Airports Commission: Proposals for providing additional airport capacity in the longer term

A response by Birmingham Airport

Birmingham Airport


BHX

Contents

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Reply to: Andrew Cleaves at GBSLEP

Greater Birmingham and Solihull LEP
Baskerville House,
Centenary Square
Birmingham B1 2ND
Tel: 0121 303 4369
Email: gbslep@birmingham.gov.uk

16th July 2013

Dear Sir Howard,

The Greater Birmingham & Solihull LEP, Black Country LEP and Birmingham Chamber of Commerce Group endorse this submission by Birmingham Airport to the Airports Commission. It sets out a vision of how Birmingham Airport can be expanded over the longer term to deliver additional aviation capacity and connectivity for the UK which will help to rebalance the UK economy.

We have already confirmed to you our support for the options for making best use of Birmingham Airport's capacity in the short to medium term. However, there is now a need to be bold and develop a strategy that creates the longer term capacity which is necessary to meet future growth and support the Midlands and UK economy.

The Airport is a key economic enabler, helping to plug the greater Midlands, the UK's second most important export market, into global wealth. The ability to develop direct links with the world's emerging and growing economies is essential for the region to remain competitive.

The expansion of Birmingham Airport and the continued development of direct connectivity with the rest of the world that our industrial base so desperately needs, will support and create thousands of jobs in an area of high unemployment.

The vision for the Airport is fully aligned with existing and emerging regional development and transport investment strategies: GBSLEP's Delivering Growth, Solihull's M42 Economic Gateway, UK Central, the Black Country LEP's Core Strategy and High Speed 2.

We agree that the Government's long-term national aviation policy should support and promote the growth of major long-haul airports delivering aviation capacity and connectivity to the key strategic regions of Britain. The Airports Commission has a once in a generation opportunity to reshape the UK's aviation capacity and connectivity in a way that will spread the benefits to the whole country.

The Greater Birmingham & Solihull LEP, Black Country LEP and Birmingham Chamber of Commerce Group support the ambitions of Birmingham Airport, although we are clear that any decisions will require the proposals to be considered independently by the relevant planning authorities. It is imperative that any proposals will need to ensure that their environmental impacts are mitigated in order to minimise impacts on the environment and local communities.

We urge the Airports Commission to short-list the proposal in its interim report due to be published this December and look forward to working with, and continuing to engage with, your commission.

Yours sincerely,

Andrew Cleaves
Non-executive director
Greater Birmingham and Solihull LEP Transport Lead & Chair GBS LTB

Stewart Towe
Chairman
Black Country LEP

Jerry Blackett
Chief Executive
Birmingham Chamber of Commerce Group (BCG)

John McNicholas
Chairman
Coventry and Warwickshire LEP Business Transport Group

Colin Leighfield
Chairman
Black County Chamber of Commerce Transport Group

Copy to Andy Street, Chair, Greater Birmingham and Solihull Local Enterprise Partnership

Sir Howard Davies
Airports Commission
Sanctuary Building
London XSSCS

July 16th 2013

Dear Sir Howard,

The signed Councils below endorse this submission by Birmingham Airport to the Airports Commission. It sets out a vision of how Birmingham Airport can be expanded over the longer term to deliver additional aviation capacity and connectivity for the UK which will help to rebalance the UK economy.

We have already confirmed to you our support for the options for making best use of Birmingham Airport's capacity in the short to medium term. However, there is now a need to be bold and develop a strategy that creates the longer term capacity which is necessary to meet future growth and support the Midlands and UK economy.

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The Councils support the ambitions of Birmingham Airport, although we are clear that any decisions will require the proposals to be considered independently by the relevant planning authorities. It is imperative that any proposals will need to ensure that their environmental impacts are mitigated in order to minimise impacts on the environment and local communities.

We urge the Airports Commission to short-list the proposal in its interim report due to be published this December and look forward to working with, and continuing to engage with, your commission.

Yours sincerely,

Sir Albert Bore
Leader
Birmingham City Council

Cllr Ken Meeson
Leader
Solihull Metropolitan Borough Council

Cllr Mike Bird
Leader
Walsall Council

Cllr Roger Lawrence
Leader
Wolverhampton City Council

Cllr David Sparks
Leader
Dudley Metropolitan Borough Council

Cllr Anne Lucas
Leader
Coventry City Council

Darren C. Cooper
Cllr Darren Cooper
Leader
Sandwell Metropolitan Borough Council

John Morris
Public Affairs Director
Birmingham Airport Limited
Diamond House
Birmingham Airport
Birmingham B26 3QJ

15th July 2013

Dear John

The Airports Commission and Birmingham Airport's Long Term Vision

Transport infrastructure is a top strategic objective for Worcestershire Local Enterprise Partnership (WLEP) in fulfilling its ambition to help business growth and job creation. Connectivity and good infrastructure which supports the movement of people and trade are the core principles which frame the WLEP's pursuit of specific local and national transport projects and improvement schemes to unlock Worcestershire's potential.

One significant element of our transport ambition is to improve connectivity to Birmingham Airport, the M42/M5 corridor and the future HS2 terminal. Cumulatively, this "tripod" of major infrastructure improvement will provide a significant gateway for Worcestershire businesses in regularly accessing UK, European and global markets as well as attracting trade and inward investment.

The Long Term Vision articulated by Birmingham Airport's submission to the Airports' Commission sets out the compelling business need for a major Midlands airport hub on a par with Heathrow and Gatwick as well as other global cities. Birmingham Airport's forecasted 70 million passengers a year by 2050 will require consolidated airport expansion to increase capacity and bring a multitude of economic benefits to Worcestershire and the Midlands as a whole. It will enhance richly the diverse thriving and growing business sectors and local economies outside South East England.

The Worcestershire Local Enterprise Partnership (WLEP) on behalf of its business community welcomes and endorses fully Birmingham Airport's vision. Working together with other Midlands LEPs and significant current and emerging business sectors, Birmingham Airport can provide a robust and significant infrastructure hub for air travel which connects readily with the surrounding road and rail infrastructure network as existing and as proposed for improvement.

I strongly recommend the Birmingham Airport Vision to the Airports' Commission as a fundamental component in realising WLEP ambitions for business growth and job creation and unlocking Worcestershire's full potential.

Yours sincerely,

Peter Pawsey
Executive Chair
Worcestershire LEP

Jon Hockley
Planning Manager
Birmingham Airport,
Birmingham Airport Limited
Birmingham
B26 3QJ

Stoke-on-Trent
& Staffordshire
Enterprise Partnership

15th July 2013

Dear Jon,

Birmingham Airport's long-term Airports Commission submission

Thank you for your email. We very much support the development of our regional airports and are pleased to support the development of Birmingham Airport as part of this. We are not in a position to give the whole hearted support to HS2 that the leaflet implies but are pleased to support the principle of the airport's development. We see this is as being an opportunity for us to reduce travel overall and a consequent benefit to the West Midlands both economically and in terms of sustainability.

Our emerging policy position is likely to seek good rail connections between airports and ourselves. Something that we feel we already have in large part to Birmingham which we view as one of your strong selling points.

Yours sincerely

Ron Dougan
Chair
Stoke-on-Trent and Staffordshire Local Enterprise Partnership

c/o Jenny Greer, Staffordshire Place 1, Staffordshire County Council, Wedgwood Building, Tipping Street, Stafford, ST16 2DH

Sir Howard Davies
Airports Commission
Sanctuary Building
London XSSCS

19th July 2013

Dear Sir Howard,

Half a million businesses and six and a half million employees are located in Birmingham Airport's long-haul catchment. This makes it the second largest business catchment in the UK.

But at the moment, 3 million business people travel to London airports from the Midlands each year to visit their customers overseas. These businesses incur cost and time penalties as a result of insufficient aviation connectivity. And the inability to travel easily to new markets is seriously damaging economic growth.

We welcome Birmingham Airport's investment in its runway extension so that it can offer long-haul flights around the world. But we need to be bold and have a strategy that ensures the greater Midlands region remains plugged into global wealth in long-term.

We support the ambitions of Birmingham Airport and call on the Airports Commission to recognise that a one airport strategy in the South East is not a national aviation strategy – we need a network of major airports supporting businesses across the UK.

Yours sincerely,

A F Blakemore and Son Ltd
A2B Radio Cars Ltd
ABC Solutions (UK) Ltd
ABSTRAKT SERVICES LTD
Access Intelligent Services Limited
ADZ Media
AGS Technical Solutions
AiM Software Limited
AL-HIDAAYAH TRAVEL LTD
Allen IP Limited
Alliance Financial consultants ltd
ASAP Fire Systems Limited
Aston University
B S Executive Travel Limited
Bainbridge Collins Ltd
Bean IT Ltd
Beautiful Gardens
Birmingham Chamber of Commerce
Birmingham City University
Birmingham Forward
Birmingham Future
Black Country Metals
Black Rhodium
Blythe Valley Business Park
BNP Paribas Real Estate
Brefi Group Limited
BSA Machine Tools Ltd
Charles Peters
City of Birmingham Symphony Orchestra
Clarke Associates UK Limited
CM2000
Colmore Business District
Corporate Solutions (Logistics) Ltd
Creative Shift
Crompton & co
Crowne Plaza Birmingham City
Cruise Holidays UK
Cypher Media
Delcam
Deloitte Midlands Region
Dunsby Associates LLP
East End Foods plc
Ebrex UK Ltd
Econocom Plc
Effigy Blinds Ltd
Embassy freight Services (Midlands) Ltd
EOM Consulting Ltd
Event and Exhihition Design & Managment
Exhibition & Event Carpeting
Family Care Trust
Flamesurge UK Ltd
Fleeman Cooper Ltd
FleetMilne Property
FMS Enterprises UK Ltd

Global Logistics
Global Partner Solutions Europe
Gough Bailey Wright
Handelsbanken
Harrow Green
Helpdesk Communications Ltd
Henry Mills Ltd
Heritage Collection
Higgs & Sons Solicitors
Holiday Inn Birmingham Airport
Holiday Inn Express Birmingham NEC
Hotel du Vin & Bistro
Hotels.tv /Birmingham
Hub Digital
Hulley & Kirkwood
Human Potential Accounting
Industratech ltd
Industrial PENSTOCKS LTD
In-Form Solutions Ltd
Innovation Birmingham
ITM Economic Development Ltd
Jas Sansi PHOTOGRAPHY
JLT Speciality Ltd
John Silver Chauffeur Service
johnsons quality coach & bus travel
Knox+
LICHFIELD FIRE & SAFETY EQUIPMENT CO. LTD
Lion Industries UK Ltd
Lode Heath School
LS Photographic Services Ltd
Luxwood
Medinet
Menzies Strathallan Hotel
Metropolis 2 Limited
MG Motor UK
Midlands Air Ambulance
Miller Construction
MWW Ltd
National Training Resources Ltd
NextiraOne UK Limited
Nicholas George Ltd
PackSys Limited
PCPT Architects Limited
Pennycuick Collins
Pilot IMS Ltd
Pitchford Estate
PNC Global Logistics (UK) Ltd
Powell Williams LLP
ProfessionalPolishing Services Ltd
Ramada Birmingham Sutton Coldfield
RBH
Reabrook Limited
Research by Design
RJF Public Affairs Limited
Sampad
Saxon Design Ltd
Scotts Timber Engineering Ltd
Sertel Electronics UK Ltd.
Shoosmiths LLP
Sinnergy
Small Heath School
Smith Cooper LLP
Squire Sanders
Stage Electrics
Steel importer & exporter
Sterling Pharmaceuticals Ltd
Steve Leighton Bookkeeping & Accountancy
Stone Consulting Ltd
Studio 726 Ltd
Sue Davis HR Limited
Sutton Coldfield Town Centre BID
Suttongate Consulting Ltd.
Swallow Evacuation & Mobility Products Ltd
Sydney Mitchell LLP
Technology Management
The Chartered Institute of Payroll Professionals
Thistle Birmingham
Thomas Fattorini Ltd
Town Hall & Symphony Hall Birmingham
Transmag UK Limited
Trinity Mirror Printing
TRW
UCC Ltd
United travel
Urban Communications
Wileman Sales Consultancy Limited
Wordsmith Communication UK Ltd
Wragge&Co LLP
Wright Design & Management
Wright DM ltd

1 Executive summary

Birmingham needs a Great Airport for a Great City.

This proposal is about ensuring that the greater Midlands region, anchored around Britain's second city, has the infrastructure it needs to develop the economy it supports, into global wealth in the twenty-first century. It forms part of a long-term national aviation policy that supports and promotes growth at a network of major long-haul airports delivering aviation capacity and connectivity to the key strategic city regions of Britain.

Birmingham Airport welcomed the central recommendation of the 2003 White Paper. However, the 2003 second runway location would not only substantially limit the amount of additional capacity, and range of connectivity, that an increased Birmingham Airport could deliver in the long-term; it would also have impacts on the local community that our vision substantially reduces. The political circumstances surrounding aviation policy, and the UK aviation industry, have also changed immeasurably since 2003.

Birmingham Airport launched its long-term vision for the Airport, Midlands economy and UK aviation on the 10th June 2013. The scheme would involve moving the location, and changing the scale, of the second runway development as identified by the 2003 Aviation White Paper. The new runway terminal would be integrated with UK Central and HS2, deliver capacity of up to 70 million passengers per annum (mppa), and runway capability of up to 500,000 Air Transport Movements (ATMs) off both runways. By moving the second runway to the new site, the Airport would have the potential for further, very long-term expansion post-2050. One of the primary benefits of our proposal is the extent to which capacity could be "turned up" and provided to cater for demand as it arises.

Surface access connectivity is a key strength of this proposal. The Airport already benefits from integrated air, rail and road connectivity, and when HS2 is complete, will be the most accessible airport for over 19 million people living in the UK, making it Britain's most accessible airport. The expansion outlined would be supported by an aim to have a 50% non-car mode share.

The new proposed second runway location would have dramatically lower environmental impacts than the 2003 White Paper location. Expansion to 70mppa would be fully in line with the commitments made under the UK Climate Change Act 2008, remove 13,001 people out of the 57dB night noise contour and 34,063 out of the 54dB night noise contour. This represents a reduction of c.100% and c.91% respectively, a substantial improvement for local communities.

The current runway infrastructure has the capability to accommodate circa 27 million more passengers; for that reason, the indicative timeframe for any new runway development would be around 2030. At this point, the Airport would be operating at close to, or over, the point at which the marginal benefit of developing a second runway would outweigh the marginal cost of more intensive utilisation of the existing runway. There are no insurmountable issues concerning airspace management and the development of Birmingham Airport's vision.

The Airport's vision is likely to be one of the cheapest to deliver in terms of overall costs because of the relative open nature of the site and the way it ties in existing and proposed local and national infrastructure. Increased traffic at Birmingham would allow the Airport to fund terminal/ capacity expansions to 27mppa (using the existing runway). Beyond that the estimated cost of the proposed expansion scheme would be £6.99 billion.

RBS and Volterra concluded that financing would be available to provide for the full range of possibilities likely to emerge from a decision to develop Birmingham Airport, with development of a new terminal and supporting infrastructure. They concluded that the Airport would have a range of financing possibilities.

Birmingham Airport would like the Commission to short-list its proposed expansion scheme and recognise it as an option that could support and enhance the UK's status as Europe's most important aviation hub. However, this does not imply an immediate commitment or desire on behalf of the Airport Company to start development now, but maintains long-term scope to do so as and when demand growth forecasts justify.

The Airport's proposed scheme is not, on its own, a national aviation strategy or a discreet airport development. It has wider industrial, social and economic significance.

The UK is too big for all traffic and demand to be supported by one 'focal' airport. Analysis by *Steer Davies Gleave* and *Capital Economics* into long-haul catchment areas reveals that the UK has four economic macro-regions that are capable of supporting a major long-haul airport – London, Birmingham, Manchester and Scotland.

Birmingham Airport's proposal, therefore, forms part of a network solution for the UK which would deliver Great Airports for Great Cities. Promoting connectivity at four strategic airports, whether hub or point-to-point, recognises that transport infrastructure and international connectivity are economic enablers that provide a pathway to a virtuous cycle of growth. Aviation policy is not just about runways, each major regional economy cannot succeed without its own meaningful international gateway.

The striking feature of Birmingham Airport's vision is that it complements the different expansion schemes and national policy strategies promoted by Gatwick, which would keep Heathrow open, and Transport for London, which would close Heathrow. Both of these scenarios would deliver great airports for Britain's great cities. A network of airports will provide the flexibility and resilience the UK needs to respond to changes in aviation industry, and infrastructure assets that match Europe's leading economies.

Birmingham Airport, Capital Economics and the West Midlands Economic Forum have published extensive evidence on how Birmingham Airport's proposed scheme supports the Government's wider economic objectives and its potential national economic impacts. These reports have been shared with the Airports Commission, and can be downloaded at www.balancedaviationdebate.com, or http://westmidlandseconomicforum.co.uk/.

Expansion at Birmingham Airport will provide the range, scale and choice of international connectivity to support, enable and drive local economic growth, employment and the region's emerging development strategies. The supportive Councils, the West Midlands Local Enterprise Partnerships (LEPs), the network of West Midlands Chambers of Commerce and hundreds of local businesses recognise this. The Airport acknowledges their support in developing our long-term vision and submissions to the Commission.

Birmingham Airport's vision is not a discrete, standalone development. The proposed second runway location site would align with planned investment in the Airport, HS2 and UK Central with existing assets such as the NEC, Birmingham Business Park and Resorts World Birmingham. Phasing development so that investment in UK Central, HS2 and the Airport follow-on from one another would maximise labour and capital resource use, reduce costs across the supply chain, reduce the individual cost of each investment and maximise the return for the taxpayer and private investors.

Taken together, this 315 hectare site of development land has the opportunity to become a mixed commercial community development, of Airport and access focussed occupiers that together create and support an out of town business community. It would be an economic and logistics hub for the UK.

The delivery body envisaged to oversee the implementation of this exciting initiative would be akin to a Development Corporation with spending powers and statutory CPO. We do not envisage the body requiring unified planning powers as the Local Authority partners to the project will ensure strategic suitability.

2 Response to questions relating to the additional capacity and connectivity delivered by the proposed scheme

In response to the following Airports Commission questions:

- The level of additional capacity and connectivity that could be delivered?
- How and when this could be provided?
- Number and type of additional flights?
- Scope for the proposal to facilitate the development of new routes?
- Assess proposal against assessment of need?

2.1 Plugging the greater Midlands region into global wealth in the twenty-first century

2.1.1 The 2003 Aviation White Paper

The last full Governmental review of the UK's national aviation policy, the 2003 Aviation White Paper, recognised that whilst not immediately required, 'there [will be] a need for additional runway capacity in the Midlands'. 'Our preferred location for a new runway… is at Birmingham, where we support the airport operator's variant proposal for a short-wide spaced runway [limited to 2,000 metres]' to the west of the existing runway – Appendix 2. This scheme was the best proposed option because, when compared to other options at Birmingham previously proposed:

i) It would require less green belt to be taken
ii) It resulted in the loss of fewer properties than the full-length option
iii) It avoided the loss of Bickenhill Meadow Site of Special Scientific Interest
iv) It could be phased more effectively
v) It would not require a major diversion of the A45
vi) It would have lower noise impacts than the full-length option
vii) There was strong support among the aviation industry, economic development and business stakeholders in the West Midlands for the development, and the economic benefits this would bring.

Following the White Paper, the Government invited the airport operator to:

i) Apply to safeguard the land for the proposed second runway location
ii) Develop the Birmingham Airport Master Plan
iii) Consult the interested parties prior to the preparation of a planning application
iv) Lengthen the existing runway to allow services to be offered to more distant destinations and larger aircraft types to use the Airport.

Since 2003, the airport operator has:

i) Developed the Birmingham Airport Master Plan (2007), which proposed an extension to the existing runway (in place of the second runway)
ii) Been in regular contact with community stakeholders about the Airport's future
iii) Invested £33 million in a runway extension and

control tower, which will give the Airport the capability to offer very long-haul connectivity from spring 2014.

Despite providing support for the scheme, the White Paper recognised that the potential noise impacts of the runway location were an area of concern for local people, environmental groups and a number of other stakeholders. To ameliorate these concerns, the White Paper stated that operations on the new runway required **'stringent limits on the area affected by noise… and [flights] should be limited to aircraft with a noise quota no greater than 0.5 and should not be used at night'.** As a result, '**only smaller types of aircraft (turboprops, regional and narrow bodied jets) would be able to use the new short runway, and to mitigate potential noise impacts this could be limited further to the quieter types.**'

Birmingham Airport welcomes the central recommendation of the 2003 White Paper. However, the restrictions associated with the 2003 second runway location would substantially limit the amount of additional capacity, and range of connectivity, that an increased Birmingham Airport could deliver in the long-term.

2.1.2 The Airports Commission and a new national aviation strategy

The political circumstances surrounding aviation policy, and the UK aviation industry, have immeasurably changed since the 2003 Aviation White Paper was published:

- **No third runway at Heathrow** – in 2010, the Coalition Government overturned the former Labour Government's policy of supporting a third runway subject to strict environmental tests and controls.
- **No second runway at Stansted –** local opposition and uncertainty in national policy stalled Stansted Airport's plans to build a second runway.
- **The break-up of BAA** – Gatwick Airport has been taken out of ownership from BAA and is now owned by a consortium led by Global Infrastructure Partners (GIP), which also now owns Edinburgh Airport. Stansted Airport has recently been acquired by Manchester Airport Group.
- **Technological advances** – the last decade has witnessed innovations in aircraft design, with the Boeing 787 and Airbus A350 offering very long-haul hub bypass connectivity at lower noise and air emissions levels than older aircraft models.
- **High-Speed Two (HS2)** – there is cross-party support for a new north-south high-speed rail link. HS2 will change the UK's air-rail transport landscape and provide significant opportunities for Birmingham to serve passengers in a market extending into London.
- **Changes in planning law and practice** – which impose new consultation requirements on developers of new airports and involve relatively new and untested processes for handling national infrastructure projects.
- **An increased emphasis on competition and the abandonment of the principle of 'picking winners'** – the new Competition act and the changes to regulatory agencies lay an increased emphasis on the effectiveness of maintaining market structures which are not dominated by single producers but which foster a range of strong competing suppliers.

Birmingham Airport has already submitted its proposal for making best use of the Airport's existing capacity in the short and medium-term. This submission provides a top-level proposal for how additional runway capacity at Birmingham Airport in the long-term would help maintain the UK's position as Europe's most important aviation hub.

2.1.3 Birmingham Airport's long-term vision – A Great Airport for a Great City

Birmingham Airport launched its long-term vision for the Airport, Midlands economy and UK aviation on the 10th June 2013. The launched pamphlet – *Plugging the greater Midlands region into global wealth* – made public the Airport's vision of growth as indicated in the Airport Company's letter of engagement to the Commission on 28th February 2013.

The scheme would involve moving the location, and changing the scale, of the second runway development as identified by the 2003 Aviation White Paper. In place of the formerly proposed short, wide-spaced runway to the west of the Airport, the new scheme would be a full-length runway to the east of the current airport site.

The new runway terminal would be integrated with UK Central and HS2 investments and deliver combined capacity of up to 70mppa, and runway capability of up to 500,000 ATMs off both runways. By moving the second runway to the new site, the Airport would have the potential for further, very long-term expansion post-2050.

2.1.4 The nature, scale and timing of the aviation capacity and connectivity delivered by the proposal

Table 1 summarises the additional traffic capacity that can be delivered at Birmingham Airport according to the Commission's definition of the short, medium and long-term.

Table 2 provides detailed traffic capacity and indicative timescales for expansion.

In summary, the proposed new second runway location and terminal developments would enable Birmingham Airport to expand from the 8.9mppa it handles today to 70mppa by 2050, subject to growth in passenger demand, with the potential to expand further in the very long-term. Each runway would have the capacity to offer very long-haul connectivity (see Figure 1) on all types of aircraft, including larger, wide-bodied heavy aircraft like the Airbus A380.

This scale of development and ambition would provide Birmingham Airport with the level of capacity and connectivity it needs to be a Great Airport for a Great City, and plug the greater Midlands region into global wealth for the next century.

2.1.5 Assessment of need

In seeking to outline a second runway, Birmingham Airport assessed their proposals for additional capacity against the Government and independent passenger demand forecasts. The DfT's 2013 UK Aviation Forecasts for Birmingham Airport are summarised in Table 3.

Birmingham Airport submitted its appraisal of the DfT's forecasts in response to the Airports Commission's Discussion Paper 01. The submission agreed that there will continue to be sizeable growth in passenger demand for aviation, and additional capacity will need to be brought online to cater for this. However, the submission argued that the DfT's forecasts should not form the sole basis for deciding on the location of future airport capacity. Up to the beginning of 2013, the DfT forecasts considered that Birmingham Airport would handle 20mppa by 2020; the latest forecasts above show 11.4mppa in the central case. Clearly there is a wide margin of error between the DfT and the Airport's independent forecasts, reflecting the fact that the current DfT forecasts are conservative in relation to Birmingham Airport for the reasons set out below.

The primary purpose of the DfT's demand and allocation model forecasts is to 'inform long-term strategic aviation policy'. Its findings are highly contestable representations of theoretical constructs of future demand based on past behaviour. They lack the granularity to engage with the aspirations of individual airports, their catchment areas and the future growth of the catchment economies.

As a result, both the DfT's constrained and unconstrained traffic forecasts are only useful if the Airports Commission views airport capacity as a siloed

Table 1 – Summary of additional capacity at Birmingham Airport

Commission timescale	Summary
Short-term	Birmingham Airport can double in size to 18 million passengers per annum (mppa) by the Airports Commission's definition of the short-term. This could add 9mppa of long-haul capable capacity to the UK airport network before 2017.
Medium-term	Birmingham Airport can expand up to between 27–36mppa on the existing runway by the Airports Commission's definition of the medium-term. This could add 18–27mppa of long-haul capable capacity to the UK airport by 2024.
Long-term	A second runway with a new terminal development at Birmingham Airport would give the Airport the potential capability to handle 500,000 ATMs, with terminal capacity of up to 70mppa. This capacity could cater for forecasted traffic growth up to 2050.
Very long-term	If the Airports Commission wishes to consider optionality beyond 2050, the Airport Company would like it noted that the newly proposed site for expansion would ensure that there is further space on the existing airport estate to respond to future growth in passenger demand with incremental additions to airport capacity. At this stage, the Airport Company believe that future very-long-term incremental expansion and technological advancements would allow the Aiprort to handle approximately 750,000 ATMs and 100 mppa.

decision about demand management. If the Airports Commission decision is based on what is best for the future UK economy, it will build a model that allows airports to plug the discrete regions of the UK that they support into global wealth.

The submission also explores analysis by York Aviation, commissioned by Birmingham Airport, into the methodology of the DfT's forecasting model. It reveals that there are underlying weaknesses in the assumptions, inputs, rationality and outputs underpinning the DfT's model. These are summarised in Table 4.

In March 2013, Birmingham Airport commissioned Steer Davies Gleave (SDG) to undertake a traffic forecast to support the Airport's submission to the Airports Commission. Their forecast was developed

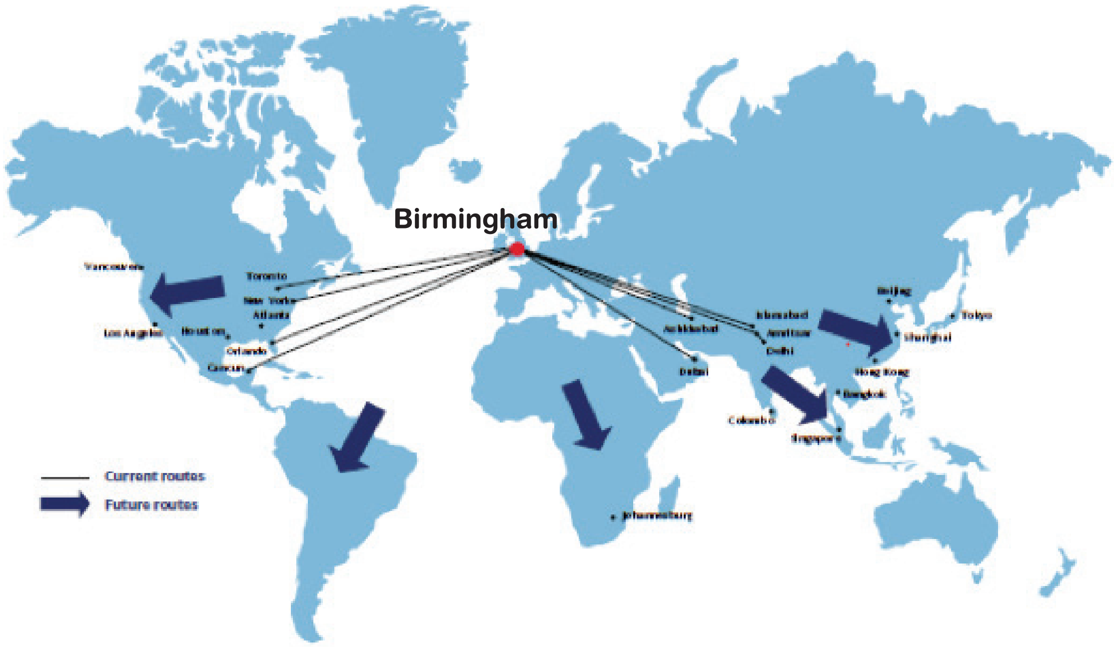
Table 2 – Birmingham Airport's detailed traffic capacity and indicative timescales for expansion

Indicative delivery timeframe	Maximum capacity (mppa)	Air Traffic Movements (ATMs)	Infrastructure requirements	Planning permission	Operationally feasible
Single full length runway capability					
0- 3yrs [to 2017]	18mppa	140,000	• Minor development works to taxiway and apron system • Small-scale growth, as and when required, primarily for control authorities	Permitted development	Yes
3- 8yrs [to 2024]	27mppa	205,400	• Further taxiway works • Some increase in apron and pier capacity • Terminal extension works	Part permitted development, some planning application works required	Yes with works described
Runway extension consent provides planning permission up to approximately 27mppa/ 205,400ATMs					
Up to 10 years	36mppa* * Maximum capacity from existing runway	240,000	• Additional terminal development • Further works to apron and pier capacity • Subject to improvements in local transport infrastructure	Variation of existing planning permission required to increase number of permitted air traffic movements	Yes with works described
Two full length runways capability					
c. 2030	63mppa* *27mppa existing runway + 35mppa new terminal	455,400* *205,400 existing runway, 250,000 new runway	• Second full capability runway • New integrated terminal development • High-speed air-rail link between terminals • Subject to local and national transport infrastructure improvements	Full planning permission required	Yes major works
c. 2050	70mppa* *Maximum capacity from both runways	500,000* *250,000 ATMs off both runways	• Additional terminal development • Further works to apron and pier capacity • Subject to improvements in local transport infrastructure	Variation of planning permission on existing runway required to increase number of permitted air traffic movements	Yes major works

Table 3 – The DfT's forecasts for traffic growth at Birmingham Airport

Forecaster	Type (case)	2011	2020	2030	2040	2050
Department for Transport 2013	Unconstrained (central)	8.6	11.4	13.9	17.2	22.7
	Constrained (low)	8.6	10	11.3	14	19.4
	Constrained (central)	8.6	12	17	28	38
	Constrained (high)	8.6	14	25.3	36	n/a

Figure 1 – Connectivity offered by Birmingham Airport's runway extension from 2014



bottom-up to 2017/18, and top-down post-2018. The SDG forecasts are summarised in Table 5 and a comparison of the DfT and SDG's forecasts is shown in Table 6.

Under the following circumstances:

i) **The short-term policy package included within the Commission's 2013 Interim Report includes measures that help to make best use of Birmingham Airport's spare capacity**
ii) **The Commission short-lists/ provides a national policy statement in support of the Airport's second runway proposal**
iii) **Phase 1 of HS2 is operational in 2026;**

Subject to policy, Birmingham Airport considers that it is possible to achieve growth in line with SDG's high constrained forecast to 2020 and, depending on long-term policy, within SDG's central and high constrained case to 2030.

Growth at this level would see Birmingham Airport handling between 21.2 and 27.4mppa by 2030. The Airport Company would expect to expand the terminal capacity to the full extent of the 2007 planning permission, up to 27mppa, as indicated in Table 2, to respond to this growth. As a result, Birmingham Airport would be operating at between 79%–101% capacity by 2030.

The 2003 Aviation White Paper stated that 'the optimal capacity of [Birmingham Airport's] existing runway is likely to be around 20mppa although this is heavily dependent on the average number of passengers carried per aircraft and the diurnal profile of the traffic using the runway.'

Analysis of Birmingham Airport's independent traffic forecasts reveals that passenger throughput at the Airport is expected to exceed 20mppa by 2030. At this point, the Airport would be operating at close to, or beyond, the point at which the marginal benefit of the development of a second runway outweighs the marginal cost of more intensive utilisation of the existing runway. One of the primary benefits of our proposal is the extent to which capacity could be "turned up" and provided to cater for demand as it arises, as opposed to a more speculative construction.

Table 4 – A summary of Birmingham Airport's critique of the DfT's demand forecasting models

Caveat	Explanation
Exaggeration of the past	The DfT model is calibrated on past behaviour and represents an exaggerated version of the status quo. The historical data may no longer reflect current market interactions, it is not necessarily reflective of future behaviour, ignores the underlying potential of airport catchment areas and any future route development activities.
Lack of granularity	The economic growth inputs used by the National Air Passenger Demand Model (NAPDM) lack granularity, assuming uniform growth across the UK. There is no segmentation of inputs to reflect the UK's economic geography.
Allocation is very misleading	The current failure to recognise the limitations of the National Air Passenger Allocation Model (NAPAM) is the greatest failure of the DfT's approach to forecasting, notably the impact of the 'ballooning effect' from traffic spilling out of constrained airports and its inability to consider how airports compete with overseas airports for hub traffic.
Modelling is only half the answer	Even with a more enhanced version model, the DfT model is insufficiently robust to be a sole basis for policy decision. Wider evidence, patterns and aspirations of growth will always be vital to any decision about additional airport capacity.
A step change is needed	There needs to be a step change in the way the forecasts are used and considered, and a greater role for probability analysis by peer reviewers who sense check the findings.

Table 5 – SDG's passenger traffic forecasts for Birmingham Airport

Forecaster	Type (case)	2011	2020	2030	2040	2050	2060
Steer Davies Gleave 2013	Assumptions (low)	8.6	13.0	17.1	20.4	25.4	28.8
	Assumptions (central)	8.6	13.8	21.2	29.3	41.6	48.6
	Assumptions (high)	8.6	17.1	27.4	39.1	57.9	68.7

Table 6 – A comparison of the DfT's 2013 forecasts with SDG's forecasts

Forecaster	Type (case)	2011	2020	2030	2040	2050	2060
DfT	Constrained (low)	8.6	10	11.3	14	19.4	n/a
SDG	Constrained (low)	8.6	13.0	17.1	20.4	25.4	28.8
Difference		**0.0**	**3.0**	**5.8**	**6.4**	**6.0**	**n/a**
DfT	Constrained (central)	8.6	11.8	16.7	28.2	38.3	n/a
SDG	Constrained (central)	8.6	13.8	21.2	29.3	41.6	48.6
Difference		**0.0**	**2.0**	**4.5**	**1.1**	**3.3**	**n/a**
DfT	Constrained (high)	8.6	14	25.3	36	n/a	n/a
SDG	Constrained (high)	8.6	17.1	27.4	39.1	57.9	68.7[1]
Difference		**0.0**	**3.1**	**2.1**	**3.1**	**n/a**	**n/a**

3 Response to questions on the impact of the proposed scheme on UK aviation and how it will maintain the UK's position as Europe's most important aviation hub

In response to the following Airports Commission questions:

- Strategic fit – how will the proposal support or enhance the UK's status as Europe's most important aviation hub?
- Economy – what is the likely impact of the proposal on the UK aviation industry?
- Economy – how will other airports be affected by the proposals and what will the impacts of this be for air passengers and other users, airlines and the wider economy?
- People – how will the proposal impact upon the passenger experience (e.g. choice, cost, accessibility)?

3.1 The future of the aviation industry

3.1.1 Airline industry in recovery

The world's airlines and airport representative organisations, International Air Transport Association (IATA) and Airports Council International (ACI), are bullish about the industry's future. ACI's major concern is with the lack of total capacity in Europe, not with the distribution of aircraft and passengers using those airports.[2] This is supported by IATA's decision, in June 2013, to upgrade its global outlook for the airline industry:

- Revenue: USD711 billion in 2013 (previously USD671 billion);
- Ancillary revenues contribution: 5% (up from 0.5% in 2007);
- Airline industry profit: USD12.7 billion, up USD2.1 billion from previous projection;
- Net margin: 1.8%;
- Return on invested capital: 4.8%.

Passenger growth forecast:

- Passenger traffic: 3.13 billion (exceeding 3 billion for the first time);
- Passenger capacity: 4.3%;
- Passenger demand; 5.3%;
- Passenger load factor: 80.3%;
- Passenger yields: 0.3%.

Passenger demand is expected to increase by between 1.7% and 15% per region, and across all regions. The only negative is a slight deterioration in cargo yields. However, these projections are based upon certain assumptions:

- IATA assumes global trade growth of 4%, GDP growth of 2.2% and, critically, a stable oil price (Brent) of USD108 per barrel, compared with USD109.5 in previous forecasts and an USD111.8 average for 2012.

- IATA and ACI's forecasts do not account for exogenous 'shocks' and their cumulative effect on airlines. The global airline system is based on a complex assortment of personal and commercial interactions. Incidents such as a volcano in Iceland can play havoc with an airline in Australia, disrupting its schedules and stranding passengers all around the world. The lack of resilience in the UK system means that an incident at Heathrow has similar 'ripple effects' on global aviation.
- Airline reports commonly describe their outlook of the market as "challenging", "volatile", and "uncertain". Uncertainty in particular has become the new normal. The extent of the industry's sense of uncertainty is reflected in the corporate objectives of leading airlines, which have been seeking to enhance their financial position, pay down debt, and align capacity to mass demand, whilst reducing costs and adopting more conservative fuel hedging positions.

Many legacy airlines are therefore seeking safety in numbers, to reduce costs and generate higher revenues and yields. This behaviour is cautious, reflecting the short-term need to protect shareholder value, rather than serve the needs of passengers and national economies. As a result, consolidation around the incumbent global alliances: Oneworld, SkyTeam, and Star Alliance (who account for 54.6% of global seat capacity), is set to continue.

3.2 Fragmentation and the shift eastwards

Recent trends are threatening the stability of the global alliances, the mainstay of consolidation. This has been driven by a shift to long-haul hubs in the Middle East, airline fragmentation and new market entrants:

- IATA's forecasts shows that Middle East airline traffic is projected to grow 6.4%, compounded annually, during the next 20 years, making it the world's fastest growing region for air traffic. This growth is fuelled by Gulf carriers and Turkish Airlines who continue to take advantage of (ICAO) sixth freedom travel organisation, connecting foreign countries via a transfer in the carrier's home country, a model that was once the preserve of both European and Asian carriers.
- Dubai Airport is expected to overtake London Heathrow as the world's busiest airport (based on largest number of international passengers) by 2016.
- There are increasingly more smaller, unaligned, nimble carriers joining the market which are lower cost and aggressively expansive, and that are moving to centre stage, even in the long-haul arena, such as AirAsia X (Malaysia), Scoot (Singapore), Jetstar (Australia and Hong Kong), Skymark (Japan) and proposed models by FlyA (Switzerland) and even Ryanair.
- Some airlines seem to perceive greater value in developing their own ad-hoc linear alliances with one or more additional carrier(s) to operate in specific regions. The agreement between Emirates and Qantas is a good example, while neighbouring Etihad Airways has negotiated four individual alliance agreements and is working on more. Changes of this sort are examples of the development of radial alliances – see Figure 2 – and may prove to be of some strategic benefit to airports such as Birmingham Airport.
- Another factor increasingly being taken into account in these 'do-we-merge/consolidate-or-not-and with-whom' scenarios is the continuing decline in premium traffic, which is currently hovering at around 8% of the total (January 2013), having been 9.6% in January 2007 and having fallen to a low of 7.5% in January 2009. The reduction of 1.5 percentage points might appear to be insignificant but it represents a much higher proportion of global revenues. Meanwhile the more nimble, often unaligned, carriers referred to earlier are able to negotiate a way through the economic quagmire more easily, without having to consider the effects of their actions on others.
- The eastwards swing is visible in the airport sector. Of the top 20 global airports in terms of seat capacity offered only three are in Europe (London Heathrow, Paris CDG and Frankfurt International). Nine are in Asia Pacific and two in the Gulf or the eastern edge of Europe/West Asia (Dubai and Istanbul). That figure contrasts interestingly with the regions with the highest seat capacity overall, in which category Europe comes second, only slightly behind North America. This suggests that seat capacity is much more widely spread already than at just the main 'focal airports'.
- Coincidentally, with the inaugural flight of the Airbus A350 on 14th June 2013, a future competitor to the existing and future Boeing 787 variants (which will now include a larger version for very long trips)

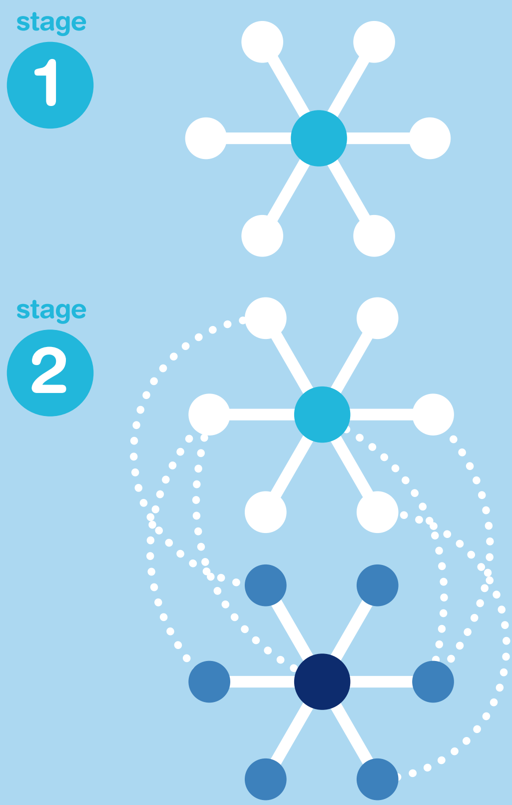
Figure 2 – the evolving "constellation" alliances

The new 'constellation' alliances – egocentric, covering specific geographical needs

Individually the ingredients of the new radial partnerships are not out of the ordinary for bilateral airline arrangements. But they gain their special character as the core airline develops the various, targeted, radial spokes and evolves into a comprehensive global strategy. To be a valuable partner, an airline needs to be able to provide:

- geographical access to discrete markets + beyond connectivity
- access to behind-gateway domestic markets
- reciprocal benefits, although not mirror reciprocity
- mutual competitive interests (including common 'enemies')
- codeshares (i) on common routes; (ii) beyond domestic gateways; and (iii) third country codeshares (where permitted)

And, preferably, but not necessarily, antitrust immunity and metal neutrality (including coordination and revenue sharing) is desirable.



and the B777X long range variants, the future for non-focal airports continues to look brighter. These aircraft (the so-called 'hub busters') possess a mix of economic parsimony and operational versatility that suits those airports well.

The interaction of these factors influences capacity restraint in the major aligned carriers, to the extent that the new growth, globally, is mostly from new airlines. As a result, examining past performance of (UK and European) airlines and their current business aspirations may not reflect the emerging global reality.

3.3 What these trends mean for the UK's non-focal major airports

The construction of additional airport infrastructure in and around London will not remove the threat to the gateway hub because the Gulf carriers, and Emirates in particular, have already established critical mass and have identified their airports in the minds of travellers as acceptable alternatives. Moreover, it is in the Middle East where airport, as well as airline, capacity is being added. Table 7 shows evidence of the commensurate benefits that connectivity via non-focal airports delivers for the wider UK economy.

3.4 Summary

The airline industry is likely to witness more liberalisation, fragmentation and a shift east. The difficulty is predicting the speed at which each of these trends will take place, and how they respond to each other. What this analysis shows is that the UK's reliance on a constrained Heathrow as its dominant gateway is unsustainable. Focal airports are important, and airports such as Birmingham and Manchester may or may not become focal airports themselves, but airlines are increasingly aware that UK catchments around these airports can support thick network airline spoke routes from a wider range of international focal airports, and long-haul point-to-point offered by new aircraft. We need long-haul airport assets across the country to deliver the flexibility and resilience the UK needs, both to engage with any development in the airline industry, and to better connect UK Plc.

3.5 Great Airports for Great Cities

The Airports Commission asked UK airports to develop proposals that will support or enhance the UK's position as an aviation hub, and to consider how those schemes promote future economic growth.

Research by Capital Economics, *Birmingham Airport's role in a balanced British economy*, makes a vital contribution to this debate. It uses surface access analysis by SDG, into the most convenient airport with long-haul capability that UK residents can reach by road or rail, to analyse the UK aviation market.[3]

SDG's analysis found that the 100% of residents in the UK are within a maximum of 2 hour journey time from one of four macro regions – London, Birmingham, Manchester and Scotland. Each of these regions, London excluded, has one major long-haul airport.

Using this catchment analysis, Capital Economics studied the economic activity in each region. They found that each of these macro regions has its own economic identity and requires unique international connectivity to cater for those needs. The Commission is guided towards the Capital Economics report for information on the type of activity each airport catchment supports.

The SDG and Capital Economics analyses make the case for why the UK's great cities need great airports to compete in the twenty-first century. **The Government's long-term national aviation policy should support and promote growth at a network of major long-haul airports delivering aviation capacity and connectivity to the key strategic city regions of Britain – see Appendix 4.** The benefits of this approach are summarised in Table 8.

3.6 Birmingham Airport and a network solution for UK aviation policy

On a purely regional basis, this proposal is about ensuring that the Greater Midlands region has the infrastructure it needs to plug the economy it supports into global wealth in the twenty-first century.

Chapter 1 explained the nature and scale of Birmingham Airport's proposal for delivering additional capacity and connectivity for the UK. **Birmingham Airport asks the Commission to short-list its scheme and recognise it as an option that could support and enhance the UK's status as Europe's most important aviation hub.**

The spare capacity already available at Birmingham means that the indicative timeframe for any further development would be around 2030. This year reflects forecasted traffic growth and would enable the new terminal/ runway to benefit from the domestic connectivity and infrastructure pipeline created by planned investments in High-Speed Two (HS2) and UK Central.

Table 7 – Analysis of the impact of air connectivity from non-focal airports in the UK

City region	Explanation
Manchester	The Gulf carriers reacted to the withdrawal of British Airways services from Manchester Airport by making Manchester their second airport in Europe in terms of the number of weekly services available to and from the Gulf.
Newcastle	Analysis by UK Trade & Investment suggests that since the introduction of a daily service to Dubai by Emirates in September 2007, the region there has been a notable boost to exports and trade. The analysis shows a rise in trade from £150 million to £275 million between the North East and Australasia over the period 2007–2012. A study of the International Passenger Survey, UK Civil Aviation Authority (CAA) Passenger Survey and CAA Statistics also leads to an estimate that inbound passengers on the Dubai service spent around £16.7 million in the North East of England in 2012, supporting around 230 jobs in the tourism industry. Separate research has analysed the journey time benefits derived from shorter travelling times for passengers and businesses and the productivity benefits triggered by these. On the basis of 2012 traffic levels, the consultancy suggests the service will bring net economic benefits of £4.6 million to the North East or when considered across the five year life of the service, around £20.3 million since September 2007.
Birmingham	Air India has just launched a new Birmingham-Delhi route on one of its new Boeing 787 Dreamliners. Tickets have gone on sale for flights starting 1st August 2013. This is further proof that there is strong demand for strategic long-haul services from the Midlands region and that point-to-point is viable outside of Heathrow and that it continues to evolve.

Table 8 – Benefits of Birmingham Airport's Great Airports for Great Cities aviation strategy

Benefit of long-term strategy	Explanation
Sustainable catchment areas	It is essential that the economic activity and passenger demand in the catchment areas dictate the size of each of these gateways. Research by Capital Economics and SDG reveals that there are four regions that have large enough catchments to support a major long-haul airport – London,[4] Midlands, North West and Scotland.
Global connectivity within 2hours for all	Basing an aviation strategy around these four gateways would ensure that 100% of residents in the UK live within 2hours surface access journey time of at least one UK airport with global connectivity.
Plugging the UK into global wealth	Each of these airports should act as the international connectivity dimension of that region's economic growth strategy, and support growth in the twenty-first century.
Rebalancing the economy by sharing the benefits of an economic enabler	Promoting connectivity at four strategic airports, whether hub or point-to-point, builds on research by the CBI, *Trading Places* (2013). The CBI found that transport infrastructure and international connectivity are economic enablers that provide a pathway to a virtuous cycle of growth. Aviation policy is not just about runways, each major regional economy cannot succeed without its own meaningful international gateway.
A 'one airport' solution is not a national aviation strategy	Only by pursuing a truly national aviation strategy based on a network of national airports will the Commission achieve its objective of maintaining the UK's status as Europe's most important aviation hub.
Enhancing our status as Europe's aviation hub	A strategy that actively promotes a network of national airports will ensure that the UK's range of freight and passenger airport assets surpass those of our European competitors – such as Germany, France, Netherlands.
Responsive to changes in the airline industry	A network strategy will ensure that as the UK economy develops over the twenty-first century, it has infrastructure with the flexibility and resilience to respond to any type of development in the airline industry. Only with a network can the UK have the agility it needs to cater for the route consolidating, profit-maximising and uncertainty driving the corporate strategies of established legacy airlines, the footloose and profit-chasing characteristics of new long-haul airline entrants, and dynamism of Europe's low-cost carriers.

The Airport's vision is not, on its own, a national aviation strategy. A one airport solution cannot be a national aviation strategy because the UK is too big for all traffic and demand to be supported by one 'focal' airport. Birmingham Airport's proposal forms part of a network solution for the UK which would deliver Great Airports for Great Cities.

By indicating that Birmingham Airport would seek to be in a position to develop new capacity for 2030, the vision does not imply an immediate commitment or desire on behalf of the Airport Company to start development now, but maintains long-term scope to do so as and when demand growth forecasts justify. There are three key strengths to this position – continuity, complementarity and consistency:

1. **Continuity** – the Airport's short and medium-term proposals fit with the Airport's longer-term ambitions. By moving the proposed second runway to the East of the current site, our proposals can, to a large extent, be "turned up", or increased in delivery speed, in response to government policy and/ or changes in passenger demand.
2. **Complementarity** – unlike the leading schemes being promoted in the South East, which are mutually exclusive, expansion at Birmingham Airport is complementary to a new super hub in the South East or a dispersed solution, either of which would ensure that the UK has Great Airports for its Great Cities.
3. **Consistency** – Birmingham Airport has never changed its position about its short, medium and long-term aspirations to support the Midlands and UK economy. The Airport has always said that it did not foresee the need for a second runway before 2030, and has already made public its case for how moving it to the East of the current site would enhance the Airport's long-term offering. This consistency of message and aspiration has helped the Airport build the type of meaningful and sustainable local community relations that allowed the Airport to secure planning permission for its runway extension, without recourse to public inquiry, appeal, or judicial review. This is in stark contrast to Heathrow, which has subjected local communities, London's authorities and national legislators to a number of mixed messages and perceived broken promises:

- Terminal 5 will be the end/ no need for a third runway
- We want to build a third runway but not a fourth
- Maybe we will need a fourth in the future
- We need mixed mode/no need for mixed mode

This vacillating approach to public engagement has eroded trust across London and led the Mayor of London to declare that "Heathrow's bosses are treating the public like absolute idiots".[5]

The long-term nature of Birmingham Airport's proposal means that it fundamentally differs from the leading, publically promoted schemes for additional capacity in the South East: Heathrow Airport (incremental expansion), Gatwick Airport (incremental expansion) and Transport for London (construction of a new hub).

Unlike Birmingham, each of these sponsors is attempting to expand their existing airport sites, or construct a new airport, immediately.

Based on public statements, their submissions are expected to reflect this. Consequently, each promoter is seeking to have their scheme short-listed by the Commission for Phase 2 scrutiny, and, ultimately, recommended to Government as the Commission's preferred scheme in its Final Report in 2015.

On the basis of publically launched schemes and the views included within the Airports Commission's Discussion Paper on Airport Operating Models, Birmingham Airport believes that there are three leading variations in long-term policy that the Commission could pursue:

1. Incremental expansion of capacity at Heathrow to deliver a third runway, with additional future runway capacity safeguarded, and possible expansion at Gatwick in the long-term.
2. A dispersed model based on competition between a network of airports serving the South East with Heathrow managed as a constrained hub. This would involve the Commission supporting incremental expansion at Gatwick immediately and safeguarding expansion at Birmingham or Stansted in response to future demand.
3. The construction of a new hub in the South East and consolidation of the London airport network, as proposed by Transport for London. This would involve the likely closure of Heathrow, making the best use of existing capacity at Birmingham, Stansted and Gatwick during the transition period while a new airport is built, and support for expansion at Birmingham or Stansted as demand dictates.

The relationship between Birmingham Airport's second runway and other publically promoted long-term schemes for additional capacity is summarised in Table 9.

Birmingham Airport does not oppose the continued operation of Heathrow as a major hub, but is opposed to the type of expansion proposed by Heathrow in their latest report, *Best Placed for Britain*, for three main reasons:

1. A third runway at Heathrow is a 15–20 million passenger answer to a 100 million passenger problem in the long-term. Once the runway is built, it will immediately require a fourth. If the Commission decides it wants a hub solution for the South East, the chosen airport should have at least four runways and room for further expansion. Through no fault of its own, Heathrow's location in the centre of West London precludes this level of expansion.
2. The Coalition Agreement, Labour Party, Mayor for London, London Assembly Members and numerous Local Authorities have ruled out expanding Heathrow beyond 480,000 Air Traffic Movements because it would expose too many people living in West London to unacceptable noise and air pollution. Birmingham Airport supports this position.
3. It is often suggested that only Heathrow can be a hub in the UK. This is true only insofar as British Airways (BA) will not commit to a more distributed model of service, so long as the Heathrow three runway option remains on the table. However, foreign flagship carreirs have succeeded by using multiple hubs. Basing long-term plans on the strategy of one airline is risky because most of the airlines which are flying today were not here 30 years ago and many of the giants of the 1980s are now defunct. A more sensible strategy would be based on underlying demand for travel.

The striking feature of Table 9 is that Birmingham Airport's scheme complements the different expansion schemes and national policy strategies promoted by Gatwick, which would keep Heathrow open, and Transport for London, which would close Heathrow.

If the Commission decides that the solution to the South East is a new mega-hub, and it can overcome the immense challenges to building it and closing existing airports, Birmingham Airport is ideally placed to provide additional long-haul capacity and connectivity for the South East during that transition period.

However, if the Commission decides to operate Heathrow as a constrained hub and chooses to expand existing airports, Birmingham Airport will be an essential piece of the jigsaw. Its central location makes it an ideal partner for a more dispersed, competition-based model for UK aviation.

Both of these scenarios would deliver Great Airports for Britain's Great Cities. A network of airports to provide the flexibility and resilience the UK needs to respond to changes in aviation industry, and infrastructure assets that match those currently serving Germany, Europe's leading economy.

3.7 Impacts on other airports

The proposed development to the east of Birmingham Airport brings the Airport closer to Coventry Airport.

In April 2006, Coventry Airport was granted planning permission on appeal for the 'Interim Passenger Facility'(IPF). This permission was capped to 0.98mppa and 10,700 Passenger Air Transport Movements a year, with five flights permitted between 0700 and 0759 peak hour. In June 2007, Coventry Airport was refused permission on appeal for the construction of a passenger terminal and associated works capable of handling 2mppa.

Table 9 – A strategic table showing how various proposed expansion schemes relate to each other

	Birmingham 2rw	Heathrow 3rw	Heathrow 4rw	Gatwick 2rw	Stansted 2rw	Stansted 4rw	Thames Estuary Inner 4rw	Thames Estuary Outer 4rw
Birmingham 2rw		N	N	Y	P	P	Y	Y
Heathrow 3rw	N		Y	P	P	N	N	N
Heathrow 4rw	N	Y		N	N	N	N	N
Gatwick 2rw	Y	P	N		Y	N	N	N
Stansted 2rw	P	P	N	Y		Y	N	N
Stansted 4rw	P	N	N	N	Y		N	N
Thames Estuary Inner 4rw	Y	N	N	N	N	N		N
Thames Estuary Outer 4rw	Y	N	N	N	N	N	N	

Y = fully compatible P = Potentially compatible N = incompatible

A key reason for the refusal of the appeal was on sustainability grounds, and specifically, on the proximity of Coventry Airport to Birmingham Airport; “Coventry Airport is always likely to experience a relatively poor public transport provision, when compared to Birmingham International Airport”… “if the appeal is dismissed, virtually all the services which would have been provided would be readily available a relatively short distance away at Birmingham International Airport … on the face of it, there is some merit in the argument that there is no need for the proposed development, and it also has a bearing on the sustainability objective of reducing the need to travel by car.”[6]

Since 2007, public transport provision at Birmingham Airport has continued to grow. It seems a reasonable assumption therefore that any future application to grow Coventry Airport beyond its current approved limits of 0.98mppa would be unsuccessful on similar grounds of sustainability. The growth of Birmingham Airport as suggested in this chapter would not have a material effect on this decision.

4 Response to questions on how the proposed scheme supports the Government's wider economic objectives and its potential national economic impacts

In response to the following Airports Commission questions:

- Does the proposal support the Government's wider objectives and legal requirements (for example, support of national and regional economic growth, re-balancing of the economy)?
- Promoter's assessment of how the additional aviation capacity and connectivity enabled by their proposals impacts upon the nation's economy as a whole – including growth across the regions.
- Impacts on trade, FDI, tourism and enhanced access to international aviation services for passengers and freight throughout the country.

Birmingham Airport, Capital Economics and the West Midlands Economic Forum have published extensively on how Birmingham Airport's proposed scheme supports the Government's wider economic objectives and its potential national economic impacts:

1. Birmingham Airport, *Don't put all your eggs in one basket – a challenge to aviation orthodoxy*, 2012.
2. West Midlands Economic Forum, *Birmingham Airport – Stimulating Revival, the role of Birmingham Airport in rebalancing economic growth*, 2012.
3. Birmingham Airport, *Response to the Airports Commission's Discussion Paper 02 Aviation Connectivity and the Economy* – 2013.
4. Birmingham Airport, *Proposal for making best use of existing capacity in the short and medium term* – 2013.
5. Capital Economics, *Birmingham Airport's role in a balanced British economy – an initial examination of the macroeconomic potential of Birmingham Airport with extended long-haul capabilities, 2013.*
6. West Midlands Economic Forum, *Exports, Economy and Connectivity – the potential for, and impact of, aviation links on the Midlands economy*, 2013.

These reports have been shared with the Airports Commission as part of prior work streams. However, for a full account of the contribution Birmingham Airport would make, all of these reports can be can be downloaded at www.balancedaviationdebate.com, or http://westmidlandseconomicforum.co.uk.

5 Response to questions on the likely local social and economic impacts, and management of, the proposed scheme

In response to the following Airports Commission questions:

- What are the likely impacts of the proposal on the regional/ local economies surrounding the proposed site for the new or enhanced capacity, other airports affected by the proposal, for example on: employment, labour, agglomeration, housing, business, regional strategies?
- What are the likely local social impacts of the proposal, including impacts around the proposed location for new capacity and around any other airports which would be affected, for example on: employment, housing, local communities, vulnerable groups, quality of life and health?
- Are there other significant wider social impacts of the proposal which should be taken into account?
- How does the proposed plan to engage with local communities in taking forward their plans?

5.1 Alignment with local economic growth and regional development strategies

Expansion at Birmingham Airport will provide the range, scale and choice of international connectivity to support, enable and drive local economic growth and the region's emerging development strategies. The supportive Councils, the West Midlands Local Enterprise Partnerships (LEPs) and the network of West Midlands Chambers of Commerce recognise this. The Airport acknowledges their support in developing our long-term vision and submissions to the Commission.

There are three significant regional development strategies in the West Midlands at the moment:

1. The Greater Birmingham Solihull Local Enterprise Partnership's (GBSLEP) strategic framework, *Delivering Growth*, which builds on the Heseltine *No Stone Unturned – in pursuit of Growth* review and subsequent report *The Greater Birmingham Project: The Path To Local Growth*;
2. The Black Country's Core Strategy, setting out a detailed spatial strategy and the policies and mechanisms needed to deliver economic growth;
3. Solihull Metropolitan Borough Council's M42 Economic Gateway project – *UK Central*.

The proposed expansion of Birmingham Airport is fully aligned with all three.

Solihull's M42 Economic Gateway project – *UK Central* – was launched in June 2013. In their launch document, Solihull recognises that the 'unique concentration of strategic economic assets in Solihull that includes Jaguar Land Rover, Birmingham Airport and the NEC – offers an opportunity for growth on a scale that is of national significance'. UK Central is 'in pole position to be the engine room of the West Midlands economy'.[7] An expanded Birmingham Airport is an essential part of UK Central's ambitions.

The GBSLEP strategy demonstrates that the region's public and private leaders are 'determined to exploit the opportunity… to rebalance the UK economy'. They recognise that empowering the city-region to become more productive and more prosperous depends on a successful Birmingham Airport, integrated with existing and future transport infrastructure. The LEP has committed to working with the Airport to increase route development East and West. The connectivity offered by an expanded Birmingham Airport aligns with the LEP's three strategic pillars: Business, People and Place, and supports the LEPs six 'strategic enablers', which have been designed to deliver growth for the city-region – see Table 10.

This potential for such a scheme was also identified as one of Lord Heseltine's key priorities for *The Greater Birmingham Project: The Path to Local Growth*.

> *"The M42 Economic Gateway in Solihull is a fantastic opportunity, not just for Greater Birmingham and Solihull but also for the UK. The GBSLEP will develop a strategic framework and development plan, through a Development Corporation-type approach or similar, which combines targeted investment in local infrastructure ensuring that the M42 Economic Gateway can fully capitalise from the investment opportunities that the expansion of Birmingham Airport and High Speed 2 will bring. The Single Pot will enable the far more effective pooling of local and central resources which can be used alongside other funding mechanisms – such as GBS Finance – and ensure that investment can be prioritised effectively and co-ordinated locally."*[8]

In addition, the GBSLEP area has been pioneering in its approach to modern spatial planning following the abolition of Regional Plans. Partners within the region, including the Airport, have contributed to a draft Spatial Plan for the GBSLEP area which will be consulted upon in Summer 2013. This has been led by Birminghan City Council but supported by genuine cross-sector collaboration. The draft plan will support the expansion of the Airport, in line with wider GBSLEP aims, and contains a strategic objective to enhance and increase links to the region's key international gateway, Birmingham Airport.

The Black Country's Core Strategy seeks to make the most of the Black Country's accessibility and location to attract new employment opportunities and investment in innovation and technology, and to deliver a network of successful strategic centres. An integrated transport network with connectivity to national and international markets is critical to delivering economic growth and Birmingham Airport's ambitions for growth directly support those of the Black Country.

The Airport's vision has also been supported by both Worcestershire, and the Stoke & Staffordshire LEPs – demonstrating the wider economic benefits of the Airport to its long-haul catchment area.

5.2 Local social and economic impacts of the proposed development scheme

5.2.1 Jobs and growth

The Airport is a major local and regional employer.

Table 10 – How Birmingham Airport supports GBSLEP's six strategic enablers

GBSLEP Strategic enabler	Expansion at Birmingham Airport will support this objective
Growing the number of successful businesses	78% of manufacturers based in the Midlands that responded to the EEF survey on connectivity called for the expansion of regional airports and 70% of respondents identified the air network as critical or important to their business.[9]
Building on our sector strengths and opportunities	Birmingham Airport's catchment area economy has the largest share of export-intensive manufacturing activity of any airport catchment, which is dependent on connectivity for trade and investment.
Stimulating innovation in products, processes, services and business structure	Over the last few decades, post-production services have grown to account for c. 40% of the total value of the manufacturing trade. With long-haul connectivity, the region's flagship companies – JLR, MG Motor UK, Rolls Royce – will be able to compete with rival economies for this market by having engineers, technicians and sales representatives to a client within one working day.
Improving our skills talent pool	Delivering connectivity for the UK's manufacturing centre will drive job creation and training opportunities, diversifying and expanding the talent pool.
Improving physical and digital connectivity	The LEPs and the Airport have created a strategic transport alliance to increase route development East and West, bringing the international marketplace to the door of Midlands' businesses and passengers.
Optimising physical, cultural and environmental assets	Integrating the Airport with local light rail and national high-speed rail will maximise the value of investments and encourage a modal shift onto rail, generating positive environmental externalities.

Table 11 shows detailed estimates of the economic benefits that expansion at the Airport on the current runway would deliver.

Arup analysed the growth implications of Solihull's UK Central scheme. The results are shown in Table 12. They provide a valuable insight into the likely economic impact of aligning the proposed expansion of Birmingham Airport, HS2 and UK Central and turning the development into a transport logistics hub for the centre of the UK.

Solihull's study reveals that the economic contribution of the key economic assets in the M42 Economic Gateway can be expected to increase significantly: up to 150,000 jobs and approaching £16 billion in respect of local GDP per annum by 2040. This represents an additional 94,000 jobs and £9bn in GDP per annum for the West Midlands region, compared with the 'Business as Usual' scenario in which use of Birmingham Airport is very limited. However, Birmingham Airport's proposed scheme is larger than the M42 Economic Gateway study and it is reasonable to assume that Arup's estimates of the economic contribution it would make are therefore conservative. Initial analysis by the WMEF estimates that the direct and indirect economic benefits of expansion at Birmingham Airport would create the equivalent to 243,000 jobs in the wider economy for every 36mppa.[10]

The real opportunity is for the Midlands to have a plan that ensures it accrues all of the benefits on offer from having a fifteen year infrastructure pipeline in the region. A key goal of Sir John Armitt's independent review of infrastructure is to prevent the type of poor planning that led to a fifteen year gap between investment in HS1 and Crossrail, despite both schemes using similar skills sets, capital stock and management.[11] Staggering development so that investment in UK Central, HS2 and

Table 11 – Economic benefits of expansion at Birmingham Airport*

Employment impacts (FTE jobs)	13,079,000ppa	20,939,000ppa	27,189,000ppa
Birmingham	2,090	2,750	3,010
Solihull	9,640	12,470	13,450
Former County West Mids	12,720	16,520	17,880
West Mids Region	13,430	17,630	19,090
Income impacts (£ millions)			
Birmingham	191	307	394
Solihull	71	115	147
Former County West Mids	326	524	671
West Mids Region	400	642	824

* Figures correspond to the years and forecasts in the 2007 runway extension planning application. FTE jobs rounded to nearest 10, income rounded to nearest £1m.

Table 12 – Estimated economic contribution of key economic assets in the M42 Economic gateway by 2040*

Employment impacts (FTE jobs)	2012	2040 (scenario 1)	2040 (scenario 2)	2040 (scenario 3)
Solihull	50,471	106,700	125,288	145,373
GBS LEP	82,594	145,586	165,844	187,634
West Mids Region	100,876	175,476	197,582	221,246
Total GDP impacts (£ millions)				
Solihull	3,002	11,383	13,229	15,136
GBS LEP	4,520	14,654	16,660	18,735
West Mids Region	5,335	17,053	19,247	21,516

* Figures are gross and thus include the current contribution of the key economic assets in the region.

the Airport follow-on from one another would maximise labour and capital resource use, reduce costs across the supply chain, reduce the individual cost of each investment and maximise the return for the taxpayer and private investors. The Airport hopes to consider this opportunity in further details as part of the Commission's Phase 2 work.

What is clear from these figures is that Birrmingham Airport's proposal is of a scale of ambition that would consolidate the region's development strategies and deliver the infrastructure needed to plug the greater Midlands economy into global wealth for the next century.

5.2.2 Housing and social displacement

The proposed second runway location and associated developments would necessitate the removal of some properties, both residential and general commercial. The Airport will undertake detailed design work as part of our Phase 2 work to calculate the precise numbers and mitigation measures. However, the new location is located on a comparatively sparsely populated area, compared to the existing runway, and initial studies suggest that the number of affected properties would be in the tens rather than hundreds or thousands.

The Airport envisages that the employment opportunities at the expanded airport site, and associated developments such as HS2 and UK Central, would stimulate a large demand for new housing in the access to work area. Fortunately, existing local and regional strategies have made provision for the expansion of local housing for up to 2025–2030. The Airport also envisages that the pioneering GBSLEP Spatial Plan will have a role to play in this area in the future.

A growing population is likely to generate a higher demand for suface access to and from the Airport from the Black Country, Coventry and GBSLEP region. Chapter 5 provides details of how the Airport, aligned with UK Central, proposes to cater for this demand.

5.2.3 Overcoming local deprivation

Table 13 shows the levels of worklessness, JSA claimants and relative deprivation levels across the Greater Birmingham and Solihull region.

These figures show that Birmingham Airport is situated amidst several communities that are suffering from acute levels of deprivation. Problems of economic and social exclusion are particularly acute in parts of East Birmingham close to the Airport and in the adjacent four wards of North Solihull, collectively known as the North Solihull Regeneration Area. The regeneration of this area has been identified as a 'step change priority' by the council.

Youth unemployment is another major issue facing the region. The population of Birmingham is one of the most youthful in Europe, with 46% of residents younger than 30, compared with the England average of 38%. Population projections suggest that Birmingham's population is expected to grow by more than 150,000 by 2028. The City's youthful profile means that its working age population will grow at nearly twice the national rate over this period. Seasonally adjusted youth unemployment rates in Birmingham already stand at 20.4%, compared with a UK rate of 11.6%, and is forecast to rise.

Birmingham also has a high proportion, close to 20%, of its working age population with no formal qualifications. This is higher than any other English core city and concentrations are among the highest in the wards closest to the Airport.

Birmingham Airport recognises that the provision of a wide range of full and part-time employment opportunities, at all skill levels, can make a significant contribution to tackling some of these issues. The Airport Company will work with local authorities, education and training providers and other employers at the Airport to implement a Site Employment and Training Strategy for the Airport, which will respond to issues of unemployment and worklessness in Solihull, Birmingham and the West Midlands with a particular focus on the East Birmingham and North Solihull Regeneration Zone. The Airport hopes to develop this proposal in greater detail as part of the Commission's Phase 2 analysis.

If policy is laid down then there is an early opportunity to create a local skills base through education; a 'pipeline' to feed the infrastructure projects across Greater Birmingham. The development of the Airport's vision will allow the Airport and complementary development to play its full role in helping to combat these local levels of deprivation and provide substantial opportunities for the youth of the area.

Table 13 – Deprivation indicators across wards in Birmingham and Solihull

Location	%working age population claiming JSA and National Insurance Credits	%working age population claiming an out-of-work benefit	% population living in 5% most deprived SOAs in England	% population living in 10% most deprived SOAs in England
UK	**3.6**	**14.1**		
Birmingham	**6.9**	**20.6**	**23**	**40**
Bordesley Green	19.8	20.0	30	88
Hodge Hill	7.5	24.8	28	41
Shard End	9.0	30.2	54	85
Sheldon	5.5	19.2	15	22
South Yardley	7.3	19.5*	24	50
Stechford & Yardley North	7.0	22.7	25	38
Washwood Heath	11.0	25.7	90	94
Solihull	**3.2**	**12.3**	**N/A**	**11.2**
Chelmsley Wood	9.4	30.2	44	66
Fordbridge	9.4	28.6	11	66
Kingshurst	7.4	25.0	11	66
Smith's Wood	8.1	23.6	0	37.5
NSRA	**8.6**	**27.8**	**16.5**	**58.9**

Source ONS[12]

5.3 Local engagement strategy for proposed expansion scheme

Birmingham Airport has a strong track record in engaging with local communities to address issues of local concern surrounding its operations. The Airport's community relations activities include investment in community projects through the Community Trust Fund and in mitigating the impact of aircraft noise through the Sound Insulation Scheme and the Schools Environment Improvement Scheme. In 2012, total investment in these and other community relations activities amounted to in excess of £400,000.

Examples of the Airport Company's active community engagement programme include a Community Alerts scheme to advise of unusual activity that may have the potential to cause disturbance and an Outreach Scheme where Airport staff are available for informal discussions on any area of community interest at convenient local venues and times, including evenings and weekends. These initiatives are among a range of activities that complement the work of a supportive Airport Consultative Committee and its sub-groups.

They are an important element in the promotion of a positive relationship between the Airport Company and its local stakeholders that helped deliver £100m worth of development, including terminal capacity, runway extension and hangerage – all without recourse to Judicial Review, appeal or public inquiry.

The Airport Company's commitment to transparency is further demonstrated by the decision to launch our long-term vision for the Airport on 10th June. The event was attended by leading business and political figures from across the Midlands and there was extensive media involvement. Following this announcement, the Airport briefed the Airport Consultative Committee and hosted a local authority day, in which local Councillors were briefed on the Airport's plans by the executive team. The Airport is hosting a similar event for additional Councillors on 18th July, and a series of further events will take place as required.

The Airport Company will seek to continue this process of engagement after the 19th July deadline, and looks forward to working with the Commission should the vision be short listed for future scrutiny.

6 Response to questions on surface access requirements for the proposed scheme

In response to the following Airports Commission questions:

- The potential need for new surface transport infrastructure.
- Implications for existing surface transport network.

Surface access is a critical consideration for choosing an airport. Excellent accessibility helps the market perform more efficiently by reducing journey times across the UK for passengers and freight. This allows airports to compete for the traffic from the same population centres, enabling customers to make a more informed decision about where to fly from. High quality air-rail connectivity greatly enhances passenger experience and increases the attractiveness of international gateways to tourists, and potential investors. Encouraging a modal shift away from car onto rail generates large positive environmental externalities by limiting surface access emissions and improving air quality.

Surface access connectivity is a key strength of this proposal. The Airport already benefits from integrated air, rail and road connectivity, and HS2 is scheduled to begin operations between Birmingham and London in 2026. When HS2 is complete, Birmingham Airport will be the most accessible airport for over 19 million people living in the UK, making it Britain's most accessible airport.

6.1 2030 Current Site

As a follow on for work carried out for HS2 Ltd, Arup produced a traffic model for the Airport to analyse future traffic conditions, both on the existing site and on our proposed second runway location. Their model included assumptions based on Birmingham Airport operating at 26.2mppa, the completion of HS2 and a number of other local sustainable transport interventions. At this level of demand, Arup concluded that the M42 motorway corridor would be operating over capacity.

This means that infrastructure improvements will be needed regardless of whether the Airport develops a second runway. The M42 corridor would need to be upgraded to provide between four and five lanes in each direction between its junctions with the M6 and M5 motorways. Additionally, the M6 north of the M42 would permanently require four lanes running in each direction.

6.2 UK Central infrastructure proposals

UK Central will involve substantial improvements being made to the local road infrastructure. Solihull aims to 'deliver investment infrastructure quickly', with 'improvements to J6 [on the M42] acting as the first significant project delivered by UKC' – see Appendix 8 & 9. UK Central's Master Plan states the following:

> *"The preferred strategy for M42 junction 6 is to replace the existing junction with two separate new junctions to better manage competing demands (and growth) and which would each serve discrete purposes, as follows:*
>
> - *a northern junction would provide access into the hub, the NEC, north Solihull, Coleshill and HS2. It is estimated that these uses could generate in the region of 5,500–6,500 trips in a busy hour;*

- *the southern junction would provide access to Birmingham Airport, the A45 corridor and destinations off the A45 corridor. It is broadly estimated that this junction would serve in the region of 6,000–9,000 vehicles per hour.*
- *A two junction strategy would create the capacity to accommodate growth as well as providing greater network resilience. The M42 corridor suffers if an incident occurs at Junction 6 as the number of alternative access routes is limited. Having two junctions would provide the opportunity to divert traffic. The proposed two junctions would interface with the local highway network to ensure that connectivity and access are maintained and in some cases even enhanced."*

The Master Plan indicates that works will commence in 2015 and be finished by 2019, far in advance of the proposed airport development.

6.3 2030 Vision

Table 14 summarises the forecasted flows on the local motorway links that would result from the modified J6 layout.

The complementary nature of UK Central's proposed infrastructure improvements mean that Birmingham Airport does not anticipate the proposed expansion scheme would have any significant impacts on the wider road network beyond those identified by UK Central. It also confirms that the proposed expansion scheme will enable substantial growth in air passenger numbers over and above the capability of a second runway.

6.4 Very long-term expansion post-2063 and model assumptions

Arup also assessed the traffic implications of very long-term growth at the Airport and from UK Central post-2063, beyond 70mppa. Their analysis showed that the M42 would need additional investment to cater for forecasted growth. Arup concluded that the proposed scheme will not add significantly to traffic growth, over and above the forecast infrastructure that would be required to meet expected 2063 levels. This is because growth is predominantly driven by 'background' traffic, rather than airport specific traffic.

6.5 Rail (High-Speed and Classic)

A large portion of the Midlands is accessible by rail within one hour from Birmingham Airport, including Coventry, Walsall, Wolverhampton, Northampton and Milton Keynes. In total, just over 2 million passengers accessed Birmingham Airport by rail in 2012.

To support Birmingham Airport's submission to the Commission, the Airport commissioned SDG to analyse how current, planned and potential rail service improvements would improve surface access connectivity to the Airport.[13] Their model, based on rail connectivity for c. 80% of the Airport's potential

Table 14 – forecast scheme (2030) Typical Weekday Peak Hour Traffic Flows

Link	Direction	2030 Base + Development AM	2030 Base + Development PM	Carriageway Required
M42 between northern and southern proposed junctions	NB	10500	9400	M6
	SB	9700	10700	M6
M42 between southern proposed junction and junction 5	NB	7800	7300	M4
	SB	7600	7900	M4
Diverted A45 west of proposed junction	EB	2700	3800	D2
	WB	3300	4100	D3
M42 between northern proposed junction and Junction 7	NB	7300	9000	M5
	SB	8900	6800	M5

M= Motorway, D= Dual Carriageway

catchment, revealed that 3.1m people live within one hour of Birmingham Airport by rail. This gave the Airport a maximum one hour rail journey catchment of 10.3mppa.

The proposed HS2 development and the Interchange station will be 1.5km from the existing airport terminal facility (connected by a high speed link) and directly linked to the proposed airport expansion site. SDG's analysis shows that HS2, and associated rail service improvements, will fundamentally change Birmingham Airport's surface access offering, and the potential shape of the UK air-rail network. Birmingham Airport will become a multi-modal transport hub for the centre of the UK economy and bring an additional 5 million people, or over 80 million air passenger journeys, within an hour's rail journey of the Airport. **By 2032, 15.1million people will live within 1 hour of Birmingham Airport, and 45 million people – or nearly three quarters of the total UK population – will live within 2 hours of the Airport**.

As detailed in our short and medium-term submission, there are numerous schemes that could improve rail access to Birmingham Airport, including: **the Birmingham Gateway project, programmed improvements to the Coventry-Nuneaton line, improvements to services to Wolverhampton, Nottingham, Derbyshire and Yorkshire, Project 110 London Midland, and enhancements to early morning/ late night/ Sunday services to the Airport.**

In the Black Country, the Wolverhampton Interchange will help transform the City Centre by creating a state of the art public transport hub, providing improved access to Birmingham Airport and the National Rail Network. It will improve sustainable access to the airport from the western part of the conurbation.

The reopening of the 'Whitacre Link' is a potentially attractive scheme for improving rail access to the Airport – see appendix 6.[14] Investment in this scheme, estimated to be £243 million, would allow passengers to access the Airport via a non-stop service from Derby, which would take less than 40 minutes, compared to the current journey time of 85 minutes. The Link (for which the relevant planning permissions would be required) could also open up significant areas of the East Midlands and offer wide ranging connectivity benefits to the West Midlands (including the Black Country), allowing trains to bypass the congested central Birmingham area and access Coventry and Warwickshire more easily. The line could also have a significant role to play in freight traffic, with a potential for Birmingham to become the first UK airport with a direct rail freight connection.[15] Appendix 5 provides estimates of the difference/saving in journey times from selected locations that HS2 and the Whitacre Link will offer to passengers considering access to the Airport by rail.

Appendix 7 shows Birmingham Airport's rail and road network from 2032.

6.6 Rail (Light)

A medium-term aspiration of Centro is to extend the Midland Metro from Birmingham to the Airport (either via the A45 or through East Birmingham), allowing significant communities to access the Airport and the wider M42 Economic Gateway more easily.

UK Central's Master Plan identified that the 'development of a quality public transport corridor is seen as an essential part of the the transport strategy' for connecting Solihull Town Centre to the Airport and HS2 – see Appendix 9. UK Central that investment would provide:

- *"Quick and efficient movement between the hubs and the regional/national rail networks… improved connectivity between Blythe Valley Business Park Solihull and Birmingham International Station* [and Airport]*… the opportunity to interchange with Centro's Midland Metro extension… [and] the opportunity to interchange with HS2.*
- *Accessibility to employment opportunities for areas of east Birmingham and North Solihull.*
- *The opportunity to extend the corridor further in either direction."*

The preferred system identified by the study *"would be an extension to the Centro light rail/rapid transit proposals which connect Birmingham City Centre with the airport/NEC via East Birmingham and North Solihull. The extended system would continue down through the Hub serving the Birmingham Airport/ NEC/ proposed HS2 interchange area, connecting to Solihull Town Centre and Solihull Rail Station and extending to Blythe Valley Business Park. The*

LRT is proposed to pass through areas of east Birmingham and north Solihull and this would open up potential connectivity to employment opportunities at the Hub, Solihull Town Centre and Blythe Valley Business Park."

A fully integrated light rail 'cross' network, linking Solihull Town Centre, Birmingham City Centre and residential area, the Black Country and East Birmingham and North Solihull to the Airport and HS2 would represent a significant opportunity for the area, the Airport, local residents and regional businesses.

6.7 Bus and coach

Bus connectivity is extremely important because it ensures affordable connectively for employees at the Airport site. The Airport has made substantial contributions to improving bus access to support passengers and employees over the last ten years. Currently, Birmingham Airport has over 120 coach services a day, serving 35 main towns and cities across the UK. Birmingham Airport will use Phase 2 scrutiny to establish a plan for how bus and coach access can be improved for those communities not served by heavy or light rail proposals.

6.8 Green infrastructure

UK Central and the Airport's proposed expansion scheme is an ideal opportunity to deliver an extensive network of green infrastructure, for both connectivity and leisure purposes. Our pioneering Historic Environment, Ecology, and Landscape Management Plan (HEELMP) (see chapter 7) shows what can be achieved when all stakeholders work together to deliver environmental improvements. The Airport would seek to replicate this approach in the development of a second runway. This type of commitment would ensure that any development was accompanied by an ecological gain for the region. For example, the Airport would seek to create multi-use green corridors that provide opportunities for wildlife and biodiversity, and provide transport corridors for cycling and walking, both for access and for leisure.

6.9 Freight potential

Accessibility of goods to markets is critical for business and Birmingham Airport's central location makes it ideally placed to cater for UK imports and exports. WMEF research estimates that at 36 mppa and with improvements to rail freight connections, such as the development of the Whitacre Link, Birmingham Airport could transport 850,000 tonnes of high value freight. Key freight depots already exist within close proximity at Hams Hall, Kingsbury and Birch Coppice, and a Rail Freight Terminal at Telford is already under development.[16]

6.10 Public transport mode share

The Airport's current Master Plan states that the Airport aims to deliver a 35% public transport modal share by 2030. In 2012, the existing airport public transport mode share was **32%,** confirming that the airport is close to achieving both the masterplan target and the Section 106 target of 37% by 2030/27.2mppa. However, as summarised in this chapter, planned and potential surface access improvements would allow the Airport to dramatically increase its public transport modal share far beyond 35%:

- HS2 will substantially enhance the accessibility to the airport from the south east from 2026, and from the North West, East Midlands, South and West Yorkshire by 2032.
- HS2 will release capacity on the existing West Coast Main Line railway, which could be used to provide new connections to currently unserviced conurbations.
- Local public transport connectivity between Birmingham City Centre and Coventry and Birmingham City Centre and Solihull both via the airport. These will not only improve public transport for passengers but also for employees at the airport and other commuters in the area.

Therefore, the scheme would be supported by an aim to have a **50%** non-car mode share.

7 Response to questions on environmental implications of the proposed scheme

In response to the following Airports Commission questions:

- Is the proposal aligned with the national climate change commitments and global targets?
- What are the air quality implications of the proposal? Are these consistent with the legal frameworks for air quality? What mitigation plans are proposed?
- What are the noise implications of the proposal?
- What measures are envisaged to limit or reduce the number of people affected by noise?
- Does the proposal affect any designated sites (for example Sites of Scientific Interest or Special Protection Areas) and if so how might any effects be managed?
- How might the proposal compare, in terms of its impact on greenhouse gas emissions, with alternative options for providing a similar amount of additional capacity?
- What are the proposals plans for continuous improvement and reduction of carbon emissions over time?
- Are there other significant local environmental impacts which should be taken into account?

Birmingham Airport recognises the need to balance the economic and social benefits of air travel with the environmental impacts, and operates a comprehensive and proactive set of environmental mitigation programmes. Since 1996, the Airport has had a comprehensive Section 106 legal agreement in place with the Local Planning Authority (Solihull Metropolitan Borough Council), which was revised and updated as part of the runway extension planning application. This commitment helps explain how the Airport's runway extension planning application was approved within 12 months, and avoided being called in by the Secretary of State despite the development taking place within the Green Belt.

7.1 Climate Change

The aviation industry contributes only 2% to global emissions, but air travel is growing and this growth is predicted to continue. As a result, it is essential that the aviation industry takes proactive steps to minimise its CO_2 emissions and impact on the global environment. Efforts to reduce emissions require a collaborative approach between stakeholders including airlines, airports, and government. Birmingham Airport is part of the UK industry's collective attempt to engage with this issue and is a signatory to Sustainable Aviation and the CO_2 Road Map, which aims to reduce net CO_2 emissions to 50% of 2005 levels by 2050.

Birmingham Airport is also taking unilateral action to ensure that the Airport meets the air travel needs of the Midlands region (and beyond) in an environmentally responsible way. In 2013, the Airport produced a draft Carbon Management Plan, which aims to reduce emissions on the basis that "what gets measured gets managed". The Plan includes emissions from gas consumption, diesel used by Airport vehicles, refrigerants, emissions from electricity used by the Airport (including tenants), passenger travel to the site, aircraft landing and take off cycle, procurement and supply chain, waste management, water use and treatment. The total emissions of this are compared to other published UK airports in Table 15.

Table 15 shows that emissions per passenger at Birmingham are directly comparable with other airports,

Table 15 – Emissions per passenger at UK airports

Airport	Annual emissions (tonnes)	Passengers per year (millions)	Emissions per passenger per year (kg)
Birmingham	203,926	9	22.9
Gatwick	729,709	33.8	21.6
Heathrow	2,318,000	69.4	33.4
Stansted	434,889	18	24.1
Glasgow	137,276	6.9	20.0

and significantly lower than at Heathrow. The relative under-utilisation of the Airport also means that average emissions per passenger are likely to fall as the airport grows volume to match its base energy use. If it is assumed that the per passenger rate of emissions remains constant with aviation growth, then clearly this trajectory has the potential to be in conflict with UK Climate Change legislation. However, the introduction of more modern and fuel efficient aircraft will help to reduce total emissions, especially driven by escalating fuel prices. Central estimates of aircraft fuel efficiency in 2040 suggest the fuel burn of new aircraft will be 51.6% of the average fuel burn than in year 2000 Aircraft [Arup].

At a local level, Birmingham Airport has been successful in working proactively in collaboration with both Air Traffic Control and Airlines to significantly reduce CO_2 emissions within the local airspace infrastructure and on the ground at the Airport. The Airport already implements significant emissions reduction measures, in systems and equipment to enable us to understand our impact and identify opportunities to reduce our environmental impact, and also by working closely with our partner airlines to reduce emissions;

- **Smart metering** – across the airport site, enabling detailed monitoring and targeted management
- **Building Management System** – allowing monitoring, review of energy use and automatic adjustment of systems to improve efficiency
- **Renewable Energy Generation** – with the use of 200 PV panels on the roof of the existing terminal
- **Switch off of Air Conditioning Packs/Hydraulic Pumps** – used to reduce the fuel burn during temperate periods of the year and when operational criteria allow.
- **Operation Pathfinder** – a collection of pioneering schemes to incentivise the use of fixed ground electrical power and the proactive support of airlines to reduce fuel burn through local airspace management
- **Continuous Descent Approach (CDA)** – a technique which reduces the fuel consumption of arriving aircraft. BHX has a high compliance rate of >95% for CDA
- **Continuous Climb Operation (CCO)** – a technique to reduce the fuel consumption of departing aircraft.
- **Single Engine Taxiing** – where aircraft use a single engine to taxi thereby reducing fuel consumption. This is actively encouraged at BHX.
- **Eastern vector** – a 7 nautical mile track reduction that directs arrivals to runway 15 via the eastern side of the airfield.
- **Continuous Taxi** – the procedure of taxiing between the runway and stands without needing to stop and burn fuel whilst stationary.
- **MOSUN** – a departure route unique to Birmingham and pioneered by the Airport in conjunction with NATS, which offers airlines the ability to take an alternative, shorter route (a reduction of 70 nautical miles) to Iberia and potentially South America. The route also allows CCO to a greater height than alternative routes, as it avoids the congested South East and the fuel restrictions this applies to transiting air traffic, maximising fuel and CO_2 reductions.

Another way in which the Airport aims to reduce emissions is by providing a closer choice for passengers who currently use other airports, principally Heathrow. The runway extension planning application estimated that increased growth of Birmingham Airport and “better servicing” of our core catchment would result in a surface transport saving of circa 260million km and a resultant saving in CO_2 of 17,000 tonnes (at a passenger throughput of 27,189,000).

The Airport's proposed expansion site would be constructed and designed with sustainability and energy efficiency locked in from the start of the design process. The aim for the new terminal development would be to be designed to the highest standards (BREEAM Outstanding), with measures such as renewable energy generation on site, greywater recycling, and waste management forming part of the initial plans. The site's location, largely located on an existing brownfield site, will also allow exciting proposals to be explored for on site energy generation, using the existing waste resource located on site (such as feasibility for methane capture and usage). The Airport looks forward to developing these proposals as part of the Commission's Phase 2 work.

The Airport's vision would also be constructed with climate change adaptation incorporated from the beginning; for instance with regard to surface water run off, river flooding, future temperature rises, and drought issues. Such issues could again be considered in more depth as part of Phase 2 work.

Finally, a key benefit of short, medium and long-term expansion at Birmingham Airport is that capacity can be "turned up" or increased in delivery speed in response to government policy and/ or changes in passenger demand. This is a key strength as it does not require Government to commit to building new runways now. The Airport's proposal allows capacity to be provided in a strategically staged manner alongside Government commitments to reduce emissions in other industries, and allows the UK Government to prioritise carbon decisions in a planned manner, fully in line with the commitments made under the UK Climate Change Act 2008.

In the long-term, the most energy efficient scenario for the development of UK aviation is one where the overall surface access distance is reduced. This supports the philosophy of a network of 'national airports' which serve their discrete catchment and local businesses.

7.2 Air Quality

The Airport commissioned studies into the effect of growth at the Airport on Nitrogen Dioxide (NO_2), Fine particulates (PM_{10}), and Oxides of Nitrogen (NO_x) as part of the runway extension planning application. This concluded that NO_2 would grow by around 32–34% between 9mppa and 27mppa. However, in all relevant locations outside of the Airport, concentrations are expected to remain within the UK and EU air quality objective of 40ug/m3. This estimate is based on a conservative estimate of aircraft types and does not account for the potential reductions in aircraft NO_2 emissions for the new generation of more efficient aircraft types. For fine particulates (PM10), at all locations outside the Airport site, the UK set air quality objectives for this pollutant are expected to be achieved with 27mppa/205,400 ATMs. Solihull Council, the Local Planning Authority, acknowledged these results when they approved the runway extension, stating "the evidence provided confirms that there will be no exceedences at the Airport and there will be no effect on residential locations".

The proposed location for the expanded Airport would be located in a predominantly rural area to the east of the M42, with a second runway forming the eastern boundary of the site. Therefore, the main source of pollution within the Airport (the terminal building) will be located at least 500m away from any receptors to the east and the impact is not anticipated to be significant. The Airport also undertook a simple level DMRB assessment to determine the potential impact of changes to the local road network from expansion. This showed that as the scheme will involve the relocation of existing roads, many receptors alongside these roads will therefore benefit from the proposals. Conversely, some receptors may suffer a slight adverse impact, where roads are moved closer. Overall, none of these effects are expected to be significant. Finally, in terms of construction, effective mitigation measures will be put in place to reduce any risk of dust nuisance at sensitive receptors around the site.

7.3 Noise

The Airport's overriding objective for managing noise is, "to work with our stakeholders, including the local community and industry partners, to adopt the best practicable means to assess, manage and minimise the impact of aircraft noise, both now and in the future."

The Airport's response to the Commission's short and medium-term paper provided details of the numbers of people likely to be exposed to noise levels of 57dB (daytime) for traffic levels of 13.079 million passengers per annum (mppa), 20.939mppa and 27.189mppa.

Table 16 – The number of people and households impact by noise emissions (57dB) as a result of expansion at Birmingham Aiport

Year (mppa)	Scenario	Day/Night	% operations on existing runway	% operations Vision runway	Area (km2)	Population	Households
2029/30 (26.2mppa)	1	Day	50	50	36.1	31,246	12,918
	2		0	100	33.2	15,981	6,697
	3	Night	50	50	9	1,637	646
	4		0	100	8.5	0	0
2036/37 (35.1mppa)	12	Day	100	0	45.5	81,719	33,302
	14		0	100	45.5	27,632	11,842
	11	Night	100	0	11.6	13,001	5,396
	13		0	100	11.6	0	0
2062/63 (71.7mppa)	8*	Day	50	50	45.2	47,122	19,081
	9*	Night	50	50	11.4	3,116	1,369
	10*		0	100	10.8	0	0

These figures were considered a worst case scenario as the predictions date from 2007 with an old aircraft fleet mix.

The Airport also analysed the noise emissions from the proposed expansion scheme. To ensure consistency with the short-term submission, the Airport based its calculations on the older fleet mix. Forecasts were carried out for various scenarios for 2030, 2037, and 2063 [with a conservative allowance for noise reductions of 0.1db per annum post-2030]. These contours were also informed by the DfT's Aviation Policy Framework, which stated that:

> *"The Government will continue to treat the 57dB LAEQ 16 hr contour as the average level of daytime aircraft noise marking the approximate onset of significant community annoyance. However, this does not mean that all people within this contour will experience significant adverse effects from aircraft noise. Nor does it mean that no-one outside of this contour will consider themselves annoyed by aircraft noise."*

Table 16 outlines the population counts for scenarios in 2029/30 (26.2mppa), 2036/37 (35.1mppa), and 2062/63 (71.7mppa) for area, population numbers and numbers of households within the 57dB noise contours. Scenarios 8, 9, & 10 use the 0.1db per annum reduction detailed above.

This table confirms that significant opportunities exist to distribute the pattern of noise exposure strategically (see section 7.3.3).

Birmingham Airport recognises that noise from aircraft at night is widely regarded as the least acceptable aspect of aircraft operations and we already have one of the most stringent night flying policies of any UK Airport. It is therefore worth noting the effects of night noise from a second runway when compared to the existing runway. For 2029/30 (26.2mppa), 2036/37 (35.1mppa), and 2062/63 (71.7mppa) (when using the conservative reduction forecast of 0.1dB per annum), using the second runway for 100% of night flights results in **no one**[17] living within the 57dB contour. The new runway in 2037 would provide an opportunity to remove 13,001 people out of the 57dB night noise contour,a reduction of 100% At the 54dB night noise contour, 34,063 would be removed from the contour area (37,207 within the existing runway contour versus 3,144 in the vision runway contour), a reduction of 91%.

Expansion at the Airport would therefore be in line with the Government's overall policy to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise.

7.3.1 Comparison with other schemes – Previous Birmingham Schemes

Table 17 details the noise effects of the current proposed scheme with the previous scheme included within the 2003 Aviation White Paper and the variant of this scheme proposed by the Airport in our draft Master Plan.

This table clearly shows the advantages that the location has over previously proposed and agreed second runway locations for Birmingham Airport. The previous alignments to the west of the current airport had the potential to impact on more people in and around Solihull and the eastern edges of Birmingham. The new vision runway location – *at a greater overall passenger number* – has the potential to impact on approximately 60% fewer people than this draft Master Plan proposal (27,632 against 67,950). This is a substantial benefit for local residents.

Table 18 compares noise emissions at Birmingham Airport and Heathrow, if they were both operating at c. 70mppa. It reveals that considerably less people would be exposed to noise pollution from an enlarged Birmingham than are afflicted by existing Heathrow operations.

7.3.3 Mitigation

Birmingham Airport's sound insulation scheme ensures that any local resident exposed to air noise pollution within the 2002 63dB(A) noise contour is eligible for modern acoustic insulation. As a result,

Table 17 – A comparison of the noise impacts of different second runway locations

Proposal	Year	mppa	Population numbers within 57db day contour
2003 Aviation White Paper ('the Birmingham alternative')	2030	–	102,750
BHX Draft Master Plan west runway	2030	30–34	67,950
2013 Scenario 13 – East runway (0/100% split)	2037	35.1	27,632

Table 18 – A comparison of noise emissions between Birmingham Airport and Heathrow

Airport	Proposal	Year	mppa	Population numbers within 57db day contour
Birmingham	2013 Scenario 5- Eastern runway, 50/50 split	2063	71.7	101,441
	2013 Scenario 8-Eastern runway, 50/50 split, 0.1db reduction p.a.			47,122
Heathrow	2011 Baseline	2011	70	237,750

7.3.3 Ecology – The Birmingham Airport HEELMP

As part of the permission for the extension to the runway at Birmingham Airport, a HEELMP was agreed to mitigate the effects of the development. This plan has been drawn up with the full support and assistance of Solihull Metropolitan Borough Council, Natural England, and the Warwickshire Wildlife Trust. This plan provides for the creation or equivalent of 4ha of 'MG4' grassland, over 40ha of 'MG5' grassland, the planting of over 1,500 trees and over 5km of hedgerow. The plan also provides for the diversion of the Bickenhill Brook and protection of protected species, including the White Clawed Crayfish (WCC)

The implementation of the HEELMP is now well underway and significant advances have been made, including the discovery of a substantial increase in the numbers of WCC on site, since our works have commenced.

the Airport has already provided acoustic insulation to over **7,000** local homes.

The provision of a second runway to the east of the existing site provides significant opportunities to distribute the pattern of noise exposure more strategically. Tables 16 and 17 give some indication of the possibilities that could be achieved through placing all night traffic on the vision runway. Other possibilities can also be explored if the runways were operated as follows:

- Daytime – Segregated mode (with no runway alternation)
- Vision runway – Daytime departures towards the north west and arrivals from the northwest
- Existing runway – Daytime departures towards the south east and arrivals from the south east
- Alternation between runways to provide respite periods to local communities

These options have not been modelled at this stage but could provide the opportunity to significantly reduce the overall population enclosed by the noise contours.

7.3.4 Designated sites

It is Government policy to seek to achieve 'no net loss', particularly in relation to Priority Habitats and Species. The Airport is well aware of its responsibility in the Natural Environment and Rural Communities Act 2006 and that the scheme will need to achieve 'no net loss'.

Our current runway extension project is being delivered largely on previously green belt, agricultural land. To compensate for this loss of valuable land, including the rare 'MG4' grassland, a HEELMP (Historic Environment, Ecology & Landscape Management Plan) has been agreed – see 7.3.3.

Substantial work has taken place on considering the impact of the vision on designated sites, and on related environmental concerns, including: Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNR), Sites of Importance for Nature Conservation (SINC), Local Wildlife Sites (LWR), Listed Buildings, Scheduled Monuments, Registered Parks and Gardens, Effects on landscape. The work is summarised in Table 19.

Table 19 – A summary of the environmental impact of expansion at Birmingham Airport on designated sites

Designated site	Summary of environmental impact
Special areas of conservation	There are four internationally designated sites within 30km of the proposed development. These sites are designated for features which it is considered will not be affected by the proposed development and are located at significant distances from the proposal (Fen's Pool, Dudley; River Mease, Staffs/Leics; Ensor's Pool, Nuneaton; Cannock Extension Canal). It is not likely therefore that a Habitats Regulation Assessment would be required for the proposed development.
Sites of Special Scientific Interest and Local Nature Reserves	There are four SSSIs and five LNRs which lie within 2km of the overall site boundary. However, only one of these sites lies within the vision footprint. This site is the River Blythe SSSI. The River Blythe has been designated as SSSI due to the diversity of its ecology. Detailed design work would have to take place on this matter in Phase 2, but it is the Airports intention that the best course of action would be to divert the River Blythe on its affected length, as opposed to other solutions such as culverting. A similar approach was taken in the construction of the runway extension (see above). The diversion of the river could allow an ecologically and geomorphologically rich river to be maintained and created and would provide numerous benefits in terms of issues such as flood risk as well. With an appropriate mitigation scheme an option could provide "no net loss", and indeed increase the value of the SSSI in time could be designed and provided. Should our vision be taken forward to Phase 2, then detailed discussions with Natural England and the Environment Agency could take place.
Sites of Importance for Nature Conservation and Local Wildlife Sites	Initial results show that two of these sites would be directly affected by the entire scheme. Mitigation for these affects may include off or on site mitigation and should be readily achievable.

Designated site	Summary of environmental impact
Listed Buildings	Initial results show that 6 listed buildings lie within the footprint of the proposed development (2 of which are Grade II* and 4 Grade II). Table 20 shows known previous schemes at other national airports and their possible effect on listed buildings. Clearly the loss of any heritage asset is to be avoided where at all possible; however this is a small number for a scheme such as this, and of these six listed buildings, it is likely that two of them could be designed out of the scheme at detailed design stage and retained (the two Grade II* buildings), and three of the four Grade II structures would only be required towards the end of the design period (2063) and so could be retained for a considerable amount of time. 228 listed buildings are located within 2km of the proposed development (5 Grade I, 24 Grade II*, and 199 Grade II). Those within 1km of the scheme may suffer adverse effects, with those within 2km having possible setting issues due to the passage of aircraft. Mitigation for such effects where appropriate could be discussed with English Heritage and considered as part of phase 2.
Scheduled monuments	There are 12 scheduled monuments within 2km of the proposed scheme. As for listed buildings, those within 1km of the scheme may suffer adverse effects, with those within 2km having possible setting issues due to the passage of aircraft. Mitigation for such effects where appropriate could be discussed with English Heritage and considered as part of phase 2.
Registered parks and gardens	Packington Hall, a Grade II* registered Park and Garden, is located to the east of the M42. The majority of the Park lies to the east of the scheme, but a proportion lies within the footprint and the scheme would likely result in the loss of this part of the park. We understand that substantial mitigation would be required to ameliorate this impact. One possibility is for the proposal to divert the River Blythe (as proposed above) to be linked into an overall scheme to help mitigate the impact upon Packington Park.
Landscape setting	There are no Areas of Outstanding Natural Beauty or National Parks in close proximity to the proposal. The proposal is located within the Arden National Character Area. Charactersitics of this area include a well wooded farmland landscape, diverse field patterns, the M42, M40, M6, M5 and the West Coast Mainline transport corridors and a complex and contrasting settlement pattern. The proposed HS2 route would also contribute to the transport corridors within this area. The proposal is likely to result in significant adverse landscape effects due to the scale and type of development proposed. However, it should be noted that in overall terms the landscape is not judged to be of high sensitivity due to the presence of Packington Landfill within the site which is accompanied by a the presence of large scale commercial buildings and a range of transport infrastructure in the wider area that contribute to the lowered sensitivity within these areas of landscape. This degree of baseline landscape sensitivity is likely to be further reduced by the development of HS2.

Table 20 – Impact of proposed airport expansion schemes on listed buildings

Airport	Scheme	Information Source	No. listed buildings lost
Heathrow	Runway 3 (Sipson)	2003 Aviation White Paper and supporting docs	8
Gatwick	Runway 2	DfT consultation on Future Development of Air Transport in the UK – South East (July 2002)	17
Stansted	Runway 2	2008 Planning Application	13
Birmingham	Long Term Vision	–	6

8 Response to questions on the cost of the proposed scheme

In response to the following Airports Commission questions:

- What is the estimated cost of the proposal, including surface access, land purchase, compensation and any other associated infrastructure?
- What are the associated cost assumptions and risks?
- Is it likely that the cost can be met entirely by the private sector? If not, what is the public private split? How would the proposal be financed? What are the associated assumptions and risks?

All of the proposed schemes for new airport capacity will require substantial funding, large amounts of new equity and new corporate structures to manage them. Birmingham Airport's vision is likely to be one of the cheapest to deliver in terms of overall costs because of the relative open nature of the site and the way it ties in existing and proposed local and national infrastructure. It is also important to note that the amount of funding required will depend on the timing of the scheme provision. For instance, it is envisaged that Birmingham Airport will need a much larger traffic and revenue base before development would start.

8.1 Costing

8.1.1 Short and medium-term growth

The increased traffic at Birmingham would allow the Airport to fund terminal to capacity expansions using the existing runway to 27mppa. Planned or forecasted local major developments – the M42 gateway project and HS2 will play a role in the future development of surface access improvements and the Airport will work with the local and national transport authorities to ensure that investments are planned accordingly. Any changes to air passenger or airline charges caused by expansion will be in line with market forces to ensure that Birmingham Airport remains competitive in the UK aviation market.

8.1.2 Birmingham Airport's vision

Based on consultation, Birmingham Airport estimates that the total cost of the proposed expansion scheme would be £6.99 billion. This initial costing includes the full cost of the proposed additional runway and terminal infrastructure to the east of the existing runway, which would be capable of supporting 36mppa. The total includes costs for the following:

- Works to existing runway
- Envisaged runway, terminal, power, fuel storage, waste and water
- Envisaged aprons and satellites
- Connecting dual taxiway between the runways, including M42 & HS2 bridge
- Utility diversions
- Integration to HS2 Birmingham Interchange Station
- Passenger people mover and baggage links between the runways
- Environmental mitigation costs, including site remediation and compensation
- A45 diversion costs
- M42 works contribution costs
- Contribution to UK Central and wider area surface access connectivity
- Land Acquisition

The Commission should note that this costing is based on the Airport being a contributor to, but not paying the full cost of, proposed works to the M42 or other surface access improvements because these investments are essential to UK Central and HS2's proposed schemes. Additional outlay would be required for subsequent redevelopment and modernisation of the existing airport site further along the development pipeline, but the Airport would expect to generate substantial additional revenues from the wider Airport City and Aerotropolis proposed development.

These costs include a 12% allowance for management and on site costs, and a 10% allowance for risks, giving a base construction cost of approximately £5.45 bn. The terminal and associated infrastructure would be built in phases as and when required allowing the Airport to stagger capital expenditure. In all, total infrastructure costs of the full HS2 and Airport Campus could extend to around £11.5 bn, but this would be spread across the entire development and would include costs for other associated projects, such as utilities and full transport links within the area.

8.2 Financing

8.2.1 A funding strategy

Birmingham Airport has informally engaged with two leading advisers in the UK infrastructure sector – The Royal Bank of Scotland ("RBS") and Volterra Partners ("Volterra") to review the feasibility of financing the proposed expansion scheme.

RBS and Volterra have concluded on a preliminary basis that financing would be available to provide for the full range of possibilities likely to emerge from a decision to develop Birmingham Airport, with development of a new terminal and supporting infrastructure.

The range of financing possibilities, includes, but is not limited to [see Appendix 10 for a full explanation]:

- Financing with a Sub-Sovereign / Agency ("SSA") status, created via UK or Local Government guarantee or support (e.g. Network Rail, Transport for London). This could take the form of the Development Corporation (see 8.2.6) with either direct UK government guarantee / indemnity support of supported by the relevant local authorities onlending from funds raised through the Public Work Loans Board and even additional funding from the EIB
- Issuance on a secured basis, or from a securitised financing which is capable of bearing higher leverage through a formal covenant structure and layering of senior and subordinated debt (e.g. debt Gatwick , Heathrow , Brussels Airport)
- "Vanilla" corporate financing – PLC issuance on a similar basis as the existing Birmingham Airport Holdings Ltd. bond (rated BBB+ by Standard & Poor's).

The majority of precedent transactions have been in one of bank loan format with UK and other European bank lenders, public bond market format sold to institutional investors, private placement format also sold to institutional investors or a combination of the three.

Funding airport development wholly in the private sector is well established in terms of precedent but carries greater risks in terms of market access and overall costs.

8.2.2 Detailed analysis of funding solutions available to Birmingham Airport for the proposed expansion scheme

Investors have shown strong appetite for infrastructure assets in recent years. Investors are now very familiar with UK infrastructure issuers with not only airports, but also railway and transport companies, train operating companies, rolling stock companies and ports being able to secure long dated funding at attractive coupons.

Overall interest rates remain at historically low levels with low expectation that these rates will rise significantly in the near to medium-term. RBS forecasts 30-year gilt rates to remain no higher than 3.75 for at least the next 12 months (vs 3.56 today). In addition, corporate spreads and margins, especially in the loan market, are historically relatively attractive for borrowers – see Table A11.1, Appendix 11.

Despite a somewhat volatile backdrop with some economic and political uncertainty, general market conditions have been supportive of new issuance. The market has seen strong technicals and a supply and demand imbalance, supported by continuing incoming investor funds – see Table A11.2, Appendix 11.

Demand has generally outpaced supply, despite high issuance volumes, and investors have delivered oversubscribed order-books and relatively tight pricing. In addition, issuers have been looking for yield and credit diversification. Even when the market did show some volatility, it has not dramatically affected the primary market with supply returning quickly post short "closed" market periods – see Table 11.3, Appendix 11.

8.2.3 Financing recommendation

The section above outlines the range of options available at the Airport for funding provisions. As mentioned in section 8.1.2, the expansion of Birmingham Airport can be supported by additional access infrastructure which will be funded by other bodies. In the light of this, it will be possible to create demand models which will generate potential payback likely to attract investors. Additionally, policy support can lead to the potential for government or local government guarantees to support a strong enough rating to attract international investors.

Most likely, in the opinion of RBS and Volterra, there will be a combination of these methods of support which could in principle support a financing model.

8.2.4 A national significant development opportunity for the Midlands

The government seems determined to kick-start the economy by investing in infrastructure. It is banking on large engineering and construction projects, such as roads and the high-speed rail link, to generate jobs and prosperity. Ministers are looking for big ideas.

Government supported and LEP led Enterprise Zones, Lord Heseltine's 'single-pot' review, Sir John Armitt's Independent Infrastructure Commission and Lord Adonis' growth review are all examples of senior political figures taking the lead on this issue by promoting schemes like Hitachi's investment in County Durham, Manchester's Airport City and the Atlantic Gateway. These are nationally significant infrastructure and business schemes that will attract investment, deliver jobs and promote growth.

Birmingham Airport's proposed scheme is of this scale because it is not a discrete, standalone development. The proposed second runway location site would align with planned investment in the Airport, HS2 and UK Central with existing assets such as the NEC, Birmingham Business Park and Resorts World Birmingham – Figure 3.

Taken together, this 315 hectare site of development land has the opportunity to become a mixed commercial community development, of airport and access focussed occupiers that together create and support an out of town business community[18] (an aerotropolis). The community would neither compete with Birmingham city centre initiatives, nor undermine existing industrial and community occupation across the West Midlands. It will bring a unique product to the market for businesses – national accessibility housed in a modern, sustainable central UK location.

The second runway location will create a focus for commercial activity and local services, generating demand for development opportunities that spin off from the initial investment. This is an opportunity in an area where there is currently no development, but which has the developmental flexibility and capacity to contribute to the capital and operational costs of the proposed expansion scheme. This will promote the airport city concept and widen the service offering.

The development area, focussed around the HS2 terminal and the NEC, with improved access off the newly created M42 junctions are fundamentally in accordance with the recently published M42 corridor study by GBSLEP and Solihull Council – UK Central. This scheme aims to create 100,000 jobs and generate £19.5 billion by 2040, which fits with the timetable expectations for the Airport opportunity around the second runway. Aligning HS2, UK Central and Birmingham Airport into a major infrastructure development would transform a set of discrete development projects into a nationally significant scheme for the central UK economy. **This scheme should be added to HM Treasury's National Infrastructure Pipeline as well as being short-listed by the Airports Commission for further investigation.**

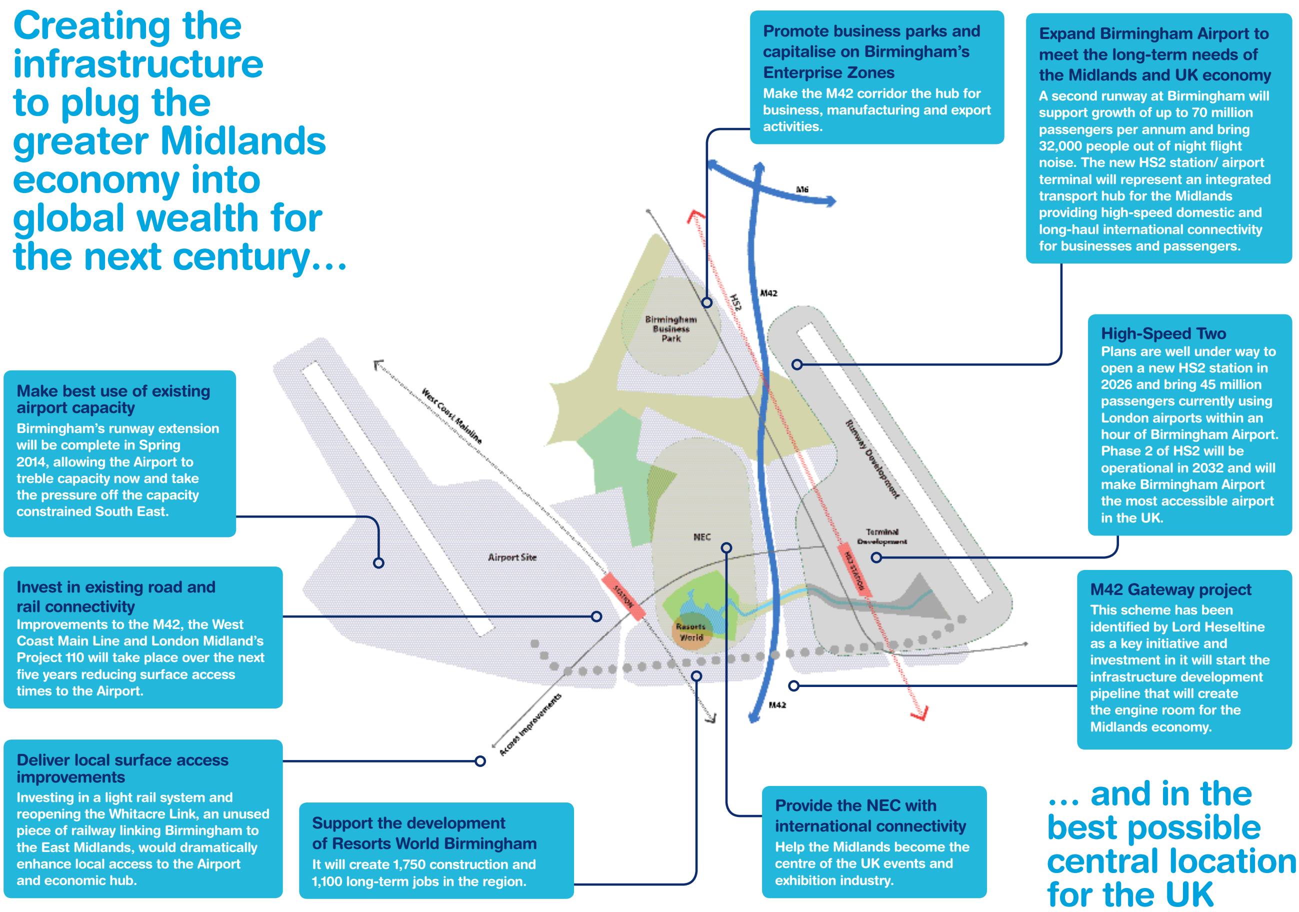
8.2.5 Scale and uses

The scale of the development is significant, generating commercial development opportunities that will service the West Midlands economy from 2030 onwards. The range of uses envisaged will provide a future supply of land for airport and non-airport related commercial occupation. Due to the uses proposed, and scale of the sites available, this opportunity would contribute to the Greater Birmingham economy rather than competing directly with the city centre.

8.2.6 Delivery structure

The delivery body envisaged to oversee the implementation of this exciting initiative would be akin to a Development Corporation with spending powers and statutory CPO. We do not envisage the body requiring unified planning powers as the Local Authority partners to the project will ensure strategic suitability.

Figure 3 – Expansion at Birmingham Airport would form part of a major national infrastructure scheme for the Midlands



The Development Corporation could consist of the following partners:

- Birmingham Airport – Operator and Investor
- Birmingham City Council – Landowner and Planning Authority
- Solihull Metropolitan Borough Council – Landowner and Planning Authority
- North Warwickshire Borough Council – Planning Authority
- Packington Estate – Landowner
- Local Enterprise Partnerships – Economic delivery body and channel of public investment
- NEC Group
- Marketing Birmingham
- HS2
- Network Rail

At this stage, given the scale and integration/ dependency on infrastructure investment the Development Corporation is expected to be an ideal lobbying and managing body capable or coordinating public policy, public funding and a body that will focus on maximising the opportunity for inward investment in the areas. With the support of a strategic executive, this body will provide the overseeing role to ensure growth in economic prosperity and collaboration across the wider interests to create the development platforms as appropriate.

The Development Corporation would have a Partnership Board with control over the necessary landholdings required to deliver the wider vision. Direct implementation responsibilities would rest with an Executive team (excluding direct investment by Birmingham Airport) but the Board will require implementation partner(s) to deliver on site but principally will act in a coordinating manner to secure the following outputs:

- Coordinate and own the Development Framework/ outline planning through an Executive delivery team

- Support the marketing drive, branding and promotion
- Act as an enabling body coordinating strategic infrastructure and investment
- Act as the landowner from which land assets are drawn down by the implementation vehicles thus ensuring priorities are met and avoiding cherry picking if left solely to the market
- Undertake a monitoring role to ensure milestones are met and investment priorities are delivered
- Procure airport infrastructure and co-ordinate public led infrastructure projects
- Appoint, competitively, a delivery partner(s) that will bring funding and commercial delivery expertise for non-airport development.

Table 21 – Uses of development opportunity at Birmingham Airport

Type	Use	Explanation
Airport related occupation	Cargo	The need to diversify Airport related business and revenue in addition to pure passenger revenues can be exploited considerably with this initiative. Other airports aim to provide on-site logistics facilities, however none will be able to offer the integrated rail, airport and road options that exist at the new Runway site. A Midlands based cargo port would provide a central location that cannot be offered at Manchester, offer a different market to that offered at East Midlands and rents that would be significantly cheaper than Heathrow. The distribution advantages to the rest of the UK could be exploited by all modes of transport. This could release capacity around Heathrow on the road network.
	Airport Services Offices	As airport usage expands the need to accommodate airport related services and airline related occupation will increase. The current airport arrangement provides limited opportunity to capture these occupiers. The new opportunity will provide ample space with all the accessibility opportunities that this site can offer when compared with the South East.
	Maintenance	Maintenance of aircraft requires significant land take. The availability of land at the current airport is limited. The new opportunity will provide sufficient land areas capable of accommodating these units without detrimental impact to other commercial uses and at a land value that can be commensurate with its use. Premiums that may need to be considered at other more land constrained sites, i.e. where competing higher value uses will drive up the land price, will be avoided at the second runway site.
Commercial	Offices at Business Parks	The proposal will have the ability to accommodate millions of sq ft of business park/ offices. The statistics show that Birmingham has very little supply of Grade A stock and it is diminishing as there has been virtually no speculative development in the city during the recession and future areas of supply would cater for city centre demand and be complete in the next 15 years. We expect demand for Birmingham to be maintained and in terms of competing supply, planned developments at Paradise Circus, Arena Central and Southside are expected to be substantially developed over the next 5 years. This would provide 12–15 years of take up prior to significant volumes of commercial land being made available at the Airport. Whilst Birmingham Business Park is currently regarded as a tired asset, this is largely due to the focus of occupiers preferring city centre locations where public transport and ancillary services are readily available to the workforce. In line with the UK Central proposal, the opportunity at the airport to provide a range of related services at the most accessible location in the West Midlands would reverse this trend and increase the prospect of a return of natural demand.
	Other	Airports will create their own demand for retail, leisure and hotels. We envisage the creation of a mixed commercial community offering a wide range of land uses to cater for the on-site needs of passengers and related services that will attract and retain other commercial occupiers. Expansion of the NEC offer is available, extension to the retail and leisure offer will benefit from increased on-site demand that would not be using the city centre and once consolidated would assist in delivery of the UK Central proposals.
	Digital and Power infrastructure	Data and IT needs are virtually untapped but increasing in demand. The infrastructure investment via HS2 and the Airport will provide the opportunity to house IT/ Data related occupiers for the future. Such uses will be attracted to the city centre and out of centre locations therefore we do not see a competing interest with the city centre. The scale and power and availability of space, offered at competitive cost to the city centre, makes the Airport an ideal location for 'large footprint occupiers'.
	Logistics	The Midlands is the premier region for logistics development, due to its location in the centre of the country, with trucks able to get to the key UK markets in the South East, Midlands, North West and Yorkshire quickly and efficiently. There are limited sites available at present to serve this demand, and the proximity of the airport and rail freight sites at Hams Hall and Daventry add significantly to this offer.

The Master Plan for UK Central includes proposals for the creation of a delivery vehicle called UKC Limited. One possibility is that the remit of this body could be expanded to include the above proposal and area or vice versa.

8.2.7 Land Acquisition Strategy

Significant areas of the land required are already under the control of just two ownerships identified as partners on the Corporation Board. The Airport executive has entered into discussions with both Birmingham City Council and the Packington Estate to agree the broad principles which will lead to an agreed heads of terms to deliver the wider scheme. The same is anticipated with Solihull Metropolitan Borough Council and other major owners/ interest parties.

Other key land areas would be acquired by negotiation in advance of public notification through land deposits and options to be entered into as the scheme progresses to approval. Other land interests such as those that will be under control of HS2 could be brought forward in a JV arrangement to ensure full integration of shared infrastructure requirements on jointly required land.

9 Response to questions on the operational viability and delivery of the proposed scheme

In response to the following Airports Commission questions:

- Is the proposal consistent with relevant safety requirements?
- What operation, safety and /or resilience risks are associated with the proposal?
- What measures are proposed to mitigate these?
- Is the proposal deliverable within relevant airspace constraints?
- What assumptions underpin this assessment?
- What are the main delivery risks in the proposal?

9.1 Safety and safeguarding

In working up the proposed long term vision full consideration has been given to ensuring that the detailed design proposals, when developed, would be able to comply with relevant CAA and EASA safety requirements and be intended to accommodate the largest Code-F aircraft.

The proposed long-term vision has been assessed at this stage in respect of:

- Safeguarded surfaces and obstacles as contained within CAP 738 Safeguarding of Aerodromes and the Town and Country Planning (Safeguarding of Aerodromes, Technical Sites, and Military Explosives Storage Areas) Direction 2002
- Birdstrike hazards as defined in the above documents
- Likely weather conditions; fog, prevailing wind etc.
- Public Safety Zones as contained within Control of development in Airport Public Safety Zones (Department for Transport Circular 01/2010).

As the long-term vision is located approximately 3.5km from the Airport's existing runway, in operational effect the runways would work as two separate runways linked by a taxiway. This would prove beneficial since the runways would be fully wide-spaced and could be used to their full extent if necessary. This increases the capacity of the runways, and also aids resilience.

As part of the basic plans produced to date, the safeguarded surfaces have been considered, including the Inner Horizontal Surface (IHS), Conical Surface, Outer Horizontal Surface (OHS), Take-off Climb Surface (TOCS), Approach Surface (APPS) and the Transitional Surface. The integrity of all of these surfaces is fully maintained, with the exception of some existing ground (natural topography) to the east of the proposed vision which would likely breach the IHS (set at 137m) and also some of the Conical Surface. The distance from the closest point where the existing ground reaches 137m to the runway is about 2km. It is considered that the risk at 2km from the proposed runway would be fully manageable with appropriate operational safeguards put in place.

Aside from the natural topography breach mentioned above, there are no obstacle breaches to protected surfaces, no breaches closer to the runway than 2km and no breaches on likely flight paths.

Birdstrike risks on the proposed runway are considered manageable. Birdstrikes do occur occasionally with the existing runway, but mainly of low-risk species, and the local area surrounding the vision area generally exhibits similar characteristics to the area surrounding the existing runway. A more detailed appraisal of the surrounding area, possible consented risks (e.g. mineral extraction and restoration proposals) would be considered in Phase 2, but planning applications and risks would be monitored and managed in the usual way should the proposal be constructed.

Weather conditions in the area are generally good, and exhibit no specific localised phenomena – for instance fog conditions are rare. The new runway would be located parallel to the existing runway, and so would be aligned in the same direction; that is north west to south east (and vice versa). Ideally, in the UK, runways would be located in the same direction as the prevailing wind – south west to north east, however the current runway operates well and extreme crosswinds are rare. The benefit of locating the additional runway perfectly parallel with the existing runway means that the runways can be operated more efficiently independently and air traffic control is less complicated than if the runways were not parallel.

Public Safety Zones have been considered at a strategic level within the proposal. There are no properties within the high risk contour (1:10,000) and no properties within the lower risk contour (1:100,000).

9.2 Airspace

There are no insurmountable issues concerning airspace management and the development of Birmingham Airport's vision:

- At a local level the proposal for the airport to operate with widely spaced independent parallel runways would enable more efficient use of airspace than closely dependent parallels. The runways could then be operated independently; for instance there would be no need for one runway to operate as an arrivals runway, and the other for departures, unless of course this was desirable for other reasons.
- The interrelationship with Coventry Airport and its consented 2mppa will need to be considered as part of detailed design, although at this stage and for the majority of the vision the proposed development should allow sufficient flexibility to allow Coventry Airport to perform to its consented capacity, should this prove necessary.
- At a national level, the Airport vision means that there will be no substantial development of Birmingham Airport until after the current airspace re-designs for the South East of England (known as LAMP) and the Northern Terminal Control Area (NTCA) are fully implemented post 2020. Once LAMP and NTCA are implemented, the basic UK spinal flow of traffic will remain, that is northbound flow to the east of Birmingham and towards East Midlands Airport (EMA), southbound flow over and to the west of Birmingham. The substantial proposed difference from the current airspace configuration is that the arrivals traffic flow to Heathrow will be moved substantially to the west of the current alignment, thereby increasing the volume of southbound controlled airspace to the west and southwest of Birmingham. This will enable Heathrow northbound departures from Runway 27 (predominant runway) to be aligned on a more direct northerly route to the west of the current alignment, thereby avoiding the congested area around Brookmans Park (BPK) and facilitating early climb above (or west of) Luton.
- The interface between the LAMP airspace development and the NTCA airspace development will remain, as it is now, in the Birmingham area. Due to this, and dependent on growth at Birmingham, there may well be a requirement for a new "Midlands TMA" Terminal Control operation (which has been proposed previously to facilitate the integration of Birmingham/East Midlands/Coventry traffic flows between the LAMP structure to the south and the NTCA structure to the north. It is suggested at this early stage that such a proposal or the provision for increased traffic from Birmingham will need to be future proofed in any LAMP or NTCA proposals.
- In addition to the above the LAMP project currently includes the possible development of a controlled airspace route from Birmingham to the southwest to MOSUN (see page 37). The Airport is fully in support of this routeing which would create environmental improvements, and would probably become the principal traffic flow for Birmingham – Iberia traffic and some transatlantic traffic.
- The proposed airspace configuration changes and route structures for the NTCA project are not known at this stage. Substantial growth in Transatlantic traffic from Birmingham may require airspace expansion to the west of the Daventry complex, or an alternative westerly route provided.

10 Key asks

- That the Airport's proposal for a new full-length runway to the East of the current site be short-listed and/ or the land for the new site safeguarded by the Commission for future development, subject to appropriate growth in passenger traffic.
- That the Airport's proposal is recognised and short-listed as a scheme that could provide additional capacity for the UK in the long-term, and would form an essential part of a national aviation strategy based on a network of major long-haul airports.
- That it is recognised that it is difficult to predict the speed at which the trends towards liberalisation, fragmentation and the shift east will take place, but that the UK needs flexible and resilient airport infrastructure.
- That the Commission uses analysis by Steer Davies Gleave and Capital Economics into long-haul catchment areas, which revealed that the UK has four economic regions, each capable of supporting a major long-haul airport – London, Birmingham, Manchester and Scotland.
- That the Government's long-term national aviation policy should support and promote growth at a network of major long-haul airports delivering aviation capacity and connectivity to the key strategic city regions of Britain.
- That the complementarity of Birmingham Airport's vision to other proposed expansions of airport capacity is recognised.
- That the Commission recognises that the economic benefits of the expansion at the Airport could significantly support the Government's objective of rebalancing the economy by promoting exports and manufacturing.
- That the Commission recognises that Birmingham Airport could develop into a major belly-hold freight airport supporting the UK economy.
- That the Commission acknowledges that regional LEPs, business community and councils recognise that expansion of Birmingham Airport and the continued development of direct connectivity with the rest of the world will support and create thousands of jobs in an area of high unemployment.
- That the Commission acknowledges that the proposed expansion scheme is fully aligned with existing and emerging regional development and transport investment strategies: GBSLEP's Delivering Growth, Solihull's M42 Economic Gateway; UK Central, the Black Country LEP's Core Strategy and High Speed 2.
- That the Commission recognises that surface access connectivity is a key strength of this proposal, with the Airport ideally positioned to benefit from planned infrastructure investments and offer a full multi-modal solution of integrated air, rail and road connectivity; making it a transport and logistics hub for the Midlands and further afield.
- That the Commission agrees that the second runway location would have dramatically lower environmental impacts than the 2003 White Paper location. Expansion to 70mppa would be fully in line with the commitments made under the UK Climate Change Act 2008, remove 13,001 people out of the 57dB night noise contour and 34,063 out of the 54dB night noise contour. This represents a reduction of 100% and 91% respectively, a substantial improvement for local communities.
- That the Commission recognises that the Airport has sought independent advice and demonstrated that its vision is both financially and operationally realistic and achievable.
- That the Commission agrees that the vision is likely to be one of the cheapest to deliver in terms of overall costs because of the relative open nature of the site and the way it ties in existing and proposed local and national infrastructure.
- That the Commission agrees that the wider development scheme, with HS2 and UK Central, be recognised as a project of national significance.

11 Appendix A

1. Contributing consultancies and organisations
2. Map of proposed site as supported in 2003 Aviation White Paper
3. Indicative map of proposed second runway location [2013]
4. Birmingham Airport's long-term vision for UK aviation policy based on analysis by Capital Economics and Steer Davies Gleave
5. Whitacre Link and HS2 journey time savings
6. Whitacre Link proposal
7. Birmingham Airport's 2032 rail and road map
8. UK Central proposed infrastructure
9. UK Central's proposed public transport corridor
10. Detailed analysis of funding solutions available to Birmingham Airport for the proposed expansion scheme
11. Market backdrop analysis by RBS

Appendix A1

Contributing consultancies and organisations

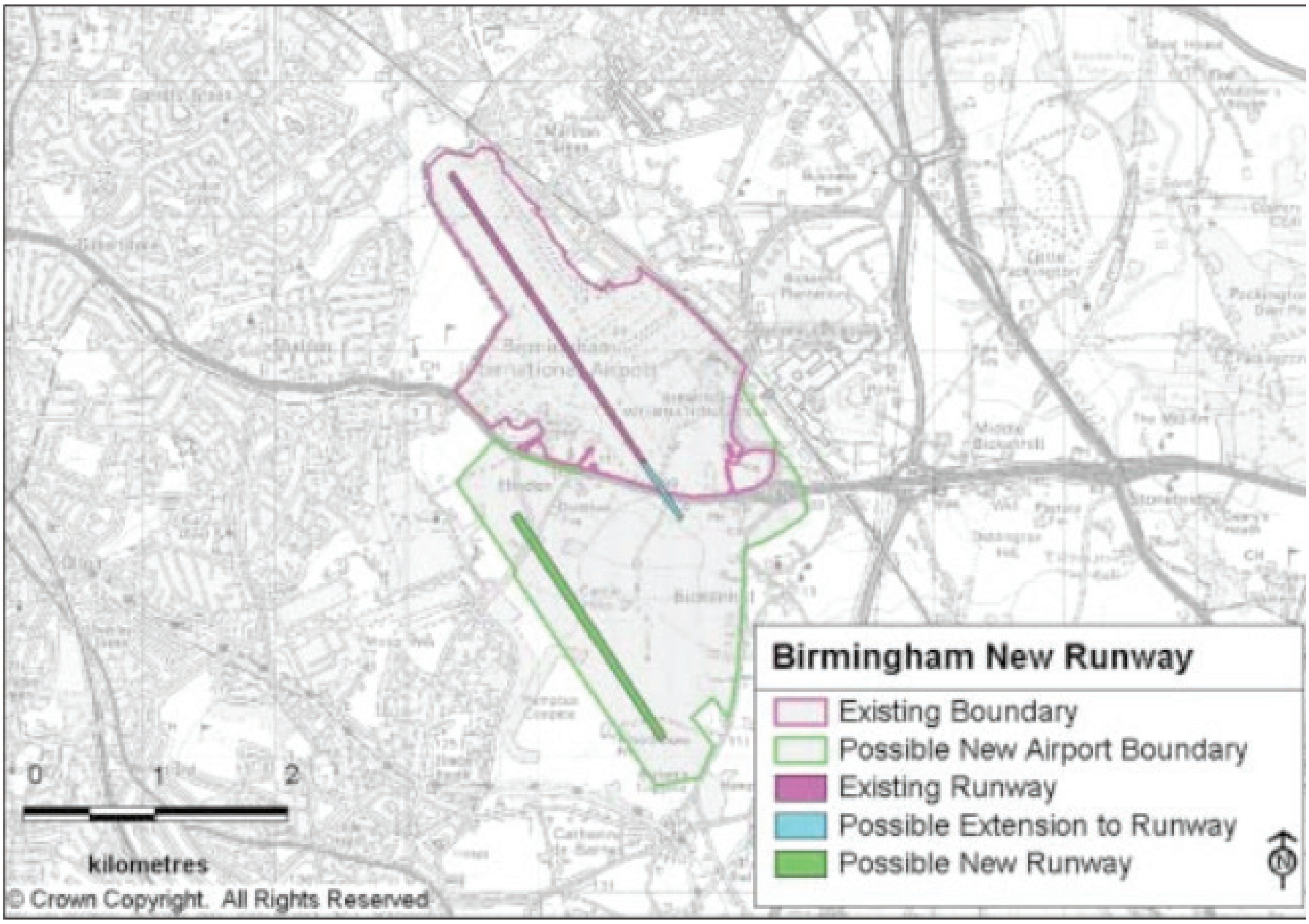
The following consultancies and organisations contributed to this submission:

1. Arup – Engineering and environmental work
2. Alan Marshall, Inchbrook Consulting – Transport
3. Birmingham Airport
4. Birmingham Chamber of Commerce Group
5. Black Country Local Enterprise Partnership
6. BNP Paribas – costings and delivery
7. Capital Economics – Economic benefits
8. David Bentley – Operational models
9. Greater Birmingham and Solihull Local Enterprise Partnership
10. Marketing Birmingham
11. MBPC Infrastructure Ltd – Delivery
12. Royal Bank of Scotland – Funding structures
13. Simon Robinson – Provelio Limited – Detailed costings
14. Solihull Metropolitan Borough Council
15. Steer Davies Gleave – Forecasting and transport
16. Volterra Partners – Funding structures
17. West Midlands Economic Forum – Economic benefit
18. Westbourne Communications – Project management and communications
19. York Aviation – Forecasting

Appendix A2

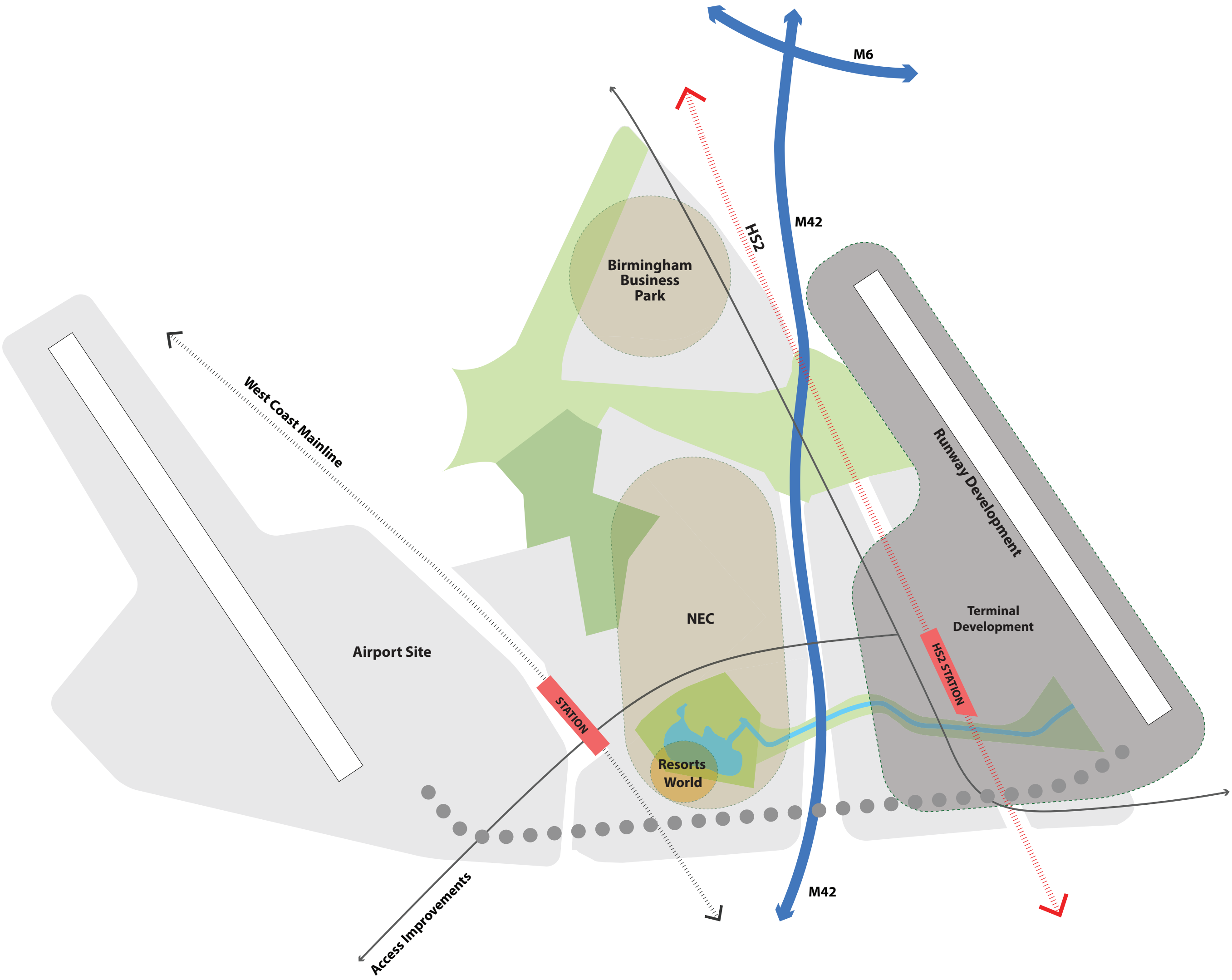
Map of proposed site as supported in 2003 Aviation White Paper

(see http://tinyurl.com/q9wcxt4)



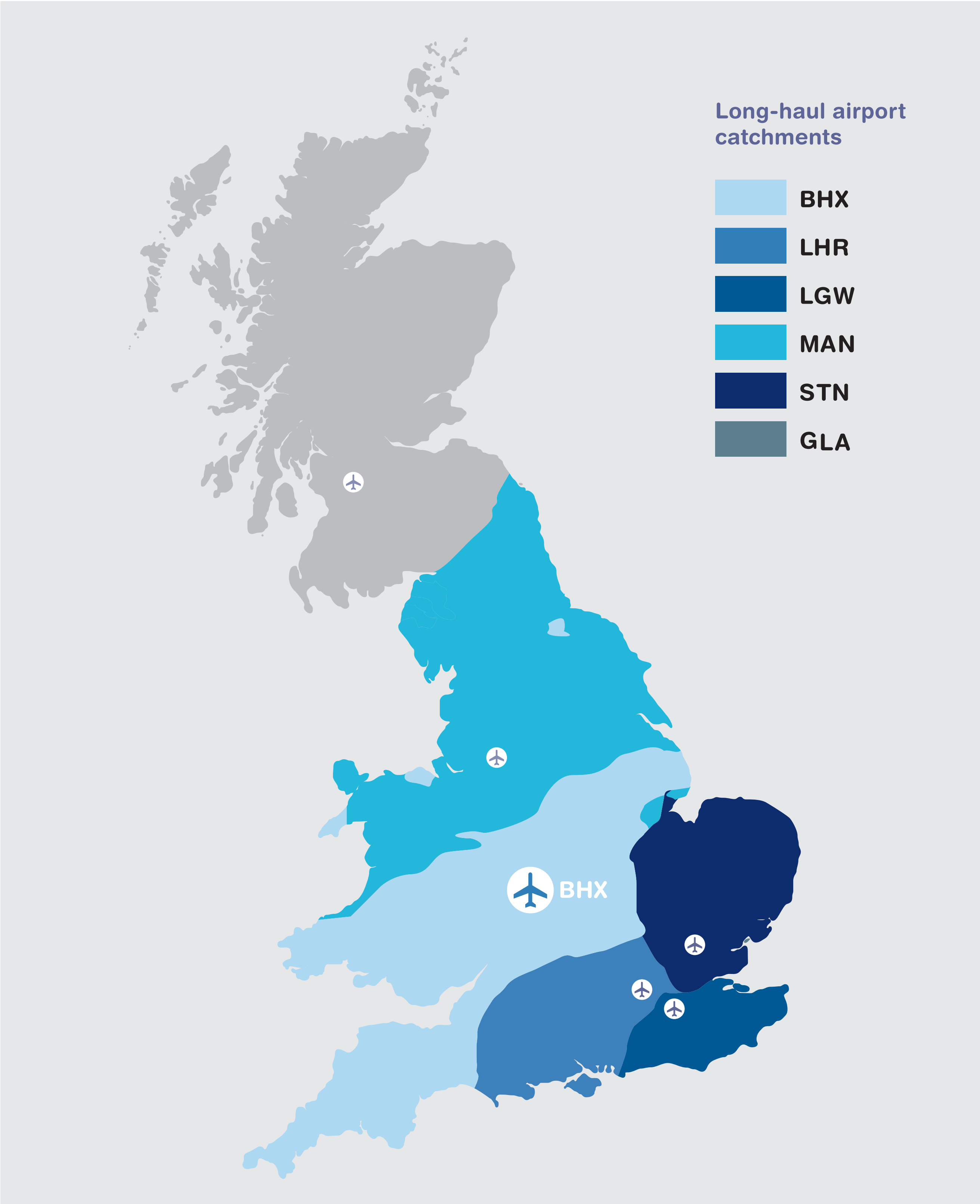
Appendix A3

Indicative map of proposed second runway location [2013]



Appendix A4

Birmingham Airport's long-term vision for UK aviation policy based on analysis by Capital Economics and Steer Davies Gleave



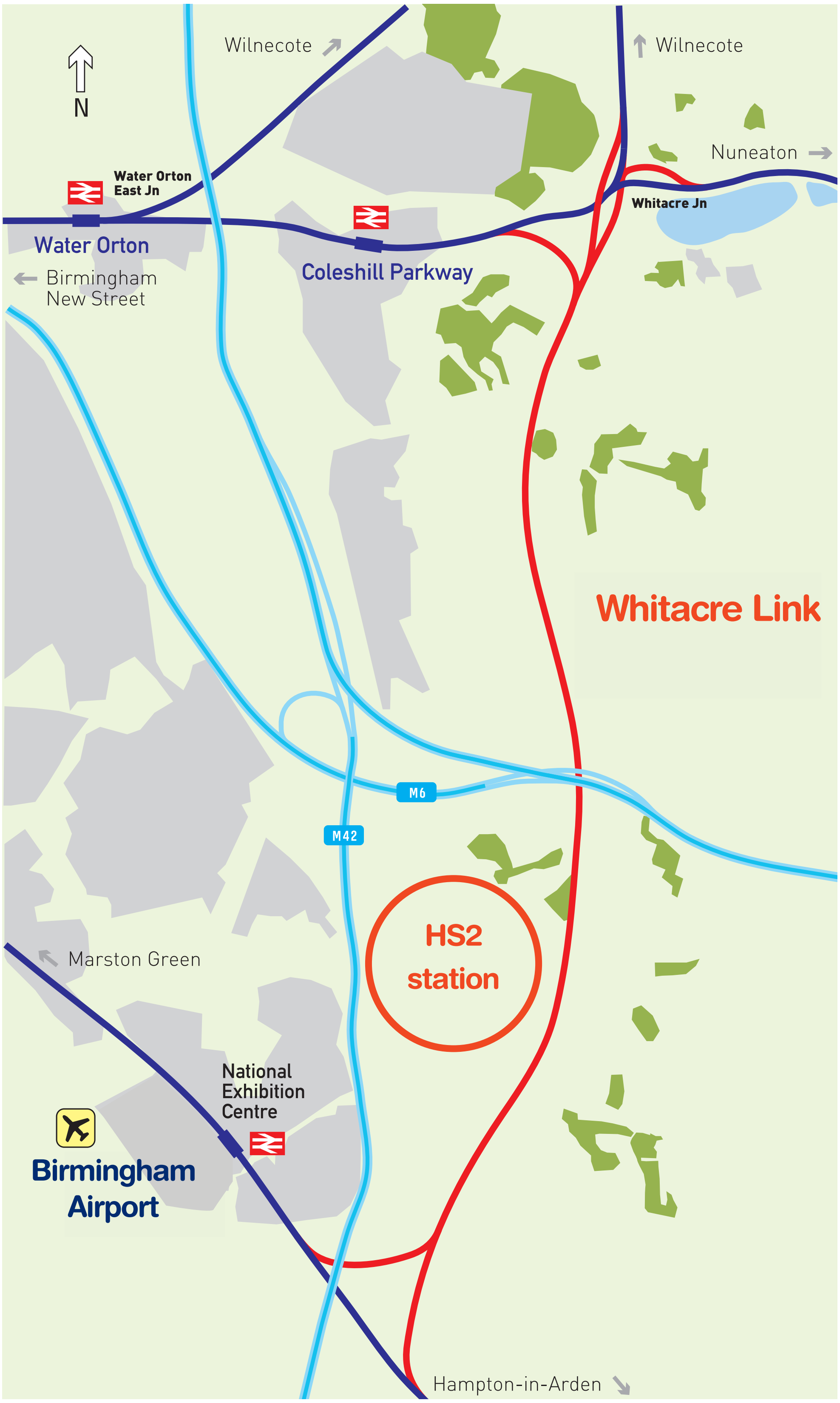
Appendix A5

Comparison of surface access journey times with and without HS2 and the Whitacre Link

Destinations	Current Journey Times	Journey Time with Whitacre Link	Savings	Journey Time with HS2	HS2 Savings
Edinburgh	248	None	N/A	194	52
Glasgow	237	None	N/A	202	35
Newcastle	180	175	5	100	80
Sunderland	243	223	20	141	102
York	141	116	25	63	78
Leeds	120	113	7	57	63
Wakefield	135	102	33	75	60
Bradford	175	149	26	82	93
Salford	143	None	N/A	62	81
Barnsley	135	105	30	93	42
Doncaster	116	111	5	73	43
Rotherham	126	97	29	73	53
Sheffield	96	67	29	58	38
Liverpool	94	None	N/A	58	36
Wigan	104	None	N/A	84	20
Bolton	137	None	N/A	63	74
Manchester	90	None	N/A	41	49
Stockport	98	None	N/A	56	42
Stoke on Trent	66	None	N/A	58	8
Derby	85	40	45	33	52
Nottingham	98	60	30	38	60
Leicester	71	38	33	70	1
Wolverhampton	32	None	N/A	39	N/A
Birmingham	9	None	N/A	11	N/A
Walsall	46	None	N/A	46	N/A
Coventry	14	None	N/A	N/A	N/A
Northampton	48	None	N/A	N/A	N/A
Milton Keynes	40	None	N/A	N/A	N/A
Luton	145	None	N/A	N/A	N/A
Oxford	61	None	N/A	N/A	N/A
London	70	None	N/A	38	32
Reading	87	None	N/A	N/A	N/A
Swindon	128	124	4	N/A	N/A
Bristol	109	None	N/A	N/A	N/A
Cardiff	144	None	N/A	N/A	N/A
Swansea	201	None	N/A	N/A	N/A
Exeter	175	None	N/A	N/A	N/A
Plymouth	229	None	N/A	N/A	N/A

Appendix A6

Whitacre Link proposal

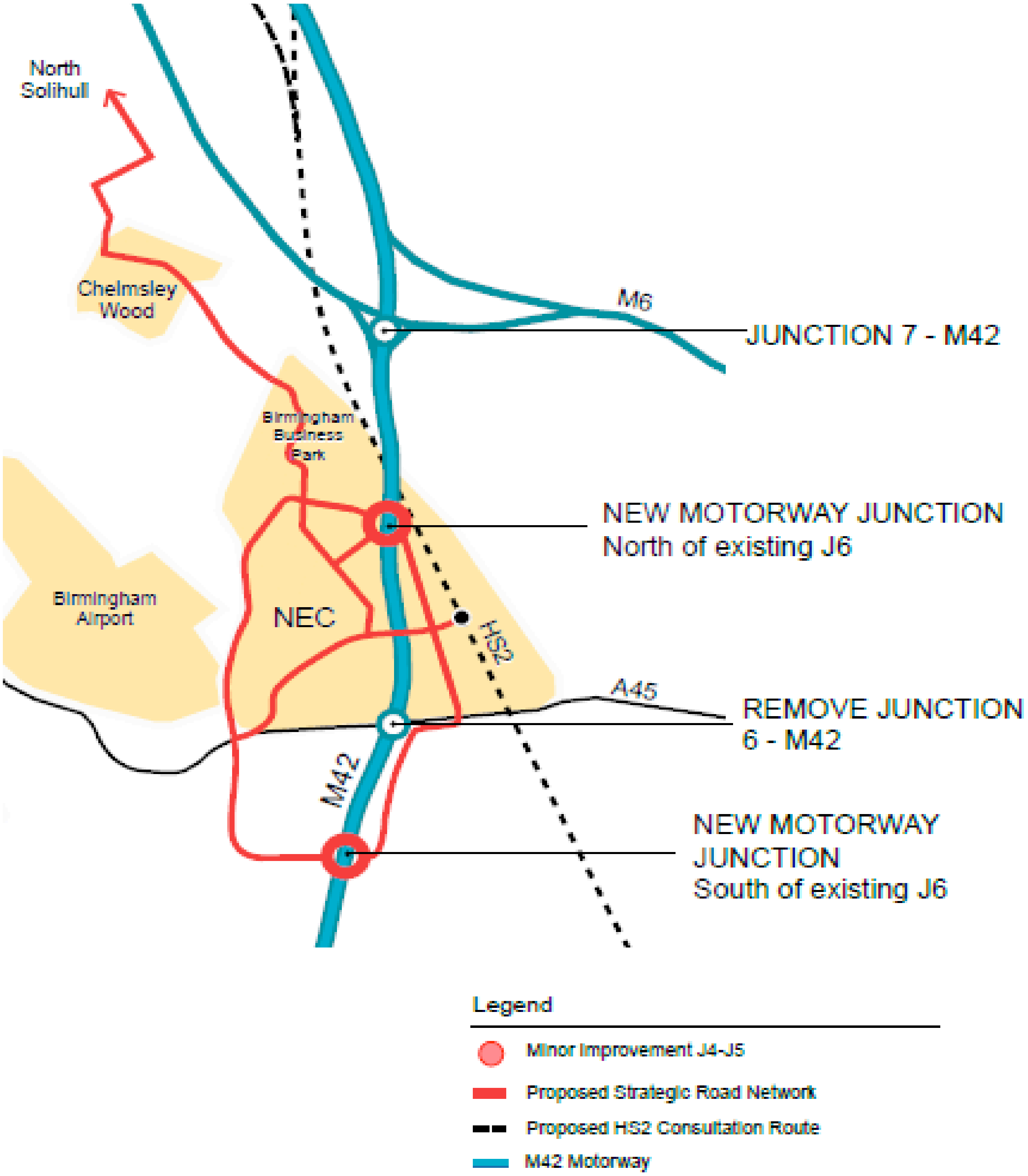


Appendix A7

Birmingham Airport's 2032 rail and road map

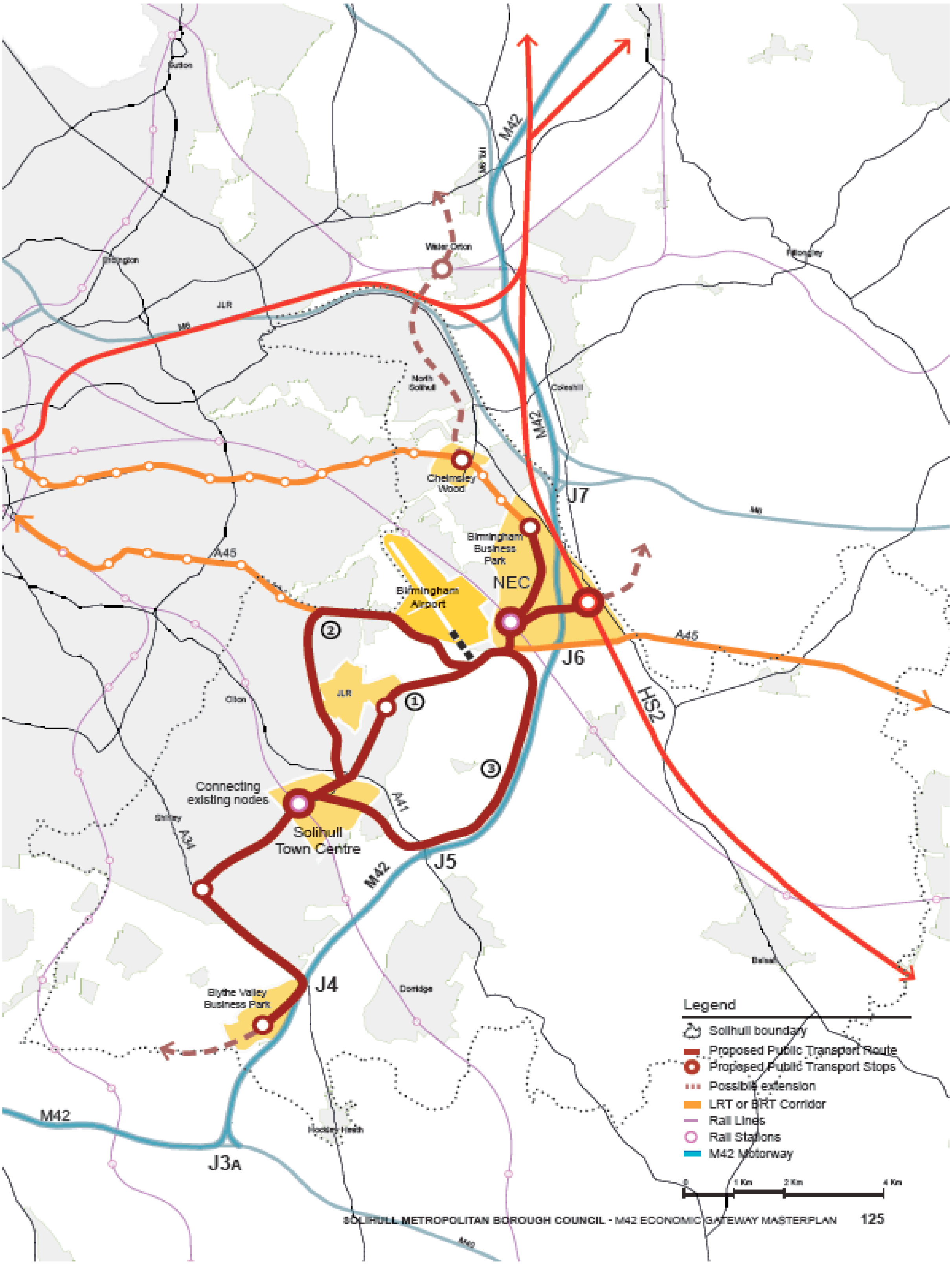
Appendix A8

UK Central proposed infrastructure



Appendix A9

UK Central's proposed public transport corridor



Appendix A10

Detailed analysis of funding solutions available to Birmingham Airport for the proposed expansion scheme

Financing with a Sub-Sovereign / Agency ("SSA") status
The provision of some form of Governmental financial indemnity or support to achieve a strong AA or better rating from at least two of the main credit rating agencies would provide effectively unfettered access to the capital markets in terms of amount, maturity and currency.

As an example, Network Rail (rated Aa1/AAA) currently issues on average ~£4bn of bonds per year.

Pricing would also be very competitive, and over time should potentially improve as issuance increases and as more investors become familiar with the quality of the credit and add it to their SSA portfolios.

Current spreads (vs UK Gilt) for UK SSA issuance is a premium of between 30–80 bps higher than the risk free rate.

Recent precedent issuance includes:

- June 2012: OeBB-Infrastruktur (rated Aaa / AA+), the Austrian railway infrastructure company explicitly guaranteed by the Republic of Austria issued a EUR1bn 2.25% 10-year transaction
- June 2013: University of Manchester (rated Aa1) issues £300m 40-year bonds at Gilts +80 bps
- June 2013: Network Rail (rated Aa1/AAA) issues £400m long-dated Sterling inflation-linked paper at Gilts +31 bps in two separate issuances
- May 2013: Transport for London (rated Aa2/AA+) issued £400m 32-year bonds at Gilts +60 bps
- October 2012: University of Cambridge (rated Aaa) issues £350m 40-year bonds at Gilts +60 bps.

Secured issuance
The secured market exists in two main forms – corporate issuance secured on assets of various types, and issuance from whole business securitizations containing the main assets, which are capable of bearing higher leverage through a formal covenant structure and layering of senior and subordinated debt.

Such structures have been commonly adopted in the UK infrastructure space, particularly when asset owners wish to increase leverage and pay dividends whilst maintaining strong investment grade credit ratings.

The secured market shares similar investors and market dynamics as the "vanilla" corporate market, and has also benefitted from strong support from the market.

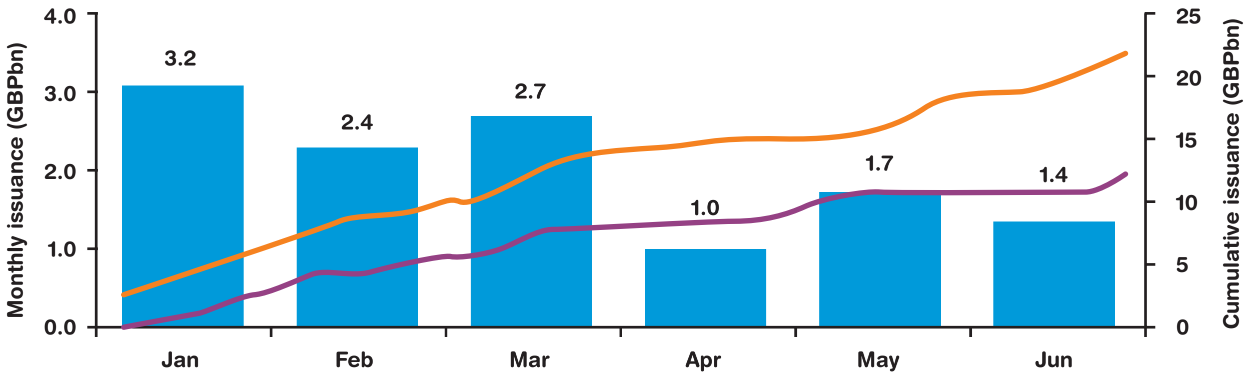
Recent precedent issuance includes:

- June 2013: Brussels Airports inaugural secured bond transaction, EUR500m 3.250% Bonds due 2020 (rated Baa1/ BBB) which was issued off a new EUR 5bn secured corporate programme and accompanying EUR1,150m of new loan facilities
- February 2013 and September 2012: HS1 £760m secured bonds, $915m unsecured private placement notes (with provisions to migrate into secured notes) and £376m bank facilities
- February 2013: £2.1bn of bank acquisition finance to support the purchase of Stansted Airport by Manchester Airport Group
- December 2012: £1.558bn debt refinancing for Peel Ports including bank loans and private placement notes.

The main comparable issuers are Heathrow (BAA) and Gatwick. Since 2006, BAA has issued approximately 30 new bonds in GBP, Euros, USD, CHF and CAD totalling roughly £13bn, and since 2011 Gatwick has issued 4 new bonds totalling £1.2bn. BAA senior bonds rated A- trade in the area of Gilts +150 bps, and Gatwick rated BBB+ trades in the area of Gilts +180 bps

"Vanilla" corporate financing
The traditional loan, bond and private placement market issued from a PLC or guaranteed financing company is also available, as utilized in Birmingham Airport's own 2001 issuance of bonds.

Figure 10 – 2013 Vanilla Investment Grade Sterling market issuance



Source: RBS

Although the natural home market would be the Sterling market, other currencies would also be an option.

Historically, looking at the last 5-years, transport and infrastructure has represented ~18% of the Sterling investment grade market.

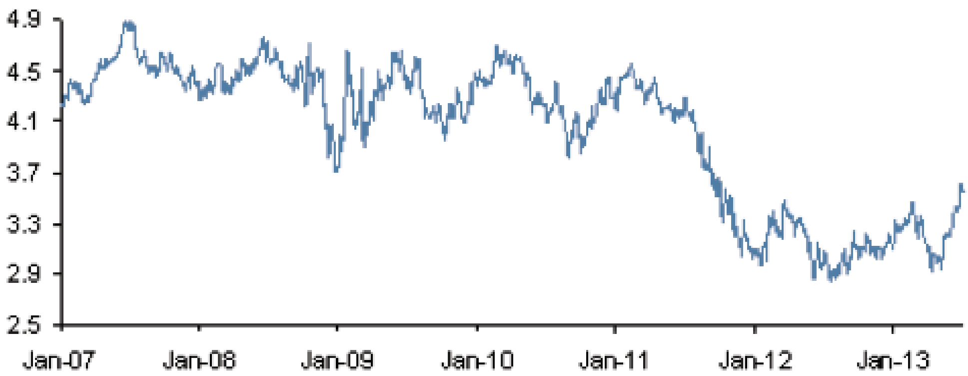
Recent precedent issuance includes:

- June 2013: Rolls-Royce (rated A3/A) issued £375m and EUR750m of new intermediate maturity (2021 and 2026) bonds
- May 2013: AT&T (rated A3/A-) issued £1bn new bonds maturing in 2043
- March 2013: the Danish shipping company A. P. Møller – Mærsk (not rated) issued £300m new 12-year bonds
- January 2013: Severn Trent (rated A3/BBB+) issued £500m new bonds maturing 2026
- The current Birmingham Airport bond is currently "trading" with very low liquidity at Gilts +280 bps. We would expect a new liquid (£150m+) issue from Birmingham Airport to achieve pricing at levels though this

Appendix A11

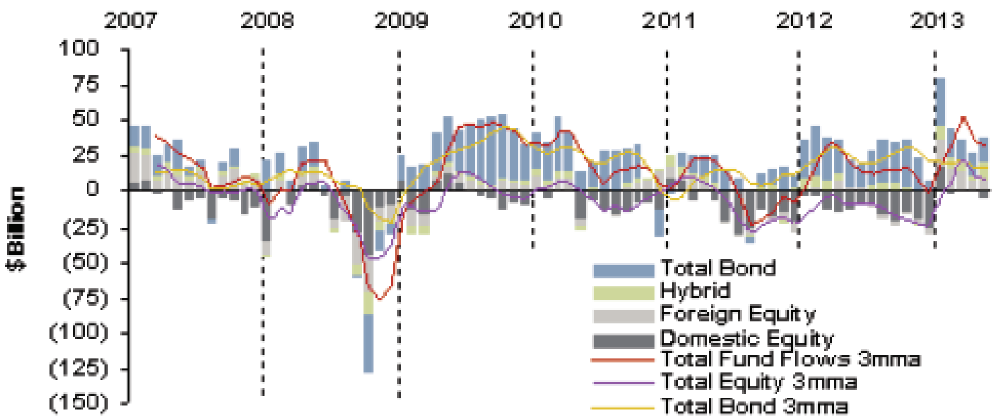
Market backdrop analysis by RBS

Table A11.1 – 30-year Gilt history



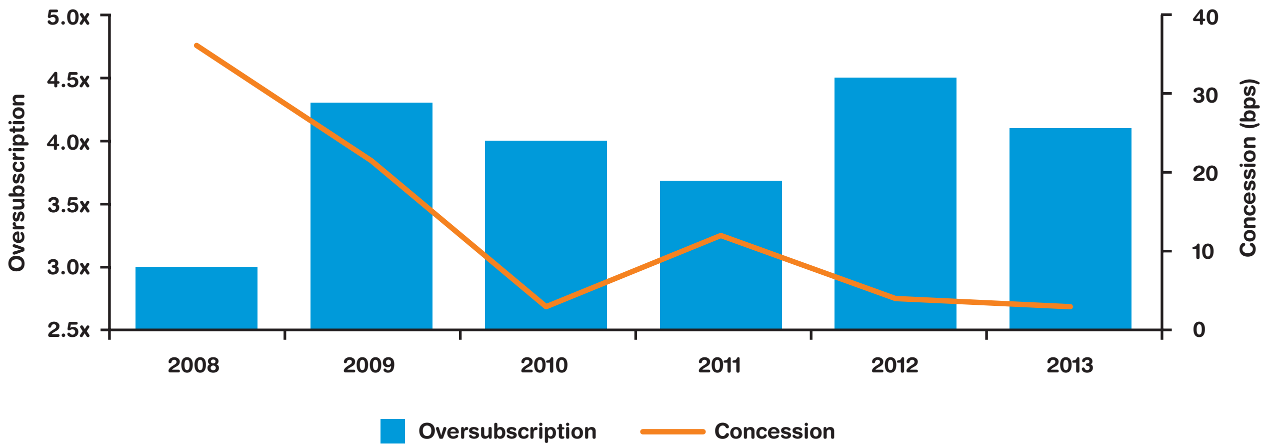
Source: RBS

Table A11.2 – Investor fund flows



Source: RBS

Table A11.3 – Bond orderbook oversubscription and new issue concenssions



Source: RBS

12 Endnotes

1. It should be noted that the high SDG forecasts suggest 68.7mppa by 2060, whilst earlier in this section it was suggested that post 2050 Birmingham Airport could handle in excess of this figure.
2. Reference from David Bentley.
3. The Capital Economics report was submitted to the Commission as part of Birmingham Airport's submission to the Commission's Discussion Paper on Aviation Connectivity and the Economy. The report contains detailed analysis of the economic activity, and passenger groups, that each airport supports. Please refer to the report for additional information.
4. This vision supports two different models for London – either a dispersed model with a constrained Heathrow, or the closure of Heathrow and the construction of a new hub to the East of London as recommended by Transport for London.
5. Boris Johnson, *London needs a new hub to stay world-class*, Evening Standard, 18th June 2013.
6. Secretary of States for Communities and Local Government and Transport,14th June 2007.
7. Solihull Metropolitan Borough Council, *UK Central*, 2013.
8. EEF, "Transport for Growth – Getting the economy moving", 2013.
9. Lord Heseltine, *The Greater Birmingham Project*, 2013.
10. West Midlands Economic Forum, *Stimulating Revival – the role of Birmingham Airport in rebalancing economic growth*, 2012.
11. Evan Davies, Built in Britain, 2013.
12. Additional sources include Solihull Metropolitan Bough Council Website; Birmingham City Council; Local Economic Assessment, 2011; Birmingham City Council; Youth Unemployment Briefing, April 2013; Solihull Metropolitan Borough Council; Unemployment Briefing, June 2012.
13. Birmingham Airport submitted SDG's report, *Making Birmingham Airport more accessible by rail*, to the Commission following consultation about the Airport's short and medium-term submission.
14. Please note, any development of the Whitacre Link would be subject to the relevant planning processes.
15. The 0.1db assumption has been based on the findings of the Sustainable Aviation report "Noise Road-map – A blueprint for managing noise from aviation sources to 2050".
16. For a full explanation of the freight potential at Birmingham Airport, see WMEF report Exports, Economics and Connectivity (2013).
17. Estimates were made of the numbers of people and households enclosed within the noise contours. The CACI population database contains data referenced at the postcode level. Population and household numbers associated with each postcode are assigned to a single co-ordinate located at the postcode's centroid. Consequently the population count may under specific circumstances encompass a handful of properties which are not accounted for in the Population count data. Likewise on occasions the population counts can slightly overstate the population exposed.
18. In addition to airport operator and commercial development space.