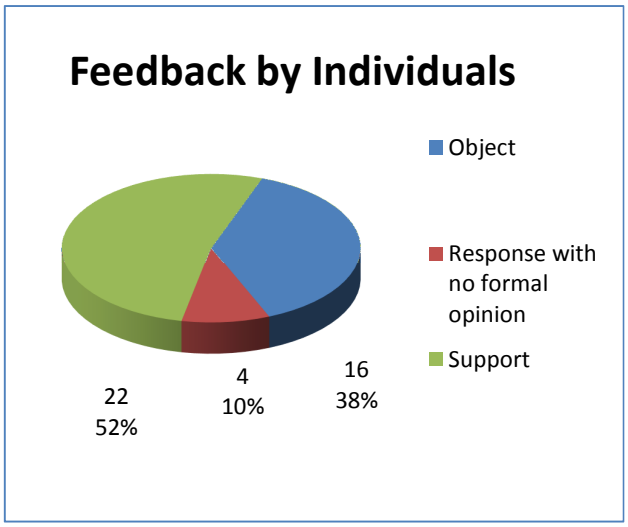
This graph shows the spread of responses received representing a wide range of interests. Most responses received came from individuals living in areas affected by the trial.

The term 'Local Government' used denotes Parish, District and County Councils.

'Aviation industry' includes UPS, NATS (Air Navigation Services Provider) and Heathrow Airport.

The two 'Environmental/Community Groups' shown are Stop Stansted Expansion and Council for the Protection of Rural England (CPRE) - Hertfordshire.

Individual Responses



Over 50% of responses received from individuals were in support of the trial procedures being adopted permanently, with 10% being neither for nor against the change.

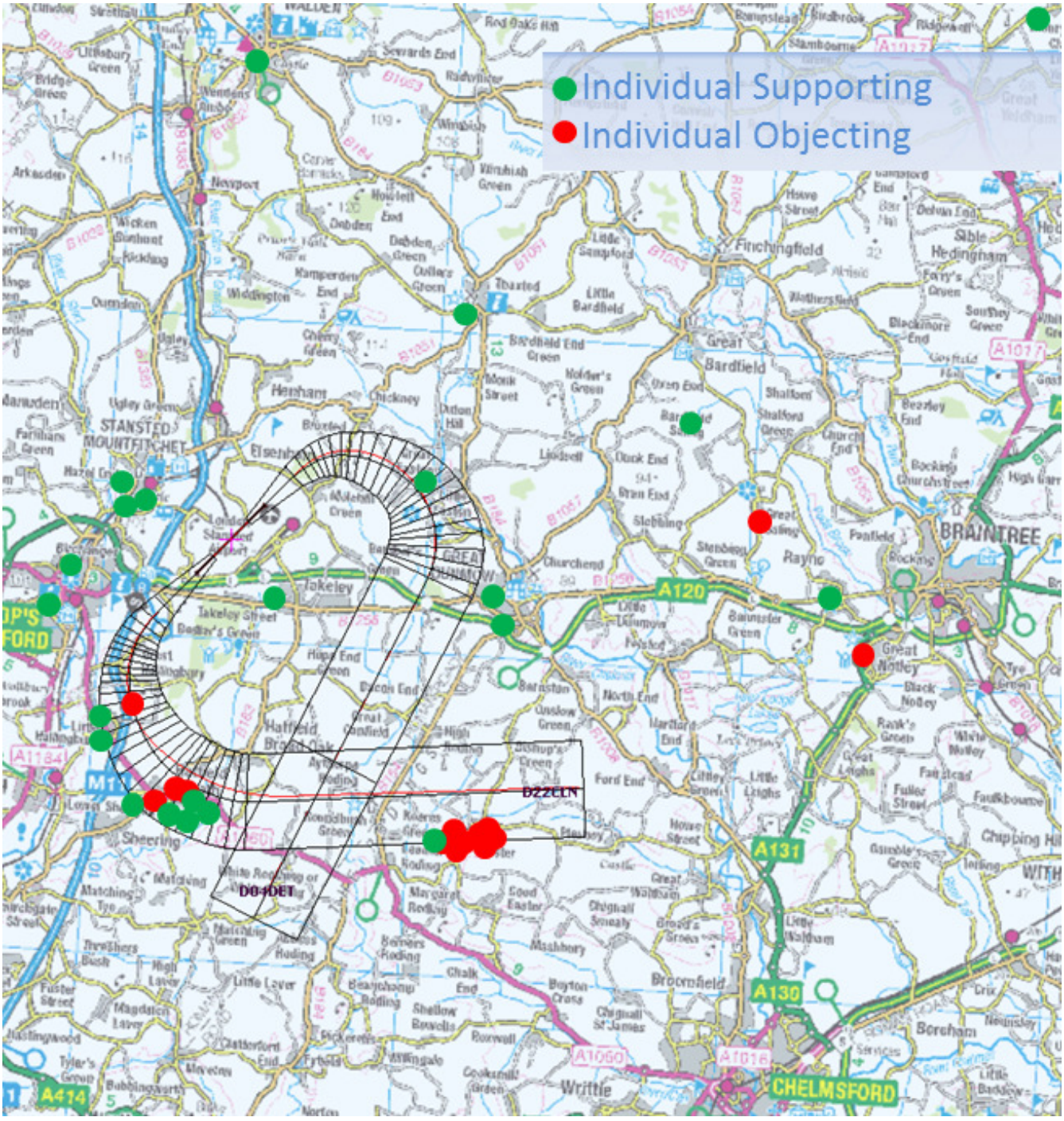
It is useful to understand the geographic spread of these responses to see if objections came from any particular areas e.g. areas directly affected by the trial procedures.

Geographical spread of responses – Individuals

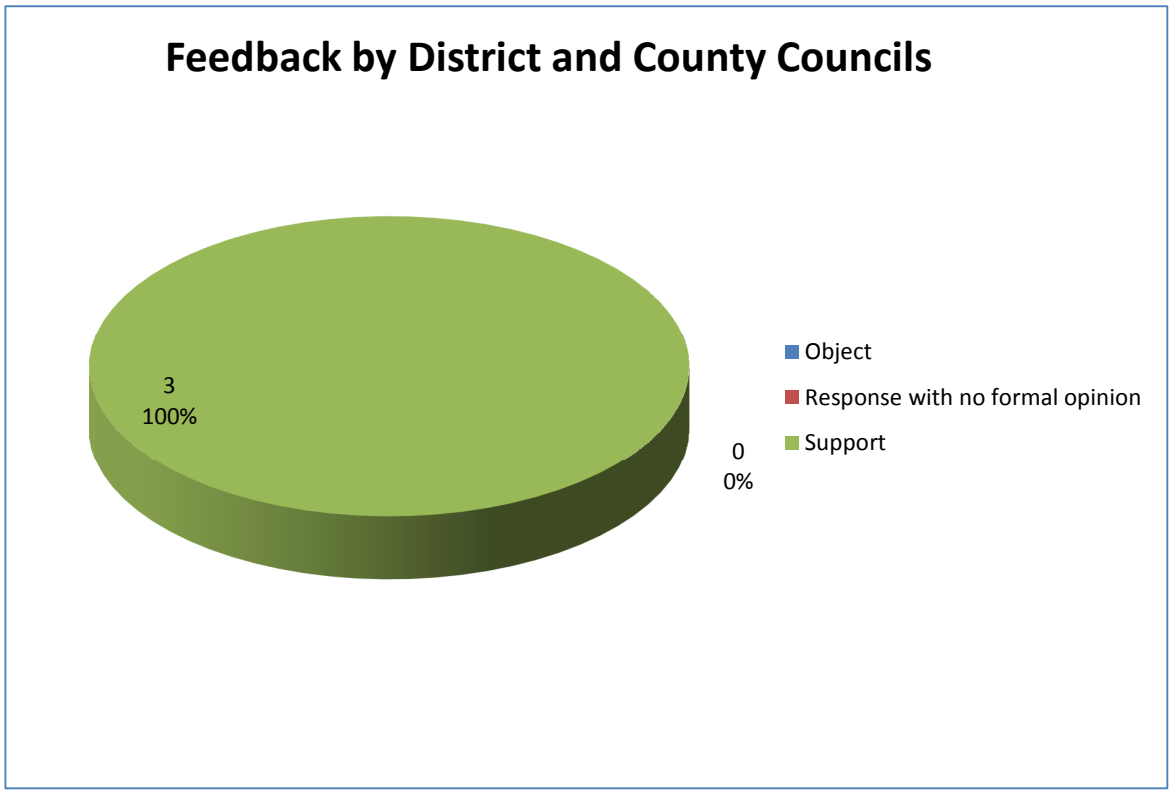
The map on the following page marks where supporting or objecting responses were made. Please note, this map does not include responses from those without a formal opinion and also excludes two responses that did not fit in the boundary of the map (Tonbridge and East Bergholt, all objecting).

The map indicates that the main cluster of objecting comments (8 in total) originated from High Easter. Another smaller cluster of negative comments originated from Hatfield Heath however supportive responses were higher in number from this area. Aside from these two clusters, there is a more consistent spread of supporting comments, both under the affected SIDs and in surrounding areas.

Geographical spread of responses – Individuals (continued)



Local Government – District and County Councils



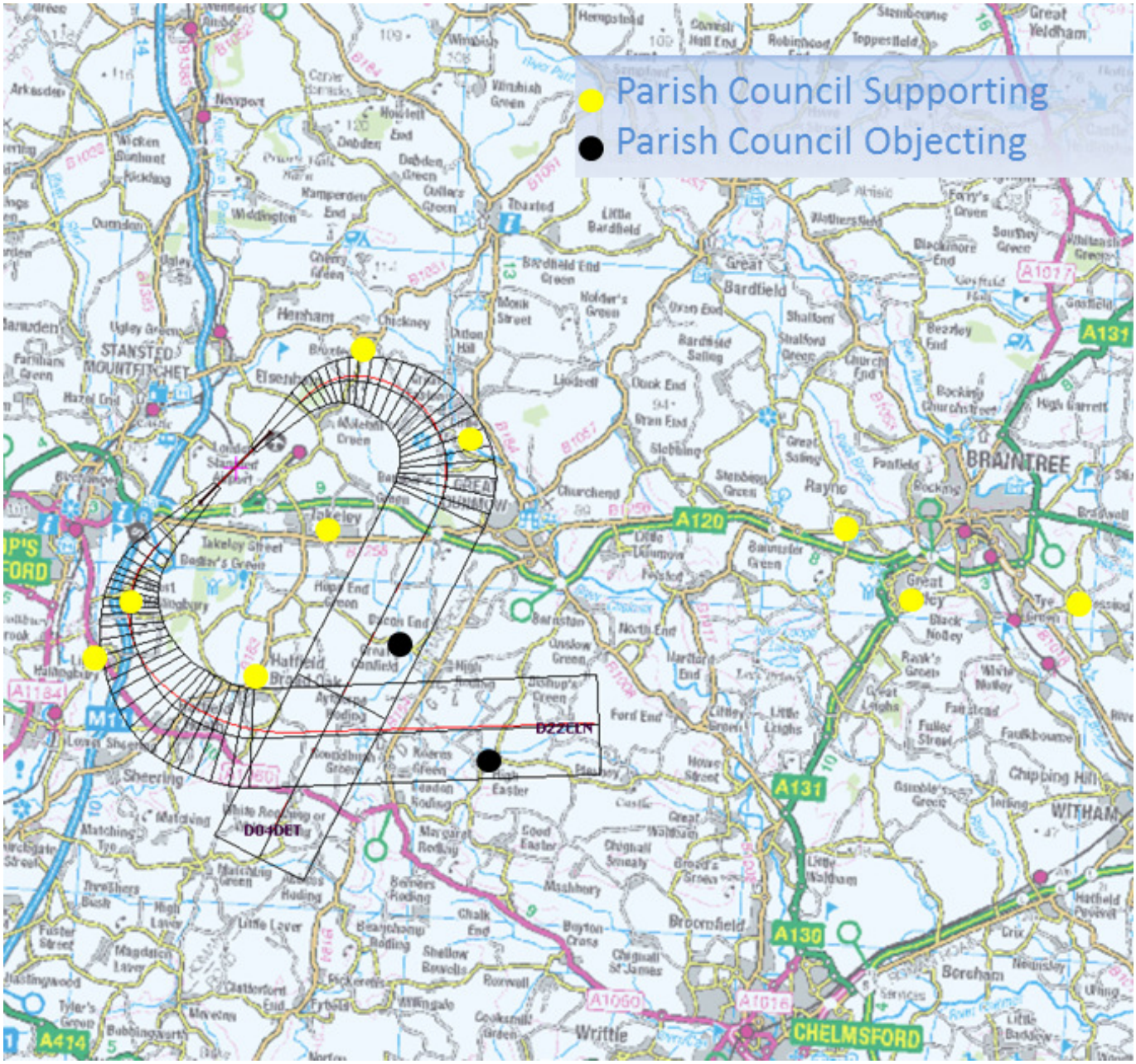
The three main local authorities – Essex County Council, East Herts District Council and Uttlesford District Council – all support the permanent adoption of the trial procedures.

Geographical spread of responses – Parish Councils

The map on the following page demonstrated which Parish Councils responded to the consultation and whether or not they responded in support of the trial.

Two parish councils objected to the consultation: Great Canfield and High Easter. High Easter was also where the airport received 8 objections from individuals. However, a number of other parish councils in the area affected by the trial were in support of the technology.

Geographical spread of responses – Parish Councils (continued)



6. Questions and Concerns Raised and Stansted Airport's Response

This section provides an overview of the responses received. All responses will be passed to the CAA consistent with their regulatory process.

Of all responses received, there were 8 that were supporting the consultation but had no specific comments. Of those that offered their individual comments and / or comments of interests they represent, this section highlights the considerations raised by stakeholders through the consultation process.

The following comments are ordered on the number of their reoccurrence:

Fewer people will be overflown / more accurate flying / avoiding overflight of villages (30 comments)

The most common theme from responses welcomed the fact that fewer people would be overflown, which is consistent with government policy to limit and where possible reduce the number of people adversely affected by aircraft noise. This is achieved by the RNP1 technology providing more accurate and consistent departure tracks across all aircraft types.

Fewer people will be exposed to noise (17 comments)

A number of responses highlighted the fact that fewer people would be exposed to aircraft noise. These comments are welcomed and this was the intention of the project during its inception. The SIDs were designed to replicate the existing SIDs as closely as possible, avoiding the overflight of many more local urban areas.

Ryanair not participating in the trial / too few aircraft to appreciate the impact (16 comments)

The numbers of aircraft flying the RNP1 SIDs has been relatively small[4]. However, there is a wide range of aircraft that have flown the RNP1 SIDs that are detailed in the technical report along with the consistent accuracy they are all able to fly. A significant evidence base exists to prove the technology works as intended, with a high degree of accuracy and consistency across a wide range of aircraft types. RNP1 technology is relatively new to the

[4] Aircraft operating trial procedures from Stansted ranged from between 4 – 16 departures per day.

UK and we understand this is the first trial of RNP1 with RF turns to be undertaken. Airlines can only operate RNP1 with appropriate regulatory approval which has proven to be a lengthy process. Aircraft fleet equipage is improving and we anticipate the numbers of aircraft that can operate RNP1 to grow steadily over the coming years.
Ryanair are committed to participating in the trial, their aircraft have the technology aboard and are at present in the process of gaining their RNP1 regulatory approval from the Irish Aviation Authority. Pegasus, which have the same aircraft type as Ryanair, have successfully operated the RNP1 SIDs with an identical track profile to all other aircraft flying RNP1, also as shown in the technical report.

Will any proposed changes be subject to a review process after 12 months? (8 comments)
The CAA will carry out a post-implementation review at a date notified in any approval notice. This is usually after 12 months and consistent with the CAAs Guidance on the Application of the Airspace Change Process – CAP 725.

Supportive providing there is not a disproportionate and unbearable noise impact upon the minority of losers (8 comments)
With any airspace change, there are in most cases winners and losers. A number of responses welcomed the introduction of RNP1 but were concerned this would have a disproportionate effect on the minority of losers. There are no new routes proposed and no new areas will be overflown at low level. London Stansted Airport operates a noise insulation scheme to support those who are most impacted by aircraft noise. The Airport has already committed to reviewing its noise insulation scheme as part of the Sustainable Development Plan consulted on during 2014.

Can you direct traffic away from High Easter to the north but within the NPR? (7 comments)
A large number of responses were from the High Easter area and there was a collective theme to review the NPRs, submitting the following comments to the consultation:

- *'[The NPRs] had not been revised since the early 1990s and therefore take no account of changed demographics, increased understanding of how noise affects people's health and the growth of traffic over the past 25 years'*
- *'Move the tracks to the northern edge of the NPR – 500m'*

- *'Route aircraft over large communities and roads where ambient noise levels are higher'.*

Whilst the Airport will continue to discuss these comments directly with local community representatives, these suggestions were not within the scope of this project or consultation and have not been considered. Moving aircraft over large communities increases the number of people overflown and is not consistent with Government policy of limiting and where possible reducing the numbers of people effected by noise. The changes proposed for implementing PBN have a material effect on the low level turn as part of the departure routes, else all other elements remain the same, with aircraft vectoring beyond 4,000ft dispersing aircraft across a much wider area.

LAMP 1a Detling to Clacton switch (8 comments)

Some responses suggested that RNP1 would help alleviate concerns relating to the NATS LAMP phase1a project, moving daytime Detling departures to the Clacton routes. Although the projects are not related, Stansted Airport also believes RNP1 implementation will help mitigate some of the effects of this NATS change at low level.

This technology should be implemented on the other departure routes (6 comments)

A number of responses to the consultation agree that RNP1 technology brings significant benefits in the reduction of overflights of some local communities and should be expanded to the other departures routes as soon as possible.

Stansted Airport wishes to implement the RNP1 SIDs on the two trialled routes initially and continue to bring other operators to fly RNP1. We will look to expand the application of this technology to our other departure routes and will develop plans with our Consultative Committee and local communities to implement this technology on our other departure routes. RNP1 technology with RF turns better enables replication of our existing departure routes and we believe this is the best option for London Stansted, which is bound by EU Legislation called the Pilot Common Project[5] to implement PBN through RNP1 by 2024.

[5] http://eur-lex.europa.eu/legal-content/FR/TXT/PDF/?uri=CELEX:32014R0716&from=EN

Aircraft should be dispersed across the whole 3km Corridor (4 comments)

Concentration vs dispersal has received a great deal of attention in the aviation industry over recent years. Present Government policy states in the aviation policy framework that:

> *"in most circumstances, it is desirable to concentrate aircraft along the fewest possible number of specified routes in the vicinity of airports and that these routes should avoid densely populated areas as far as possible.".*

The SIDs and associated NPRs at London Stansted consist of very tight turns soon after departure. Those aircraft that have flown the RNP1 SIDs are concentrated traffic along a precise path. The RNP1 SIDs were designed to replicate the conventional SIDs as closely as possible, thus avoiding the overflight of some communities within the NPRs. This is in line with Government Policy. Aircraft are naturally dispersed once above 4,000ft through ATC vectoring.

The NPR's at Stansted Airport should be reduced in width (3 comments)

The NPRs that surround the SIDs are owned by the Secretary of State for Transport. Stansted Airport would support reducing the width of NPRs when the majority of aircraft are able to fly RNP1 and expanded across all 6 departure routes.

Will compensation be offered to those adversely affected? (3 comments)

Stansted Airport operates a noise insulation scheme to support those who are most impacted by aircraft noise. The Airport has already committed to reviewing its noise insulation scheme as part of the Sustainable Development Plan consulted on during 2014.

There will be a quadrupling of traffic over Hatfield Heath on the Clacton route (3 comments)

These comments misunderstand the proposal. Proposed changes to air traffic distribution on SIDs, which will affect the Clacton route, were the subject of a separate consultation conducted by NATS during 2014 and recently approved by the CAA. The redistribution of Detling departures to Clacton will increase air traffic movements over some areas of Hatfield Heath based on current traffic profiles, but not by a factor of 4. Implementing RNP1 on the runway 22 Clacton SID will greatly reduce the overflight of this area as more

operators are able to fly RNP1 and would help mitigate any noise impacts as a result of LAMP phase1a. The 2 projects are not linked in any way.

What other options were considered? (2 comments)

This project came to fruition to address community concerns and improve track keeping at low level by consistently keeping to the NPR centreline. The development of the two RNP1 SIDs were to address community concerns through this improved track keeping and adherence to the NPR centreline. No other options were considered, although the RNP1 SIDs were revised in their design stage to better reflect the NPR centreline.

Will Stansted Airport continue to monitor Air Quality? (2 comments)

Yes, Stansted Airport monitors Air Quality through diffusion tubes at 5 locations and continues monitoring equipment at two locations. This reported annually and statistics are published on the airport website. Our current levels of PM_{10} and NO_2 are well within UK air quality objectives and we will continue to monitor Air Quality at these sites.

This makes noise exposure worse in Hatfield Heath (2 comments)

We do not believe this trial has a negative impact on Hatfield Heath as the design moves aircraft inside the existing SID, further away from Hatfield Heath. Those aircraft that have flown the runway 22 Clacton RNP1 SID have consistently not overflown Hatfield Heath, as shown in the trial technical report and this situation will improve further still as the technology expands to other operators.

New flight paths have already been implemented (2 comments)

There were 2 responses that highlighted that new flight paths have already been implemented. There have been no changes to routes in the East Berholt area since October 2014 or recently to the Great Notley area. Both of these comments would be consistent with the timings of NATS Consultation in 2014 and the proposed implementation of LAMP Phase 1A.

Combine 04 Clacton to 22 Clacton route earlier to avoid Rayne (1 comment)

The 04 Clacton departure route, which is the closest to Rayne, was not part of this consultation. As and when we develop RNP1 on our other departures routes we will consider if there is any benefit to moving an NPR, in line with government policy at that time. However, we appreciate that long term consistency is fundamental to our local communities which should be equally considered as well as any communities that may experience noise that would at present be largely unaffected.

Will this technology be applied to arrival routes? (1 comment)

This trial and consultation was specifically about replicating two of our existing departure routes. However the EU Legislation, Pilot Common Project, as previously mentioned also mandates RNP technology to arrivals. This is something London Stansted will have to implement to comply with this EU legislation but is not currently in our immediate plans.

You are just moving the problem from one area to another (1 comment)
The RNP1 SIDs concentrate departing air traffic within an area contained within the existing NPRs. There are no new areas overflown as a result of this proposal. Above 4,000ft, the results of the trial have shown the usual spread of traffic through ATC vectoring. Below 4,000ft, the concentration of departures reduces the number of people overflown by up to 84%, consistent with government policy.

7. Next Steps

Following positive feedback from this trial, Stansted will now seek to adopt the trial technology permanently.

As part of the regulatory process, Stansted will be submitting this feedback report and the RNP1 SID designs that have been trialled and consulted upon to the Director of Safety and Regulation Group (SARG). Following this, Stansted will also submit an Airspace Change Proposal to the Director of SARG, which will then begin the formal decision making process. This process usually takes around 16 weeks.

The Director of SARG will ultimately decide on the outcome of this process. Any group wishing to present new evidence or data to the Director for his consideration prior to making any decision regarding this proposal can do so in writing to:

Director
Safety and Regulation Group
CAA House
45 – 59 Kingsway
London
WC2B 6TE

Appendix A: Consultation - Media Coverage Summary

DATE	PUBLICATION	JOURNALIST	ARTICLE TITLE	TYPE	CIRCULATION
1 September	Braintree & Witham Times	N/A	Airport plans to reduce noise with new GPS system for planes	Online	1,122
1 September	Essex Chronicle	Chris Dyer	Stansted Airport announces plans for planes to fly over 4,000 fewer Essex homes	Online	37,595
2 September	Cambridge News	N/A	Stansted Airport launches new flight path proposal in bid to cut down on aircraft noise effects	Online	54,447
2 September	East Anglian Daily Times	Edmund Crosthwaite	Noise reduction hope at airport	Print	29,772
2 September	Herts and Essex Observer	N/A	New flight path proposals set to cut Stansted Airport noise effects for more than 4,000 people	Online	11,253
2 September	Heart Cambridge	Gareth Wesley	Stansted Airport Noise	Radio	41,500
2 September	ITV Anglia	N/A	Aircraft noise could be reduced by GPS	Online	
2 September	Saffron Walden Reporter	N/A	Stansted Airport announces plan to reduce aircraft noise - Have your say	Online	1,000
2 September	Airport Technology	N/A	Stansted Airport begins consultation on new take-off procedure to reduce noise	Online	
3 September	Cambridge News	N/A	Airport's bid to decrease aircraft noise	Print	15,088
3 September	Dunmow Broadcast	Michael Steward	Thousands could benefit from new take-off plans	Print	12,483
3 September	Essex Chronicle	N/A	Airport reduces noise	Print	26,237
3 September	Saffron Walden Reporter	N/A	Have your say on airport plans to reduce noise	Print	15,993
3 September	Walden Local	N/A	Plan to reduce aircraft noise for thousands of local residents	Print	13,500
7 September	The Times	Graeme Paton	Replacing beacons with Sat Nav will narrow flight paths and reduce noise	Print	391,000
7 September	Buying Business Travel	N/A	Stansted plans new flight paths to reduce aircraft noise	Online	15,309
8 September	Airport Business	N/A	London Stansted Airport plans new innovative take-off procedure	Online	
10 September	Essex Chronicle	N/A	Have your say on take-offs	Print	26,237
10 September	Herts and Essex Observer	Sinead Holland	Consultation begins after take-off noise reduction trial	Print	14,295
17 September	Herts and Essex Observer	Letters page	On the path to more air noise	Print	14,295
24 September	Radio 4 You and Yours	Rick Kelsey	STN is trialling new technology that helps planes follow flight paths more accurately	Radio	3,280,000
24 September	Herts and Essex Observer	Letters Page	Allow me to clear the air…	Print	14,295
5 October	Herts and Essex Observer	Sinead Holland	SSE urges residents to take part in flight path consultation	Web	27,336
05 October	Braintree & Witham Times	N/A	Campaigners welcome consultation on flight path changes	Web	1,122
06 October	Cambridge News	N/A	Call for residents to take part in flight path consultation	Print	15,088
01 November	Airliner World	N/A	Stansted Turns Down the Noise	Print	33,000
20 November	East Anglian Daily Times	N/A	Have your say on flight path proposal	Print	29,000
20 November	Dunmow Broadcast	N/A	Consultation on flight paths set to finish shortly	Print	12,400
20 November	Saffron Walden Reporter	N/A	Consultation on flight paths set to finish shortly	Print	16,485
				Total	**4,149,852**

Appendix B: Consultation - Community Outreach Summary

June 2015	Presentation to STACC
July 2015	Presentation of consultation plan to STACC-EIG
August 2015	Briefing to Sir Alan Haselhurst MP (during airport visit)
	Letter and Consultation Summary leaflet to sent to;
	Sir Alan Haselhurst MP
	Mark Prisk MP
	Robert Halfon MP
	Uttlesford DC
	Great Dunmow Town Council
	Essex County Council
	Hatfield Heath Parish Council
	Hatfield Broad Oak Parish Council
	Little Hallingbury Parish Council
	Great Hallingbury Parish Council
	Little Easton Parish Council
	Great Easton Parish Council
September 2015	Presentation of RNP1 trial to Great Hallingbury Parish Council by invitation
	Advertisement in Herts and Essex Observer (inc online edition)
	Essex Chamber Policy Council
	Community outreach event – Foakes Hall, Great Dunmow 3pm – 7pm
	Community outreach event – Rhodes Centre, Bishop's Stortford 3pm – 7pm
October 2015	Community outreach event – Village Hall, Hatfield Heath 3pm – 7pm
November 2015	Presentation to Uttlesford District Council's STAPP

Appendix C: Consultation – Responses Received

Aviation Industry

UPS Airlines
Heathrow Airport
NATS

Environmental / Pressure Groups

Stop Stansted Expansion
Council for the Protection of Rural England (CPRE) - Hertfordshire

Local Government Organisations

Great Notley Parish Council
Little Easton Parish Council
Rayne Parish Council
Takeley Parish Council
East Hertfordshire District Council
Broxted Parish Council
Uttlesford District Council
Cressing Parish Council
Great Hallingbury Parish Council
Little Hallingbury Parish Council
Hatfield Broad Oak Parish Council
Canfield Parish Council
High Easter Parish Council
Essex County Council

There were an additional 42 responses from individuals