Durham Tees Valley Airport

Master Plan to 2020 and Beyond

April 2014

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Foreword

This Master Plan establishes a vision for the future of Durham Tees Valley Airport and describes further investment proposals for the Airport and its surrounding land holdings.

It considers proposals for the Airport to 2020 in detail and provides broad indication of potential development beyond that period to 2050.

The Airport has always played an important role serving the business community on Teesside, particularly in the process chemicals cluster. It provides passenger links to an international hub at Schiphol and the North Sea Oil Centre of Aberdeen. It is also the home of a number of important companies in the aviation sector and has recently added aircraft decommissioning to these.

During the recent economic downturn, many passenger airlines in the low cost and leisure sectors have pulled back to the larger airports. Smaller regional airports, including Durham Tees Valley, have seen passenger numbers fall. However, with its business base and owning a significant land resource, the Airport has the opportunity to continue to develop its strengths as a business focused airport community. In doing so, it can target sectors and businesses that offer the greatest growth potential and emulate the achievements of other airports that offer niche aviation services alongside specialist employment clusters.

This Master Plan sets out proposals for this future development and how it can be achieved using the Airport's own resources, including land, much of it brownfield. Few airports, even the largest, can survive on the revenue from passenger traffic alone and many have established wider development platforms to diversify income sources and to maximise their potential. The Airport Company believes that this can similarly provide business growth opportunities at Durham Tees Valley Airport alongside a focused passenger business serving local communities.

Leisure destinations accessible via scheduled services to Schiphol will be promoted alongside business services through marketing activity.

Durham Tees Valley Airport is part of Peel Airports which also owns Robin Hood Airport Doncaster Sheffield and is itself part of the Peel Group. The six local authorities of Darlington Borough Council; Stockton-On-Tees Borough Council; Redcar and Cleveland Borough Council; Durham County Council; Hartlepool Borough Council and Middlesbrough Borough Council hold an 11% shareholding in the Airport. Tees Valley Unlimited (which is the Local Enterprise Partnership for the area and is charged with delivering sustainable economic growth in the Tees Valley) works with the Airport Company and provides economic guidance.

The Airport takes its environmental responsibilities seriously. It is a stakeholder in 'A Strategy Towards Sustainable Development of UK Aviation' which seeks to ensure that the environmental effects of air travel are managed and mitigated. There is an established flying restriction over the villages of Middleton St. George, Middleton-One-Row, Yarm, and Eaglescliffe; and Noise Abatement Restrictions are in place. The Master Plan considers the likely environmental, social and economic effects of the proposed development and seeks to ensure a sustainable outcome. The proposals seek to minimise environmental impacts, mitigate harm where possible and provide landscape, ecological and sustainability benefits as part of the development.

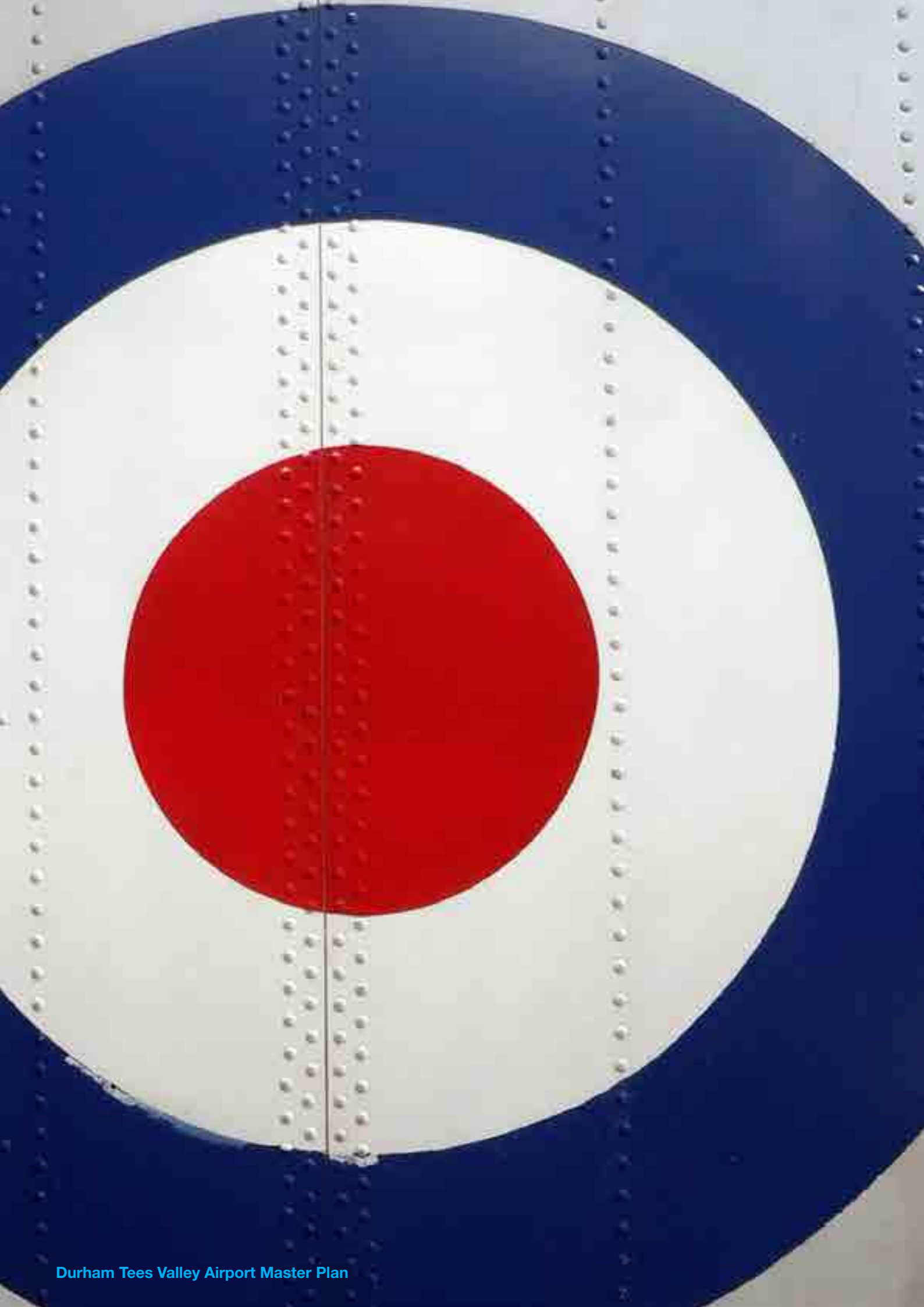
In preparing this Master Plan, the Airport has sought views as widely as possible including local communities and business groups across the Tees Valley, Airport tenants and staff, statutory undertakers, environmental organisations and representatives of local government including parish councils. The Master Plan was published for consultation over an eight week period from November 2013 to January 2014. The consultation process was publicised through a range of methods including a media launch, leaflet distribution, consultation exhibitions and business briefings. Alongside this, key relevant local authorities, parish councils, the Airport Consultative Committee and statutory bodies were consulted directly on the Master Plan proposals. A Consultation Report on the results of the process was published in February 2014.

An analysis of the feedback showed support for the vision of achieving a viable future for DTVA and for maximising the employment potential of the site.

The comments were carefully considered in the preparation of this final Master Plan document. The Master Plan was adopted by the Airport on 28 March 2014. It sets out the amount and type of development and change that will be needed to fulfil the objectives of the Airport and provides those with an interest in DTVA a common understanding of it's long-term aspirations.

The Master Plan can be downloaded from the DTVA website: www.durhamteesvalleyairport.com and hard copies can be ordered from the Airport by writing to:

Durham Tees Valley Airport,
Darlington,
Tees Valley,
DL2 1LU



1. Introduction

1.1 Durham Tees Valley Airport (DTVA) is situated at Middleton St. George in the eastern part of Darlington. The Airport extends into Stockton borough to the east but its core built facilities including the terminal, operational buildings, and associated employment uses are within Darlington.

History of the Airport

1.2 DTVA has for many years been an important part of the economy and transport network of the Tees Valley. The Airport began its life as Royal Air Force Station Goosepool, and in 1941 became RAF Middleton St. George. The most northerly of Bomber Command's frontline airfields, it was home to squadrons of Whitley, Halifax, Wellington and Lancaster bombers. In 1943, it became a base for the Royal Canadian Air Force. It was in a Lancaster based here that Flight Officer Andrew Mynarski of their 419 Squadron carried out an act of such heroism that he was posthumously awarded the Victoria Cross, the last VC to be awarded to an airman of World War II. A summary of the history of RAF Middleton St George is attached at Appendix 1.1.

1.3 The majority of the buildings which comprise the Airport today were built to accommodate the original military use of the airfield. These include hangarage, administrative buildings, staff accommodation and housing within Middleton St George (the latter now being in private ownership and known as Oak Tree).

1.4 In 1963 it was decided that RAF Middleton-St-George should close. The local authorities of the day saw the potential of this airfield as a civil airport, terms were agreed and the RAF finally departed on 17th April 1964.

The Civil Airport

1.5 The terminal of what became Teesside International Airport was opened in 1966 by Queen Margaritha of Sweden. The first scheduled service was to Manchester. In November 1969 the first flight to London Heathrow was operated by British Midland. Additional services and routes were developed over subsequent years to satisfy many of the air transport needs of the area, particularly routes to Amsterdam (Schiphol) and Aberdeen, serving the chemical industry cluster. Passenger numbers reached around 300,000 passengers per annum (ppa) in the late 1970s and stayed at that level into the 1990s.

1.6 Investment in upgrading the Airport facilities led to growth in passenger and freight traffic in the early and mid-2000s with passenger numbers averaging over 700,000 ppa, driven by the growth of the low cost sector. The Airport invested in a number of projects to enhance its transport role and economic contribution. These included construction of a new access road (St George Way), extension and resurfacing of the passenger car parks, refurbishment and recladding of the terminal and investment in the airfield infrastructure.

1.7 In 2004, DTVA applied for planning permission for development to enable the Airport to accommodate 3 million passengers and over 25,000 tonnes of freight per annum (the Airport expansion); and the development of a business park for aviation related companies (the Northside Business Park). The applications were approved in 2007, but by then the aviation sector was beginning to see a downturn.

1.8 Permission was also granted for c. 176,900 sq m (1,900,000 sq ft) of warehousing and distribution buildings on the south side of the Airport (Southside Phase 1), linked to a joint development agreement with regeneration agencies, including English Partnerships and the Regional Development Agency (RDA), ONE North East. However, subsequently the RDA was abolished and the development did not proceed. The HCA inherited the land interests of ONE North East in the vicinity of the Airport and the delivery of Southside will be dependent on joint working between the HCA and the Airport company.

Impacts of Recession

1.9 The financial crash and subsequent prolonged period of economic recession have had a significant impact on the economies of the Tees Valley and North East Region. These economies performed below UK averages on a number of measures even before the crash. The downturn has had greater impacts on levels of employment and business activity than in other UK regions, for example, total employment in the North East and Tees Valley in 2012 was about 2% below 1997 levels, whereas at UK level employment has grown by c.7% over the same period. This underperformance is, at least in part due to the greater reliance on sectors that have contracted the most during this period; and a relatively lower representation in potential growth sectors. This has resulted in levels of employment and GDP per capita in the North East and Tees Valley remaining significantly below national averages.

1.10 The performance of the economy has had a marked impact on demand for air travel and has contributed to significant reductions in passenger numbers and freight throughput at the Airport. This has been compounded by specific challenges facing airports. These include:

- the introduction of Airport Passenger Duty[1] in the late 1990s and the doubling of the rate in 2007
- the high (and rising) fixed cost base imposed by regulators which limits the options to reduce cost in line with falling income
- the tendency of airlines under financial pressure to consolidate their operations at large hub airports and reduce costs and routes at smaller airports.

1.11 In response to declining demand for passenger services from DTVA, and global economic conditions, a number of airlines have terminated contracts at the Airport meaning cuts in flight services and reduced connectivity for the region. This has had a significant impact on the viability of the Airport.

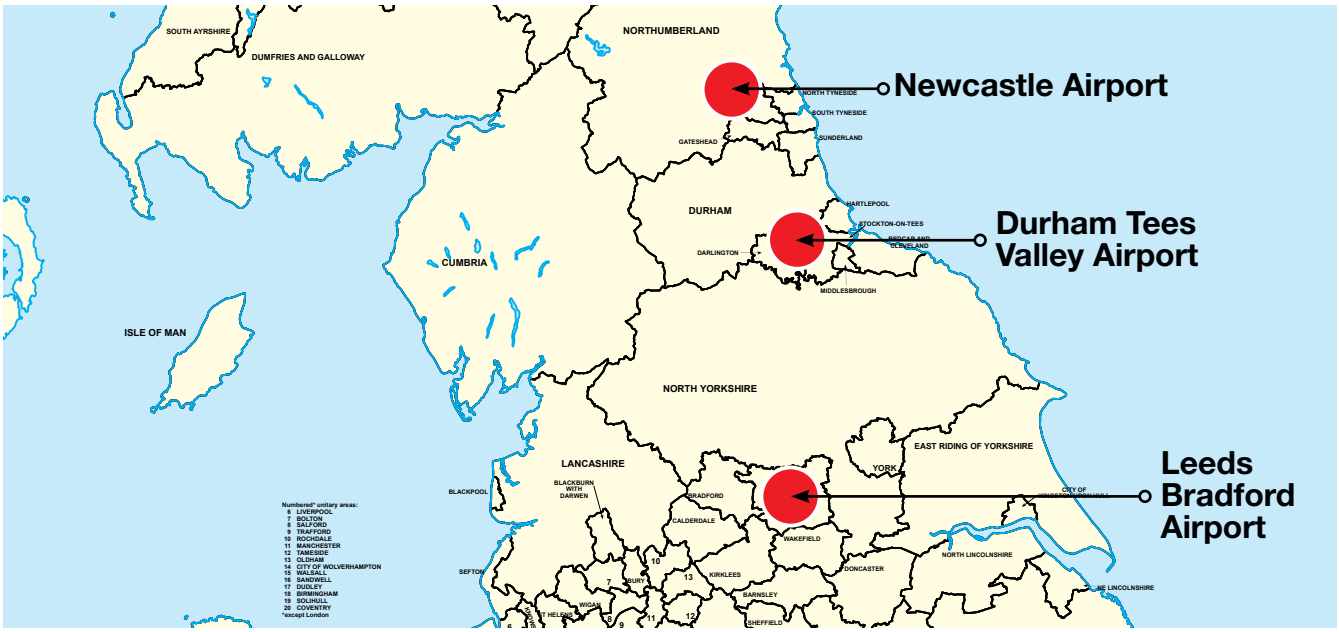


Figure 1.1: Airports in the north-east of England and North Yorkshire

[1] Airport Passenger Duty is an excise duty which is due on chargeable passengers being carried from a UK airport on chargeable aircraft

1.12 These challenges have been particularly acute at DTVA due to competition from Newcastle and Leeds Bradford Airports (Figure 1.1). These airports offer a wider range of routes and have larger local catchments. This generates certain economies of scale and has enabled them to better withstand reduced demand and to benefit from consolidation by airlines.

The Need for a Master Plan

1.13 This is an important time for the Airport as it seeks a sustainable business model in response to market changes to safeguard passenger services, including international links that are important to the local economy. Business and general aviation at DTVA remain core activities. In addition, there are a number of specialist operators in aviation related sectors. These include the Serco International Fire Training Centre (IFTC), Cobham Plc (flight training and services) and Sycamore Aviation (aircraft dismantling, recycling and maintenance). This activity, together with a significant land and property resource, represents an opportunity to re-position the Airport within the aviation market, secure additional investment and establish a vibrant specialist airport.

1.14 The land ownership of the Airport includes significant areas of previously developed land to the north and south of the runway; these areas are known respectively as “Northside” and “Southside”. They present an opportunity to secure development that will generate the capital needed to invest in the re-positioning of the Airport and its transition to a viable business model.

1.15 After detailed assessment as part of a strategic plan for the future of the Airport it has become clear that the most sustainable model is to focus on its business sector strengths, in terms of growing passenger traffic, business and general aviation and capturing opportunities in growth markets such as aircraft maintenance and recycling. This includes considering the potential for mixed use development including residential which will complement existing uses on and adjacent to the site and provide funding to reinvest in the Airport. Capital investment in new infrastructure, such as hangars, will provide long term secure rental income. This is termed “enabling development”. Further details of this are set out in Chapter 7.

1.16 To realise this objective, a co-ordinated planning policy approach, which has the support of all key stakeholders, is essential to create a clear framework for the Airport and related projects. The required investment will only be attracted if there is certainty over the medium and long term plans for the area. This applies to private sector investment in business growth and also to potential public sector funding, for example public transport initiatives such as the Connect Tees Valley scheme. Once adopted, this Master Plan will establish the clarity and certainty which is needed for inward investors and potential companies seeking premises and wishing to locate at the Airport site.

Durham Tees Valley Airport looking North East

1.17 A consistent approach across the whole Airport and associated land is also essential because:

- the Airport straddles the boundary between two local authority areas (Figure 1.2);
- their emerging Development Plans will address the different priorities of the two boroughs and are progressing on different timescales.

1.18 There is a need for a positive and pro-active strategy, which establishes the site as an economic priority and supports public and private regeneration funding. DTVA is not alone in the challenges it has faced and other airports of a similar scale are developing their own specialisms some of which are recognised as Enterprise Zones (EZ).

Purpose of the Master Plan

1.19 This Master Plan creates a clear and robust policy framework for the growth and development of the Airport. It supplements policies within the Development Plans of both Darlington and Stockton.

1.20 The contents of the Master Plan have been consulted upon widely and where possible, comments that were raised during the consultation have been addressed. The Master Plan will therefore form part of the evidence base to inform the preparation of development plan documents by the borough councils and will be a material consideration in the determination of planning applications within the Master Plan Area itself and elsewhere, if they would impact on the future of the Airport.

1.21 The provisions of this Master Plan have considered the current markets within which the Airport operates, its future potential role, and the steps needed to create a viable future with significant opportunities for growth. These proposals have been subject to extensive commercial testing. The proposals contained within this Master Plan represent the most appropriate strategy to:

- secure a viable airport business;
- offer the best prospect of enabling the Airport to retain important international connections which are important to the economy of the Tees Valley ;and
- enable optimum investment in related uses and activities which offer strong long term prospects for economic growth.

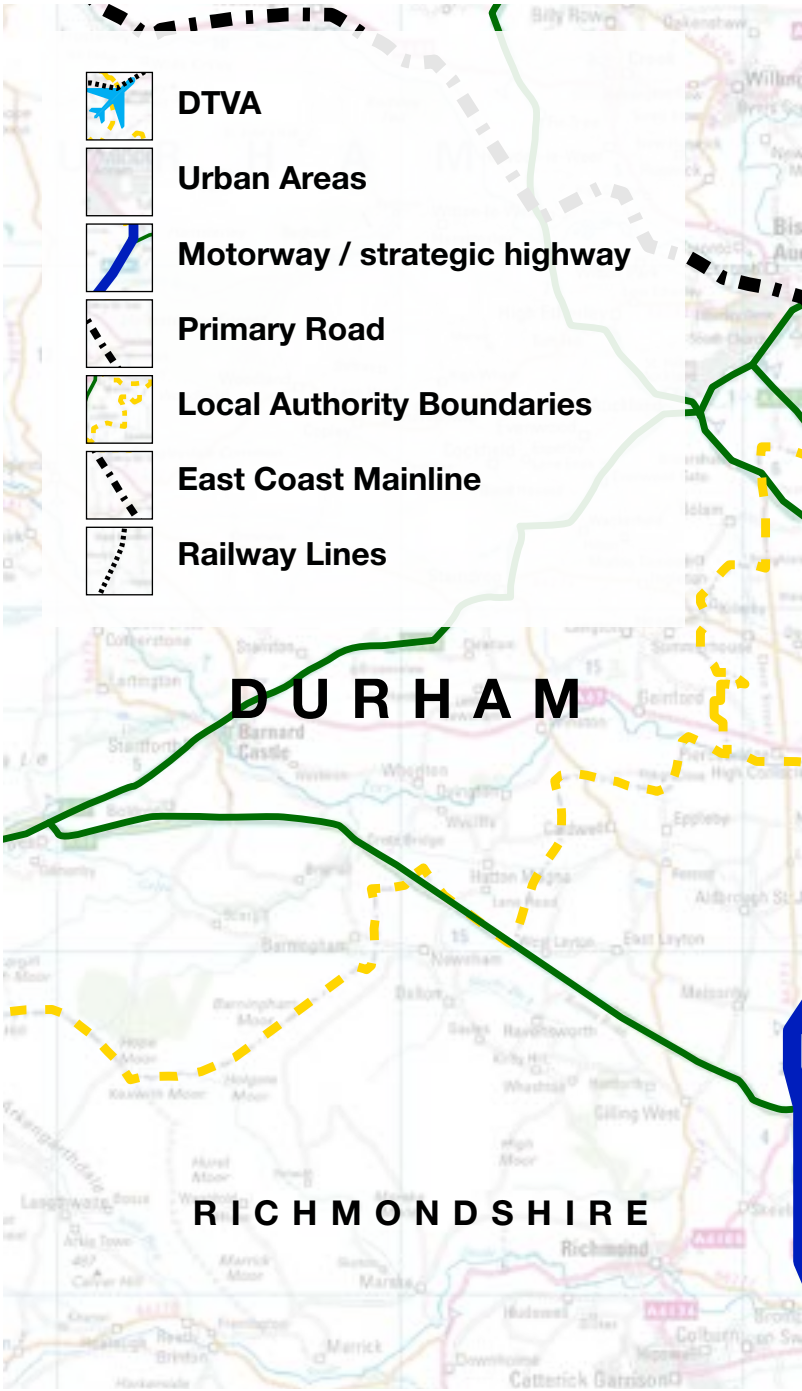
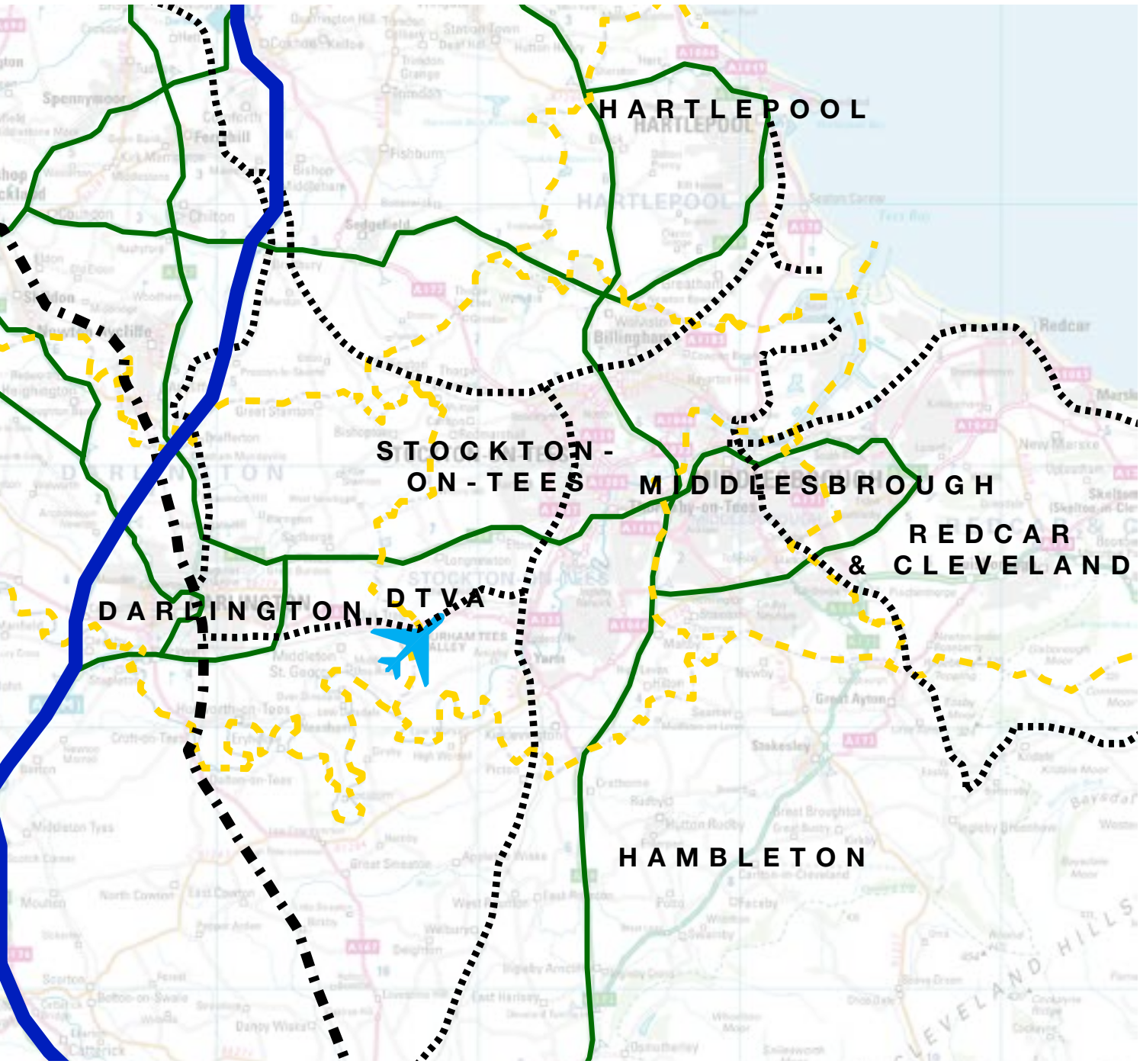


Figure 1.2: Strategic location of DTVA

1.22 The Master Plan establishes clarity of what is proposed, over what timescale, and who will be responsible for its delivery. It is also a basis for ongoing engagement with all those who have an interest in the Airport. This includes users of the airport; aviation operators and other businesses based at the Airport; the Airport Consultative Committee; technical consultees; statutory bodies and local communities. Where delivery of the Master Plan requires the submission of planning applications, these will be subject to consultation as part of the statutory application process.



Timeframe

1.23 The Master Plan looks ahead in detail to 2020. It considers the likely scale of development and change that can be achieved over the time period. In doing so it sets the Airport in the context of the Department for Transport's (DfT) national aviation forecasts over that period. The proposed housing development and additional hangarage are expected to be delivered in phases commencing in the early part of the plan period. Employment proposals will be delivered in line with occupier demand. Some of the proposals within the Master Plan, for example the Southside employment proposals, may not be fully delivered by 2020.

The Master Plan therefore looks ahead in more general terms, beyond that period. In doing so the Master Plan has regard to the DfT's longer term aviation forecasts for DTVA. The property development proposals, particularly the construction of employment floorspace will only be partly developed by 2020, with the remainder being phased for delivery in the subsequent period extending to 2050.

2. Vision and Objectives

Vision

The Master Plan Vision is to:

- Reposition Durham Tees Valley Airport to establish a viable airport business model and investment strategy for the long term;
- Create a vibrant mixed use Airport neighbourhood facilitating investment by others in a range of aviation related businesses and, where necessary enabling investment in other uses; and
- Create a robust spatial framework and business case for the investment in the developments necessary to achieve this vision.

Objectives

In pursuit of this Vision, the Objectives for this Master Plan are to:

- Maintain a vibrant and profitable business as a stable and secure basis for on-going investment in order that the continuing development of DTVA is feasible and can be funded;
- Provide business services for the process industry and other sectors in the Tees Valley for whom links to international hubs and other centres are important;
- Address the requirements of the business and general aviation community including in specialist growth sectors such as fire training, aircraft dismantling and maintenance / repair engineering services;
- Meet the needs of specialist aviation requirements, including Military Support Services and Police and Ambulance Services;
- Enhance DTVA as a cargo destination by developing the opportunity for air freight by providing appropriate facilities, including consideration of a freight siding to the Tees Valley railway line;
- Maximise the potential of DTVA as an economic driver creating employment and stimulating investment in support of the on-going economic and physical regeneration of the Tees Valley;
- Create an airport neighbourhood with a strong central focus and identity with shops / services provision appropriate to scale and type / mix of uses and residential accommodation;
- Uphold the highest possible safety standards concerning air traffic control (ATC) and airspace in accordance with Civil Aviation Authority (CAA) requirements;
- Maintain a sustainable airport by safeguarding and enhancing the special character and interest of the area, minimising environmental impacts at source through good design and by addressing the potential effects of aviation on climate change through commitment to “Sustainable Aviation”;
- Reduce the need to travel long distances to other airports, (principally in the South East) through the provision of connecting air routes;
- Improve the opportunities for sustainable travel, including public transport, to and from DTVA through the provision of improved bus services;
- Facilitate relocation of the railway station as part of wider investment in rail connectivity within the Tees Valley;
- Establish a framework for improving the physical appearance of DTVA, its landscape quality and its interface with neighbouring land uses; and
- Set out the long term growth plans of DTVA in order that these can be taken into account by local authorities in preparing their development, economic and transport plans and by others in making investment decisions.

Part 1

Durham Tees Valley Airport: Today

3. Master Plan Area

3.1 The area to which this Master Plan applies is shown on Figure 3.1 and comprises the existing Airport operational area; commercial uses to the northern side of the Airport; land to the north west of the terminal that has permission for a business park and car parking; land to the south of the Airport which has planning permission for employment development; and land to the south of the A67 which has been identified as part of the Connect Tees Valley scheme as a site for a replacement railway station.

Location

3.2 The DTVA Master Plan area is situated midway between Darlington and Stockton-on-Tees. Darlington is around 8km to the west and Stockton-on-Tees around 8km to the north east as shown on Figure 3.1.

3.3 The Airport is located at the village of Middleton St George. Middleton One Row lies around 1 to 2km to the west of the runway, with the hamlets of Low and Over Dinsdale 2km to the south west. To the north is the village of Long Newton, with the settlements of Eaglescliffe and Yarm some 4km to the east.

3.4 The site lies within the 'West Stockton Rural Fringe' landscape character area (as defined by the relevant Landscape Character Assessment[2]). The predominant land use in the area is agriculture with large arable fields prevailing. More significant features include settlements, isolated dwellings and farmsteads, and the Airport.

3.5 The topography around DTVA is largely flat and rural in character. To the north, the landscape consists of arable and dairy farmland, with intermittent hedgerows and occasional copses.

3.6 Eaglescliffe and Yarm to the east are in a low lying area, and effectively mark the edge of the urban fringe of Stockton-On-Tees. To the south, the land slopes downwards towards the River Tees, with woodland belts located at Newsham and Aislaby.

3.7 The A66 Trunk Road runs from the A1 (M) south via a short spur motorway (the A66M) and forms a southern and eastern bypass to Darlington, before running eastwards towards Stockton and Middlesbrough. The creation of the Long Newton Interchange on the A66 has improved the direct accessibility of the Airport to the national strategic road network.

3.8 Dinsdale railway station lies 1.25 km to the west of the Airport. Situated on the Tees Valley Line, it serves the route between

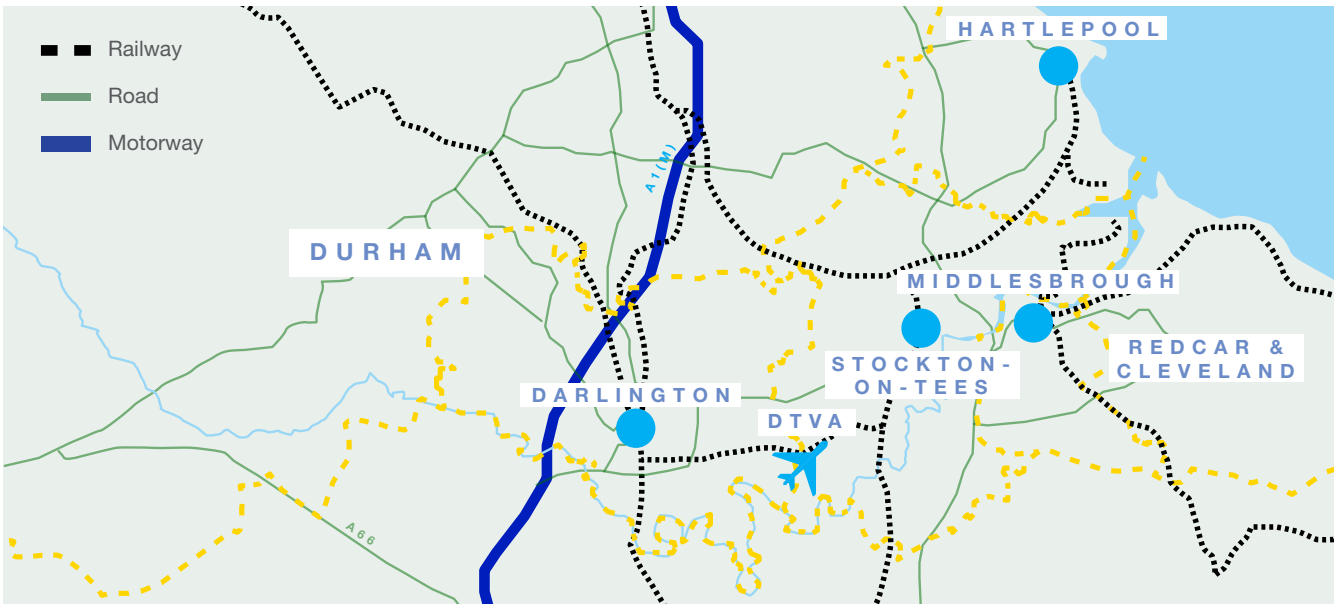


Figure 3.1: Strategic location of DTVA

[2] Stockton Landscape Character Assessment. White Young Green, (2011)

Bishop Auckland and Saltburn via Darlington, Thornaby, Middlesbrough and Redcar. The Airport station, a rail halt, is located approximately 1 km to the north east of the terminal, 1.5 km to the west of Allen's West station. It is served by a parliamentary service, with one train stopping at the station on a Sunday and is recorded as one of the least used railway stations in the country. Plans exist for a replacement station, but have not progressed in recent years. This would be located adjacent and to the east of the bridge over the railway line from the A67.

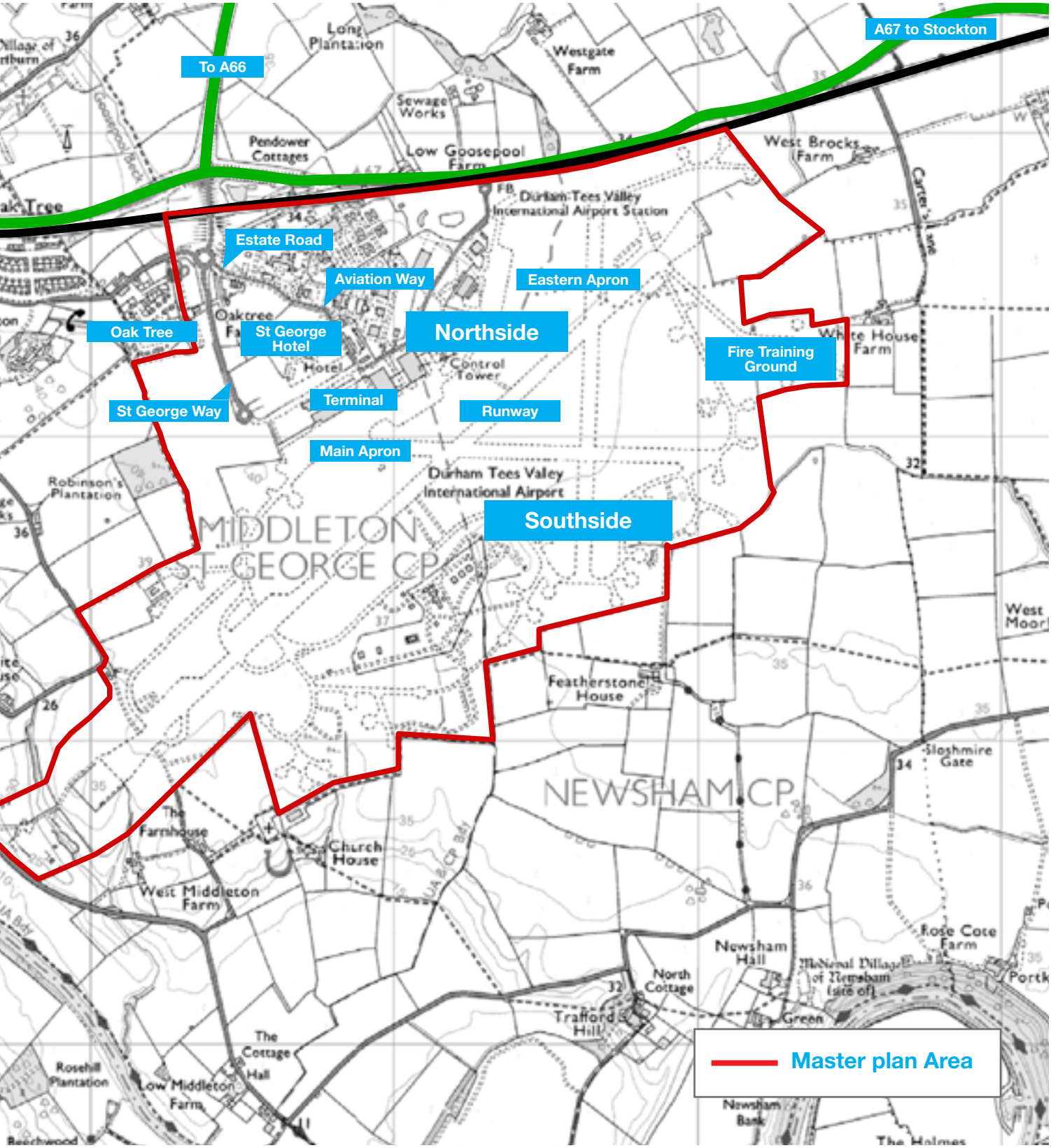
The Master Plan Area

3.9 The Master Plan area extends to around 338 ha (835 acres) and encompasses the operational area of the Airport along with areas of land at Northside and Southside (Figure 3.2). The majority of the Southside land and the undeveloped area of Northside are within the ownership of Durham Tees Valley Airport Limited There are areas of Northside which are owned by third parties, including the Middleton St George Hospital, Cleveland Motorhomes, The Spa Hotel, The International Fire Training School operated by Serco, together with a number of engineering companies. There are also some smaller vacant development sites. Land to the west of the access road within the ownership of the Airport Company is currently farmed. The HCA owns land at Southside.

3.10 The principal access to the DTVA is from the north via a roundabout on the A67, which links Darlington with the A66 and A19 (T). The road crosses the Darlington to Stockton Tees Valley railway line south of which is a second roundabout at Yarm Road. From here direct access to the terminal at DTVA is facilitated via St George Way, whilst the Estate Road leads to Aviation Way and serves the Northside employment areas, the Airport hotels and operational parts of the airfield. Access to Southside is currently only possible by crossing the runway and this lack of accessibility has to date hindered the ability to progress the development of it.

3.11 Not all land within the Master Plan boundary is owned by DTVA Ltd. However, the boundary is thought to be the most logical for the sensible planning of the Airport and surrounding areas. There are a number of existing development sites within the area where property owners may bring forward their own proposals.

Figure 3.2: The Master plan Area



N.B. Master Plan Area includes land within the ownership of Durham Tees Valley Airport and other ownerships in the vicinity

The Airport

Runway, Taxiways and Aprons

3.12 The main runway of 2,291m is aligned on a south west – north east axis (Runway 05-23). A second runway is aligned on a north west – south east axis and crosses the main runway, although this runway sees little use (Runway 01-19). Various taxiways connect the runways with areas of existing apron which serve development to the north of the main runway.

3.13 The main apron fronts the terminal. This apron can accommodate up to 8 main stands for aircraft up to Code C with a wingspan up to 35.99 m (e.g. B737). Larger, Code D aircraft with a wingspan of up to 51.99 m (e.g. B767) can be accommodated exceptionally by using more than one stand with control procedures for operation on the taxiway in place. Code E aircraft with a wingspan up to 64.99 m (e.g. B777) could only be accommodated by closing most of the apron.

3.14 To the east of the terminal there are hangars which serve the Air Ambulance and businesses such as Sycamore and Cobham. A new hangar has also recently been constructed to accommodate the National Police Air Service. These hangars are accessed by the eastern apron.

3.15 Landing approach lights extend some 600m from the north eastern end of the main runway, and some 300m from its south western end.

3.16 Within the Airport, Northside is the main focus of existing airport related activity. This area accommodates the existing terminal building, passenger and staff parking areas, control tower, fire station, administrative offices, hangars and other buildings in aviation use.

3.17 The terminal building, albeit an older building, has in the recent past seen internal reconfiguration and the re-cladding of the landside elevations. It is functional and able to meet passenger and operator needs.

3.18 Set-down/pick-up points for taxis are situated to the west of the terminal, including for disabled passengers. The main passenger car parking is located to the north of the terminal.

3.19 Airport administrative staff occupy offices within the terminal and modular offices located to the east of the main car park. Maintenance and operations staff are based in various existing buildings to the east of the terminal, including the control tower and adjacent Rescue and Fire Fighting Services (RFFS).

Passenger Services

3.20 The Airport plays an important role for the local community in providing global connections by air. This is particularly the case for the business community in the process chemical industry sector on Teesside. In 2012, the total passenger throughput totalled 165,000 passengers.

3.21 KLM Cityhopper operates a service to Amsterdam Airport Schiphol. Schiphol is what is termed a hub airport. It is the home airport for KLM (Royal Dutch Airlines), which operates with sister company, Air France, in an alliance called Sky Team. Ranked as Europe's fourth largest airport, over 100 airlines provide services to over 300 destinations from Schiphol. KLM collects traffic into its hub from a number of regional airports, including DTVA. Passenger numbers on this route were about 100,000 in 2012. The route serves both business and leisure passengers, who are seeking a seamless connection to destinations worldwide, including America, Asia and Africa.

3.22 Eastern Airways operates services to Aberdeen, which are tailored to the needs of the North Sea oil industry. From Aberdeen onwards, connection can be made to Wick, Stornaway and Stavanger in Norway. Passenger numbers on this route were about 33,000 in 2012. Eastern also operates occasional charter routes for business customers.

3.23 Flybe operates a summer only charter flight to Jersey on behalf of a local travel agent with other flights operated by operators such as Newmarket Holidays.

Airport Hotel

3.24 The St George Hotel is situated to the north of the terminal building and main car park. It accommodates the needs of passengers and flight crews, as well as being used by local business people for events. It is also popular for weddings and has meeting and conference facilities and function rooms available for hire.

Aviation Services

Cargo Handling Facilities

3.25 Camair Freight Solutions is an independent freight forwarder, servicing the North East of England with particular focus on the chemical, polymer and biotechnology industries and with off shore activity in the oil and energy sector. Working in conjunction with KLM, Camair handles airfreight imports direct into DTVA on its daily flights.

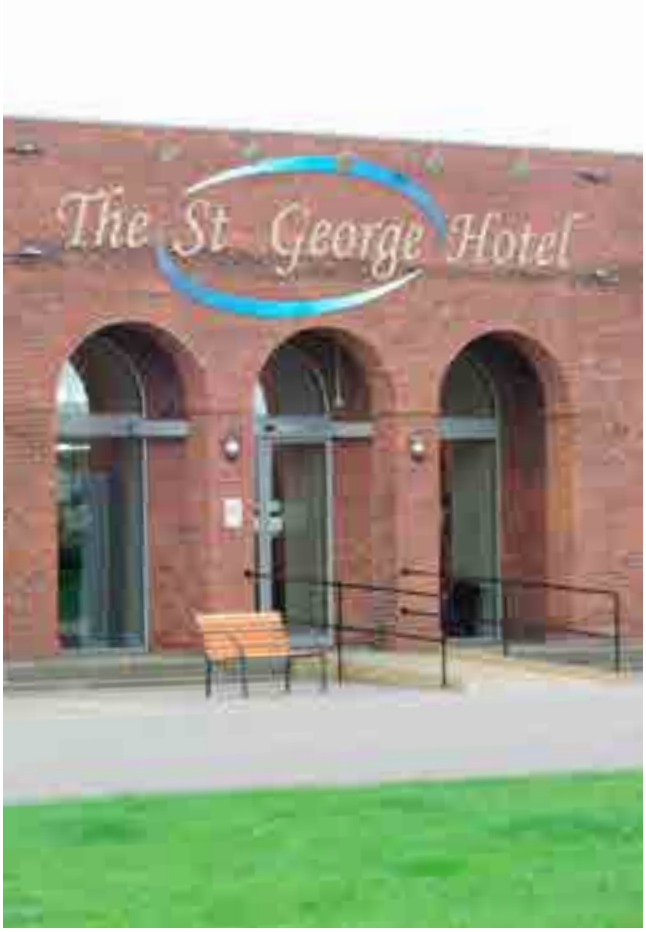
General Aviation and Aircraft Maintenance

3.26 The general aviation activity at DTVA comprises a flying club, flying schools and also local based businesses. Several hangars to the immediate north east of the terminal building cater for general aviation activities and aircraft maintenance. There are a number of operators based at the Airport offering a variety of services from charter flights to private and commercial tuition. Durham Tees Flight Training is approved by the CAA to teach courses for both commercial pilot licences and instructor rating.

3.27 The Police and Air Ambulance helicopters are also located at the Airport. The National Police Air Service has its operational unit based at the Airport and a new bespoke hangar has recently been completed to accommodate their helicopter. The Great North Air Ambulance is based in the general aviation hangar. Military aircraft occasionally use the Airport given it is close to a number of RAF airfields located in North Yorkshire.

3.28 There is also an FBO (Fixed Base Operator) on site, Weston Aviation, which provides ground services and flight support to the growing number of corporate and business aviation operations at DTVA.

3.29 There are two flying schools based at DTVA which offer a range of activities from pleasure and trial flights to a full pilot training programme in fixed wing and rotary aircraft to cater for all individuals who enjoy the aircraft experience. There is also a private aircraft owners club which is based within hangar 3 and offers syndicate shares in aircraft and short to long term hangar parking.



International Fire Training Centre

3.30 The Serco International Fire Training Centre (IFTC) is located in former RAF buildings on Northside. A fire training ground is located at Southside adjacent to the operational airport. The IFTC is widely recognised as the leading aviation fire training centre in the world. Based at DTVA since 1981, the Centre employs highly skilled professionals and provides training in fire and emergency response that is tailored to the requirements of the aviation, marine, industrial and offshore sectors. The facilities at DTVA include:

- a 7.3ha (18 acres) dedicated training site with world class simulators and the largest confined space rigs in the UK
- fire tender garaging and equipment storage
- classrooms with laboratory equipment to teach fire fighting theory, and
- a virtual reality suite to test decision making under pressure in real time.

3.31 All of the IFTC's courses are accredited to international requirements including to those of the Civil Aviation Authority (CAA), the International Civil Aviation Organisation (ICAO) and the Offshore Petroleum Industry Training Organisation (OPITO).

Sycamore Aviation Services

3.32 DTVA is establishing itself as an ideal location for aircraft dismantling and recycling. Sycamore Aviation Services occupies a 4,200 sq m (45,000 sq ft) hangar immediately to the east of the terminal building. Sycamore undertook a UK wide search for a suitable location for its business and chose DTVA as it offers ideal facilities to accommodate the current needs of the business and importantly, offers scope for future expansion.

3.33 Sycamore Aviation is a new and growing business. It offers specialist aircraft decommissioning and recycling services to airlines and aviation companies. These services include aircraft storage; care and maintenance; dismantling; and component storage.

3.34 Re-certification of components and dedicated turbine engine recycling will be added to these services in the near future.

Cobham plc

3.35 DTVA is a significant base for Cobham plc. The Cobham group offers an innovative range of technologies and services to solve challenging problems across commercial, defence and security markets. It has market leading positions in air-to-air refuelling; aviation services; audio, video and data communications, including satellite communications; defence electronics; life support; and mission equipment. It holds a contract with the Ministry of Defence (MoD) to provide essential operational readiness training for the Royal Air Force, British Army and The Royal Navy. Cobham's fleet comprises Dassault Falcons operating from DTVA out of a hangar complex completed in 1995.

Air Traffic Control (ATC)

3.36 The regulated airspace around DTVA is designated as Class D Controlled Airspace. Aviation legislation requires all aircraft wishing to enter, or fly, within this Controlled Airspace to make radio contact with DTVA ATC and obtain clearance to operate. DTVA ATC controls the airspace using a combination of radio instructions and radar surveillance to manage air traffic.

3.37 The current ATC tower at 5.69m (c.19 ft) high is the original RAF facility and is located to the north-east of the terminal. It consists of a two storey block with Visual Control Room (VCR) positioned on the flat roof. It is integral with the RFFS block, which is a single storey facility with a communal rest room, shower, kitchen and separate locker room/changing block. The Radar head is located south of the runway.

Fuel Farm

3.38 The fuel farm comprises a compound of fuel tanks and ancillary buildings and is situated to the west of the apron.

Other Northside Occupiers

3.39 The area of Northside which is not part of the Airport is occupied by a mix of uses including employment uses, healthcare, leisure, housing and open land.

Priory Hospital Middleton St George

3.40 The Middleton St George Hospital is operated by the Priory Group. It is one of the country's leading independent private hospitals. The Hospital comprises five separate wards that are housed within a range of buildings across extensive grounds.

Caravan Storage

3.41 The Airport has recently secured permission for the temporary storage of caravans on an underused area of car parking to the north of the terminal. This provides a valuable service for local caravan owners; is an ideal use for the land; and generates a revenue stream for the Airport.

Land Adjacent to St. George Way

3.42 Lying to the west of St George Way are two areas of open land owned primarily by DTVA totalling about 15 ha (36 acres). These areas are farmed on a temporary basis.

Aviation Way

3.43 Located within the former RAF estate, to the north and north east of the terminal, are a number of former military buildings and sites, some of which have been redeveloped to provide new premises. Amongst the occupiers are specialist engineering companies involved in saw manufacture, product design and development and window manufacture, together with the Spa Hotel. A motorhome dealership (Cleveland Motorhomes) is located on the Estate Road, close to the Yarm Road roundabout.

3.44 The Airport has recently acquired the site of the former Hangar 5. The site is 4 ha (10 acres) in area. The hangar was converted into a tennis centre with indoor courts but this closed a number of years ago. The remnants of the former building have recently been dismantled to facilitate future redevelopment.

Former RAF Housing - Oak Tree and Washington Avenue

3.45 There are two groupings of housing built by the RAF close to entrance to the Airport, accessed from Yarm Road. These are interspersed with older farm buildings, new houses and The Oak Tree public house. These areas total 15 ha (36 acres) and comprise almost 200 houses. Close by is Middleton Hall Retirement Village. This comprises a large residential facility for the elderly and includes a nursing home, care home, spa and fitness centre, and range of homes for independent and extra care occupation including apartments and bungalows. A range of waterside bungalows for independent living are currently under construction on the site.

Recreational Area

3.46 There is a playing field to the north of the St. George Hotel fronting Aviation Way. It is laid out to provide two football pitches and is used by a local club under licence from the Airport.

Southside

3.47 The area to the south of the runway is known as “Southside”. This comprises areas of disused taxiways and hardstanding associated with the wartime activity at the Airport. The eastern part of Southside lies within the Borough of Stockton while the western part is within the Borough of Darlington.

3.48 Part of Southside within Stockton Council’s administrative area is occupied by the IFTC fire training ground. This comprises a 7.3ha (18 acre) site which is used for specialist firefighter training. The site contains a large number of aircraft remains, including several Hawker Siddeley Tridents, and more recently, the fuselage of an Airbus A380 – one of the largest aircraft in the world. These rigs are set alight in controlled conditions and used as simulators to train specialist firefighters from around the world in dealing with aviation and industrial fire and emergency incidents.

3.49 The remainder of Southside within Stockton’s area has planning permission for development of c.176,900 sq m (1,900,000 sq ft) of employment space providing for a mixture of aviation-related and general employment uses. This is known as Southside Phase 1. Detailed planning permission for this development was secured in 2007 and a start was made on enabling works. Prevailing economic conditions have, however, prevented the delivery of the access and service infrastructure that is needed to deliver buildings on the site.

3.50 At present, Southside is accessed across the existing airfield (including crossing the runway). The Master Plan’s proposals include the provision of a new access road linking the Northside with the Southside around the eastern end of the runway. This development would open up the Southside to a variety of employment uses.

3.51 That part of the Southside area which lies within Darlington Council’s administrative area (Phase 2) is allocated within the Darlington Local Plan (Policy EP10) for employment development. It is envisaged that development of this land would take place once Phase 1 has been delivered.

Site Opportunities

DTVA is an established location for air transport, associated services and general business and employment development. The airfield infrastructure can accommodate a variety of aviation needs including specialist training services. The Master Plan area includes a number of previously developed areas of land which have potential for further aviation related and mixed use development.

The Serco International Fire Training Centre based at the Airport is a world leading training facility for firefighters in the aviation, marine, industrial and petrochemical sectors. It is a significant exporter of services and expertise and has a key role to play in the future of the Airport.

Sycamore Aviation is a relatively new business in a rapidly growing sector which has potential to grow at DTVA and create significant skilled employment.

It is these businessesand the addition of further new business aviation companies, which create the future opportunity for growth which this Master Plan seeks to capture.

Site Constraints

Growth is potentially constrained by a need for additional infrastructure such as direct access between Northside and Southside and reinforcement of some site utilities and services. These constraints are capable of being addressed as part of this Master Plan.

There is a potential need to upgrade the energy supply to support the proposed developments. Options to address this including the development of on-site energy generation will be considered as the Master Plan moves forward.

The existing foul drainage system outfalls to the north-east of the airfield at Northumbrian Water's Teesside Airport Works. On the Southside there is no foul treatment infrastructure available. Upgrading works will be needed as part of the Master Plan proposals.

4. Planning and Policy Context

4.1 Various aspects of national and local policy have a bearing on the future growth and development of DTVA.

4.2 What follows is a short review of the current policy context that focuses on those strategic aspects that are likely to have a bearing on development over the long term.

4.3 This section of the Master Plan considers:

- national policies, such as the National Planning Policy Framework (NPPF) and the Aviation Policy Framework (APF) which set out a strategic policy framework for the development of airport's in the UK;
- local planning, transportation and economic policies which seek to ensure that the social and economic benefits of development are balanced with the need to protect the environment;
- the planning history of the Master Plan Area and the Airports permitted development rights.

National Planning and Transport Policy

National Planning Policy Framework

4.4 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied.

Sustainable Economic Growth

4.5 At the heart of the NPPF is a presumption in favour of sustainable development. For plan-making this means that local planning authorities should positively seek opportunities to meet development needs of their area[3]. In particular, the NPPF is underpinned by a set of core land-use planning principles, which include the requirement to:

"proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs." [4]

4.6 The Government's commitment to encourage jobs and prosperity, via the planning system, is also reflected in NPPF:

"Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth through the planning system." [5]

Airport Development

4.7 In relation to airport growth, the NPPF promotes a collaborative approach to secure sustainable development:

"Local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure to support sustainable development, including… transport investment necessary to support strategies for the growth of… airports." [6]

4.8 At present there is not a National Policy Statement (NPS) in relation to airport development; the NPPF therefore explains:

"When planning for… airports… plans should take account of their growth and role in serving business, leisure, training and emergency service needs. Plans should take account of this Framework as well as the principles set out in the relevant national policy frameworks and the Government Framework for UK Aviation." [7]

Viability and Deliverability

4.9 The NPPF also establishes that plans should ensure viability and deliverability:

"…Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened." [8]

[3] NPPF, paragraph 14
[4] NPPF, paragraph 17
[5] NPPF, paragraph 19
[6] NPPF, paragraph 31
[7] NPPF, paragraph 33
[8] NPPF, paragraph 173

Duty to Cooperate

4.10 It is necessary to plan strategically across local boundaries; the NPPF establishes that:

"Public bodies have a duty to cooperate on planning issues that cross administrative boundaries, particularly those that relate to the strategic priorities set out in paragraph 156."[9]

[i.e. homes and jobs needed in the area; provision of retail, leisure and commercial development; the provision of infrastructure for transport, and the provision of health, security, community and cultural infrastructure and other local facilities.][10]

"Local planning authorities should work collaboratively with other bodies to ensure that strategic priorities across local boundaries are properly co-ordinated and clearly reflected in individual Local Plans… As part of this process, they should consider producing joint planning policies on strategic matters and informal strategies such as joint infrastructure and investment plans."[11]

Aviation Policy Framework

4.11 The Aviation Policy Framework (APF) was published in March 2013 and it partly replaces the 2003 White Paper (The Future of Air Transport) and its associated guidance documents as the Government's policy on aviation.[12]

Status

4.12 The APF sets out the Government's objective of allowing the aviation sector to continue to make a significant contribution to economic growth across the country. It also sets the parameters within which the Airports Commission (AC), led by Sir Howard Davies, will work. The AC has been tasked with examining the need for additional UK airport capacity, particularly in the south-east, and will recommend to the government in 2015 on how this can be met in the short, medium and long term.[13]

4.13 The APF is an important material consideration in plan-making and decision-taking:

"In preparing their local plans, local authorities are required to have regard to the policies and advice issued by the Secretary of State. This includes the Aviation Policy Framework, to the extent it is relevant to particular authority area, along with other relevant planning policy and guidance. The Aviation Policy Framework may also be a material consideration in planning decisions depending on the circumstances of a particular application."[14]

Economic Benefit of Aviation

4.14 At the outset, the APF establishes that aviation benefits the UK economy, both at a national and a regional level. It also outlines the importance of the growth of regional airports outside of London:

"…Airports are in some ways cities in themselves, creating local jobs and fuelling opportunities for economic rebalancing in the wider region or area. New or more frequent international connections attract business activity, boosting the economy of the region and providing new opportunities and better access to new markets for existing businesses"

"…The Government recognises the very important role airports across the UK play in providing domestic and international connections and the vital contribution they can make to the growth of regional economies. For more remote parts of the UK, aviation is not a luxury, but provides vital connectivity."[15]

Collaborative Working and Airport Master Plans

4.15 The APF aligns with the guidance in the NPPF by encouraging local collaboration, in particular:

"…that local authorities should work with neighbouring authorities for the provision of viable infrastructure necessary to support sustainable development, including transport investment necessary to support strategies for the growth of airports"[16]

4.16 The APF acknowledges that over 30 airports across the UK have adopted airport master plans and recommends that airports continue to produce master plans:

"the primary objective of master plans is to provide a clear statement of intent on the part of an airport operator to enable future development of the airport to be given due consideration in local planning processes. They also provide transparency and aid long-term planning for other businesses."[17]

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[9] NPPF, paragraph 178
[10] NPPF, paragraph 156
[11] NPPF, paragraph 179
[12] Aviation Policy Framework, paragraph 5.2
[13] APF, Executive Summary, paragraph 1
[14] Aviation Policy Framework, paragraph 5.6
[15] Aviation Policy Framework, paragraph 1.2
[16] Aviation Policy Framework, paragraph 4.6

4.17 Annex B of the APF provides guidance on master plans and their suggested content:

"The Government recommends that the more ground covered in a master plan and the more extensive the consultation which has informed its preparation, the greater its value in informing future land use, transport and economic planning processes, and in supporting prospective planning applications."[18]

Davies Commission

4.18 The government announced in September 2012[19] that it has asked Sir Howard Davies to chair an independent Airports Commission tasked with identifying and recommending to government options for maintaining this country's status as an international hub for aviation.

4.19 The Commission will:

- examine the scale and timing of any requirement for additional capacity to maintain the UK's position as Europe's most important aviation hub;
- identify and evaluate how any need for additional capacity should be met in the short, medium and long term.

4.20 The Commission, published an Interim Report in December 2013 which set out:

- its assessment of the evidence on the nature, scale and timing of the steps needed to maintain the UK's global hub status; and
- its recommendation(s) for immediate actions to improve the use of existing runway capacity in the next 5 years – consistent with credible long term options.

4.21 In relation to regional airports, such as DTVA, the Interim Report concludes:

"The Commission's resources and remit mean that it is not the appropriate body to reach a view on many of the schemes proposed for improving access to smaller and regional airports. However, it is important that these airports can serve their local markets effectively, so central Government should work with Local Authorities and Local Enterprise Partnerships to ensure that proper consideration is given to the needs of airport users when prioritising local transport investment."[20]

4.22 The Commission invited scheme promoters to submit further proposals by May 2014 and set out a number of objectives to be assessed. One area where information is welcomed is the strategic context of schemes where further information is sought about "why a proposal is well-placed to address the UK's future aviation capacity and connectivity needs, and how it may support the socio-economic development of local areas, regions and the UK as a whole."[21]

4.23 The Commission is due to publish, by the summer of 2015, a final report, for consideration by the government and opposition parties, containing:

- its assessment of the options for meeting the UK's international connectivity needs, including their economic, social and environmental impact;
- its recommendation(s) for the optimum approach to meeting any need;
- its recommendation(s) for ensuring that the need is met as expeditiously as practicable within the required timescale; and
- materials to support the government in preparing a National Policy Statement to accelerate the resolution of any future planning application(s).

4.24 A decision on whether to support any of the recommendations contained in the final report will be taken by the next government.

UK Aviation Forecasts

4.25 The UK Aviation Forecasts[22] set out forecasts of passenger numbers, air transport movements and aviation carbon emissions at UK airports.

4.26 The last UK Aviation Forecasts were published in January 2013 by the Department for Transport. They forecast that demand for air travel will increase within the range 1% to 3% a year nationally up to 2050 compared to historic rates of 5% over the last 40 years. This slowdown recognises approaching market maturity and a projected end to the decline in average fares seen in the more recent past. The forecasts take account of key drivers of demand, including taxes such as Air Passenger Duty (APD) which has risen in recent years, to estimate a range of national growth predictions and then use a Passenger Allocation Model to distribute the traffic to the 31 airports considered, including DTVA.

[17] Aviation Policy Framework, paragraph 4.11
[18] Aviation Policy Framework, paragraph B.1
[19] Written statement to Parliament: Independent Airports Commission – increasing international competitiveness of UK airlines and airports, (September 2012)
[20] Airports Commission: Interim Report, paragraph 5.89
[21] Airports Commission: Interim Report, paragraph 7.25
[22] UK Aviation Forecasts 2013, Department for Transport (January 2013)

4.27 The Forecasts consider a range of factors, which determine airport choice, including the costs of travelling to and from an airport and the frequency of flights offered. These unconstrained forecasts are then adjusted for capacity constraints, which in particular affect major airports in the South East of England, primarily Heathrow.

4.28 Low, Central and High forecasts are produced. For the purposes of this Master Plan, the Central Demand Case forecasts are used (the table at Annex E.2 of the Forecasts which is reproduced at Table 4.1).

4.29 Generally the forecasts illustrate the strength of the South East market compared to the regions and also the tendency for traffic to concentrate at fewer larger regional airports, a process which was particularly hastened by the recession. A significant number of smaller regional airports show little anticipated growth in the period to 2020 and even beyond this. Smaller airports are having to adjust their operations to this economic reality.

4.30 The Government projects passenger traffic at DTVA at 200,000 ppa by 2020 growing to 400,000 ppa by 2050 and this Master Plan includes proposals to enhance services and meet the levels of passenger traffic envisaged within national forecasts.

	mppa				
Airport	2011	2020	2030	2040	2050
Heathrow	69.4	75.5	81.8	86.9	92.9
Gatwick	33.6	37.3	40.6	42.6	44.2
Manchester	18.8	22.1	28.1	39.0	55.2
Stansted	18.0	25.4	35.7	36.0	35.4
Luton	9.5	13.8	18.5	18.6	17.7
Edinburgh	9.4	10.5	13.2	16.8	20.5
Birmingham	8.6	11.8	16.7	28.2	38.3
Glasgow	6.9	6.9	8.7	9.7	12.2
Bristol	5.8	6.8	9.7	12.3	12.3
Liverpool	5.2	5.3	6.7	8.2	15.4
Newcastle	4.3	4.2	5.1	5.8	8.9
East Midlands	4.2	3.6	4.4	9.0	14.1
Belfast International	4.1	4.9	6.5	8.2	10.3
Aberdeen	3.1	2.9	3.7	4.5	5.6
London City	3.0	4.9	6.2	6.4	7.1
Leeds/Bradford	2.9	4.4	6.4	8.3	8.4
Belfast City	2.4	3.0	3.7	4.7	5.8
Southampton	1.8	2.3	4.0	7.0	6.7
Prestwick	1.3	1.8	2.0	2.2	2.6
Cardiff	1.2	0.9	1.1	1.7	7.8
Doncaster Sheffield	0.8	0.9	1.3	2.3	6.5
Exeter	0.7	0.7	1.1	1.7	3.0
Bournemouth	0.6	0.7	1.4	4.8	4.4
Inverness	0.6	0.8	1.0	1.2	1.4
Norwich	0.4	0.4	0.6	1.5	3.6
Humberside	0.3	0.7	0.9	1.0	3.0
Blackpool	0.2	0.3	0.4	0.4	0.3
Newquay	0.2	0.5	0.5	0.5	1.2
Durham Tees Valley	0.2	0.2	0.1	0.1	0.4
Coventry	0.0	0.0	0.0	0.0	0.0
Southend	0.0	1.5	2.5	2.3	2.3

Table 4.1: Terminal passenger forecasts up to 2050 for passenger airports in the UK

Sustainable Aviation

4.31 The Airport was a founder member of Sustainable Aviation (SA), which is an alliance of UK's airlines, airports, aerospace manufacturers and air navigation service providers. Together, SA has a long term strategy to deliver cleaner, quieter, and smarter flying. SA undertakes work to reduce the emissions from aircraft and support a global agreement on aviation emissions. The Sustainable Aviation Road Map for Noise (2013) (http://www.sustainableaviation.co.uk/) outlines a blueprint for managing noise from aviation sources until 2050.

Economic Policy

The Plan for Growth

4.32 The Government published its Plan for Growth in March 2011 with the clear intent of economic recovery, business investment and driving job creation. The Plan's aim is to put the UK "on a path to sustainable, long-term economic growth"[23].The ambitions of the Plan include making the UK one of the most competitive places to start, finance and grow a business, including having the most competitive taxation system in the G20. The Plan for Growth also includes an ambition to encourage investment and export activity as a route to a more balanced economy.

4.33 The Plan for Growth provides a context for a range of economic development and business investment measures including the Government's flagship Enterprise Zone programme and an enhanced entrepreneurial role for UK Trade and Investment (UKTI) in promoting UK exports.

4.34 The Plan for Growth contains a focus on key growth sectors including: healthcare and life sciences; advanced manufacturing; construction; digital and creative industries and professional and business services.

4.35 The Plan for Growth also signals an important change in the way that the Government views housing as an enabling factor in labour mobility, rather than just a social good. Measures such as FirstBuy (shared equity) were a central feature of the Plan for Growth's approach to boosting housing supply. This recognition in the Plan for Growth has subsequently led to support for the UK construction sector and a range of measures to increase housing supply.

Connecting the Tees Valley: Statement of Transport Ambition (2011)

4.36 The Statement of Transport Ambition provides a 10 to 15 year vision for transport investment in the Tees Valley. Of relevance to DVTA it sets out the clear need to improve both external and internal connectivity and states that:

"It is vital that links from our key assets at Teesport and Durham Tees Valley Airport to national and international hubs and markets are maintained and built upon to support our global industries."[24]

4.37 The Master Plan for DTVA will ensure the future viability of the Airport operation and contribute to delivery of the Tees Valley Transport Ambition.

Tees Valley Economic and Regeneration Statement of Ambition (2012)

4.38 The Statement of Ambition sets the vision for the Tees Valley for the next 15 years. The ambitions set out in the Statement include the following:

- **Ambition 1:** Drive the Transition to the High Value Low Carbon Economy
- **Ambition 2:** Create a More Diversified and Inclusive Economy – supporting growth in a more diverse sector base including service and retail sectors, digital and creative industries, logistics and healthcare among other sectors. The priorities for the achievement of Ambition 2 also include investment in a transport network which facilities ease of movement of goods and people. Specific priority is given to enhancing links to national and international gateways, including via DTVA.

4.39 The intended outcomes of the Statement of Ambition are as follows:

- Increase GVA per head to 82% of the national average;
- Increase the number of Enterprises from 241 to 300 per 10,000 population - an increase of 25% (approximately 3,200 net increase);
- Increase the Employment Rate (63.1%) to meet the national average (70.2%);
- Increase the number of people with Higher Level Skills by 5% - to be revised on completion of the Skills Action Plan.

[23] The Plan for Growth. HM Treasury. (March 2011) paragraph 1.1
[24] Tees Valley Unlimited. Connecting the Tees Valley: Statement of Transport Ambition, (2011) paragraph 6.2

4.40 This statement represents a forward looking and ambitious vision for the economy.

Advanced Manufacturing Sector Action Plan (2012)

4.41 The Tees Valley Advanced Manufacturing Sector Action Plan identifies the challenges and opportunities in the sector. It clearly references the UK Government's commitment to diversification of the economy post the credit crunch and the focus on "export led growth" linked to UK manufacturing as well as service industries. This is significant for the Tees Valley economy, with employment in advanced manufacturing activities totalling almost 22,000 people within 750 firms. Tees Valley contains a significant cluster of chemical manufacturing firms.

4.42 The Sector Action Plan specifically concludes that:

- "…connectivity represents a vital part of the apparatus required to export successfully", and
- "Maintaining and maximising the value of these [connectivity] assets will play a critical role in the future economic prosperity of the Tees Valley."[25]

4.43 Achieving a sustainable airport business at DTVA will respond directly to the challenges set out within the Advanced Manufacturing Sector Action Plan and will help businesses in the sector to remain competitive.

Logistics Sector Action Plan (2012)

4.44 The Logistics Sector Action Plan highlights that the sector employs 5,000 people across 250 firms and contributing over £300 million Gross Value Added (GVA) to the area's economy every year. The logistics sector is considered to be important in leading and supporting economic growth in the Tees Valley.

4.45 DTVA is identified as a key asset for the logistics sector with important links to Aberdeen and Amsterdam. The value and importance of the Airport is expressed as follows in the Action Plan:

"Airports are seen as important economic development assets which can influence businesses' decisions to locate in an area, people's perceptions of a location and support local firms in attracting visitors and accessing new markets"[26]

4.46 Creating a sustainable airport business at DTVA is therefore of critical importance to the logistics sector in the Tees Valley, as well as providing the infrastructure for attracting inward investment.

4.47 The Action Plan highlights the need to attract additional investment to key infrastructure, including DTVA to support a growing and diverse local economy, the logistics sector and other industrial/ sector supply chains.

Tees Valley Enterprise Zone

4.48 A further component of the economic development strategy for Tees Valley is the Enterprise Zone (EZ) which was one of first to be designated by the Government. The Tees Valley EZ comprises twelve sites with a total area of c.424 ha (c.1,050 acres). They include both new and established business locations, some with port access, identified as serving the advanced manufacturing, engineering, chemical, renewable energy, and digital sectors.

4.49 Incentives such as business rate relief and capital allowances are available on sites included within the EZ, as well as simplified planning procedures and superfast broadband. Companies operating in the target business sectors of advanced manufacturing and engineering, chemical, renewable energy and digital can benefit from the incentives on offer. Eligibility criteria for business incentives place emphasis on growing businesses, thereby ensuring that the EZ will generate net benefits for the economy rather than displace business investment.

4.50 The EZ Implementation Plan published by Tees Valley Unlimited in 2011 articulates the important contribution that the EZ will make to promoting the area's industrial base as well as diversifying the economy:

- Assisting the process of modernisation in the existing petrochemical, processing and engineering industries which will lead to improved competitiveness;
- Creating attractive opportunities for large scale foreign direct investment in advanced manufacturing/ engineering, chemical and biotechnology sectors as well as renewable energy production;
- Encouraging growth of the business supply chain to support existing large scale industries in the Tees Valley; and
- Providing support for the emerging and fast growing digital sector.

[25] Tees Valley Unlimited, Advanced Manufacturing Sector Action Plan, page 4
[26] Tees Valley Unlimited, Logistics Sector Action Plan, page 8

4.51 In summary, the EZ has an important role to play in attracting businesses, enhancing competitiveness and encouraging investment in business modernisation.

4.52 EZs exists at other airports, such as Newquay Airport, Manchester Airport, and Daedalus.

City Deal

4.53 Tees Valley submitted a Wave 2 City Deal Expression of Interest to the Government in January 2013. The inherent opportunity that is set out in the Expression of Interest is to accelerate the pace of change for deployment of green technologies among Tees Valley companies, to produce cleaner energy and products. Accelerated take up of green technologies will help Tees Valley businesses and UK manufacturing to remain competitive, as well as substantially reducing the carbon footprint of the area.

4.54 The core package of measures set out in the Expression of Interest includes:

- Devolved local decision making powers on skills budgets to ensure that the needs of employers are met effectively;
- Skills for developing company supply chains in the area's key sectors together with advanced manufacturing and engineering, logistics, healthcare and digital, to ensure that companies can become more competitive, and for SMEs to export more and ensure that they access major business supply chains; and
- Proactive national and local inward investment activity and mechanisms to support private investment.

4.55 City Deal and the devolved powers that are associated with it will help to support businesses within growing sectors of the local economy, including the logistics sector which includes aviation related activities. The Tees Valley City Deal was announced on 13 December 2013. The City Deal includes £12 million secured funding which will lever in £28 million of private sector investment and help to facilitate 3,500 new jobs. This sits alongside the Tees Valley Strategic Economic Plan which identifies aviation-related activity as a significant opportunity for local economic growth.

Tees Valley Economic Assessment (2013)

4.56 The Tees Valley Economic Assessment was commissioned by the Local Enterprise Partnership, Tees Valley Unlimited (TVU), to inform its economic strategy and interventions. It identifies growth opportunities in a series of what are termed "super sectors" including petrochemicals, advanced manufacturing and new renewable energy. A growth target of 25,000 jobs is identified in the Local Economic Assessment, evidenced by a combination of previous growth rates and the ambition set out in the City Deal and the Tees Valley Statement of Ambition.

4.57 Tees Valley Unlimited and its partners across the Tees Valley prepared a draft 'Strategic Economic Plan' for submission to Government in December 2013.

4.58 The Draft Strategic Economic Plan (SEP, December 2013) sets an ambitious framework for Tees Valley to become a high value, low carbon economy while promoting diversification and a more inclusive economy. The SEP sets out the key activities that are required to take forward economic growth opportunities and to remove barriers to growth. It is Tees Valley's Growth Deal "ask" of the Government. Via a Local Growth Deal, Local Enterprise Partnerships (LEPs) can access a share of the new £2 billion single Local Growth Fund to invest in projects to unlock economic growth across the LEP area.

4.59 The SEP is aligned and provides synergy with European programmes, the Tees Valley Statement of Ambition, the agreed Tees Valley City Deal with Government and the funds available through the Tees Valley Investment Fund.

4.60 The headline target of the SEP is to achieve a net increase of 25,000 jobs in 10 years, boosting GVA by £1 billion. The SEP priorities to unlock growth can be summarised as follows:

- Connectivity and Enabling Infrastructure;
- Business Growth and Innovation;
- A Skilled Workforce; and
- Sustainable and Equitable Economic Growth.

4.61 The specific "asks" of Government contained in the SEP include several of particular relevance to the DTVA:

- Investment in Bank Top station in Darlington – alleviating rail freight capacity constraints and facilitating better connectivity within the Tees Valley area;
- Extend Highways Agency fibre-optic cable link to devices on the A19 improving strategic control of the route;
- Electrification of the Teesport/ Middlesbrough to Northallerton Transpennine route – enabling growth of the container market and exports from Teesport;
- Introduction of differential rates of Air Passenger Duty to encourage the use of Durham Tees Valley Airport and to maximise the economic impact that it can have within the local area;
- Introduce ring fenced slots for regional flights at London airports to support the operation of Durham Tees Valley Airport;
- Proactive support from the HCA including transferral of assets to local authorities with deferred payment of considerations and local respending of receipts from asset sales within the North East; and
- Inclusion of Tees Valley in future "Super Connected Cities" and other superfast broadband initiatives;

4.62 The SEP acknowledges the important role that DTVA plays in the competitiveness and prosperity of Tees Valley and as a vital transport link for the local business community.

4.63 The DTVA Master Plan, launched November 2013, is highlighted within the SEP as providing a clear vision to 2020. Tees Valley's input to the Davies Commission is specifically referenced in relation to a case for differential Air Passenger Duty (APD) and ring fenced slots for regional flights at London airports. These measures would support the greater use of DTVA, assist in relieving capacity constraints in London and the South East and have positive local economic effects.

Local Planning Policy

4.64 One of the main purposes of this Master Plan is to set out the proposals for growth at DTVA in order that these can guide the development re-positioning of the Airport and be taken into account in emerging development plan documents at both DBC and SBC. A number of existing Development Plan Documents (DPDs) contain planning policies

and statements applicable to DTVA and its environment. These are referred to in general below.

Spatial Strategy

Darlington Core Strategy, May 2011

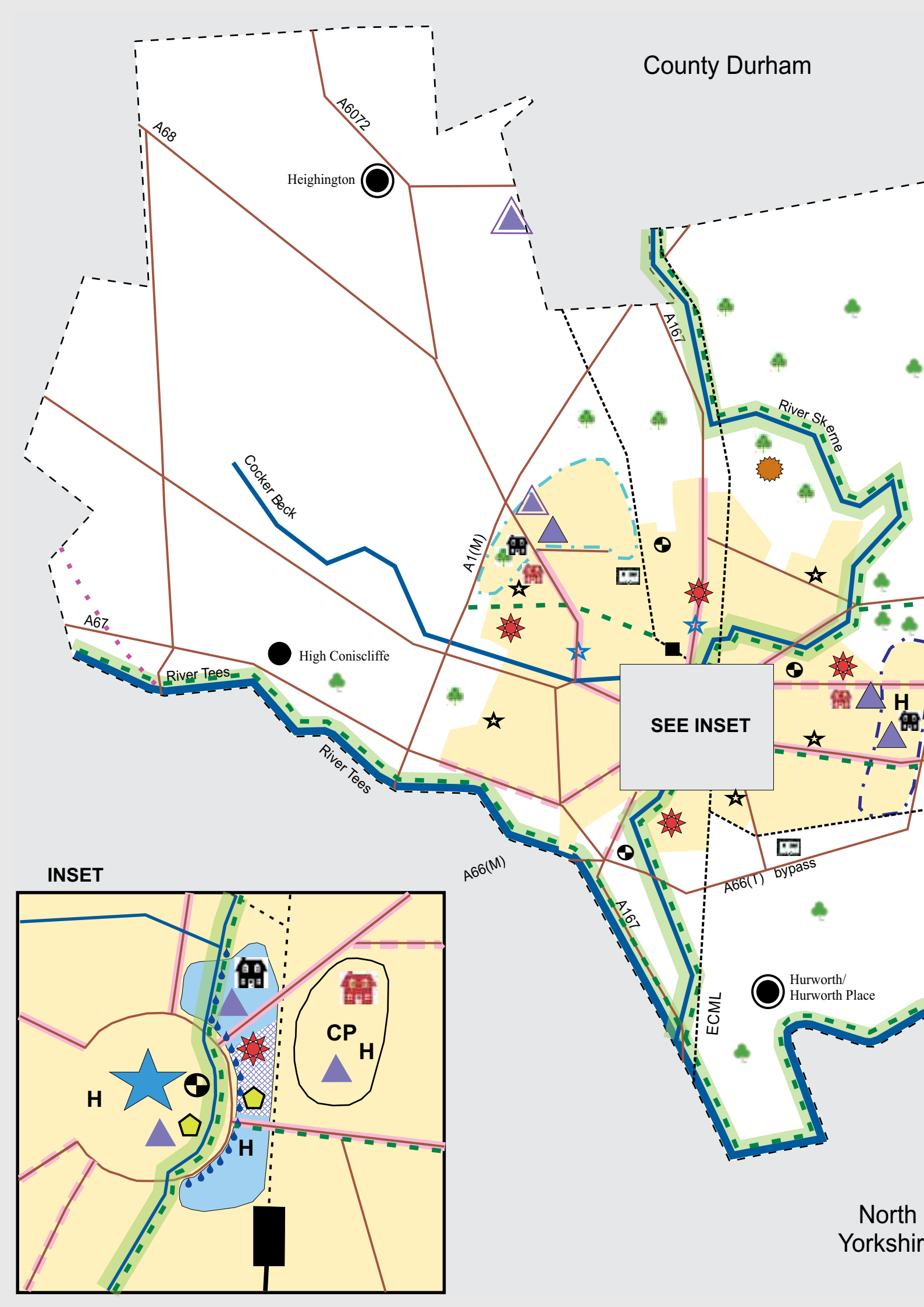
4.65 The adopted Darlington Core Strategy (DCS) acknowledges Middleton St. George to be a "Larger Village" and states that DTVA has a key role in the economic growth of the region and as a regional gateway.[27] This is reiterated through Darlington's Sub-Regional Role and Locational Strategy (Policy CS1) which identifies that Middleton St. George, as one of the larger settlements in the borough, should be a focus for the provision of services, employment and facilities and that there will be development at the strategic location of DTVA throughout the plan period for airport related employment uses.

4.66 The Core Strategy Key Diagram shows the Airport to be "Strategic General and Mixed Use Employment Location" (Figure 4.1). Following on from the DCS locational strategy, Policy CS5 identifies provision for up to 235ha of additional land for general and mixed use employment across the Borough. The policy identifies that throughout the plan period that part of DTVA which is within the Borough of Darlington will deliver about 20ha of airport related employment land and about 5ha of general employment land.

4.67 The policy does however allow for exceptions to the employment safeguarding where it can be demonstrated that:

- Continued use of the site for employment uses is no longer viable for appropriate employment uses, taking into account the site's characteristics and existing/potential market demand; or
- Continued use of the site for B1, B2 or B8 purposes gives rise to unacceptable environmental or accessibility problems; or
- An alternative mix of uses offers greater potential benefits to the community in meeting local needs for business and employment, or has other regeneration benefits; and
- The site is no longer required for the purposes of providing a balanced portfolio of land for employment purposes.

[27] Darlington Core Strategy, paragraph 3.1.12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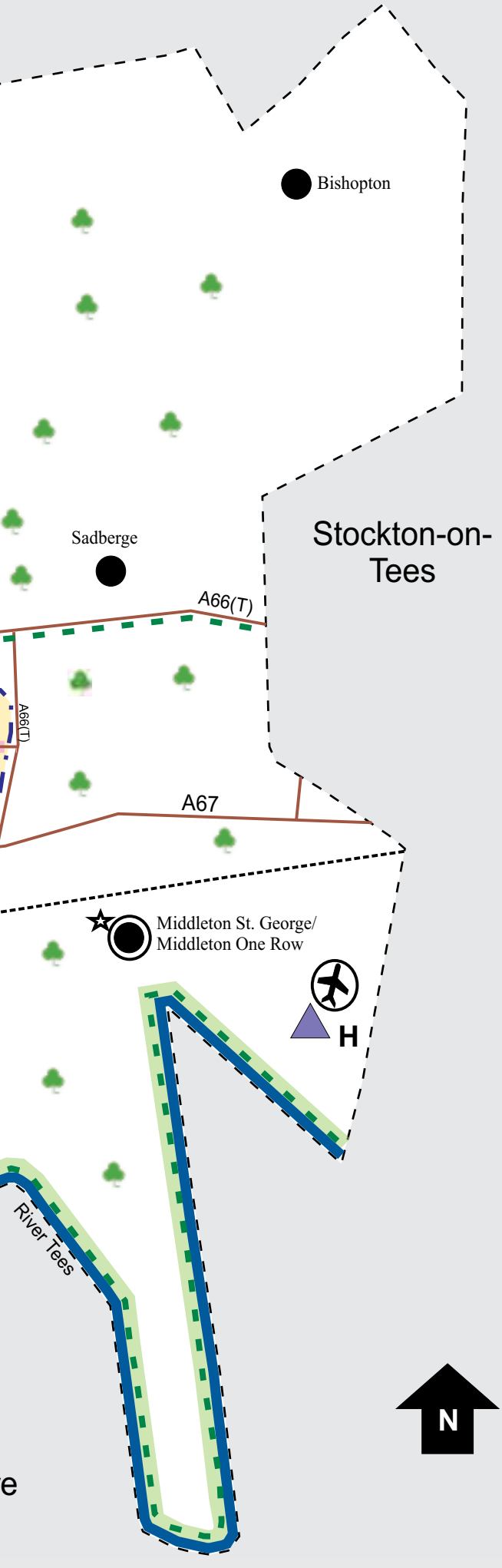


KEY DIAGRAM (Policy number in brackets)

- Boundary of Darlington Borough
- Main Urban Area (CS1, CS10)
- Larger Village (CS1)
- Village
- Roads
- Railways

PROPOSED

- North West Urban Fringe (CS1)
- Eastern Urban Fringe (CS1)
- Town Centre Fringe (CS1, CS3, CS5, CS7, CS10, CS16, CS19)
- Strategic Flood Risk Corridor (CS1, CS16)
- Central Park (CS1, CS5, CS10, CS19)
- Durham Tees Valley Airport (CS1, CS19)
- Darlington Town Centre (CS1, CS5, CS7, CS8, CS9, CS18)
- District Heating Network (CS3)
- Strategic General & Mixed Use Employment Locations (CS5)
- Key Employment Locations (CS5)
- H Hotel Locations (CS6)
- Darlington Cultural Quarter (CS6)
- District Centre (CS9)
- Local Centre (CS9)
- Strategic Housing Locations (CS10)
  - Committed Housing in Planning Permissions
  - New Housing Planned
- Areas for Regeneration & Improvement of Existing Housing (CS12)
- Travelling Community Sites (CS13)
- Strategic Corridors (CS14, CS17)
- Strategic Wildlife Corridors (CS15)
- Strategic Countryside Site at Skerningham (CS17)
- Community Forestry (CS17)
- Strategic Sports & Recreation Locations (CS18)
- Public Transport Corridor (Key/Secondary) (CS19)
  - Key
  - Secondary
- Bank Top Railway Station (CS10, CS18, CS19)
- North Road Railway Station (CS10, CS19)

Darlington Local Development Framework
Core Strategy
May 2011

Figure 4.1: Darlington Core Strategy Key Diagram

4.68 The western extent of the Master Plan Area (adjacent to St George Way) lies beyond the Airport boundary and the settlement limit of Middleton St. George on the adopted Proposals Maps. The land is identified as undeveloped land and is not subject to any specific policy designation or allocation. It has planning permission for redevelopment of car parking and a business park.

4.69 Policy CS6 which seeks to promote a vibrant cultural and tourism offer also identifies capacity for additional visitor accommodation on the DTVA site.

4.70 In relation to transport, Policy CS10 of the DCS identifies that:

"DTVA is essential to the economic performance of the Tees Valley. The Council will continue to work with the airport and regional partners to promote more services, including the reinstatement of flights to London Heathrow… The first phase of the Tees Valley rail improvements also includes a new rail stop serving the airport."[28]

4.71 To secure this, Policy CS19 identifies that:

"…the Council and its partners will work together, where appropriate with the aid of developer contributions, to make the best use of and improve existing transport infrastructure within and connecting to the Borough…"

"In the short term (up to 2016), providing new stopping facilities for rail services to the east of Bank Top railway station and serving Durham Tees Valley Airport"

Making and Growing Places DPD (Preferred Options), June 2013

4.72 DBC has recently published its preferred options draft "Making and Growing Places DPD" (MGP). This document provides site specific and general development management policies for the Borough, including a preferred policy approach for the future development of DTVA (Policy MGP7).

4.73 The supporting text to the DTVA policy outlines that:

"Maintaining a viable and thriving regional airport will help to deliver one of the Core Strategy objectives, improving links between the Borough and further afield, affirming the role of the Borough as a gateway to the wider Tees Valley."[29]

4.74 The policy itself identifies that:

"225 ha of land at Durham Tees Valley Airport is safeguarded for the continued unfettered operation of a thriving regional airport, and for a mix of airport related uses and other uses that may be required to sustain it.

About 20ha of airport related development and about 5ha of general employment development will be permitted within the site".

4.75 The policy does however include a proviso that where it can be demonstrated that the employment development will not be sufficient to sustain a viable operational airport, additional amounts of airport related and/ or general employment uses, and then other non- airport related uses which would not undermine the achievement of Core Strategy objectives nor constrain existing or future aviation and airport related activity may be permitted, but only where it can be robustly demonstrated that:

- the amount and type of development will not adversely impact on the Council's ability to deliver the locational strategy and key development sites of the Local Plan and its wider strategic objectives; and
- the proposed development is the minimum necessary to enable tangible projects that will demonstrably help to sustain the Airport over the longer term to be delivered; and any projects proposed must be clearly identified in a credible long term Business Plan, to be submitted to the Council with any planning application; and
- that best endeavours have been exercised in making best use of existing land, buildings and facilities to support a viable Airport; and
- funding to sustain the Airport or deliver the tangible projects is not available from another source.

Stockton Core Strategy 2010

4.76 SBC's adopted Core Strategy acknowledges a number of key objectives will need to be achieved for the borough to strengthen economic performance, maintain population growth, encourage inward investment, and improve the image of the borough. One of these objectives is to "realise the potential of the presence of Durham Tees Valley Airport".[30]

[28] Darlington Core Strategy, paragraph 9.9

[29] Making and Growing Places Preferred Options DPD, (June 2013), paragraph 3.6.2

[30] Stockton Core Strategy paragraph 2.5

The CS identifies DTVA as an asset and Policy CS4 (Economic Regeneration) directs 50ha of additional employment land for airport related uses.

Stockton Regeneration and Environmental Local Development Document

4.77 SBC is currently preparing a Regeneration and Environmental Local Development Document (RELDD) which, once adopted, will provide site-allocations and development management policies.

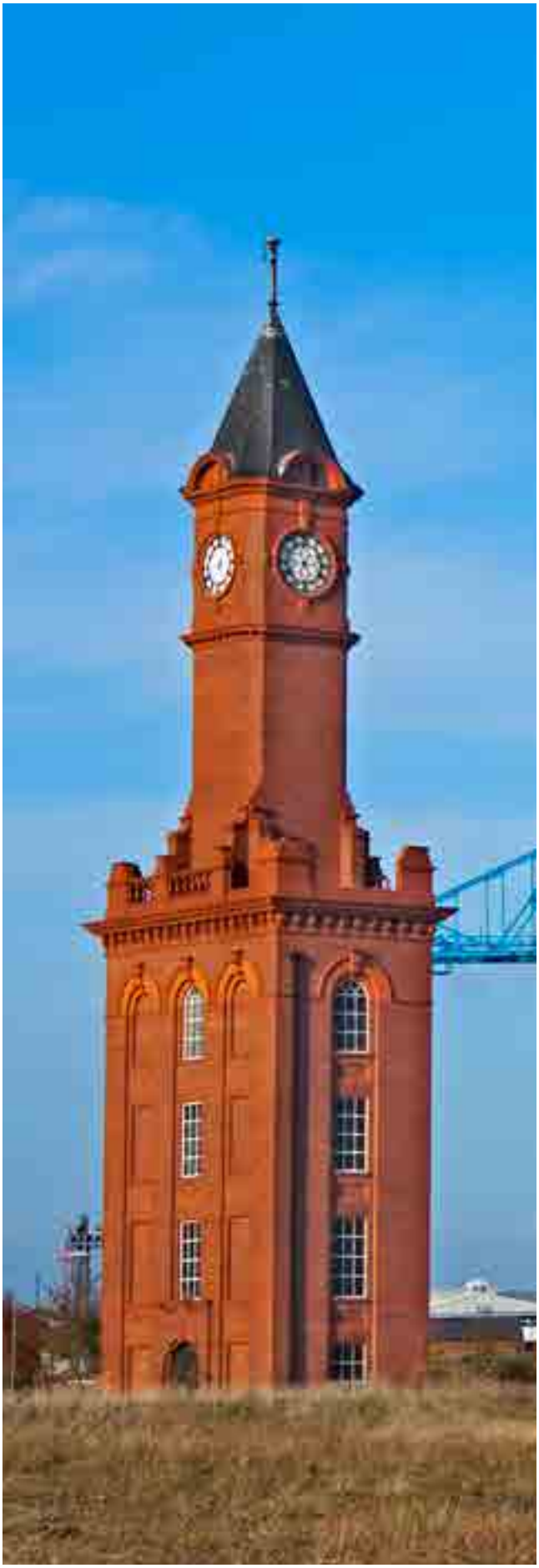
4.78 SBC has published a Preferred Options draft of the RELDD in July 2012 and this includes a site-specific policy related to DTVA (Policy EMP7). This policy carries over the Core Strategy allocation for 50ha of additional employment land for airport related uses, which would allow for the sustainable expansion of facilities at the Airport. The policy clarifies that appropriate airport related uses include, operational infrastructure; terminal facilities; car facilities; maintenance facilities; offices; warehousing/distribution; ancillary training centres and hotel accommodation. Proposals for town centre uses will be supported where it can be demonstrated that they are ancillary to the function of the Airport.

Development Management Policies

4.79 The Master Plan has been prepared in line with relevant environmental policy and legislation.

4.80 The NPPF identifies that the planning system should contribute to and enhance the natural and local environment by:[31]

- protecting and enhancing valued landscapes, geological conservation interests, and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels



[31] NPPF, Paragraph 109

of soil, air, water or noise pollution or land instability; and

- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

4.81 In relation to noise the NPPF states that:

"Planning policies and decisions should aim to:

- *avoid noise from giving rise to significant;*
- *adverse impacts on health and quality of life as a result of new development;*
- *mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;*
- *recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established…";*

4.82 The NPPF also contains advice on when air quality should be a material consideration in development control decisions. Existing, and likely future, air quality should be taken into account, as well as the EU limit values or national objectives for pollutants, the presence of any AQMAs and the appropriateness of both the development for the site, and the site for the development.

4.83 The National Planning Policy Guidance (NPPG) provides a broad range of technical guidance and advice on various matters, including design, air quality, the historic environment, flood risk, noise, light pollution, open space, transport, and environmental impact assessment. Relevant aspects of this guidance will be taken into account in planning applications for delivery of elements of this Master Plan.

4.84 The development plans of both Darlington and Stockton include strategic environmental policies to guide new development.

4.85 In Darlington, Core Strategy Policy CS16 identifies that:

"*New development should protect and, where possible, improve environmental resources, whilst ensuring there is no detrimental impact on the environment, general amenity and the health and safety of the community. Development which may have an adverse impact on environmental resources should be avoided.*"

4.86 In Stockton, Core Strategy Policy CS3 requires that new developments:

"Make a positive contribution to the local area, by protecting and enhancing important environmental assets, biodiversity and geodiversity, responding positively to existing features of natural, historic, archaeological or local character, including hedges and trees, and including the provision of high quality public open space"

and

"Seek to safeguard the diverse cultural heritage of the Borough, including buildings, features, sites and areas of national importance and local significance"

4.87 In assessing visual amenity and landscape character regard will be given to the Stockton Borough Council Landscape Character and Capacity Study (2011).

4.88 Air quality and noise matters are considered by policies within the Core Strategy for both Darlington (Policy CS16) and Stockton (Policy CS3) Borough Council's. These seek to protect and, where possible, improve environmental resources, whilst ensuring there is no detrimental impact on the environment, general amenity and the health and safety of the community.

4.89 The management of waste is controlled under the Waste (England and Wales) Regulations 2011, which advocate a waste hierarchy of prevention, re-use and recycling. The reduction, reuse, sorting, recovery and recycling of waste is encouraged, by Darlington and Stockton Borough Councils and details are set out in the Joint Tees Valley Minerals and Waste Development Plan.

4.90 The Master Plan will have regard to the Water Framework Directive (WFD) and in particular the Northumbria River Basin Management Plan. These documents seek to protect and enhance the quality of rivers, lakes, streams, groundwater, estuaries and coastal waters, with a particular focus on ecology.

Aviation Regulations

Aerodrome Safeguarding Regulations and Public Safety Zone

4.91 DTVA is officially safeguarded as it is a civil aerodrome of importance to the national air transport system. The safeguarding of aerodromes includes a process of consultation between Local Planning Authorities and airport operators. The development proposals in this Master Plan must comply with safeguarding requirements.

4.92 This process:

- ensures that an airport's operation is not inhibited by developments, buildings or structures in the vicinity which exceed certain heights;
- protects visual flight paths, e.g. by ensuring that runway approach lighting is not obscured by development and that lights elsewhere cannot be a cause of confusion;
- protects the accuracy of radar and other electronic aids to air navigation; and
- reduces the hazard from bird strikes to aircraft, associated with such land uses as waste disposal and sewage treatment, areas of water and large landscaping schemes.

4.93 Read alongside the NPPF, the Planning Practice Guidance (July 2013) notes at paragraph 31, under the heading 'Is safety an issue when wind turbine applications are assessed?', that:

"Wind turbines may have an adverse effect on air traffic movement and safety. Firstly, they may represent a risk of collision with low flying aircraft; and secondly, they may interfere with the proper operation of radar by limiting the capacity to handle air traffic and aircraft instrument landing systems."

4.94 There are a significant number of wind turbine schemes, at various stages of planning, development, construction and operation, within the area of the Airport's airspace. Where possible turbines have been allowed to be built, sometimes with commitments or conditions to provide mitigation where required. However the cumulative effect of turbines on Air Traffic Services has reached a point where little further development can proceed without mitigation if the turbines are visible to the Primary Surveillance Radar (PSR).

4.95 In order to allow further development of wind farms, the Airport has been undertaking a Wind Farm Mitigation Study with the aim of identifying a short and long term strategy to mitigate the effect of wind turbines on the radar and ultimately Air Traffic Services. The Airport has developed a Wind Farm Mitigation Policy to help interested parties understand the issues and set out the process for developers to follow with regard to assessing the potential impact of a proposed development and, where required, reaching agreement on mitigation which will be acceptable to the Airport.

4.96 The Airport also has associated Public Safety Zones at both ends of runway. The aim of this designation is that there should be no increase in the number of people living, working or congregating within the Zone. Darlington and Stockton Borough Council include a

KLM City Hopper at DTVA, image courtesy of Friends of Durham Tees Valley Airport

policy within their development management policies documents which will enshrine the aerodrome safeguarding and public safety zone regulations within the development plan:

- Darlington Making and Growing Places DPD – Draft Policy MGP35; and
- Stockton Regeneration and Environmental LDD – Draft Policy T6 (Aerodrome Safeguarding Zone) & T7 (Public Safety Zones)

Airport Consultative Committee

4.97 In common with airports across the country, the Airport has a Consultative Committee which acts in an advisory role and provides the opportunity for dialogue between the Airport management and representatives of the local community. It provides a forum in which a wide range of issues relating to the Airport and the community can be discussed. The terms of reference for the Committee make clear that its functions include:

- Advising the Managing Director on matters that should be referred to the Committee;
- Considering issues connected with the Airport as they affect the local community;
- Making suggestions on matters connected with the administration of the Airport which can benefit the local community; and
- Stimulating the interest of local people in the Airport and its achievements.

4.98 The Committee's purpose is to enable the Airport operator, communities in the vicinity of the Airport, local authorities, local business representatives, Airport users and other interested parties to exchange information and ideas. The Committee meets quarterly.

Friends of Durham Tees Valley Airport (FODTVA)

4.99 Friends of Durham Tees Valley Airport is a voluntary group set up by airport and aircraft enthusiasts who want to help promote and support the Airport wherever and whenever possible. It seeks volunteers from its membership to carry out any tasks with which it can assist as well as attending various events including providing the general public with advice and information relating to the Airport. Assistance includes acting as 'helping hands' when the Airport requires that extra support to supplement the operation in various situations for example marketing activities through to one-off events which may see an influx of additional aircraft and passengers.

Local Transport Policy

Darlington Local Transport Plan 2011-2016 (DLTP)

4.100 The Darlington LTP recognises the importance of DTVA to the economic prosperity of the region, in particular that it provides a 'gateway' to national and international networks. It notes that as Darlington is in a unique position it should exploit its location for the benefit of the wider catchment area, encouraging travel into Darlington for onward travel on national and international networks.

4.101 A key policy of the plan, therefore, is for the DBC to work with neighbouring authorities, transport operators and the business sector to exploit the economic benefit of Darlington's strategic location in relation to national and international networks; this includes lobbying for an air route between Durham Tees Valley Airport and Heathrow to support regeneration.

Stockton on Tees Local Transport Plan 2011-2016 (SLTP)

4.102 The Stockton on Tees LTP indicates continued support for DTVA to enhance links to and from national and international gateways to ensure markets are maintained and built upon to support industries which are operating in a global market place.

Planning History

4.103 DTVA has extant planning permissions which are referred to in this Master Plan as:

- **Airport Expansion** – permission was granted to extend and refurbish the terminal building with 18,500 sq m (200,000 sq ft) of new build floor space to provide a total of 28,000 sq m (306,000 sq ft) to provide capacity for 3 mppa, with associated baggage handling facilities, check in facilities, lounges, security and customs, retail, restaurant/catering area and plant. The permission included increased car parking provision from 2,100 to 4,500 spaces and a new public transport interchange. The expansion also includes a cargo and maintenance village to the eastern end of the Airport site (comprising

a total of 20,000 sq m (215,000 sq ft) aviation related B2 and B8 floor space);

- **Northside Business Park** – permission was granted in 2007 for 18,600 sq m (200,000 sq ft) of high quality Class B1 office space, a hotel and pub-restaurant. The buildings would range in size 1,868 sq m to 5,574 sq m; (20,000 sq ft to 60,000 sq ft) and be served by associated car parking of around 620 spaces. The scheme also included a structural landscaping scheme to provide an attractive environment and screening from adjacent land uses;

- **Southside (Phase 1)** – is situated to the south of the runway and comprises former taxiways and concrete apron associated with the former military use of DTVA. Some 70 ha of the site has planning permission for an aviation related development comprising 176,900 sq m (1,900,000 sq ft) of logistics, distribution and industrial buildings. This consent was extended and varied to allow 20 ha (50 acres) of open B1, B2, and B8 development as part of the permission. Works have commenced thereby saving the consent in perpetuity;

- **Hangar 5** – the Airport has recently acquired the site of the former Hangar 5. The site is 4 ha (10 acres) in area. The hangar, now demolished, was converted into a tennis centre with indoor courts but this closed a number of years ago. A development scheme for a hotel was commenced but did not proceed. Its lawful use therefore is understood to be for a hotel, which could be developed in accordance with the extant planning permission. However, there was also a planning application for a B1 office development on the site. This was granted in 2008 and was then extended in 2011 (subject to the signing of a S.106 agreement). The S.106, however, was never signed and this application was withdrawn in April 2013.

4.104 The resultant Air Traffic Movement's (ATM) from the extant planning permissions for the Airport Expansion and Southside are set out in Table A in Appendix 4.1.

Permitted Development Rights

4.105 The Airport (in common with other airport operators) is able to undertake certain limited works without the need for express planning permission, following notification of the local planning authority. Works of this nature are known as 'Permitted Development'. The scope of such works is set out in Part 18, Class A of Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995 (GDPO).

4.106 Part 18 of the GDPO allows the Airport to carry out development on operational airport land including the erection or alteration of an operational building in connection with the provision of services and facilities at the Airport, provided it consults with the Local Planning Authority. Other permitted development rights given by Part 18 allow works for the installation/ replacement of navigation equipment at or near an airport, and to works by the Civil Airports Authority or its agents in respect of air traffic control services and emergency works.

4.107 The Town and Country Planning (Environment Impact Assessment) Regulations 2011 ("EIA Regulations") require infrastructure projects, such as new industrial buildings with a site area in excess of 0.5 hectares, to be screened to establish whether they comprise EIA development. Works in accordance with Part 18 of Schedule 2 to the GPDO do not require planning permission unless the proposals would comprise EIA development.

Airport

Residential Area

Employment Area

Approved Employment Area

Road

Railway

Station

Proposed Station

Hotel

Terminal Building

Hospital

Pharmacy

Doctor's Practice

Dentist Practice

Vets Practice

School

Children's Play Area

Convenience Shop/Post Office

Pub

Hairdresser

Restaurant/Takeaway

Figure 5.1: Local facilities and services in Middleton St. George

5. Accessibility Context

Overview

5.1 The Master Plan area is well located to a range of local services and facilities in Middleton St George, and is accessible to high standard transport links, including by road and rail (Figure 5.1). It is also close to large areas of population and employment opportunities within standard public transport commuting distances, but currently somewhat disconnected from them.

5.2 These transport networks have substantial amounts of capacity available and can provide convenient and efficient transport of both people and goods, locally and nationally.

5.3 Recent improvements to the road network, including the Long Newton Interchange junction with the A66, provide high quality links to the Master Plan area.

5.4 The existing public transport provision on-site is limited as a consequence of reduced airport passenger activity, and other consented developments not being delivered, due to the recession. Public transport provision usually requires some initial 'pump priming', but for commercial longevity, it needs a 'critical mass' of potential usage.

5.5 Whilst current direct on-site rail connections are minimal, potential longer term improvements proposed in the Connect Tees Valley scheme include a new station within the Master Plan area. These improvements are outlined to be commercially dependent on new development and would provide direct regular access to the rail network. A new station would create a wide sustainable transport catchment for the potential demand created by both residential and employment land uses around it.

5.6 The Master Plan area is also potentially well placed for longer distance public transport trips, which would predominantly be undertaken by rail. Darlington Railway Station, on the East Coast Main Line, provides high speed access to major cities including Newcastle, York, Leeds, Edinburgh and London but to take advantage of the links, improved connectivity with Darlington Station is required.

5.7 Shorter distance, local, public transport trips, with a maximum journey time of approximately 45 minutes, can be served by rail, bus or a combination of both. Improved local bus accessibility, including linkage with Dinsdale Station, will significantly enlarge the Master Plan area's existing public transport catchment. This will bring the nearby employment and residential areas, including Thornaby, Stockton and Middlesbrough, within easy commuting distance. Bus routes can then be reviewed and refined once the new rail station is opened.

5.8 In order to support the business case for new public transport connections a stable long term and regular demand is required. Current levels of activity around DTVA do not generate such demand.

5.9 The proposed greater physical integration of the Southside employment area with the rest of the Master Plan area through the construction of new link road will also increase the opportunities and commercial attraction for public transport operators. The proximity of trip generation (residential) and attraction (employment) land uses also offers potential to reduce the demand for trips on the surrounding road network.

5.10 New public transport links will also minimise the traffic impacts associated with off-site journey to work trips to and from the area, creating a sustainable development.

Existing Road Network

5.11 The Master Plan area is well served by the existing road network. At a local level, via the A67, the area has direct and convenient road connections to the nearby residential and employment areas of Stockton-On-Tees, Yarm and Middlesbrough to the east and Darlington to the west.

5.12 At a wider strategic level, DTVA is surrounded by the national Primary Route Network. Direct connections to this network provide efficient travel routes in all directions; the A1(M) and A19 routeing north-south and the A66 / A67 routeing east-west.

5.13 The completion of the Long Newton Interchange in 2008, a major improvement project on the A66 directly to the north, further improved access to the Primary Route Network and reduced journey times to / from the area. There is a direct connection to it via Mill Lane, which bypasses Long Newton village.

5.14 This grade-separated junction provides a bridge over the A66 and new slip roads to improve conditions for traffic joining and leaving the A66. The scheme has also provided improvements for cyclists, pedestrians and local traffic.

5.15 A plan of the Primary Route Network surrounding DTVA, and important local roads within it, is shown in Appendix 5.1 (Plan A).

5.16 The Highways Agency is carrying out a corridor study of the A66, focussed on the Darlington Bypass, with the objective being to increase its capacity. This includes the A66/A67, 'Morton Palms', roundabout and the A66/A1150, Great Burdon, roundabout which were identified for improvement in the extant Airport Expansion and Southside permissions described previously in paragraph 4.103.

Access By Non-car Modes of Transport

Bus Accessibility

5.17 The Master Plan area currently has 1 bus route serving it, 6 days a week. The number 12 bus service routes from Darlington Bus Station, via Dinsdale Railway Station, to the centre of Master Plan area. Darlington Bus Station provides connections to a wide range of local and express bus services.

5.18 Before the recession, DTVA also had a bus service connection with Stockton, Eaglescliffe and Yarm. A re-introduction of a broadly similar facility will need to be reviewed and is a future aspiration.

5.19 The existing bus services also have the potential for increased demand with the proposed re-location of the Southside development area's access directly through the site's A67 roundabout access. Extension of bus provision into this large employment area, routed through the remainder of the Master Plan area to the north of the runway, would be commercially efficient and would bring the whole of the area within 400m of a bus route.

Rail : Passenger Accessibility

5.20 The Airport site is located in close proximity to the Strategic Rail Network. Darlington Railway Station is on the East Coast Main Line and provides high speed connections with locations including Newcastle, Edinburgh, Leeds, Manchester, York and London. The journey time to London from Darlington is approximately 2hours 30 minutes.

5.21 Upgrade works to the railway tracks serving Darlington station are planned, to reduce interaction between long distance and local routes. This would increase the capacity on the Tees Valley Line passing the Airport.

5.22 The Master Plan area has two rail stations in close proximity, Teesside Airport and Dinsdale. Teesside Airport is within the Master Plan area, but has no daily service stopping at it and has no prospect of it being brought back into effective use. It is also poorly located to serve the proposed demand around the Airport.

5.23 Dinsdale Station serves Middleton St George. It also provides a bus/rail connection between the Master Plan area and the East Coast Main Line via Darlington Railway Station. It has recently been improved, both physically and with stopping trains becoming more frequent.

5.24 Dinsdale Station is approximately 2km from the Master Plan area, and has 2 trains per hour connecting with areas including Darlington, Thornaby, Middlesbrough, and 1 train per hour serving the Bishop Auckland line.

5.25 Recently published statistics show that the first phase of the improvements made to Dinsdale Station, with improved station facilities and an increased (hourly) service frequency, has increased usage by over 30%. Subsequent improvements have now been made which provide 2 trains an hour, creating the potential for further increases in station usage.

5.26 Dinsdale Station is connected to the Master Plan area by the number 12 bus service. The journey to/from Darlington via bus/rail currently takes between 20 minutes and 40 minutes depending on inter-connection time.

5.27 The above bus and bus/rail information shows that the Master Plan area is currently well connected by public transport with Darlington, via its bus and rail stations, and from connections with these, to wider catchments. The rail accessibility to / from the east of the area via Dinsdale, however, is not currently attractive for a regular public transport journey.

5.28 In the short term, this bus / rail opportunity could be significantly improved for the residential and employment catchments by the improved coordination of bus service connections with the Dinsdale Station rail service timetable. With such improved connections, a substantial catchment to the east would be opened up for public transport accessibility.

5.29 The recent improvements at Dinsdale Station were undertaken as part of Phase 1 of the regional “Connect Tees Valley” (CTV) scheme. This Tees Valley Unlimited project is not, as the name may suggest, a light-rail system. Instead it is making use of the existing heavy rail infrastructure, optimising its capabilities. Potential greater efficiency for the usage of the tracks’ capacities is the responsibility of the franchised Train Operator.

5.30 A longer term objective of this CTV project is to provide a new railway station within the Master Plan area, replacing the existing Teesside Airport halt. To achieve this requires improved usage capacity over the current situation on the existing track and a commercial business case decision by the franchised Train Operator, based on potential patronage and revenue.

5.31 The proposed new station would be located just to the east of the Airport's A67 access road. The proposed CTV layout for this potential station is shown at Appendix 5.1 (Plan B). This is closer to the Airport terminal and more central to the overall Master Plan area than the current rail halt.

5.32 The proposed station would have a 800m walking catchment which will encompass the majority of the proposed mixed-use development to the north of the runway and include the terminal. This will provide significant demand and revenue for the new station.

5.33 The proposed station would also provide new convenient links with areas to the east. It would replace, and improve on, some of the bus service improvements discussed above.

5.34 The new station would enable the journey between the Airport and Thornaby to be completed in approximately 10 minutes. The rail journey between DTVA and Darlington Station would become direct and would also take only around 10 minutes.

5.35 The CTV proposal also includes a new bus layby adjacent to the new station, to maximise linkages with bus services.

Potential Public Transport Catchment Improvements

5.36 Appendix 5.1 (Plan C) shows the approximate existing public transport catchment for an overall 45 minute journey time and also how these would be improved with:

i. the addition of a bus service to / from the east

ii. a timetabled convenient bus connection with Dinsdale Station, and

iii. the introduction of the CTV's proposed new station.

5.37 It can be seen that with an improved bus service to the east, the catchment expands to include Middlesbrough, Stockton, Redcar and Hartlepool. The provision of a 'timetable coordinated' shuttle bus to Dinsdale Station expands the above catchment and also brings the wider Darlington area, Durham and Northallerton into the catchment. The introduction of the proposed CTV Station would further increase the catchment, to bring Bishop Auckland and York within easy reach of the Airport.

5.38 A new station, located adjacent to the A67 roundabout access, could also be developed to become a Park & Ride facility for residents of the Middleton St George area, and for drivers from further afield heading for the Darlington and Stockton/Middlesbrough conurbations. This would require convenient car parking space adjacent to the station. The potential demand, and hence size of car park, would need to be studied, as would the traffic impact on the access arrangements from the A67.

Rail Freight

5.39 The Master Plan area also has the potential for a new 'layby' style rail siding into the site for freight use. This could be up to 600m long depending on operator requirements, with adjacent transhipment facilities. This facility would provide a valuable connection between rail and air freight networks and has the potential to provide further benefits through links with Teesport. This could create a new hub for multimodal freight transport and help to reduce HGV usage on the road network. Creating the full length of siding will require the removal of the current rail halt.

5.40 The proposed rail freight facility is consistent with the objectives of the Teesport Rail Study undertaken in 2007, which seeks to increase the usage of the local rail network for freight transport. The Tees Valley Line is in the process of being upgraded to accommodate rail freight. One current example of this is the replacement of the road bridge adjacent to Dinsdale Station, to increase the headroom for container-carrying trains. Works on this project commenced in late 2013.

Pedestrian and Cycle Access

5.41 The typical walk and cycle catchments for Northside for 'regular' non-vehicular trips are shown in Appendix 5.1 (Plan D), together with the location of existing local amenities. the local centre of Middleton St George and its associated amenities are all within convenient cycling distance, but not for walking. The plan identifies that there is a need for increased local services 'on-site' within the Master Plan area. These would primarily serve the residential component, but would also improve the transport sustainability for the proposed employment uses. These facilities will be grouped around the western end of the existing passenger car park, as shown at Appendix 5.1

(Plan D). The Yarm Road roundabout provides pedestrian crossing facilities at all arms, providing a safe route to the proposed new rail station and bus facility.

5.42 St George Way is adjacent to the proposed residential areas. It provides an off-carriageway cycle route along its entire length, linking the Airport terminal with the Yarm Road roundabout. A dedicated crossing facility is provided at the roundabout, which connects the cycle route with the nearby local and National signed cycle routes.

5.43 The Master Plan area is approximately 1.5km from National Cycle Route 14, which runs east to Stockton, Hartlepool and beyond and west to Darlington, as shown on Appendix 5.1 (Plan E). The route to Darlington comprises a 'traffic-free path' which is off carriageway and, apart from in Darlington centre, has grade separated road crossings. Within Darlington Centre, the route is served by Toucan crossings.

5.44 The Master Plan area is connected to National Cycle Route 14 via Yarm Road, which is identified as an 'Advisory Route' on Darlington's cycle route map. Advisory Routes also connect the Master Plan area with Middleton St George and Dinsdale Station.

6. Economic Context

6.1 In preparing this Master Plan, the Airport has had careful regard to the economic and market context within which DTVA operates. The Master Plan's proposals for the future of the Airport have been informed by an understanding of the current composition the local economy and the key drivers which will shape it over the Master Plan period. An overview of the past performance and future potential of the Tees Valley economy and its impacts on DTVA is set out from paragraph 6.13 onwards.

6.2 DTVA has also researched the aviation and related sectors to inform strategies for how best to re-position DTVA to form a viable long term facility.

Economic Bodies

6.3 DTVA is a member of a number of economic groups and organisations which seek to champion growth in the North East and its key growth sectors. The Airport collaborates with these organisations to maximise growth opportunities in the region. As part of the preparation of this Master Plan, the Airport has sought the views of members of these organisations and the wider Tees Valley business community on how the Airport can best serve their needs.

North East Chamber of Commerce (NECC)

6.4 The NECC is an organisation which offers membership to firms who have business interests in the North East. It exists to serve its members and campaigns to secure better conditions for North East companies. The sole purpose of the NECC is to focus on making the North East a success. It recognises that a key factor that influences this is the North East's ability to compete internationally. NECC is accredited by the British Chamber of Commerce and through this association NECC's members are part of the international Chamber network, one of the biggest business communities in the World.

North East Processing Industries Cluster (NEPIC)

6.5 The NEPIC is an economic cluster created by industries involved in the chemicals and related sectors based in North East England. There are more than 1,400 companies in the supply chain of the sector based in the region. The sector has over 35,000 direct employees and some 190,000 indirect employees in the North East, and together they represent over one third of the industrial economy of the region.

6.6 The aim of the organisation is to represent and coordinate the industry's collaborative activities on the wide ranging issues that impact on the future and performance of energy intensive process sectors. NEPIC has been recognised by the Chemical Industries Association (CIA) in the UK for its work in informing stakeholders about the sector, and by the professional institutions in the UK for its engagement and representation of industry issues.

NOF Energy

6.7 NOF Energy is a business development organisation which promotes the oil, gas, nuclear and offshore renewables sector. NOF works to identify global opportunities within these sectors.

6.8 As part of NOF, Subsea North East is the regional advocacy group for the North East of England's subsea sector. The group promotes the region's innovation and excellence in the development of subsea technologies and solutions.

6.9 North East England's subsea sector is made up of around 50 supply chain companies which currently generate a turnover of £1 billion a year and support more than 10,000 jobs. Companies operating in the subsea sector in the North East expect a 29% increase in turnover in the next two years and on average, over 50% of North East subsea companies' products and services are exported.

6.10 Subsea technology, which involves highly sophisticated equipment used from surface to seabed and which operates remotely under the ocean, provides a viable and safe way of recovering hard to reach or marginal reserves. The sector is one of the fastest growing areas for the economy which has significant growth potential for the North East.

Northern Defence Industries (NDI)

6.11 NDI is a leading supply chain sourcing and development service representing the interests of businesses in the defence, aerospace, space and security sectors. NDI deliver real business opportunities and value added services for their members, promoting their capabilities nationally and internationally.

Airport Operators' Association (AOA)

6.12 The AOA is the national voice of UK airports representing the interests of UK airports, and the principal such body engaging with the UK Government and regulatory authorities on airport matters.

The Tees Valley Economy

6.13 The following section provides a brief overview of the recent economic performance of the Tees Valley, drawing principally upon the published Tees Valley Economic Assessment (2013). Consideration is also given to the economic contribution that DTVA currently makes to the local economy. The section concludes with consideration of the future growth potential of the local economy as described in local economic development strategy and with reference to an independent set of employment forecasts sourced from Experian.

Past Performance and Current Challenges

6.14 The Tees Valley Economic Assessment (2013) sets out the history of employment trends in the Tees Valley. It highlights a number of employment related challenges facing the local economy. These include the following:

- The Tees Valley economy is dependent on public sector employment opportunities, with 26% of jobs being in the public sector compared to the national average of 21%;
- There has been a reduction in private sector employment within the local economy, from 203,400 jobs in 2007 to 186,800 jobs in 2012; and
- There was a deficit of jobs (259,500 in total) compared to working age population (424,000) in 2012.

6.15 The Assessment also highlights the challenges that Tees Valley faces in addressing high levels of unemployment (Tees Valley's unemployment rate is 11.9% compared to 7.7% nationally as shown in the latest published ONS Annual Population Survey) and in particular the problem of elevated youth unemployment rates.

6.16 The area faces challenges associated with low enterprise rates (the enterprise birth rate is quoted as 70% of the Great Britain average) and commercialisation as measured by low rates of patents filed and granted.

6.17 It notes that the economy was historically reliant on a small number of large employers including ICI and British Steel. Employment in the manufacturing of chemicals and steel declined through the 1980s. This trend of manufacturing job losses resulted in 93,000 jobs being lost in the period 1971 to 2004. The sale of part of ICI's integrated processing complex in the 1990s to foreign owned businesses also led to a number of plant closures and relocations.

6.18 Since the 1990s, there has been a growth in other sectors of the economy and the Economic Assessment notes the growth of distribution, logistics, professional services and IT industries. Tees Valley now exhibits emerging industrial strengths in advanced manufacturing, process and low carbon industries. Despite this growth and rebalancing of the economy, manufacturing remains important and the area remains dependent on a small number of large employers that are domiciled outside the UK.

6.19 The Assessment also notes the need for investment in infrastructure to help the area realise its economic potential. Specific barriers to growth include better air connectivity, improved access to Teesport and unlocking capacity on the East Coast Mainline.

6.20 In summary, over the last 30 years the performance of economy of the North East and the Tees Valley has lagged behind the UK average. While the Tees Valley economy has begun to restructure, and emergent sectors have included service industries as well as advanced manufacturing the area is, still reliant on larger firms and it faces employment

generation, enterprise and infrastructure challenges in reaching its potential.

6.21 A more detailed, independent assessment of Tees Valley's economic performance over the period 1997 to 2012 is attached at Appendix 6.1. This independent economic analysis serves to reinforce the employment challenges facing the area and highlights how important it is to protect existing jobs and facilitate the creation of new jobs. Of equal importance is the retention of infrastructure and connectivity that can help local business retain or gain competitive advantage. Achieving a sustainable airport business at DTVA helps to support both of these vital objectives.

The Economic Contribution of DTVA

6.22 Research undertaken in 2012 examined the economic contribution of DTVA to the Tees Valley economy. This research combined primary data, including employee survey data, business expenditure and published economic data and examined the direct, indirect and induced impacts of DTVA in terms of employment and GVA. The assessment found that DTVA makes a significant contribution to the local and regional economy. Key aspects of its economic contribution include:

- 595 Direct (FTE) jobs are supported on site;
- 445 of these jobs are taken by people living within Tees Valley, implying a leakage rate of only 25% outside the area;
- Taking into account direct jobs, indirect jobs and induced employment, the total employment impact of DTVA is estimated to be between 560 and 600 (FTE) jobs at Tees Valley level, (depending on the employment multiplier applied);
- Current GVA specifically associated with DTVA is estimated to be £37m or 0.4% of the total GVA of the Tees Valley economy.

6.23 The research also includes qualitative information relating to business perceptions of the Airport and the implications for their business operations. The key points arising from the business consultation include:

- Airport access is critical for many businesses located in the Tees Valley area (including businesses in the petrochemical, oil, gas and engineering sectors). Air connectivity to hub airports is also considered critical to many businesses in

terms of accessing international customer markets;

- Businesses consulted perceive location and time saving benefits associated with DTVA which provide a source of competitive advantage for businesses within Tees Valley;
- Cargo services operating out of DTVA benefit businesses that require component delivery and assembly to short time frames. DTVA helps to support the activities of Tees Valley businesses in the shipping, pharmaceutical and petrochemical sectors; and
- Operation of the Airport helps to sustain highly skilled employment in third party organisations.

6.24 In summary, airport access generates significant direct economic benefits, including jobs and economic output. The operation of the Airport is also important for the contribution that it makes to business competitiveness, operational efficiencies and trade links. This has been confirmed by recent consultations with the business community as part of the preparation of this Master Plan which found that the current international links are highly valued and well used by the business community. It also found that the Amsterdam service carries a higher volume of passengers but both the Amsterdam and Aberdeen services sustain important business links. The routes support a number of frequent fliers including those who access connecting services from Amsterdam.

Future Performance

6.25 In considering a Master Plan to achieve a sustainable business for the long term at the Airport it is important to understand the expected future performance of the local economy.

6.26 The future potential of the local economy has been considered in the context of the Economic Assessment (2013), local economic development strategies and sector based strategies.

Independent Assessment of Forecast - Employment Change

6.27 A long term forecast of employment change has been sourced from Experian. This highlights that over the period 2013-2031, 3.3 million jobs are forecast to be created at UK level (+13.4% change), 100,000 jobs at North East level (+11.5% change) and 32,000 jobs within the Tees Valley authorities (representing a +12.8% change). These forecasts compare favourably with the levels of employment growth set out in the Statement of Ambition which aims to create 25,000 jobs over a similar period.

6.28 The employment forecast suggests that in the future the Tees Valley authorities will potentially increase employment at a faster rate than the North East region, and will potentially track UK levels of projected growth closely. A viable Airport can help to support the realisation of these higher growth levels by providing access to markets, increasing competitiveness and improving global connectivity.

6.29 Despite relatively strong rates of projected growth, it should be noted that the Tees Valley is emerging from cuts in total employment levels experienced throughout the recession, and also low absolute employment bases within certain sectors from which growth will occur.

6.30 Table 6.1 illustrates those sectors in which Tees Valley is expected to outperform North East and/or UK job growth.

Sector	UK	NE	Tees Valley
Utilities	19.0	19.1	21.5
Transport and Storage	29.9	28.9	37.4
Wholesale and Retail	9.9	8.1	10.6
Accommodation, Food Services and Recreation	24.0	21.5	23.4
Professional and other private services	22.8	20.0	29.4

Table 6.1: Sectors in which Tees Valley is expected to outperform North East and/or UK job growth

6.31 These broad sectors provide opportunities for economic growth in the North East in general and the Tees Valley more specifically. The transport and storage sector covers aviation related activities including passenger and air freight transport. It also includes logistics and warehousing. The potential of DTVA and, in particular, Southside to facilitate growth in the transport and logistics sector is significant.

Summary

6.32 In summary, the past performance of the Tees Valley economy has lagged behind the UK average. Looking ahead, however it is poised to emerge from the recession and potentially achieve employment growth rates that track the UK, and exceed the North East. The Experian employment forecasts suggest that the employment target of 25,000 jobs included in the Tees Valley Statement of Ambition is realistic, although its' achievement is not without significant challenges.

6.33 A range of sectors will potentially contribute to employment growth, including the transport and storage sector which encompasses logistics, warehousing and air transport related activities. The focus of economic strategy in the Tees Valley and the scope of the City Deal would suggest that other sectors, including advanced manufacturing, might also grow. Investment in DTVA will support the competitiveness of businesses including access to export markets.

6.34 Despite the potential for relatively strong growth rates, the Tees Valley and the North East face issues of dependency on large foreign owned employers, high unemployment rates, low enterprise formation and commercialisation rates.

6.35 These findings highlight the continued importance of investment in the local economy, measures to support industrial diversification in terms of employment opportunities and a focus on supporting those "higher growth" sectors which can yield the best employment prospects for the area. The economic evidence and local economic development strategies also highlight the importance of investment in transport infrastructure to enable access to customer markets and to support the growth of export activities. A vibrant and viable DTVA has an important role to play in addressing these challenges.

Impacts on DTVA

6.36 DTVA's performance has closely tracked that of the economy of the region. After a period of investment in the Airport and in expanding the routes it serves, passenger activity peaked in 2005/6 at 899,000 passengers. Since then numbers have declined.

6.37 Figure 6.2 illustrates how the fortunes of the Airport have risen and fallen with airline decisions to add or withdraw services. Passenger activity achieved in the early and mid-2000s was driven by the activity of a few carriers – bmibaby, FlyGlobespan and Ryanair. The withdrawal of these carriers (in some cases is compounded by them consolidating their operations at competing airports and in the case of FlyGlobespan going out of business) has limited the use of DTVA with the majority of current activity being driven by business users.

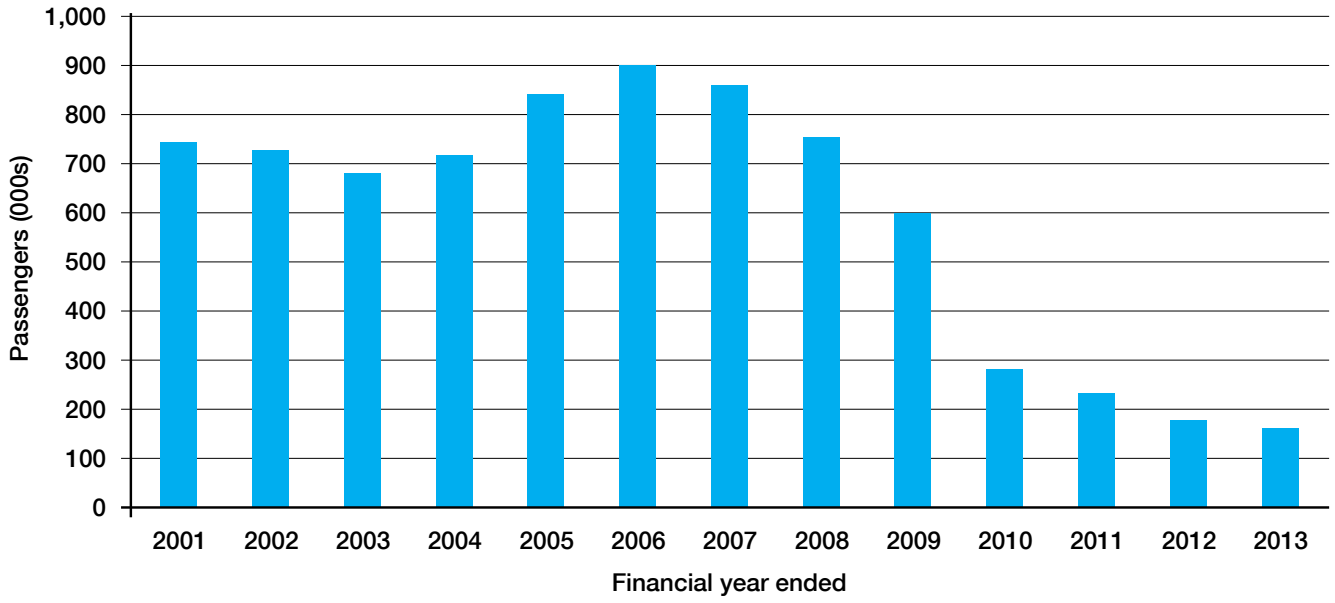


Figure 6.2: DTVA Passenger numbers 2000/01 - 2012/13

6.38 This decline, which has had a significant impact on the commercial performance of DTVA, was driven by a range of factors affecting the small airport sector as a whole, including:

- the introduction of Airport Passenger Duty in the late nineties - the doubling of the rate in 2007 impacted heavily on smaller airports which were unable to offset price increases through economies of scale;
- the high (and rising) fixed cost base (including capital expenditure) imposed by regulation has resulted in smaller airports having limited options to reduce cost when they have not had the critical mass to absorb the cost enjoyed by their larger competitors.

6.39 The North East has the lowest regional Propensity to Fly in England at 1.15 flights per resident compared to an average of 1.6 for Great Britain as a whole and the economy of the North East and the Tees Valley is reliant on non-service sectors that have has been particularly affected by constraints on public sector spending, resulting in lower disposable incomes and consequently less demand for leisure flights.

6.40 Of particular significance to the role of DTVA in the regional economy is the connections it provides for local industries and to international hub airports. The loss of the service to Heathrow in March 2009 was significant because of the range of global flights available from Heathrow. DTVA retains its regular trips to Aberdeen, which serves the oil/petrochemical sector, and to Schiphol which offers a range of long haul and European connections. These services are of particular importance in providing efficient links for regional businesses to global markets.

6.41 The impact of decline in demand on the Airport services has been significant. The Airport has reshaped its business where possible. It has sought new business from both airlines and aviation related sectors and investigated other revenue streams (eg caravan storage) to support the Airport.

6.42 In formulating this Master Plan, the Airport has explored the requirements of current and potential future occupiers and researched examples of other airports in the UK and Europe which have been successful in business development. Part 2 of this Master Plan details the proposals for the development of the Airport to 2020 and beyond.

Part 2

Durham Tees Valley Airport: The Future


WELCOME TO
DurhamTees
ValleyAirport

7. Re-positioning the Airport

Creating an Airport Neighbourhood

Framework for Investment

7.1 DTVA is an important economic and transport asset for the Tees Valley. Despite recent difficulties it remains a significant employer and provides connectivity and services which are of value to local businesses and support the competitiveness of the Tees Valley. The economic and transport connections it supports are a key aspect of local economic and regeneration strategy including the development plans for Darlington and Stockton and the LEP's growth strategy[32] which is the basis of the Tees Valley's proposal to Government to secure a share of the Local Growth Fund.

7.2 The Airport is committed to re-positioning the business with a view to delivering capital investment and increasing revenue streams which will stabilise the aviation business around its core services; enhance passenger services to provide international connectivity (and retain the potential for future expansion of these services); maximise the potential of existing land, buildings and facilities at the Airport over the long term; and facilitate the delivery of major new employment development at Southside.

7.3 This Master Plan helps to underpin investment by the Airport and by businesses which may consider the Airport as a location. It sets out a strategy to help in securing public sector grant and/or loans such as Regional Growth Fund. The Airport must in addition make full use of its own resources including property development at the Airport, which would facilitate capital and/or revenue receipts sufficient to deliver the investment needed to achieve a viable Airport business.

7.4 In this context, this Master Plan sets out the development proposals that are necessary:

- To return the Airport to a viable position for the long term, and
- Generate the capital and revenue needed to achieve this over the short term.

This includes a combination of aviation proposals, employment development and housing as 'enabling' development to facilitate the necessary investment.

7.5 This section describes the rationale for these proposals with reference to the Indicative Framework Plan. Chapter 8 then describes the Master Plan proposals in more detail and establishes the development principles which will apply to the individual proposals and which will be taken into account in determining planning applications.

7.6 Chapters 9 to 11 assess the proposed developments' likely transport, economic and environmental impacts.

Aviation forecasts

Passenger services

7.7 In 2012, the Airport handled 165,000 passengers, the majority on services to Amsterdam, with Aberdeen the second most used route. The Department for Transport's (DfT) national forecasts (see Chapter 4) predict that throughput will rise to 200,000 passengers per annum (ppa) by 2020. This figure is used for the purpose of this Master Plan. Over the longer term, the DfT forecasts indicate 400,000 ppa by 2050.

7.8 The Master Plan safeguards potential to accommodate this increase in passenger traffic over that timescale. The Airport has accommodated more than 400,000 ppa in the recent past and the Master Plan will not prejudice growth beyond the DfT forecasts. It will remain possible to expand the existing car parking facilities (potentially through a decked solution) and terminal building to accommodate at least 900,000 passengers (with minor internal alterations).

7.9 The Airport pursues new operators, as well as encouraging additional routes from existing operators. While it is not possible definitively to say where new routes will serve, it is most likely that the growth will come from a range of alternatives, which might include Belfast, Dublin, Southampton, Bristol, Cardiff, Newquay

[32] Tees Valley Strategic Economic Plan, Tees Valley Unlimited (March 2014).

and also from additional rotations on existing routes. The Airport will also seek routes to European destinations.

7.10 The Airport has considered the needs of current operators and the potential for expanded and additional services over the Master Plan period. Projected traffic for 2020 is shown in Table B of Appendix 4.1. These figures are consistent with the DfT national forecasts but importantly also allow provision for improved connections to international hub airports – for example the expansion of the current service to Schiphol Airport.

7.11 The Airport has put forward the case to the Airports Commission that in any consideration of the provision of new airport capacity in the South East, (whether at Heathrow, Gatwick or at a new site in the Thames Estuary), it can only be considered a true national hub if it serves regional airports across the nation including DTVA. Until 2009, DTVA had a link to Heathrow provided by bmi, but this was withdrawn by the operator to use the valuable slots for more profitable long haul routes. Many regional airports have suffered similarly. If new hub capacity is provided in the South East, to make it a national hub serving all the country and, in particular, local economies, such as the Tees Valley, which require international connectivity, then it is crucial that slots are ring-fenced for use by an operator making connecting spoke flights to regional airports (such as DTVA). Without such spokes, the hub will not be a national hub, just a bigger airport in the South East. This would increase regional disparity rather than addressing it. If a scenario transpired whereby a London route was regained at DTVA given the time it will take to implement any decisions that flow from the Airports Commission and then construct the new facilities, such routes are unlikely to be delivered by 2020 and therefore do not feature in the traffic projections.

7.12 The assessment of projected aviation traffic at 2020 (Table B) is compared in Appendix 4.1 with the previous assessment that related to the approved Airport Expansion development (Table A). This indicates considerably less activity than was approved in relation to the expansion of the Airport to accommodate 3 mppa, however the assessed 2020 traffic would be greater than has been the case more recently since the impacts of the recession e.g. total aircraft movements were 18,000 in 2012, but by 2020 are expected to be about 28,000.

7.13 Of a total of about 28,000 aircraft movements projected for 2020, about 20,000 would comprise Business and General Aviation. This includes test and training flights, Aero Club flights, Air Taxi flights, private owner flights, movements associated with businesses located at the site, together with an allowance for ad hoc official and military activity.

Cargo Services

7.14 The approved Southside scheme was based on aviation projections which predicted use by Boeing 747 aircraft types. It is believed this would not now occur as there is not the critical mass of air freight generated in the region to support such large loads on any regular basis. Cargo activity of a more modest nature (c.26,000 tonnes per annum) was included in the approved Airport Expansion permission and this has been taken forward into this Master Plan.

Provision for Rail Freight

7.15 DTVA is well positioned, adjacent to the Tees Valley Line, to take advantage of rail freight. This line is in the process of being upgraded to accommodate larger freight trains and is well placed to facilitate enhanced rail freight services to and from Teesport. The Master Plan therefore includes a 'lay-by' style rail siding into the site for freight use. Such an arrangement could accommodate a freight terminal and container handling facility directly linked to a range of storage, logistics and/or processing facilities. This could be attractive to logistics operator who may seek to locate to the Northside Business Park on Southside to take advantage of multi-model connectivity.

Business and General Aviation (BAGA)

7.16 The BAGA activity at DTVA is significant and has potential to grow. The provision of new hangars aimed at the needs of the BAGA sector would help to facilitate growth in BAGA activity and support the Airport business by increasing rental income. The BAGA activity is assessed to significantly increase from current conditions, with business aviation growth of about 60%, and general aviation increasing by over 40%. Even with these increases the overall BAGA activity will be under half that which occurred in 2004, and much less than that forecast as part of the Airport Expansion permission.

Occupiers of DTVA

Serco

7.17 From its operation at the Airport, the International Fire Training Centre (IFTC) delivers specialist fire training to the aviation, offshore, industrial and marine markets. Clients come from as far afield as Canada, Hong Kong, Nigeria, Eastern Europe and the Caribbean to train and exercise their skills on one of the best fire training grounds available anywhere in the world. A choice of twenty versatile training rigs offer a range of authentic fire scenarios to test the best, all under the expert guidance of a team of experienced tutors. Investment in a new virtual reality suite, new generation fire appliances and online learning keeps IFTC at the forefront of innovation in its sector. Being innovative means the business wins new clients in new markets and continues to justify its position as a recognised leader in training the world's fire fighters.

7.18 Serco is a long-established and valued occupier of the Airport and it is essential that this Master Plan facilitates its on-going needs. These include longer term options to improve and potentially expand its facilities at DTVA.

Sycamore

7.19 Sycamore Aviation is a new and growing business located at DTVA. It offers specialist aircraft decommissioning and recycling services to airlines and aviation companies. These services include aircraft storage, care and maintenance; dismantling and component storage; re-certification of components; and dedicated turbine engine recycling.

7.20 The opportunity for companies such as Sycamore to grow arises from changes in the global aviation market. Historically aircraft have been retired after 25 years in service after which they are to be "parted out" for the resale of working parts and recycling of other parts. In recent years the improved performance and efficiency of new aircraft, particularly their lower fuel consumption and noise emissions, has driven a trend for parting out younger aircraft. Due to environmental standards, manufacturers and airlines require specialist decommissioning services for aircraft at the end of their life span. This has led to an increase in the need for specialist aircraft recycling services.

7.21 Boeing has reported that out of over 41,000 aircraft it expects to be in service in 2032 only around 14% of these (5,960 planes) will be aircraft that were in service in 2013. 86% of 2032 fleet will have been commissioned since 2013. Of these 59% will be bought to meet growth requirements of airlines and 41% (14,350 planes) will be replacements for retired aircraft. This offers a huge opportunity for the aircraft parting sector[33].

7.22 Fleets of aircraft that were commissioned in order to meet rapid growth in demand for air travel over recent decades are approaching the end of their economic lives. Airlines are also investing in more fuel efficient, quieter and more cost-effective aircraft. These factors are generating significant growth in the global demand for the services that Sycamore provides.

7.23 The majority of these are based in the Europe, Middle-East and Africa (EMEA) region. The UK is the favoured location for decommissioning services due its excellent network of aviation companies. However, there is currently a shortage of facilities able to meet the expected demand. Schemes are being developed in France and Spain. If the UK is not to miss this strategic opportunity it is important that growing companies such as Sycamore are supported.

[33] Current Market Outlook 2013-2032, Boeing Commercial Airplanes, (2013) Page 15

7.24 Sycamore is very well placed to capitalise on this demand:

- It has a fully equipped hangar operation which is the only such facility fully licenced by the Environment Agency in the UK;
- DTVA has capacity to land and store all aircraft types;
- Sycamore Aviation has the expertise to compete for global contracts and already has a blue chip customer base;
- Expansion into Southside and engine recycling will make Sycamore only the second "one stop shop" for these services in the whole EMEA region; and
- The Tees Valley has a track record of skills in engineering and aviation and a ready supply of skilled labour.

7.25 It is expected that Sycamore will require further accommodation in the medium term. The establishment of Sycamore at DTVA and the rapid growth prospects of the sector in which it is engaged represents a key opportunity for the Tees Valley. This Master Plan makes specific provision for expansion onto Southside with the ability to construct a hangar capable of accommodating large aircraft, such as a Boeing 747.

Engine Test Facility

7.26 In support of the establishment of an aviation/ advanced engineering cluster at the Airport, provision is made for the development of an engine testing facility. Routine operational engine testing already takes place at DTVA and generally occurs on the aprons or taxiways. The Master Plan includes proposals to establish a dedicated facility where an aircraft engine can be tested following major servicing or overhaul. This comprises an area of hard standing/apron equipped with the necessary acoustic screens and vortex protection to mitigate any adverse impacts. Southside is an ideal location for such a facility as it is well away from significant residential areas and provision of such a facility could fit well with the business case for Sycamore.

Cobham

7.27 Cobham Aviation Services set up an operation at Durham Tees Valley Airport in 1994 to provide aerial support services to the UK Ministry of Defence to include electronic warfare, target towing and threat simulation. The Airport was selected as a base for the operation due to its proximity and ease of access to the military training airspace off the East Coast of the UK and, as the operation primarily serves the Royal Air Force, its location with respect to the major RAF Front-Line operating bases. The Airport's good weather factor, flexibility of operating hours and overall support to the operation over the past 20 years has been critical to Cobham's success in achieving and maintaining the contractual requirements of the MOD contract. Operating a fleet of Dassault Falcon-20 aircraft, adapted to carry a variety of under wing pods to produce training effects in line with the requirements of RAF Front-Line forces, the Company flies around 3,000 hours per year from the Airport in all weather, both day and night.

7.28 Cobham employs around 100 people at DTVA consisting of Pilots, Electronic Warfare Officers, Flight Inspectors, Licensed Engineers, Flight Operations Officers and ground support staff. This Master Plan seeks to accommodate the future needs of these businesses. DTVA is well placed to secure further businesses similar to those referred to above and will actively market itself as a location for aviation related businesses. This is a growing sector of the economy and DTVA can offer a level of specialist service provision, which would not be possible at larger, more congested airport sites. However, there are other airfields primarily in the South of England offering similar services and there is a need to invest in the appropriate infrastructure to compete successfully.

Development of New Hangars on Northside

7.29 The growth of the Airport in the business and general aviation sector will require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development of new facilities. The principal requirement will be for new hangars for business aircraft and general aviation. Existing hangar space is already fully used (Cobham, Sycamore, BAGA). The provision of new, purpose built hangar space and enhanced aircraft parking facilities would attract additional business,general, and light aviation operators and services. The rental income from these hangars is necessary to support the commercial viability of the Airport. It is anticipated that this development will commence in the short term and will be phased to 2020 and beyond.

7.30 The master plan proposals also include the provision of a new light aircraft and general aviation area to the northern side of the runway. The proposed facilities are aimed at flying clubs and private aircraft owners and would also aim to attract associated light aircraft associated businesses such as aircraft engineering, recycling and part sales, interior refurbishment and aircraft washing and valeting.

Capital Investment and Enabling Development

7.31 These developments require significant capital investment. DTVA and partners continue to seek sources of public sector grant and/ or affordable loans. While the potential for these will continue to be actively pursued, this alone is not likely to deliver the funds needed to secure the transition to a viable airport. As such, consideration has been given to enabling development of the land holdings of the Airport which would generate the quantum of capital required over the timescales needed to deliver the Master Plan for the Airport. Appraisal of the Airport's business model has highlighted a requirement for significant capital investment to deliver re-positioning of the Airport and investment in the hangars that will generate long term and secure rental income.

7.32 A range of development options and land uses has been considered in the context of the physical attributes of the available land; the feasibility and viability of development; and the short term and the long term sustainability of any proposed development.

7.33 In considering options, regard has been had to the original rationale for the development and growth of RAF Middleton St George as a community; its evolution as a mixed-use location which today includes aviation, commercial, residential, leisure and community uses; and its relationship with adjacent land uses. Bearing in mind the importance of achieving a viable airport as quickly as possible, consideration has also been given to development proposals which can generate income in the current and foreseeable market. In the current economic circumstances applying in the Tees Valley, housing is the only land use which is likely to generate the necessary funds in the required timescales.

7.34 Employment growth is one of the factors which determines the appropriate level and location of new housing provision. Accessibility to employment areas and local services are attributes which contribute towards their sustainability.

7.35 The principles of sustainable development, suggest that at least some proportion of the additional households locating to the Borough through job growth at the Airport should be housed close to their place of work.

7.36 This Master Plan therefore includes provisions for new housing within Northside on the areas that are not required for aviation related uses. This housing comprises 'enabling development'. This means that the proceeds of the sale of land for housing will be reinvested in works to enable the re-positioning of the Airport and the achievement of a viable business model.

7.37 The Master Plan sets out how new housing would relate to existing housing within the rest of Middleton St. George and how it can create a vibrant and sustainable neighbourhood alongside the Airport, Middleton St. George Hospital, the St. George Hotel, playing fields, employment uses and local services within the Airport and surrounding area.

7.38 The capital raised from the development of the housing will be re-invested in the Airport. It will facilitate the re-positioning of the Airport to allow extension of key passenger services, including growth in line with national forecasts and development of the new hangars required to support growth of the BAGA services. The provisions of this re-investment will be set out in an agreement (Section 106 Agreement) as part of planning application(s) for the housing development. This Agreement will ensure that all proceeds of the housing development are used in a phased manner to adapt and enhance the Airport's facilities in accordance with the vision established in this Master Plan. A diagram illustrating the enabling development process is attached at Appendix 7.1.

Southside employment park

7.39 The Airport also remains committed to maximising the employment potential of Southside. The approved Southside industrial and distribution park (Phase 1) represents a major opportunity to secure large scale employment growth in the logistics and warehousing sector. Whilst at present, and as originally conceived, this is not commercially viable, the Airport has sought means to bring forward alternative proposals. It has worked in partnership with potential occupiers to deliver early phases of development.

7.40 These plans could deliver expansion space to enable Sycamore Aviation to handle the largest aircraft types (which cannot be accommodated within their current premises); and could facilitate improved facilities for the IFTC on land adjacent to the current fire training ground on Southside. These could be delivered alongside a range of logistics and industrial buildings for which permission already exists and which total 176,900 sq m (1,900,000 sq ft).

7.41 This development would deliver new roads and infrastructure connecting from Northside, significant structural landscaping, including extensive areas of habitat creation and management, and could incorporate energy generation proposals including the potential for renewable energy which could provide the energy needs of the Airport and surrounding uses.

7.42 A new link road is proposed from Northside to Southside around the eastern end of the runway. This has been offset from the runway end sufficient to ensure that the airfield safeguarding surfaces such as the aircraft approach surface are not compromised by vehicles travelling along the road. It also ensures that the existing airfield navigational aids can be maintained. This road will therefore not impact on the operation of the runway. Final details of the road will be agreed with the CAA prior to its delivery.

7.43 The optimum alignment of the road, taking into account the safeguarding issues and the proposed rail siding layout, makes use of a section of the existing Taxiway Alpha. It is therefore proposed to provide a new section of taxiway to the south-west of the existing, subject to operational need. This arrangement is shown on the Indicative Framework Plan at Appendix 8.1.

7.44 With the support of a range of local stakeholders including TVU; Darlington and Stockton Councils and the Homes and Communities Agency (HCA), the Airport has bid for public sector funding to enable delivery of the early phases of Southside. While recent bids were not successful, the Airport continues to explore all possible funding sources. As referred to above, the Airport is also investigating the potential to capitalise on the existing rail link at the Airport to secure rail served warehousing on Northside which could act as a catalyst to further development of logistics and warehousing at Southside. Early feasibility work confirms that a 600m long rail freight siding could be accommodated on Northside. This would have the capacity to accommodate freight trains and offers potential for multi-modal logistics – rail, air and road.

7.45 Land to the west of the approved Southside employment park (within the borough of Darlington) is identified within the Darlington Local Plan for employment development as an expansion of Southside. The Master Plan identifies this land as a future phase of development (Southside Phase 2). It is anticipated that parts of Phase 1 will be development before 2020 according to occupier requirements with the rest following. Phase 2 will be developed post 2020. It may be possible to accommodate aircraft parking in this area in the meantime on existing hardstanding.

Plan 8.1: Aviation Proposals

8. Master Plan Proposals

Development Principles and Parameters

8.1 The objectives of the Master Plan are set out in Chapter 2.

8.2 To achieve these the Master Plan adopts the following spatial principles:

- consolidation of aviation activity and associated employment uses within the airfield perimeter and core of the existing Northside Business Park;
- diversification of the employment offer within Northside through infilling within the existing business park and creation of a rail siding to make provision for multi-modal warehousing, logistics and facilities on Northside;
- creation of a new link road from Northside to Southside to improve the synergy between the developments and make best use of investment in new infrastructure;
- phased delivery of an aviation related and general employment cluster in Southside Phase 1 with potential for future expansion to the west (Phase 2); and
- creation of vibrant neighbourhood incorporating high quality new homes together with improved local services/ community facilities, playing fields and associated structural landscaping.

8.3 The Master Plan proposals are shown on the Indicative Framework Plan at Appendix 8.1. These are illustrative proposals at this stage and the design will be developed and refined through planning applications. The Framework provides a clear indication of the likely size and location of key land uses. The rest of this section of the Master Plan describes the proposals in more detail and outlines design principles and parameters that will guide future development.

Aviation proposals

8.4 The level and type of aviation activity proposed in this Master Plan can be supported by the existing airfield infrastructure. As such the Master Plan proposes no change to the runway, aircraft stands, taxiways or landing lights. The existing radar facilities at the Airport are located within Southside. The radar is a Watchman type installation which, while fully functional, will require replacement in future. Such investment would not be justified at the current location because it could prejudice the full delivery of Southside. The Master Plan can accommodate a suitable alternative location for this installation when operationally required.

8.5 The existing apron areas to the immediate east and west of the terminal can provide access to some of the new hangars that will be needed to support additional BAGA activity. There is scope for a range of hangar sizes to accommodate the requirements of occupiers.

8.6 There is also scope to provide maintenance facilities within or adjacent to these hangars. Landside access to the hangars would be from the existing access road which serves the terminal. Erection of these hangars would comprise early phases of investment in BAGA growth. Additional hangars are proposed further to the west of the terminal. These would require the extension of the apron areas to provide a link from the existing northern taxiway. Landside access to these hangars would be provided from an additional arm on the existing roundabout to the north west of the terminal. Provision is made for the establishment of a landscaped bund to the rear (north) of these hangars to provide appropriate acoustic and visual screening. An indicative plan of the bund and acoustic fence is provided at Appendix 8.2.

8.7 While the provision of hangar space and other buildings required in association with the operation of the Airport are likely to constitute permitted development (and will therefore not require planning permission) the potential location and size of the buildings are shown on Plan 8.1 and the associated environmental impacts of the development are considered within Chapters 9 to 11 of the Master Plan.

8.8 There is also potential in the light aviation sector. Such provision would build on existing light aviation activities at DTVA and enhance and expand the facilities available. This will include the provision of the following:

- Allocated area for the construction of T hangars aimed at private aircraft owners; and
- Grass standage with tie down wires.

8.9 The current terminal building is larger than is required to support the current and projected passenger throughputs. It is proposed to reconfigure the building to create a more efficient and tailored terminal facility and associated catering services. This is likely to comprise internal re-arrangement and refurbishment to create a more compact arrivals and departures facility and bespoke business lounges.

8.10 This will facilitate rationalisation of the current restaurant, bar and retail provision in the terminal. The projected amount of passenger activity means that it is unlikely that the terminal would be able to support the current level of retail space. It is therefore proposed to make provision to relocate this to form part of a local services offer adjacent to St George Way. This will provide any retailer with the prominence needed to maximise the viability of a business and enable the facilities to be used by the wider local community including those working within the business parks and local residents.

8.11 A business centre proposal is also being developed for the terminal. This would use underutilised terminal space for serviced office accommodation. The target market for this accommodation would be companies serving the chemical industry where it is convenient to have short term offices in a business environment.

8.12 Provision is also made for a grouping of other local services which may find a location within the Airport neighbourhood to be attractive and which could act as a local hub. This could include for example a café, a medical or dental practice, or children's day nursery.

8.13 This would also enable rationalisation of the current passenger and staff car parking to a scale which is commensurate with the level of anticipated future activity. Plan 8.4 shows how the car park could be remodelled to provide c.920 spaces and allow for an element of dual use with the local services.

8.14 DTVA is confident that these changes can be made in such a way as not to comprise the future potential of the Airport to attract a higher amount of passenger traffic than is currently envisaged in the DfT forecasts. The proposed alterations to the terminal would therefore be carried out in a way that does not preclude adding to capacity in future and the potential for additional car parking (potentially in a decked solution) is retained. On this basis DTVA is confident that the Airport could in future handle passenger numbers similar to those achieved in 2007/8 peak.

Northside Employment Area

8.15 The Master Plan seeks to maximise the employment potential of the existing land and buildings within the Northside Employment Area (Plan 8.2). This location is likely to be most attractive to businesses which have a connection with the Airport. The focus of the Master Plan proposals is therefore on the expansion of office accommodation (Use Class B1), workshops (Use Class B2) and logistics facilities (Use Class B8).

Plan 8.2: Northside Employment Area

Offices and Workshops

8.16 The Master Plan makes provision for 9,600 sq m (c.100,000 sq ft) of offices and 1900 sq m (c.20,000 Sq ft) of workshops, which might be attractive to businesses involved in the aviation or related sectors, those who are users of the Airport or who find the prestige of an Airport location attractive. These would comprise two storey buildings with relatively small floorplates – typically around 600 sq m, although larger requirements could be accommodated by the merger of plots if required. The Northside area is the location for a number of specialist engineering and service sector companies on Aviation Way. There is also scope to develop further this existing cluster.

Logistics accommodation

8.17 DTVA is recognised as a location with significant potential in the logistics sector. The Airport can accommodate air freight and is well located for road based operations (TNT already

operates a facility within Northside). The proximity of the site to major freight facilities such as Teesport and the fact that the site has direct frontage to the Tees Valley rail line, adds to the potential attractiveness of the location.

8.18 The Master Plan therefore makes provision for the construction of a rail siding parallel to the existing rail line along the northern edge of the Master Plan area. There is scope to create a siding of c.600m in length. This could accommodate freight trains of the type used to transport containers and other bulk products. Provision is also made for freight handling facilities alongside the siding.

8.19 The creation of a rail access, in addition to the existing road and air access creates a powerful multi-modal interchange capability at the site and creates potential for not only warehousing and distribution facilities but also processing and consolidation businesses that tend to cluster around interchanges.

8.20 The Master Plan makes provision for around 12,170 sq m (130,800 sq ft) of buildings which would be capable of accommodating these kinds of activities. The Indicative Framework Plan (Appendix 8.1) illustrates a range of size of building from 800 sq m (8,500 sq ft) to 4,650 sq m (50,000 sq ft). This proposal would complement the proposals at Southside where permission has been granted for a range of larger logistics buildings up to 96,022 sq m (1,032,240 sq ft).

8.21 The combination of these facilities has the potential to create a logistics and aerospace cluster of regional significance.

Other commercial development on Northside

8.22 The previous permission for the expansion of the Airport included provision of additional hotel accommodation. This is not now likely to proceed as a standalone facility. However, to complement the proposed range of services and facilities at the Airport, it is considered that there is scope to extend the St George Hotel. A new wing would provide additional bedroom space and could accommodate the needs of existing and future occupiers of the business park and users of the Airport. This could include additional accommodation for the IFTC which has a requirement for overnight accommodation and catering services as part of its training facility.

8.23 The additional accommodation could be provided within an extension or annex to the west of the current building. This may require some reconfiguration of the existing car parking and grounds of the hotel but replacement parking could be accommodated within the main Airport car park if required.

8.24 There is also an opportunity to provide a gym either as part of or adjacent to the St George Hotel. This could be used by both residents of the hotel and be available to users of the business park and to the local community. This facility would be close to the proposed local services and would help to consolidate the hotel as part of a community hub.

8.25 As part of these Master Plan proposals, a purpose built motorhome/caravan showroom, external display space and parking areas is proposed adjacent to the terminal building.

8.26 This arrangement would allow the opportunity for improved facilities with the potential for future expansion. Plan 8.4 illustrates how it would also be possible to accommodate other similar showroom or specialist dealership businesses.

Mixed-use neighbourhood

8.27 Investment in re-positioning and growing the Airport would not be possible without capital raised from the enabling housing development (see paragraphs 7.31 to 7.38 above). In delivering this housing the objective is to create a sustainable and attractive community. The proposed housing is focussed in two main areas to the north west and north of the terminal (see Plan 8.3).

8.28 The Master Plan has potential to deliver around 250-400 homes, offering a wide range and mix of housing types (including family housing), sizes, and tenures to meet local needs. This will help secure a sustainable and mixed community. The areas would each include areas of open space, access to playing fields and children's play areas, and landscaping which would act as visual focal points and to provide informal recreation space.

8.29 The range (250-400 units) reflects the potential variation in density depending upon the market product brought forward by the housebuilder. Also some of the areas indicated for housing development are outside the ownership of Durham Tees Valley Airport and delivery will be dependent on others. These areas have been

shown on the Indicative Framework Plan with the housing notation to ensure the Master Plan is comprehensive in its approach. The housing layouts illustrated are indicative only and will be subject to detailed design consideration as and when planning applications are submitted.

Plan 8.3: Northside Indicative Residential Layout

8.30 The proposed housing would relate well to the existing and proposed land uses around it including the existing housing on the Oak Tree and Washington Avenue developments. The proposed layout provides for the provision of playing fields on the Estate Road and their incorporation in to the housing area as part of the formal public open space requirements. Plan 8.3 illustrates how significant hedgerows and landscape features would be retained and there is potential to incorporate structural planting to the west of the housing (where it adjoins open fields) and along the edges of the sites where they interface with other uses.

8.31 This arrangement of housing, together with the proposed employment, could create a critical mass of people and journey purposes at times that would make the provision of improved public transport services more viable. The housing would be approximately 2.5km from

Plan 8.4: Northside Mixed Use Local Centre

Dinsdale train station. Whilst this is further than accepted walking distance, it is within cycling distance of all of the housing. This is discussed in detail in Chapter 9, which also considers the longer term proposed rail station within the site, which would be within easy walking distance of all the housing.

8.32 In the shorter term, there is scope for improving existing bus services, (discussed in detail in Chapter 9). The Master Plan layout provides for a bus to route through the housing areas to ensure that all houses would be within convenient walking distance of a bus stop.

8.33 Residents would be within c2.5km of the local centre of Middleton St George which provides a range of services for day to day needs including a convenience store, post office,

dentist, hairdresser, and the Oak Tree Pubic House. The reconfiguration of the retail and catering services within the terminal provides the opportunity to supplement this with additional services within walking distance of the new housing.

Delivery of Southside

8.34 Southside Phase 1 has an extant planning permission for development as a logistics and industrial park totalling 176,900 sq m (1,900,000 sq ft). A sample of the approved planning drawings have been provided at Appendix 8.3.

8.35 The majority of this is focussed on developing freight handling and distribution, associated assembly facilities and aviation maintenance and industrial processes. However, 20 ha (50 acres) of the site has permission for general industrial and logistics activities. An additional c.40ha of land to the west of the approved scheme (Phase 2) is allocated for employment development within the Darlington Local Plan. (c.135,000 sq m/1,450,000 sq ft) The Airport remains committed to delivery of this strategically important site and this Master Plan incorporates proposals to bring forward development (Plan 8.5).

8.36 In support of this, the Master Plan includes proposals to create a new access from Northside. This would link the proposed employment and railfreight uses proposed at Northside with Southside via a new link road around the eastern end of the runway. It would also improve the operation of the IFTC by avoiding the need for users to cross the airfield in order to access the fire training ground. This proposal is compatible with the safeguarding and public safety requirements of the Airport.

8.37 Southside also has potential to accommodate the needs of airlines for seasonal aircraft parking and maintenance. Charter operators which serve the tourism market require places to park and maintain their fleet during parts of the year when their activities reduce. This is a market for which DTVA is well suited. There is adequate hardstanding where aircraft could be parked and businesses such as Sycamore are well placed to offer the maintenance and care services that airlines require. This type of activity is also consistent with the existing planning permission for Southside.

8.38 Previous proposals at the Airport have included the provision of an engine testing facility. This type of specialist facility would complement the other aviation related activities that are proposed and the Master Plan shows a suitable location for such a facility along with the associated noise and visual attenuation.

8.39 The remainder of Southside offers potential for a range of logistics, industrial and aviation related activities and could accommodate a range of building sizes including scope for very large footprint buildings.

8.40 The approved scheme for Southside incorporates significant landscaping and woodland planting around the southern boundary of the site. This would not only help to assimilate the proposed development into the existing landscape but could also improve long distance views towards the Airport from the Tees Valley to the south. The landscaped areas total around 16.6 ha within the approved scheme and would be extended into future phases of the development.

Plan 8.5: Southside Employment Area

9. Surface Access

Overview

9.1 Surface access considerations include multimodal accessibility issues and the impact of vehicle trips on the internal, local, and surrounding strategic road network.

9.2 The Master Plan proposals will be a catalyst for multimodal accessibility improvements in the area. These improvements in accessibility by non-car modes of transport will minimise unnecessary trip making by the private car, both for the Master Plan area and the existing surrounding residential and employment areas. This will create a sustainable development and minimise traffic impacts.

9.3 The non-car mode considerations are discussed in detail in Chapter 5.

Off-Site Traffic Impact

9.4 The capacity and operation of the surrounding highway network was extensively researched as part of the work undertaken in the lead in to the granting of the Airport Expansion and Northside planning permissions. The conclusion was that these, together with the already consented Southside Phase 1 employment area, could be accommodated by the highway network.

9.5 These traffic forecasts, and the general traffic growth in the area, were thoroughly examined and checked by the relevant Highway Authorities of Darlington Borough Council, Stockton-On-Tees Borough Council and the Highways Agency, who each subsequently gave approval.

9.6 The analyses concluded that the highway network could accommodate the traffic from all of the developments, provided that minor improvement works were undertaken at two nearby A66 roundabouts; Morton Palms and Great Burdon; together with some localised carriageway edge works on the A67 between the then proposed access to Southside and the A67 roundabout access at the Airport.

9.7 As mentioned in Chapter 5, the Morton Palms and Great Burdon roundabouts are the subject of a current study as part of a wider highway improvement consideration.

9.8 The forecast traffic generation levels associated with the approved Airport expansion were substantially larger than would be generated by these Master Plan proposals. The comparison of these differences and net reduction is set out in Chapter 11. This also contains a review of previous non-development traffic growth forecasts compared to actual current flows, showing significantly less actual growth.

Southside Access

9.9 The Master Plan shows how the access for Southside will be relocated into the Master Plan area, from its original location on the A67 to the east of Urlay Nook rail bridge. This relocation will increase traffic flows within the Master Plan, in comparison to previous proposals.

9.10 The repositioning will, however, reduce the proportion of Southside traffic on the A67 between the previous and proposed accesses, (by around 10%). There will also be less traffic from the rest of the Master Plan area on this section than if the extant planning permissions were implemented. This is the section of the A67 which was previously to be subject to minor improvements (as part of conditions attached to the relevant planning permissions).

9.11 The repositioning of the access enables better connections between Southside and the complementary areas within Northside, such as residential and service uses. The journey times for pedestrian and cycle trips between these areas in particular will be significantly reduced.

9.12 This relocation will also enable better potential bus access for Southside and improved access to the proposed railway station, which will in turn provide further support for the station's business case. This is explained in Chapter 5.

9.13 The trip generation calculations for Southside Phase 1 were undertaken at the time of its original planning application during the 1990's, and have been re-assessed. The inclusion of

the proposed Southside Phase 2 (to the west of the consented area), is also allowed for in the updated traffic forecasting.

Southside Phase 2

9.14 Southside Phase 2 is located within the Darlington Boundary and covers approximately 40 ha (96 acres). This provides potential for around 135,000 sq m (1,450,000 sq ft) of floorspace and is proposed to be developed for B8 (storage and distribution) land use.

Master Plan Site Access and Internal Routes

9.15 With the repositioning of the Southside access there would be a substantial increase in forecast traffic entering and leaving the Master Plan area via the A67 roundabout, compared to that assumed under the previous planning permissions, and to the actual conditions that were occurring before the recession.

9.16 Capacity analyses show that the two roundabouts, on the A67 and with Yarm Road have sufficient capacity to accommodate the proposals. Furthermore, both have available highway land around them to enable small scale capacity improvements, should that be considered to be beneficial.

9.17 The proposed Master Plan will change the balance of traffic demand on the internal road network. St George Way, with its segregated cycleway, will predominantly serve the bulk of the housing areas.

9.18 The employment, industrial and cargo areas will be accessed via the original spine road ("The Estate Road"), which is now an arm off the Yarm Road roundabout.

9.19 The physical characteristics of The Estate Road require some upgrading, for surface wear and width. It is not all to modern industrial access standards. The carriageway width varies between 6.6m and 8.0m and it contains two sharp bends. The standard width would be 7.3m, but the actual minimum on-site would still enable two HGVs to pass each other.

9.20 The two sharp bends are pinch points which require some improvement, and the necessary land is available.

9.21 The existing route to / from Southside then continues parallel to the runway before requiring new road construction passing around the end of it. The existing section has no pinch points along it, although there is one short section with a carriageway width less than 7.3m, (with a minimum of 6.3m). There is space available for a localised improvement. The remaining carriageway is currently in excess of 7.3m wide.

9.22 The maximum forecast hourly directional flow on the estate road is around 700 vehicles per hour (vph), with 8% being HGVs. The largest 2-way flow is around 1,100 vph, with a 10% HGV content. Outside of the highway peak hours, the total flow would be lower but the proportion of HGVs would increase.

9.23 These forecast flows can be accommodated by a standard 7.3m industrial carriageway. It will be important to minimise on-street parking and to reduce the junctions along it to a minimum.

Parking

9.24 Where possible, parking provision for the components within the Master Plan will be provided on each individual site. The provision will be based on the ratios in Table 9.1, related to the size and type of development.

9.25 The Master Plan's proposals include for the minimisation of 'on-street' parking on St George Way and The Estate Road. Given the increased industrial access purpose of The Estate Road, it is particularly important to keep parking off this road. The existing playing field will therefore have sufficient on-site car parking introduced.

9.26 Part of the existing main car park (which is currently used for caravan storage) is proposed to be developed to provide local services. The remainder would be retained for terminal users (passengers and employees). There is also the separate short stay pick-up / drop-off ("PUDO") parking area on the immediate western side of the Terminal. The latter is replaced in the Master Plan by hangar development as it has frontage to the existing apron.

9.27 The retained car park can be used by the terminal activities, and include the relocated PUDO facility. It can also be used as 'overflow' parking for the St George Hotel's conference and other occasional functions, and for the local services.

9.28 The overall size of the car park is safeguarded for the very long term usage of the terminal, set out in the Government's forecasts, (i.e. 0.4mppa by 2050). As explained above, the potential for growth above this level is not precluded by these Master Plan proposals.

Land Use	Parking Requirement
Non-residential	
B1 Offices	1 per 35 m2 GFA
B2 Industrial	Greater of
	1 per 45 m2 GFA or 1 per 10 employees
B8 Warehouse	Greater of
	1 per 100 m2 GFA or 1 per 2 employees
A1 Retail	1 per 30 m2 GFA
Showroom (sui generis)	Sufficient parking for vehicles for sale servicing
	plus 1 per 100 m2 display area (internal and external)
	plus 1 per employee
C1 Hotel	1 per 2 bedrooms plus 1 per 5 m2 public area
D1 Crèche	1 per 3 employees plus 1 per 7 children
Playing Fields*	Based on Observed Demand
Residential	
1 bedroom	2 spaces
2 bedrooms	2 spaces
3 bedrooms	2 spaces
4 bedrooms	3 spaces
5+ bedrooms	4 spaces
All flats	1.5 spaces

Table 9.1: Master Plan Parking Standards

10. Economic Benefits

10.1 This chapter examines the social and economic benefits generated by DTVA within the Tees Valley sub-region[34] and the future potential economic role of the Airport linked to the anticipated direct, indirect and induced effects of the growth and development of DTVA as proposed within the Master Plan.

The Role of DTVA in Facilitating Growth

10.2 In response to recent economic challenges policy makers across the North East have established ambitious targets for delivering economic growth.

10.3 Driven by recently formed Local Enterprise Partnerships (LEPs) and inward investment agencies, new strategies have been developed in order to respond to opportunities such as Enterprise Zones (EZ's) and to target diversification, investment and development in high value growth sectors.

10.4 Tees Valley Unlimited published the Tees Valley Economic and Regeneration Statement of Ambition in 2012. This sets a forward looking and ambitious vision for the Tees Valley economy for the next 15 years including:

Ambition 1: Drive the Transition to the High Value Low Carbon Economy

Ambition 2: Create a More Diversified and Inclusive Economy – supporting growth in a more diverse sector base including service and retail sectors, digital and creative industries, logistics and healthcare among other sectors.

10.5 The intended outcomes of the Statement of Ambition are to increase GVA per head to 82% of the national average, increase the number of Enterprises from 241 to 300 per 10,000 population - an increase of 25% (approximately 3,200 net increase), increase the Employment Rate to meet the national average (70.2%) and increase the number of people with Higher Level Skills by 5%.

10.6 The priorities for the achievement of Ambition 2 include investment in a transport network which facilities ease of movement of goods and people. Specific priority is given to enhancing links to national and international gateways, such as the DTVA. This closely links with Connecting the Tees Valley: Statement of Transport Ambition (2011) published by Tees Valley Unlimited, which states that:

"It is vital that links from our key assets at Teesport and Durham Tees Valley Airport to national and international hubs and markets are maintained and built upon to support our global industries."[35]

10.7 These ambitions are being carried forward as part of the City Deal programme and the Draft Strategic Economic Plan.

10.8 The Master Plan for DTVA will ensure the future viability of the Airport operation and contribute to delivery of the Tees Valley Transport Ambition.

10.9 Across the wider region, partners including the North East LEP, Tees Valley Unlimited, and Business Durham, are working to stimulate and attract investment in key growth sectors. In neighbouring North Yorkshire, Enterprise Partnership York / North Yorkshire / East Riding (LEP) has also recently published an Economic Investment Strategy[36]. The list below highlights a number of key projects are being brought forward:

- **Hitachi Rail Europe Facility at Newton Aycliffe –** In the region of 200 construction jobs and 730 assembly plant posts will be created directly by Hitachi at this new high tech rail assembly facility.
- **Nissan Manufacturing Plant Expansion, Sunderland –** a £250m investment will see the new Infiniti Q30 built at the Sunderland plant from 2015. The expansion and investment will create 1,000 jobs, including 280 new jobs at the Sunderland factory, plus more with its UK supplier base.
- **Tees Valley Enterprise Zone –** The Tees Valley EZ comprises twelve sites with a total area of around 424 hectares. They include both new and established business locations, some with port access, identified as serving the advanced manufacturing,

[34] The Tees Valley sub-region includes those local authority areas covered by the Local Enterprise Partnership (LEP) namely; Darlington, Stockton-on-Tees, Hartlepool, Middlesbrough, and Redcar & Cleveland.
[35] Tees Valley Unlimited, Connecting the Tees Valley: Statement of Transport Ambition, (2011) paragraph 6.2.
[36] Enterprise Partnership York/North Yorkshire/East Riding, Economic Investment Strategy. (October 2013)

engineering, chemical, renewable energy, and digital sectors. Incentives such as business rate relief and capital allowances are available on sites included within the EZ, as well as simplified planning and superfast broadband. Companies operating in the target business sectors of advanced manufacturing and engineering, chemical, renewable energy and digital can benefit from the incentives on offer.

- **Sunderland Enterprise Zone –** The Enterprise Zone covers 10 sites within 3 area clusters. These include the land adjacent to the A19 and Nissan at Sunderland, known as the A19 Ultra Low Carbon Vehicle Corridor (A19 ULCV). The A19 ULCV has been awarded £5.3m from the European Regional Development Fund (ERDF) along with £4.8m from Sunderland City Council and a £4m loan from the North East Local Enterprise Partnership's Growing Places Fund. When completed, the site will focus on the mass production of low carbon technology and advanced manufacturing, helping the Zone to become a world leader in the emerging market for low carbon research and development. The planned development will lead to a site capable of accommodating about 90,000 sq m of office and factory space and create 204 temporary construction jobs. The project is also expected to indirectly create about 1,500 new jobs and draw in £55m of private sector investment.
- **NETPark – Sedgefield, County Durham: NETPark -** The North East Technology Park is a growing concentration of science and technology related businesses developing technology and products in the physical sciences, particularly printable electronics, microelectronics, photonics and nanotechnology, and their application in the fields of energy, defence, and medical-related technologies. Since its inception in 2000, NETPark has developed a number of facilities including the NETPark Incubator and the NETPark Discovery Centre buildings.
- **PD Ports & Logistics – Teesport**: Teesport is a deep-water facility providing access to the North Sea. Teesport handles over 5,000 vessels each year and around 34 million tonnes of cargo. Steel, petrochemical, agribulks, manufacturing, engineering and high street commerce operations are all supported through Teesport. Increasingly, Teesport is also serving the renewable

energy sector – in both production and assembly facilities – providing warehousing, logistics and excellent supply chain expertise. Logistics is vitally important to customers of Teesport, requiring flexibility and a supply chain capability supporting today's needs with the capacity for expansion.

- **Teesside University** – One of the UK's fastest-growing universities, home to over 28,000 students in Middlesbrough and the recently-opened campus in Darlington. In 2009 it was named University of the Year by the Times and, in 2012, came top of a poll for student experience. Teesside is an industry-focused university with Business Secretary Vince Cable calling it "one of the best universities for business in Britain."
- **Durham University –** Tees Valley is home to Queen's Campus of Durham University, with over 2,000 students and a focus upon health, medicine, education and business. The campus also hosts the Wolfson Research Institute for Health and Wellbeing.
- **The Wilton Centre –** the largest process industrial research centre in Western Europe, which accommodates and supports start-ups and existing businesses. Based at Wilton International, the Centre is part of the second largest chemical process industrial complex in Europe.
- **The Centre for Process Innovation (CPI) –** part of the Government's High Value Manufacturing Catapult. This national centre, based at Wilton, helps to stimulate and drive innovation in the process industries and includes the SUSPROC (Sustainable Processing Business Unit) containing the National Industrial Biotechnology Facility (NIBF).
- **The Welding Institute (TWI) –** recognised global leader in engineering research and consultancy with a long history of innovation and knowledge transfer. Its Middlesbrough facility delivers world class services in joining materials, engineering and allied technologies for sectors from oil and gas and offshore wind to aerospace and automotive.
- **The Thermal Technologies Centre –** a collaboration between CPI and Tata Steel providing an open access expertise centre for industries and developers who are involved with, or interested in, using thermal processes. It offers services to support customers develop new processes, revitalise existing products and improve existing processes.
- **National Biologics Manufacturing Centre –** the new national centre, announced in 2013 to be based in Darlington, is part of CPI and will help companies of all sizes in the biologics market to develop, prove, demonstrate, scale up and ultimately commercialise new biologics process technologies.
- **Digital City -** A growing sector within Tees Valley and a priority sector for TVU in recent years has been the digital technologies industry. Growth has been driven by DigitalCity, a major partnership initiative, creating a vibrant cluster based on digital technologies. The initiative is spread across the Tees Valley with projects based at Teesside University, the Middlesbrough Boho Zone, Redcar and Cleveland and Stockton. The Institute of Digital Innovation at Teesside University has a global reputation for its work on 3d animation and is one of the top 20 places in the world for studying animation.

10.10 The quality and proximity of national and international air links is well recognised as an important factor in the investment and expansion decisions of businesses – particularly those requiring access to global markets for personnel or for the distribution of components and finished goods. This is particularly important for more peripheral areas, such as Tees Valley, where air travel or freight can provide a faster, more cost effective, form of transport than other modes.

10.11 Internationally, the market-led growth of business parks and distribution facilities in close proximity to airports demonstrates the role that aviation facilities are increasingly playing in influencing industry investment decisions. Examples include Airport City at Manchester Airport, Liverpool International Business Park at Liverpool John Lennon Airport, and the Cork Airport Business Park.

10.12 Achieving a sustainable airport business at DTVA will help businesses in key sectors to remain competitive. The Tees Valley economy

employs almost 22,000 people in advanced manufacturing activities within 750 firms. Tees Valley also contains a significant cluster of chemical manufacturing firms. The Tees Valley Advanced Manufacturing Action Plan (2012)[37] specifically concludes that:

"…connectivity represents a vital part of the apparatus required to export successfully"

and

"Maintaining and maximising the value of these [connectivity] assets will play a critical role in the future economic prosperity of the Tees Valley."

10.13 DTVA is also identified as a key asset for the logistics sector[38] with important links to Aberdeen and Amsterdam. The sector employs 5,000 people across 250 firms and contributing over £300 million Gross Value Added (GVA) to the area's economy every year.

"Airports are seen as important economic development assets which can influence businesses' decisions to locate in an area, people's perceptions of a location and support local firms in attracting visitors and accessing new markets"[39]

10.14 Creating a sustainable airport business at DTVA is therefore of critical importance to the growth in target and existing sectors in the Tees Valley, as well as providing the infrastructure for attracting inward investment.

Underpinning Tourism in the North East

10.15 One of the most important economic benefits of the aviation industry is the interrelationship with the tourism sector. Air travel has revolutionised the tourism market worldwide – providing vastly enhanced internal and international access to locations and attractions across the globe. DTVA plays an important role as a tourism gateway into the North East.

10.16 The region has a wealth of tourism market strengths ranging from the short city-break market (in York and Durham) to the natural beauty of North Yorkshire and the coast. Maximising accessibility in order to promote, support and enable in-bound tourism is crucial to the growth and success of the region supporting investment, expenditure and employment within the tourism sector and related industries.

10.17 Maintaining and enhancing flows of in-bound tourism through DTVA will underpin the ability of the North East to meet regional tourism aspirations and achieve its potential for growth.

Assessment of Economic Impacts of the Master Plan

Aviation Related Impacts

10.18 An analysis of future employment potential arising from forecast levels of passenger and cargo throughput at DTVA has been conducted. This analysis covers the Master Plan delivery period to 2020. Forecasting over the longer term would be difficult with any accuracy due the number of variables likely over this time period.

10.19 Employment arising from passenger numbers and cargo movements has been calculated based on the average employment density achieved by European airports. Survey data compiled by the ACI suggests that European airports on average supported 950 jobs per 1 million workload units (WLU) in 2001. The ACI also provides evidence of annual productivity gains which suggest that over time, European airports are likely to become more efficient, leading to lower employment densities overall. The ACI estimates that productivity gains could be as much as 2.5% per annum. It should be noted that there is some variation in employment densities between airports, reflecting the role of the airport in the aviation market (eg. the extent to which it is a hub for airlines) and the nature of passenger traffic. However, despite these variations, average employment densities are considered to be a useful benchmark for the estimation of employment.

Direct Aviation Employment

10.20 Applying the approach outlined above to the anticipated increased activity by 2020, DTVA has the potential to support around an additional 60 direct aviation related jobs on site, based upon a growing passenger and cargo throughput. This estimate of employment growth not only factors in growing throughput but also productivity gains occurring over the period 2013 to 2020 as the aviation industry continues to become more efficient.

[37] Tees Valley Unlimited, Advanced Manufacturing Action Plan (2012)
[38] Tees Valley Unlimited, Logistics Sector Action Plan (2012)
[39] Tees Valley Unlimited, Logistics Sector Action Plan, (2012) page 8

Indirect and Induced Employment

10.21 Growth in direct employment will have further economic benefits for the Tees Valley economy and that of adjacent areas, as indirect and "induced" employment is also created. Indirect employment will occur as a result of increased activity at the Airport leading to greater demand for products and services in the Airport's supply chain. Induced employment refers to the additional employment benefits that will result from the re-spending of money associated with direct and indirect employment in the wider Tees Valley economy.

10.22 In order to calculate the indirect and induced effects, a combined multiplier of 1.25 has been applied. This suggests that for every 1 direct job created at the Airport, an additional 0.25 indirect and induced jobs are created in the wider economy. A higher combined multiplier of 1.35 has also been considered in order to illustrate what might happen if stronger local supply chain links and higher rates of re-spending in the local economy occurred.

10.23 The lower multiplier of 0.25 would indicate the potential for an additional 15 indirect and induced jobs when compared to 2013 levels. If stronger supply chain links with local businesses are created and a higher proportion of re-spending occurs in the local economy, indirect and induced employment could result in an additional 21 jobs by 2020.

Total Aviation Impacts

10.24 The analysis undertaken shows that increase in total aviation-related employment that would arise from the projected increase in Airport activity could be between 75 and 81 jobs.

Property Development Impacts

10.25 This assessment considers the economic impact of the commercial and residential development proposals within the Master Plan as presented in Table 10.1. Evaluation is undertaken of impacts both during the construction and operational (or 'lifetime') phases.

10.26 Table 10.1 distinguishes between the Northside development proposals and the Southside development proposals.

Construction Phase

10.27 This section presents the quantified economic benefits likely to be generated by the construction of the proposed development.

Direct Employment

10.28 Construction expenditure related to the Master Plan is estimated at approximately £280 million. This figure will include expenditure on materials and labour used in the construction process.

10.29 It is estimated that this level of construction expenditure could support approximately 4,477 person years of employment. The HM Treasury considers that one permanent Full Time Equivalent (FTE) construction job is equivalent to ten person years of direct employment. Therefore the scheme could support in the order of 450 permanent construction jobs within the Tees Valley area.

10.30 The construction employment impacts are summarised in Table 10.2 and highlight the potential for 450 FTE construction related jobs arising from the Master Plan development proposals.

Productivity

10.31 The construction phase of the Master Plan development will also significantly increase productivity as measured by Gross Value Added (GVA).

10.32 The capital expenditure associated with the development of the Master Plan proposals could deliver an average additional £12.2 million GVA annually to the local and wider economy throughout the duration of construction.

Operational Phase

10.33 The operational phase refers to the period after construction has been completed and the new development is occupied.

10.34 The Master Plan development will deliver a significant volume of new employment floorspace and once fully occupied will accommodate a range of jobs in different sectors of the economy. As well as employment, there will be a range of other impacts including productivity increases and the generation of business rates revenue.

Northside Plan Proposals	Commercial Floorspace (sq.m) / Residential Units
A1 Retail	2,025
B1 Business (Offices)	9,600
B2 (Industrial) / B8 (Warehouse)	16,820
B8 Hangars (Warehouse) / B2 (Industrial)	28,935
C1 Hotel (Extension)	1,400 (60 beds)
C3 Residential	250 - 400 units*
D1 Non-Residential (Nursery)	925
Sui-generis (Showrooms)	2,650
Total (excludes C1 and C3 Floorspace)	60,955
Southside Proposals - Phase 1	**Commercial Floorspace (sq.m)**
B1 Business (Offices)	3,386
B1 (supporting other B use)	6,984
B2 General (Industrial)	3,600
B8 Storage & Distribution (Warehouse)	162,733
Total	176,703**
Southside Proposals - Phase 2	**Commercial Floorspace (sq.m)**
B8 Hangars (Warehouse)	135,000
Total	135,000

Table 10.1: Master Plan - Proposed Development

* The economic impact assessment assumes delivery of 400 units.

** This figure differs slightly from the 176,900 referred to in paragraph 4.103.

10.35 The proposed development also includes the delivery of a range of new homes. As new homes are occupied by households, a successive wave of economic and social benefits will be generated for the local area. These will include increased spending power, Council Tax revenues and New Homes Bonus payments.

10.36 The impacts arising from development being occupied are considered in turn below.

Direct Employment

10.37 An independent evaluation has been undertaken of the potential level of direct employment generated by the occupation of new commercial floorspace delivered by the Master Plan development. This conforms with the HCA's Employment Densities Guide Second Edition.

10.38 The Master Plan proposals are estimated to generate in excess of 6,300 gross FTE jobs.

Net Additional Employment

10.39 Net additional employment is a term used to refer to the final level of jobs that are created once a number of economic considerations have been taken into account. These include:

- Deadweight – the extent to which jobs would have been created in the absence of the proposed investment;
- Multiplier effects – the jobs directly created by the Master Plan and Southside will in turn lead to indirect jobs being created in other sectors of the economy. Multiplier effects measure the extent to which these indirect jobs are likely to be created;
- Leakage – a measure of the extent to which jobs will be taken up by people living outside the Tees Valley;
- Displacement – the extent to which investment in the proposals will lead to existing companies within the Tees Valley relocating activities as opposed to the attraction of new investment and jobs from outside the area.

10.40 The following assumptions have been applied in order to calculate net additional employment associated with the Master Plan:

- Deadweight - For the purposes of this assessment it is assumed that deadweight is zero.
- A multiplier of 1.25 has been applied to the direct employment generation calculation, to reflect additional indirect employment generation benefits arising from the proposals within the Tees Valley.
- Leakage has been calculated at 25% in recognition that the majority of jobs are likely to be taken up by people living in the Tees Valley.
- Displacement has been allowed for at 35%. This recognises that the development is likely to attract a considerable proportion of new businesses to DTVA from outside the Tees Valley. However, some local businesses may also choose to relocate to new premises at DTVA.

Applying these assumptions indicates that the Master Plan proposals could generate over 3,850 net FTE jobs.

Productivity Uplift

10.41 The operational phase of the Master Plan development will also significantly contribute to improving the economic productivity of the Tees Valley. Approximately £348 million gross direct GVA could be created every year. This is set out within Table 10.5.

Northside Proposals	Total Build Cost (£)	Person-Years of Employment	FTE Employment
Total	£87,423,540	1,336	134
Southside Proposals - Phase 1	Total Build Cost (£)	Person-Years of Employment	FTE Employment
Total	£109,655,451	1,873	190
Southside Proposals - Phase 2	Total Build Cost (£)	Person-Years of Employment	FTE Employment
Total	£83,011,500	1,268	127

Table 10.2: Master Plan Proposals Construction Employment

Business Rate Revenue

10.42 Businesses pay non-domestic rates (known as Business Rates) to contribute to the cost of the local authority providing public services. The Government has introduced a Business Rates retention scheme, which has been operational since April 2013. It provides a direct link between Business Rates growth and the amount of money local authorities have to spend on local people and local services.

10.43 Local Authorities are now able to keep at least 50% of the growth in Business Rates revenue that is generated in their area. The scheme is likely to run until at least 2020. This provides local authorities with an important source of revenue where commercial development is delivered and occupied.

10.44 The Master Plan development includes a range of commercial uses. It is estimated that, for these uses combined, these business occupiers would generate approximately £3.9 million Business Rate revenue per annum, of which at least 50% or £1.95 million would be retained by the Local Authorities of Darlington and Stockton-On-Tees. This is based on the scheme extending beyond 2020 for the life of the development.

Local Expenditure

10.45 Expenditure on convenience and comparison goods equates to an average of £3,974 per person per annum residing in Darlington Borough. It is estimated that the proposed residential component of the Master Plan could generate total household expenditure of circa £3.5 million per annum on convenience and comparison goods once fully occupied.

10.46 This potential uplift in local expenditure will increase the trading performance of existing shops and services in the locality of DTVA and in nearby towns, as well as support the viability of new facilities proposed within the Master Plan.

New Homes Bonus Payments

10.47 New residential development can make an important contribution to the resource base of local authorities through enhancement of

Northside Proposals	Commercial Floorspace (sq.m) / Residential Units	HCA Employment Density (sq.m / job)	Gross Jobs (FTEs)
A1 Retail	2,025	19 (on NIA)	85
B1 Business (Offices)	9,600	12 (on GIA)	680
B2 (Industrial) / B8 (Warehouse)	16,820	70 (on GEA)	240
B8 Hangars (Warehouse)/ B2 Industrial	28,935	Blended rate of 58 (on GEA)	499
C1 Hotel (Extension)	1,400 (60 beds)	2 jobs per bedroom	30
C3 Residential	250 - 400 units (midpoint)	N/A	N/A
D1 Non-Residential (Nursery)	925	36 (on GIA)	22
Sui-generis (Showrooms)	2,650	70 (on GIA)	32
Sub-total (excludes C1 and C3 Floorspace)	60,995		1,588
Southside Proposals – Phase 1*			
B1 Business (offices)	3,386		339
B1 Business (supporting other B use)	6,984		582
B2 General (Industrial)	3,600		100
B8 Storage & Distribution (Warehouse)	162,733		2,034
Sub-total	176,703		3,055
Southside Proposals – Phase 2			
B8 Hangars (Warehouse)	135,000	80	1,688
Sub-total	135,000		1,688
Total			6,331

Table 10.3: Master Plan Proposals – Gross Employment Generation

* Bespoke employment density which pre-dates the HCA guidance

Council Tax revenues and through New Homes Bonus (NHB) payments. The NHB matches the increase in Council Tax income for the local authority for each new home built for a 6 year period.

10.48 NHB payments are not ring-fenced, which provides local authorities with the opportunity to reinvest this additional revenue in supporting and enhancing public services and infrastructure. The proposed level of housing will deliver significant New Homes Bonus funds to Darlington Borough Council.

Summary

10.49 A key purpose of the Master Plan is to re-position the Airport to establish a viable airport business model and investment strategy for the long term. The principal intended outcome of the proposals within this Master Plan is the safeguarding of international air links which are important to the Tees Valley economy.

10.50 The proposals in this Master Plan will facilitate this and provide for future growth in passenger numbers in accordance with Government projections. By sustaining international connectivity, a viable Durham Tees Valley Airport has the potential to support business investment in the Tees Valley which will sustain and create many more jobs in the area. This can support the competitiveness of the Tees Valley and attract further investment to the area.

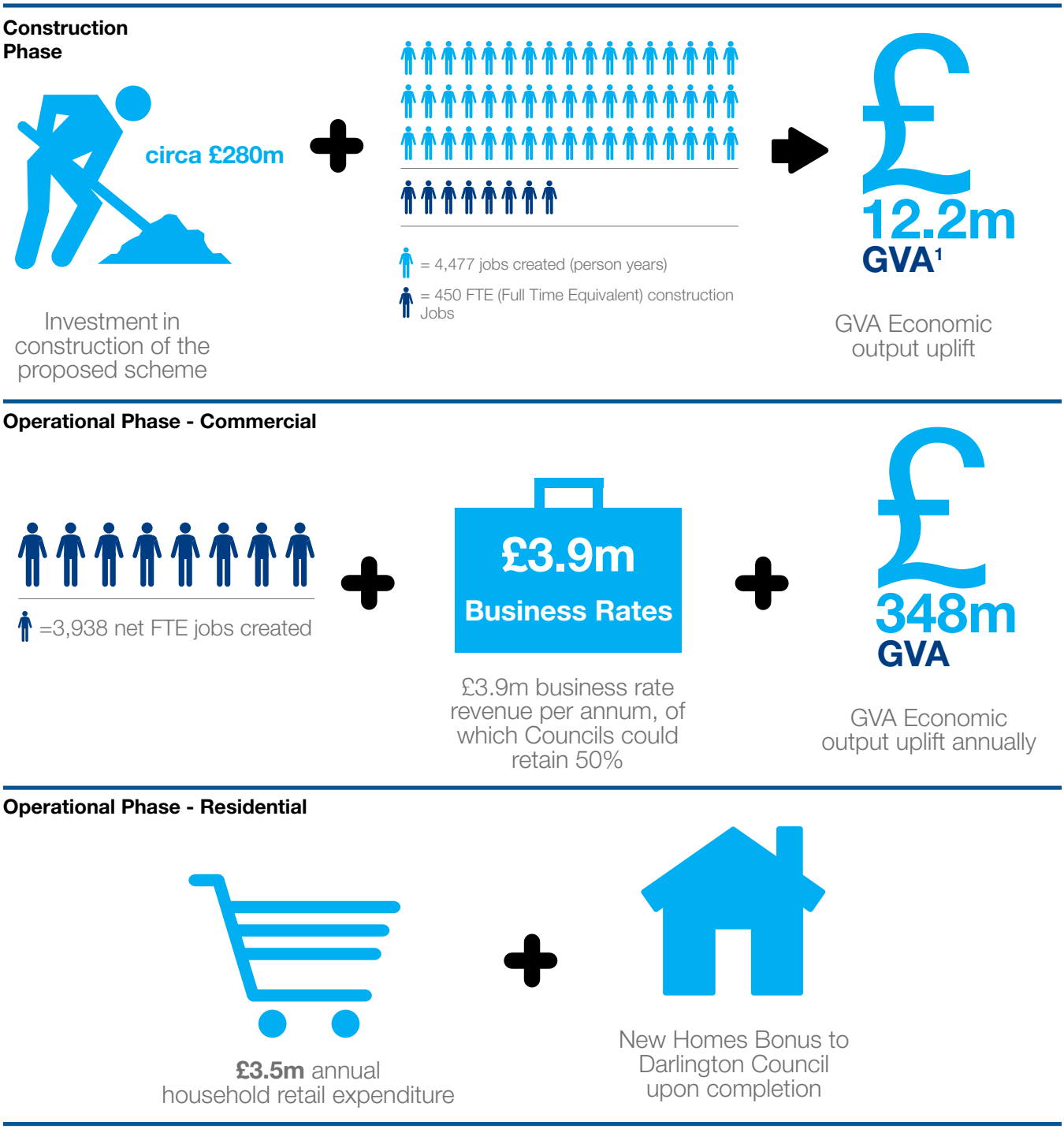
Northside Proposals	Total Annual GVA (£)
Total	£68,000,000
Southside Proposals Phase 1	Total Annual GVA (£)
Total	£182,600,000
Southside Proposals Phase 2	Total Annual GVA (£)
Total	£98,000,000

Table 10.5: Master Plan Proposals – GVA Impact

Northside Proposals	Gross Jobs (FTEs)	Net Jobs (FTEs)
A1 Retail	85	52
B1 Business (Offices)	680	414
B2 (Industrial) / B8 (Warehouse)	240	146
B8 Hangars (Warehouse) / B2 (Industrial)	499	304
C1 Hotel (Extension)	30	18
C3 Residential	N/A	N/A
D1 Non-Residential (Nursery)	22	13
Sui-generis (Showrooms)	32	20
Sub-total (excludes C3 Floorspace)	1,588	968
Southside Proposals – Phase 1	Gross Jobs (FTEs)	Net Jobs (FTEs)
B1 Business (Offices)	339	206
B1 (supporting other B use)	582	355
B2 General (Industrial)	100	61
B8 Storage & Distribution (Warehouse)	2,034	1,240
Sub-total	3,055	1,861
Southside Proposals – Phase 2	Gross Jobs (FTEs)	Net Jobs (FTEs)
B8 Hangars (Warehouse)	1,688	1,028
Sub-total	1,688	1,028
Total	6,331	3,857

Table 10.4: Master Plan Proposals – Net Employment Generation

10.51 The following diagram summarises the additional economic benefits that will accrue from the property developments which comprise part of the Master Plan:



[1] GVA (Gross Value Added) is the measure of the value of all goods and services produced in an economy. It is a key measure of output.

Figure 10.1: Economic Impact Statement

11. Sustainability and Environmental Considerations

11.1 This Chapter of the Master Plan sets out the Airport's approach to environmental management and sustainability and then addresses the likely direct and indirect effects of the growth and development of DTVA on its local communities and the environment.

Assessment of environmental effects

11.2 The environmental effects of the Master Plan have been considered against a realistic baseline position which has been taken from the previous work undertaken in 2004 when the Airport was significantly busier than at present. For example, in 2004 the Airport handled over 700,000 passengers per annum (0.7mppa) compared to 165,000 (0.16 mppa) in 2012.

11.3 The 2004 work included detailed site surveys and extensive gathering of desktop information and provided an informed understanding of the environmental effects of the Airport at that time.

11.4 In addition to this, the Master Plan proposals have been considered against the environmental impact of the approved Airport Expansion, Northside Business Park and Southside developments where planning permission remains extant and implementable. This consideration has drawn on the findings of the Environmental Impact Assessments which were undertaken as part of those planning applications (the "baseline" position).

11.5 Where more up to date information is available, this has been taken into account in the assessment of this Master Plan.

11.6 The assessments in this Chapter have been carried out by experts who are familiar with the site and its surroundings (most of them having advised on previous proposals for DTVA). The assessments are proportionate to the level of detail proposed within the Master Plan. They will be supplemented as required by more detailed assessment work as part of future applications for planning permission.

Sustainability

11.7 In considering the sustainability of these proposals the Master Plan addresses the economic, social and environmental dimensions of sustainable development.

11.8 The proposals are expected to have a significant positive economic impact. This will include sustaining vital economic and transport connections, creating significant numbers of new jobs and delivering growth in the local economy. These outcomes will also have positive social impacts. The Master Plan proposals will have further positive social impacts by contributing towards meeting local housing needs and sustaining local retail, community and transport services.

11.9 The Airport takes its environmental responsibilities seriously. It was a founder member of Sustainable Aviation which is a body that aims to make aviation as sustainable as possible. The Airport supports the Government's measures to address the impacts of aviation at an international level.

11.10 At a local level the Airport operates a number of measures to minimise the noise impact of its operations on surrounding uses. This includes routing aircraft so as to minimise direct overflying of residential areas, operating a Noise Abatement Scheme and minimising night flying.

11.11 The Airport will continue to manage existing landscape and habitat features within the Airport site and make provision for enhancement of existing features and creation of new landscape/habitat areas and public realm to a high standard. The drainage strategy for the Master Plan area will include use of sustainable urban drainage measures wherever practicable.

11.12 The Airport operates a waste management strategy which seeks to minimise the use of resources and re-use or recycle wherever possible.

11.13 New buildings proposed within the Master Plan will be built to comply with all relevant environmental standards and measures to enhance their long term sustainability will be incorporated wherever practicable.

Ecology and Biodiversity

11.14 The ecological impacts of the Master Plan could arise from several distinct sources; direct habitat loss, and other impacts during both construction and operation. The principle of development of the majority of these areas was established through the grant of planning permissions for the Airport Expansion and Northside Business Park in 2007 and Southside Phase 1 in 1999. Future planning applications for the Master Plan proposals will be accompanied by the necessary ecological surveys and mitigation where ecological impacts are identified that have not previously been addressed.

Direct Impacts

11.15 In respect of Northside, habitat losses are confined to arable farmland, amenity grassland and hedgerows. These habitats are common and widespread in the wider local area and the impact of this loss would be negligible.

11.16 Habitats within the footprint of the Master Plan at Southside comprise permanent grassland and a mosaic of tall herbs, dense and scattered scrub and trees around disused taxiways and the site of old airfield buildings. The grassland associated with the main runway, taxiways and apron would be unaffected by the proposed development. There could be opportunities to improve these areas for biodiversity, without compromising the airport function.

11.17 Areas within the site of the extant Southside planning permission were assessed as part of the grant of that permission. The Southside proposals incorporate extensive areas of landscaping including a range of habitat types which would ameliorate the impacts of the proposed development.

11.18 Where updated surveys are undertaken as part of any new proposals and protected species are identified as being affected by the proposed development, appropriate mitigation and/ or compensation would be delivered in line with local and national planning policy and legislation. Mitigation would also be delivered, as appropriate, where significant effects on ecological receptors are predicted as a result of the Master Plan development. The proposed developments would be designed and landscaped in ways which promote biodiversity.

Indirect Impacts

11.19 The potential indirect impacts of construction include locally increased levels of dust, noise and vibration, as well as the potential for visual disturbance due to the movement of people and vehicles around the complex and construction compounds. During construction, any increase in the deposition of dust to surrounding habitats is expected to be restricted to areas close to construction sites, and will be temporary in duration. The necessary legislative compliance measures will be adopted during the construction phase to minimise emissions of fugitive dust to the atmosphere, and as such the potential for adverse effects on ecology receptors is likely to be negligible.

11.20 When considered in context with the location of the Master Plan development within an operational airport, potential impacts associated with construction noise and visual disturbance are not considered likely to result in any significant effects on sensitive ecological receptors such as breeding birds.

11.21 Potential indirect impacts associated with the operation of the Master Plan proposals include increased emissions from road traffic and the risk of pollution associated with surface water run-off. However, emissions from increased road traffic are likely to be negligible when considered in context with the baseline conditions for the site, and are unlikely to result in any adverse cumulative effects on features of ecological importance.

11.22 The drainage proposals will be developed as the detailed design progresses. The drainage strategy will be designed to meet current legislative standards to attenuate and mitigate for any potential pollution incident during the operational phase of the Master Plan developments. Indirect effects on ecology and biodiversity receptors are therefore predicted to be negligible, and may be beneficial when compared to the current drainage arrangement.

Cultural Heritage

Archaeology

11.23 Previous assessment work has indicated that to the north west of the terminal building the archaeological potential is low and any archaeological deposits that have survived are likely to be of local importance, as there is limited evidence for ground disturbance.

11.24 In the area around the terminal itself and to the north and north east of it, the archaeological potential has been assessed as low and to be of negligible significance. This is due to extensive ground clearance in this area from the construction of the airfield. The impacts of the development in this area would therefore be minimal.

11.25 The area of Southside does have the possibility of archaeological remains, in particular the site of Newsham Grange and a ridge and furrow system. These have been assessed to be locally important and are unlikely to constrain future development as minimal upstanding earthworks survive. Significant parts of the affected area will be unchanged as a result of the Master Plan and as such any archaeological interest would be unaffected. The area has also been subject to extensive modern disturbance during the construction and use of the airfield.

11.26 The site of Southside Phase 1 was the subject of detailed archaeological evaluation as part of previous planning applications. The potential for archaeological interest is addressed in conditions attached to the planning permissions. A similar approach is expected to be appropriate for Southside Phase 2.

11.27 The area to the north west of the terminal building and the Southside Phase 2 will be the subject of an archaeological investigation to accompany any future planning application and appropriate mitigation will be defined where necessary.

Built Heritage

11.28 There are no designated heritage assets (listed buildings, conservation areas or scheduled ancient monuments) within the Master Plan area. The nearest listed buildings to the Master Plan area are Middleton Hall (to the west of Oak Tree), and St George's Church and Featherstone House to the south of the Master Plan area. There is also a Conservation Area at Middleton One Row.

11.29 On the north side of the Master Plan area buildings assessed as of local interest include several WWII aircraft hangars, the former officers' mess, now the St George Hotel, as well as a control tower and various other ancillary technical and mess buildings and structures.

11.30 There is the potential that each of these buildings, of local interest, will be affected by the development. The impact of this would be locally significant, but could be reduced through mitigation.

11.31 On the Southside of the Master Plan area, two small WWII retractable gun emplacements, known as Pickett Hamilton Forts were identified as being of regional heritage interest. The gun emplacements could be accommodated within or relocated as part of future development.

11.32 The WWII buildings, that form part of the former RAF Technical Complex, have been suggested by previous survey work as of low value. Any impact can therefore be mitigated through historic building assessment and building recording, where appropriate, as part of future planning applications.

11.33 There will be impacts on buildings of local cultural heritage interest, although these are not envisaged to create any major impact, which mitigation could not address.

Flood Risk and Drainage

11.34 The Master Plan will see an increased requirement for both surface and foul water drainage.

11.35 The site lies within Flood Zone 1, which has the lowest probability of flooding. The surface water from the additional hard standing areas for the Master Plan proposals would be drained via new main carrier drains. The principle of the design of these drains was established as part of the planning permission for the Airport Expansion. The main outfalls are to the River Tees via local watercourses. Surface water storage will be provided to attenuate discharges from the development to greenfield run off rates; demonstrating that surface water will be managed so as not to increase run-off from existing rates. The surface water drainage system will incorporate storage lagoons or oversized pipes to provide storm water capacity to achieve this, with the use of a proprietary 'in-line vortex throttle' to control flows. All open storage lagoons will need to be netted to prevent them attracting birds.

11.36 The existing drainage infrastructure would be used where appropriate, with new drainage infrastructure constructed to accommodate the increased flows from the proposed developments.

11.37 Interceptors will be located upstream of all outfalls where the surface water could be contaminated.

11.38 Where feasible, SUDS would be used to provide partial attenuation of the peak discharge flows and improve the quality of water discharging to local watercourses.

11.39 The overall drainage strategy was developed as part of the previous proposals for the Airport and agreed in principle with the Environment Agency.

11.40 The existing foul drainage system outfalls to the north-east of the airfield at Northumbrian Water's Teesside Airport Works. This system will therefore be extended to accommodate the Northside development and approval has been obtained for connections to serve the housing areas. Further negotiations will be required with Northumbrian Water with respect to subsequent developments. On the Southside there is no foul treatment infrastructure available and it is anticipated that a package treatment system will need to be installed to serve the developments. This would outfall into the new surface water drainage system and will be subject to detailed approval by the Environment Agency. Any future planning applications for the Master Plan proposals will be accompanied, where necessary, by flood risk assessments and drainage strategies.

Traffic

11.41 The level of DTVA terminal activity proposed in the Master Plan for 2020 is not significantly higher than the Airport's current level of activity, which is significantly lower than its historic peak operation, which occurred around 2006. Even in the longer term (2050) the passenger levels envisaged in the DfT Aviation Forecasts will be much lower than they were in 2004 when detailed traffic assessments were undertaken. Similarly, the proposed level of Northside office-based employment, will be substantially reduced from the levels approved in the Northside Business Park permission. This will result in roughly half the previous forecast number of office based trips.

11.42 Commuting trips to and from office-based employment are at their greatest intensity during the highway peak periods, when overall traffic demand on the highway network is also at its greatest. The benefits of the Master

Table 11.1: Peak Hour Off-Site Traffic Generation

Land use	Peak Hour Traffic (Vph)			
	Consents*		Proposed Master Plan	
	AM 2-way	PM 2-way	AM 2-way	PM 2-way
Terminal - Related	650	670	90	130
Northside:				
B1 Employment	520	410	180	140
B2 / B8	80	150	80	150
Hotel	70	70	70	70
Residential	0	0	250	270
Southside:				
Phase 1 B2/B8	580	450	580	450
Phase 2 B8	0	0	100	100
Total	1900	1750	1350	1310

Table 11.1: Peak Hour Off Site Traffic Generation

*without Southside Phase 2

Plan's reduced commuting trips more than outweigh the vehicle demand generated by the additional proposed residential development.

11.43 Therefore, when considering the overall change in traffic generation, the Master Plan will have less of a traffic impact on the external highway network than with the extant planning permissions. This is shown in Table 11.1 below, for all the development, other than that existing and maintained in the Master Plan.

11.44 From this comparison it is likely that some of the off-site highway improvements that were conditioned as part of the extant planning permissions may not be required to accommodate the traffic demands of the Master Plan. This will subsequently be examined in detail as part of future planning applications.

Review of Existing Traffic Levels

11.45 Existing traffic information has been collated from permanent counters at key points on the Primary Route Network. This information has been cross-referred to the equivalent non-DTVA development forecast traffic levels made at the time of the previous planning applications, to compare actual traffic growth.

11.46 The comparison shows that traffic levels on the road network are significantly lower than those forecasts before the recession. There is therefore a greater amount of spare capacity than had been assumed in the extant permissions analyses.

Master Plan Access Traffic Levels

11.47 Traffic counts were undertaken at the roundabout, (and at the adjacent internal Yarm Road junction), as part of the previous Airport Expansion planning application. These conditions reflected DTVA operating at around its highest pre-recession levels and before any new development had been delivered. The following table (Table 11.2) compares the highway peak hour and daily flows on the railway bridge between the two junctions, for this pre-recession 'base', before the proposed Mater Plan and, for completeness, for the extant planning permissions.

11.48 The comparison shows the need to review the capacity of the two access junctions, (which the Highway Authority confirmed to be acceptable for the extant permissions). This has already been covered in Chapter 9 (paragraph 9.16).

	Highway Peak Hour 2-way flow (VPH)		Daily 2-way flow (AADT)
Traffic Scenario	AM	PM	
Base	450	590	5,730
Master Plan	1,450	1,500	15,800
Extant Permissions	1,210	1,130	16,450

Table 11.2: Traffic Flow Comparison on the Railway Access Bridge

11.49 Future planning application for the Master plan proposals will be accompanied, where necessary, by a Transport Assessment. This will provide a comprehensive review of all the potential transport impacts of the proposed development, with an agreed plan to mitigate any adverse consequences.

Noise

11.50 Detailed noise assessments were undertaken as part of previous planning applications for the Airport Expansion and Northside Business Park. A further assessment of the noise impacts arising from the proposed Master Plan developments has recently been undertaken. Consideration has been given to the noise impact of the additional aircraft that would use the Airport because of the Master Plan developments, the noise impact due to increased levels of road access traffic, the noise impact of the on-site physical developments, and the construction of the development. In light of the proposed use of land for residential use which was not previously envisaged as part of the Northside Business Park, consideration has also been given to the suitability of the land for this noise sensitive use.

11.51 In light of the impact of the recession it is envisaged now that the passenger traffic at DTVA will stay at a much lower level than originally forecast. The cargo traffic is also expected to increase to less than originally forecast. This is likely to mean fewer of the larger aircraft types that were envisaged in the previous expansion proposals.

11.52 The noise implications of the resultant changes in the DTVA development proposals to 2020 have been considered. Table 11.3 summarises the aircraft traffic for the baseline 2004 and for 2020 with Master Plan implemented. To put this traffic in context of the previous approved development, values are also given related to the traffic levels that development was envisaged to accommodate. With the Master Plan developments the passenger aircraft traffic is envisaged as achieving only just over half of the baseline traffic and the business/ general aviation traffic is envisaged to also remain below the activity that took place in 2004.

11.53 The BAGA traffic is expected to grow from current traffic levels, for instance business's aviation growth indicates by 2020 annual activity increased by about 60%, and general aviation increasing by over 40%.

Airborne Aircraft Noise

11.54 With reference to daytime air noise, typical passenger aircraft size in 2020 is expected to be broadly similar to that in 2004. The DfT Aviation Forecasts (see paragraph 4.25)

Form of Traffic	Aircraft Traffic at DTVA		
	Approved E.S. (2015)	Baseline 2004	Master Plan 2020
Passenger Services:			
Passengers (mppa)	(3.0)	(0.788)	(0.200)(1)
Movements	28,365	10,501	5,396
Cargo Services:			
Cargo (tonnes)	(25,785)	(786)	(25,785)
Movements (Northside)	2,395	361	2,395(2)
Movements (Southside)	3,900		
General Aviation/ Business Aviation:			
Movements	58,707	43,897	20,226
TOTAL MOVEMENTS	93,367	54,759	28,017

(1) As forecast by DfT
(2) Cargo will operate from both Southside and Northside facilities.

Table 11.3: Approved/Baseline 2004/ Forecast Future Aircraft Traffic

predict activity expressed in terms of millions of passengers per annum to be around 0.2 mppa, slightly greater than occurred in 2012, but much less than occurred in 2004.

11.55 The noise impact of aircraft operations mainly relates to flying operations. It has been common practice to evaluate such noise impact by determining the dB LAeq,T value, and describing the 57, 63 and 69 dB LAeq,T as relating to low, medium, and high community annoyance, whilst noting that 57 dB LAeq, 16h is also taken to describe the onset of significant community annoyance. Both the Air Transport White Paper (2003) and the Aviation Policy Framework (2013) which set national aviation policy adopted the 57 dB LAeq 16h criteria.

11.56 The recent document stated;

"we will continue to treat the 57 dB LAeq, 16 hour 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."

11.57 Contour modelling has been undertaken to assess the daytime and night time noise for 2020 with the Master Plan developments completed. The contour modelling was carried out using the FAA INM software, that was used previously at DTVA, and is the most widely used software for aviation noise modelling in the world. Appendix 11.1 contains copies of the noise contours for the baseline, approved, and now forecast in 2020 situations. Figure 11.1 compares the extent of the 57 dB LAeq,16h contours for "2004"[40], 2015 and 2020, and illustrates reduction in daytime noise that is forecast for 2020 when compared with baseline conditions and approved conditions.

11.58 The number of properties currently estimated to be exposed to the low annoyance levels in 2020 is 2, that is, approximately 5 people. The Department for Transport has previously assessed populations so exposed as 8,700 at Leeds Bradford, 2,600 at Liverpool, 43,400 at Manchester and 1,200 at Newcastle Airports.

11.59 The number of properties exposed to the moderate annoyance level in 2020 is estimated as zero. No properties around DTVA will become exposed to the high annoyance levels.

11.60 In overall terms, there will be a small decrease in daytime air noise from baseline conditions, 2004, estimated as a 3dB or so reduction.

11.61 No significant noise impact is predicted on either local schools or hospitals in 2020, with the Master Plan developments implemented.

11.62 The DfT forecasts discussed earlier, (see paragraph 4.30), indicated less passenger traffic in 2030/2040 than in 2020 but a doubling of the 2020 passenger traffic from 0.2 mppa to 0.4 mppa by 2050. This would suggest a 3 dB increase in aircraft noise, but in practice this is not expected to materialise as by 2050 new aircraft will be present. The future reduction for "Imminent" Aircraft is included

Night-time noise contour: 48dB L_{Aeq8h} Day-time noise contour 57dB L_{Aeq16h}

Figure 11.1: Noise contours in relation to proposed residential areas

[40] The E.S. for the previous application used 2003 actual activity for the daytime baseline contour. As traffic in 2003 and 2004 was similar the same contour has been used here for the baseline "2004".

in the Sustainable Aviation Noise Road-Map. For regional jets mention is made of the quieter Bombardier "C" series aircraft; that aircraft started its flight trials on the 16 September 2013.

11.63 The Airport receives a very small number of noise complaints annually; in the six year period 2007-2012 on average around 19 complaints per year were received.

11.64 The night-time activity will inherently be much less than associated with the previous approved development. Based on a pessimistic assumption of half the now forecast cargo activity being at night, noise contours have been produced for 2020 and are contained in Appendix 11.1.

11.65 Night noise has been assessed by determining the extent of night noise in terms of the 48 dB LAeq,8h contour, that representing the bottom of the former Category A in PPG24 that indicated suitability of land for residential development, and in terms of the 55dB LAeq,8h contour, that representing the interim target value adopted for control of night noise by the World Health Organisation (WHO). The latter contour illustrates that no current dwellings are forecast to be exposed to 55 dB LAeq,8h.

11.66 Figure 11.1 illustrates the separation of aircraft noise impacted areas from the proposed new residential development, using the criteria of 57 dB LAeq,16h for daytime and 48 dB LAeq,8h for night-time. The proposed housing is located within Darlington, and the relevant local noise policies are given in the Darlington Local Development Framework Core Strategy, policies CS14/CS16. With regard to interim planning policy, the Council in November 2012 included with the Development Plan, Annexes 3 and 6 from the earlier noise advice given in PPG24. Annex 3 advises that for aircraft noise 60 dB Leq dB(A) should be regarded as a desirable upper limit for major new noise sensitive development.

11.67 With regard to the proposed housing, the aircraft noise levels at the closest housing to the runway have been assessed using the same INM software for the proposed development. The forecast aviation noise level is 48 dB LAeq.16h. This is 12dB below the criterion for new housing given in Darlington Borough Council's interim planning policy, and 9dB below the level adopted recently in the Aviation Policy Framework as representing the level marking the approximate onset of significant community annoyance.

11.68 The DfT aviation forecasts for the Airport until 2050 can therefore be accommodated without prejudicing the amenity of occupiers of the proposed housing. Moreover, there is residual capacity for the Airport to grow, beyond DfT forecasts, without exceeding the identified noise levels in local and national policy.

Ground Noise

11.69 As a consequence of the reduced number of aircraft movements, ground noise will remain lower that the baseline levels experienced in 2004. Ground noise associated with passenger aircraft will arise from similar locations to those used for many years, but with the reduced movements. The proposed introduction of hangar development near the terminal and on the western apron will provide useful screening.

11.70 The hangars are principally required for business aircraft, and will therefore be used for garaging as well as maintenance. Noise emission from within the hangars will be small, as aircraft maintenance requires specialised engineering not involving high impact noisy operations. The separation from noise sensitive locations will ensure such activity within the hangars does not have a significant adverse impact. The aircraft will in general be tugged into and out of the hangers so minimising noise. The provision of the engine test bay on Southside will ensure any engine runs after major maintenance are carried out distant from noise sensitive receptors.

11.71 A decrease can be expected generally in ground noise from baseline conditions.

Road Traffic Noise

11.72 Road traffic levels will be affected by the changes in passenger and cargo movements and the access route to the Southside developments. The overall effect on the local (off-site) road network will be an increase in noise level from 2012. The change from baseline conditions will comprise of less traffic related to the reduced terminal related activity but with increases due to the increased industrial and business traffic.

11.73 The extra noise arising from road traffic off site is very small, insignificant in noise terms.

11.74 The noise from the on-site roads has been assessed and indicates free-field traffic noise levels at 10m from the kerbside of about 63

dB LAeq,16h assuming no local screening. Such levels will occur near St George Way and the Estate Road. The proposed residential development will need to allow, in its detailed acoustic design, for this noise, especially for properties on the edge of developments.

Construction

11.75 The proposed physical developments are generally distant from noise sensitive locations. The closest is the house building near the existing housing at Oak Tree. That construction, and that for the hangars , should be carried out using the best practical means to minimise noise in line with the recommendations in BS 5228.

New Developments

11.76 The Master Plan developments in general do not raise noise impact matters, when compared with the actual baseline situation in 2004.

11.77 The main change from baseline conditions is the proposed full development of the Southside land. In noise terms this location is well located as it is distant from main settlement areas, although noise conditions at the isolated residential properties in that area will be assessed during detailed site development.

11.78 The use of new hangars on the eastern apron and Southside raises no significant noise concerns.

11.79 To facilitate the planned aircraft maintenance developments, as well as increased hangarage and apron space, an aircraft engine test facility is planned as part of the Southside development. This location is distant from major residential development, and can be designed to minimise impact by use of proprietary screens and bunding. With suitable controls such a facility can ensure adequate management of noise emission from the aircraft under test.

11.80 The new hangars west of the terminal are relatively close to the new proposed housing, although somewhat distant from the existing housing in the Oak Tree area. The detailed design of these new facilities should take noise emission into account, achieving adequate screening of any noisy activities on the apron in front of the hangars. An outline design for building and an acoustic fence is shown at Appendix 8.2.

11.81 The proposed introduction of residential land use, in part abutting existing residential locations, is in line with local policy with regard to the most critical matter near any airport, aviation noise. The now projected aircraft noise on this land is much less than that which would raise undue concern over new residential development.

11.82 The proposed relocation of the railway station and its associated car park is distant from noise sensitive locations.

11.83 The proposed railway siding along the northern edge of the Master Plan area, and associating freight handling facilities is well located, distant from noise sensitive locations.

11.84 Future planning applications for the Master Plan proposals will be accompanied, where necessary, by the appropriate noise evidence, construction management plans, and mitigation measures.

Summary

11.85 The DfT noted in the 2003 White Paper that the Airport has the important advantage that very low numbers of people are affected by noise. That advantage is indicated by the detailed appraisals for daytime noise, in that the very low numbers of people affected will still apply in the future. The effect of the proposed development will be small, due to the proposed near 70% reduction in activity from what was forecast for the approved 3mppa Airport Expansion development, which represents a 50% reduction in activity from 2004.

Air Quality

11.86 The air quality effects of the Master Plan proposals have been considered during both operation and construction. The operational assessment focusses on the effects of the additional road traffic associated with the residential and commercial developments. Consideration has also been given to the additional emissions associated with the expected increase in aircraft movements. The assessment of the impacts has been carried out against the existing and future year baseline air quality within the study area. The pollutants assessed are nitrogen dioxide and fine airborne particles (PM_{10} and $PM_{2.5}$) as these are the key pollutants of concern associated with road traffic and aircraft. The construction assessment focusses on the effects of dust emissions. The potential impacts of odours from aircraft operations upon the residential developments are also taken into consideration.

11.87 Baseline air quality in the study area is good. The background concentrations in 2012 and 2020 are well below the air quality objectives. While concentrations near to busy roads will be higher, the evidence from the air quality review and assessment work carried out by Darlington and Stockton-On-Tees Councils is that the air quality objectives are unlikely to be exceeded in the study area, even close to busy roads.

11.88 The Environmental Statement undertaken as part of the approved Airport Expansion considered the baseline situation in 2004 and the impact of the approved Airport Expansion, Northside Business Park and Southside Phase 1 developments, including increased aircraft operations. The Environmental Statement was founded on a baseline position of 0.7mppa in 2004, increasing to 3mppa in 2015, with the proposals. This concluded that the proposals would lead to a maximum 2 µg/m3 increase in nitrogen dioxide, with concentrations remaining well below the objectives. Currently the Airport is operating at about 0.16 mppa, with no dedicated cargo operations and some business and general aviation. With the Master Plan proposals in place, passenger throughput would increase to 0.2mppa by 2020 and up to 0.4mppa thereafter; cargo operations would increase as per the approved Northside Business Park development, whilst business and general aviation would increase by a modest amount. Overall, these increases are much smaller than considered in the Environmental Statement and therefore the impacts will be much lower. The air quality objectives will continue to be achieved by a substantial margin. This is consistent with Defra's findings that airports with less than 10mppa are unlikely to lead to air quality problems where the background nitrogen oxides concentration is less than 25 µg/m3, as is the case at DTVA.

11.89 The Master Plan proposals would increase road traffic compared with the current situation, although the impact on the external highway network would be less than the 2007 consent. However, baseline pollutant concentrations are sufficiently well below the objectives that these increases in traffic flows would not lead to any exceedences of the objectives, even when combined with additional emissions from aircraft.

11.90 The UK Aviation Forecasts place passenger traffic at 0.4 mppa by 2050. Passenger throughput would therefore be just 4% of the

10 mppa threshold below which Defra consider air quality impacts of airports to be unlikely. By 2050 it is anticipated that background pollutant concentrations will have reduced as a result of reductions in emissions from road traffic, and aircraft emissions are also expected to reduce. Therefore, the anticipated growth at DTVA by 2050 is not expected to have any significant air quality impacts.

11.91 The Master Plan proposals include areas of new housing to the north of the Airport and the potential impacts of emissions from the Airport upon these new receptors have been considered. Baseline concentrations are very low in this area, and aircraft and road traffic movements are sufficiently small that even with the Master Plan proposals in place there is no risk that the air quality objectives would be exceeded at the new properties.

11.92 There is potential for odour impacts on the proposed residential properties, as a result of aviation activities at the Airport. The closest proposed properties would be over 150m north or north west of the aircraft aprons. At this distance, there is a risk that occasional aviation fuel odours may be experienced, particularly when aircraft are taxiing on hot engines following landing. Odours are likely to be infrequent, of very short duration (tens of seconds) and are only likely to occur when the wind is blowing from the aprons or taxiways towards a specific receptor. No odour complaints have been received by the Airport from any existing residential properties in recent years. Based on this information, experience gained at other, much larger, airports, and the scale of operations at DTVA, odour impacts are unlikely to be significant.

11.93 Sycamore Aviation carries out aircraft dismantling and recycling in a hangar immediately east of the terminal building. Operations are subject to the conditions of an Environment Agency permit regulating emissions from the facility and no adverse impacts are expected.

11.94 The new residential and other developments would increase the number of people in the area which will support improved public transport links. Potential future improvements include amended bus services and a new railway station, as well as improved pedestrian and cycle links. These would assist in minimising the air quality impacts of additional people travelling to and from DTVA, as well as reducing the number of private car journeys related to current uses.

11.95 During the construction phase, there is potential for dust impacts on sensitive receptors up to 100m from the works, depending on the scale and mitigation in place. There are residential properties in Oak Tree Close, The Crescent and those within the proposed developments that could be at risk of dust impacts, when construction works are within 100m. Isolated properties to the south of the airport may also be at risk of dust impacts when works are carried out in this area. In addition, there are potentially sensitive commercial properties such as the motorhome showroom, caravan storage, hotel and hospital which may be affected, as well as cars parked at the terminal. Appropriate mitigation will be put in place via measures to be agreed as part of planning permissions. This will include measures to keep dust impacts to a minimum so that any effects will be temporary and relatively short lived, and will only arise during dry weather with the wind blowing towards a receptor, at a time when dust is being generated and mitigation measures are not being fully effective.

11.96 Where appropriate, planning applications will be accompanied by assessments of any impacts on air quality and details of proposed mitigation where required.

Landscape and Visual Impact

11.97 DTVA is located on a lowland plateau in an area of landscape character that is undistinguished, open and of ordinary landscape quality. There is little visual connection between the valley of the River Tees and the adjacent lowland plateau.

11.98 Views in the immediate vicinity of DTVA are confined to adjacent houses, views from Middleton Hall, St George's Church, Featherstone House (which are listed buildings) and the local footpaths and roads around the site.

11.99 Long distance views from the ridgelines to the north and south, views from the A67 and the railway, reveal an undistinguished group of buildings set adjacent to wide areas of hardstanding and grassland that make up the airfield. The Airport lies to the east of Middleton St. George, and is adjacent to a hospital, business park and residential settlement. DTVA is not central to the character or setting of the three listed buildings and Middleton One Row Conservation Area.

11.100 The Master Plan development will take place within the existing visual envelope of the Airport, and will lie to the south of the existing business park, hospital and residential settlement. The proposed development will be seen in this context.

11.101 Structural landscaping is proposed around the external boundaries of the development. This will comprise of landscaped mounds and linear belts of evergreen and deciduous trees, hedges and shrubs. These will be designed to both screen the development and integrate the scheme into the surrounding landscape character. The landscaping will mitigate the impact of the development on views where buildings have the potential for visual intrusion on local and long distance views. It will also provide the opportunity to improve the landscape quality and visual amenity of the site and its context.

11.102 The proposed Phase 1 Southside development incorporates a significant landscaped bund to the site's external boundaries, which will screen and filter views of the industrial / warehousing development from the east, south and west.

11.103 Phase 2 of the Southside scheme will adopt an identical approach, with a significant bund of native planting at the southern and western edges of the site. These landscape works will also provide screening to views of the Northside development from southern viewpoints.

11.104 The proposed residential development associated with the Northside has been located adjacent to existing residential settlement and will provide further opportunities to enhance the local landscape character and visual amenity.

11.105 Lighting of the new development areas has the potential for night time impacts. As with the approved Phase 1, luminaires will be designed to provide appropriate directional and reflector hoods that will avoid direct glare and minimise skyglow.

11.106 The extended development is anticipated to have visual impacts, although these are not anticipated to be significantly different from those of the already approved development and are capable of mitigation with appropriate planting and landscaping.

Agricultural Impacts

11.107 Parts of the Master Plan area are currently agricultural land. These are proposed for development as part of the Master Plan. Previous assessment has shown this land to be

no better than grade 3b (in accordance with the DEFRA Agricultural Land Classification system) and is therefore not 'best and most versatile' agricultural land. This is not considered to be a significant impact.

Risk Assessment

11.108 The safe operation of DTVA and the aircraft that use it is of overriding importance. The Airport regularly reviews safeguarding measures, which seek to protect flight paths and airspace around DTVA from potential hazards. It undertakes ongoing risk assessment of all operational aspects and maintains a Public Safety Zone in accordance with prevailing regulatory requirements. All of these aspects of airport safety have been carefully taken into account in formulating this Master Plan. The planned expansion of DTVA, as provided for in this Master Plan, can be accommodated without exceeding established measures of risk.

Climate change

11.109 It is recognised that the contribution of greenhouse gases and emissions from aircraft are a cause for concern. DTVA supports measures to tackle this matter at international level. This offers the best prospect of achieving a balance between aviation's economic benefits and environmental impacts.

11.110 At a local level DTVA is committed to minimising and managing its environmental impacts. This includes adopting a sustainable waste management strategy, where possible managing the Airport estate to promote biodiversity, incorporating sustainable urban drainage proposals wherever possible and minimising energy consumption.

Waste Management

11.111 It is recognised that the Airport has a duty of care to ensure all waste materials are dealt with appropriately. Therefore, any waste arising from the construction or operation of the Master Plan proposals will be managed in accordance with the DEFRA waste hierarchy; which prioritises prevention, re-use, and recycling, before considering other recovery or disposal options. Where necessary, future planning applications for the Master Plan proposals will be accompanied by Construction Site Waste Management Plans.

12. Monitoring

12.1 This Master Plan sets out the Airport's vision and objectives to 2020 and beyond. It will guide future decision making and investment at the Airport. The implementation of the Master Plan will be monitored and the need for future review will be considered in the light of the effectiveness of the Master Plan proposals, changes in the policy and legislative framework and developments in the aviation market.

12.2 A copy of this Master Plan is also available to view on the Master Plan website.

www.DTVA-Master-Plan.co.uk

Appendix 1.1:

Summary of the History of RAF Middleton St George

Summary of the History of RAF Middleton St George

RAF Middleton St George was the most northerly Bomber Command Station during World War II. Construction commenced in 1939, with the laying out of an ash and hard core perimeter track around a grass landing ground. Concrete runways were laid in 1940, the longest 2,100 yards (1,920m) and 40 pan hard standings were provided. Hangars were erected to the north of the runway and bomb stores to the south. The first flying units of No 4 Group arrived in 1941 – the Whitleys of 78 Squadron. No 76 Squadron also arrived equipped with Halifax bombers. In October 1942, they vacated and the base became home to the Royal Canadian Air Force, No 420 Squadron with Wellingtons; No 419 Squadron with Halifaxes; followed by No 428 Squadron. The Halifax was replaced by Lancaster Bombers in 1944.

The airfield was an important bomber base and on the night of 12 June 1944, Lancasters of No 419 Squadron were amongst 671 aircraft that took off to attack German supply lines in France from bases across northern England. It was during that raid that the brave action of Pilot Officer Andrew Mynarski, trying to save the life of the rear gunner with the aircraft aflame, was recognised with the award of a posthumous Victoria Cross.

Following a public campaign in 2004, a statue to Pilot Officer Andrew Mynarski VC was commissioned and unveiled at a memorial event on 4 June 2005. Cast in bronze at the Black Isle foundry in Nairn, Scotland, from a clay sculpture moulded by North East artist, Keith Maddison, it forms an imposing sight located outside the St George Hotel, which was formerly the Officers' Mess.

The last raid from RAF Middleton St George was flown on 25 April 1945, after which the base reverted to a training role. In the height of the Cold War, the airfield again saw increased activity with the main runway being extended to 2,500 yards (2,291m) in 1957 to accommodate Hunter and Javelin aircraft and English Electric Lightnings. The RAF left in 1964 and the process of converting to a commercial airport (initially known as Teesside International Airport) commenced.

No. 428 Squadron RCAF - Stationed at RAF Middleton St George
June 1943 – May 1945

Aerial photograph of RAF Middleton St George - 3 September 1958

Appendix 4.1:

Tables Showing Assumed Aircraft Movements

Table A: DTVA Annual Aircraft movements – Impact 2 scenario (1) (E.S. 2015)

Aircraft Movements

Movement Type	Annual Number - 2015 with Application Developments	% by Aircraft Type - 2015 with Application Developments	Main Aircraft Types - 2015
Scheduled Services (excl. Cargo)	25,142	40% 10% 10% 40%	B737-500 B737-800 Jetstream 41 A319
Inclusive Tours (mainly May-October)	3,223	75% 25%	A321 B767
Cargo			
Northside	2,177	28% 72%	BAe 146 B737
Southside	3,900	100%	B747
Positioning	218	28% 72%	BAe 146 B737
Total Movements	34,660	-	-

General Aviation Movements

GA Total	Annual Number 2015	Aircraft Types
	58,707	Various

Total Aircraft Movements

All Movements	Annual Number 2015	Aircraft Types
	93,367	As above

Table B: DTVA Annual Aircraft Movements – Master Plan (2020)

Aircraft Movements

Movement Type	Annual Number - 2020 Master Plan Proposals	% by Aircraft Type - 2020 Master Plan Proposals	Main Aircraft Types - 2020
Scheduled Services (excl. Cargo)	5,396	39% 52% 9%	Fokker 70 Saab 2000 Dash 8-300
Cargo			
Northside & Southside (Phase 1)	2,177	28% 72%	BAe 146 B737
Sub Total ATMs	7,573	-	-
Positioning	218	28% 72%	BAe 146 B737
Total Movements	7,791	-	-

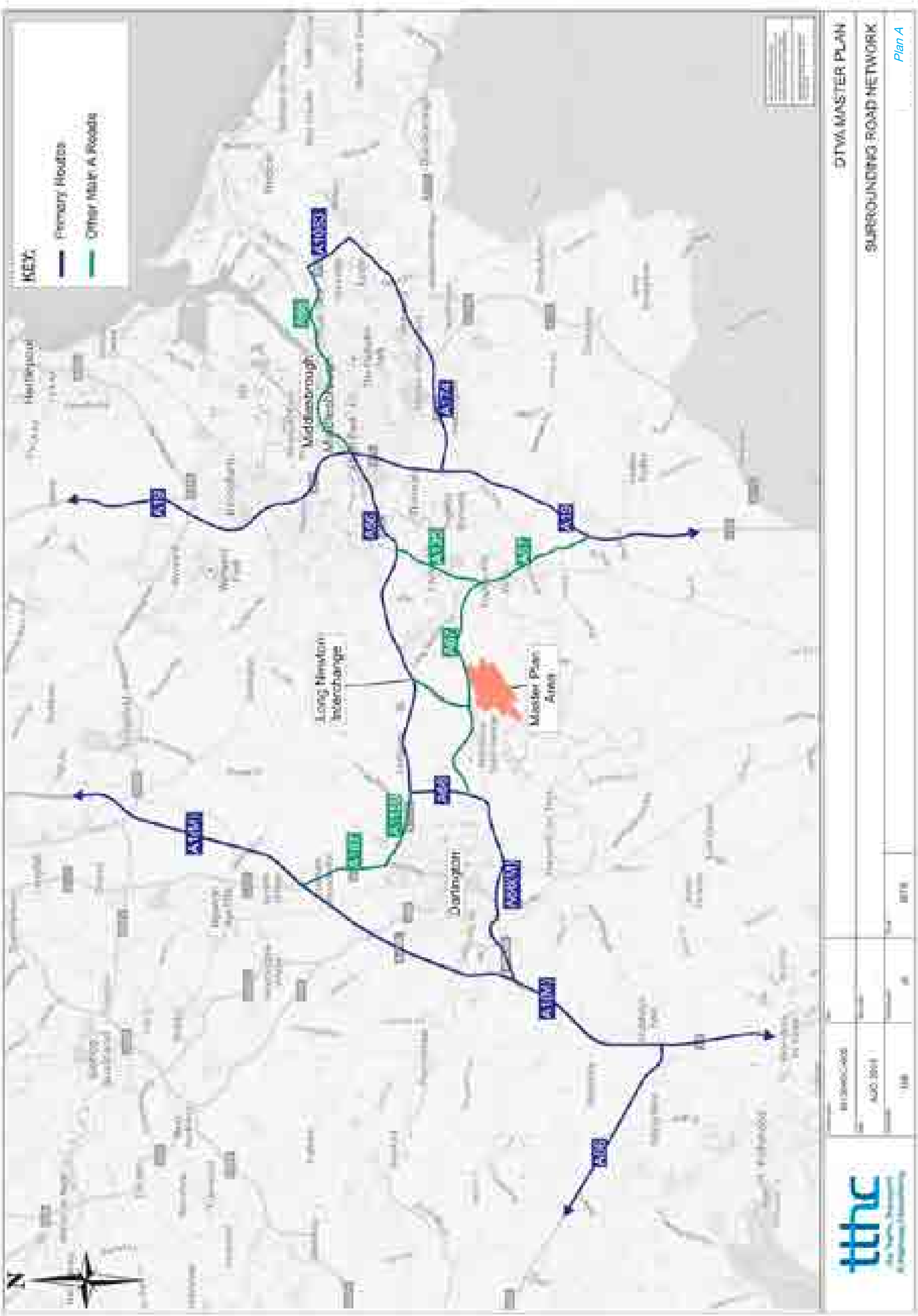
General Aviation Movements

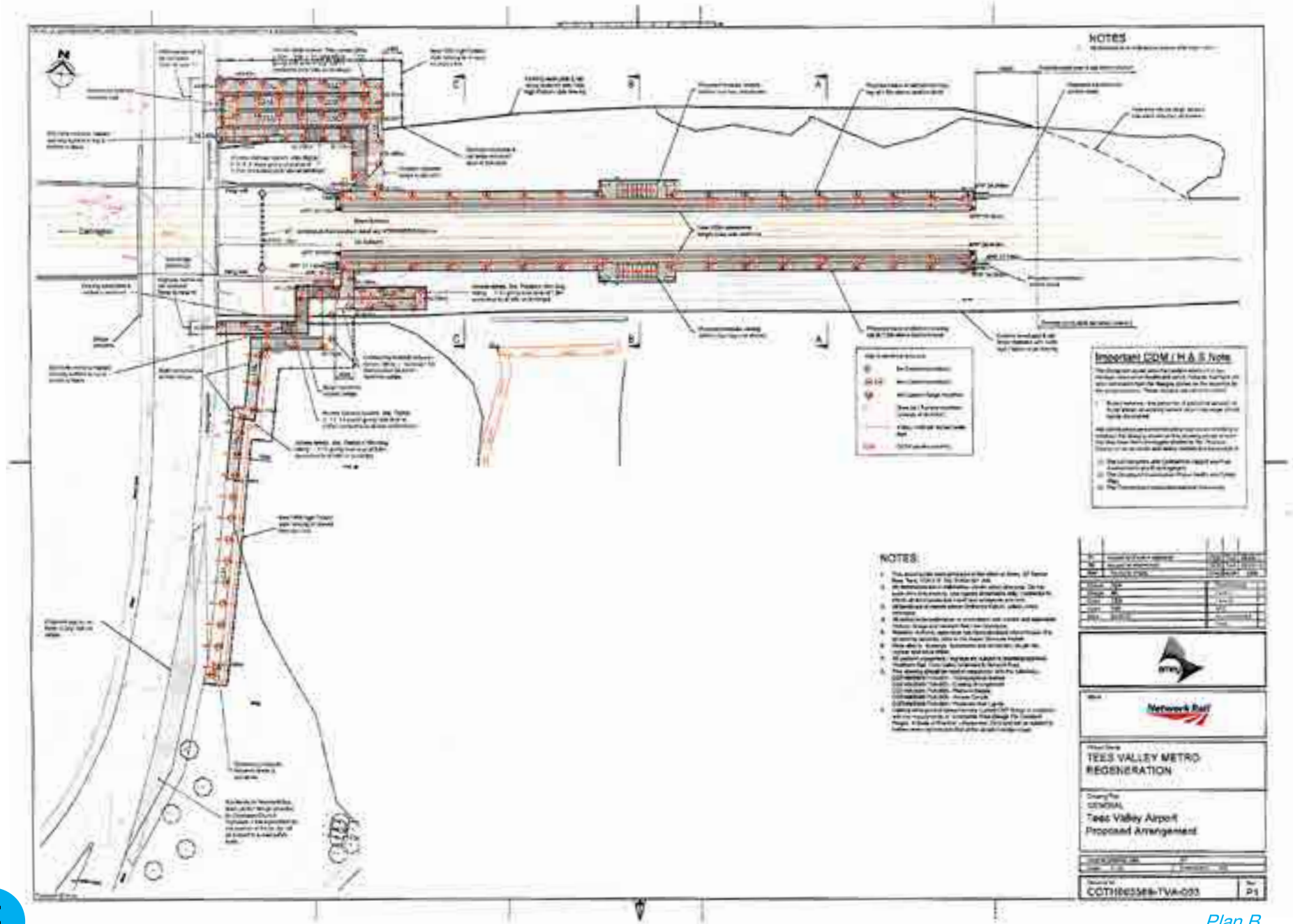
GA Total	Annual Number 2020	Aircraft Types
	20,226	Various

Total Aircraft Movements

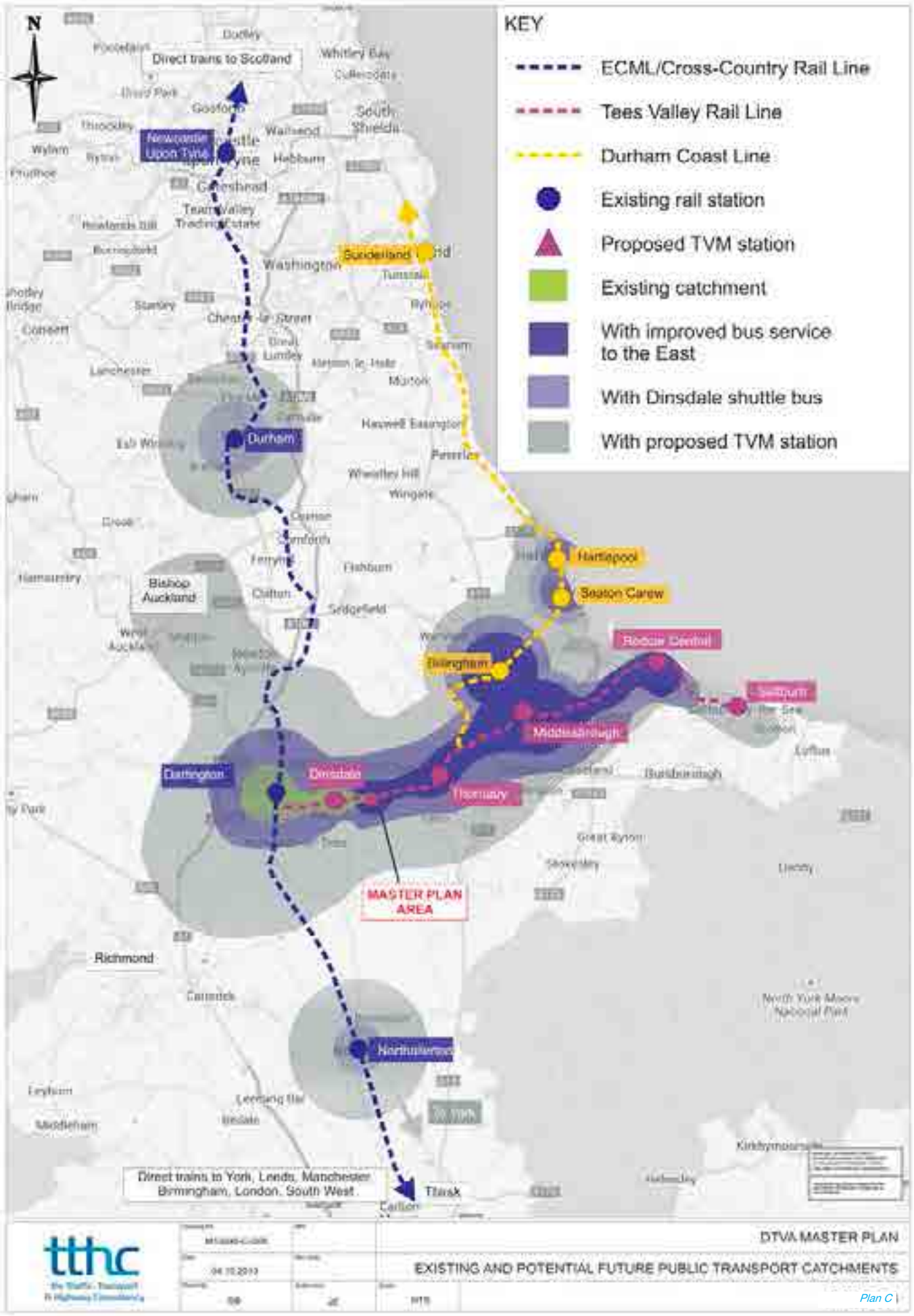
All Movements	Annual Number 2020	Aircraft Types
	28,017	As above

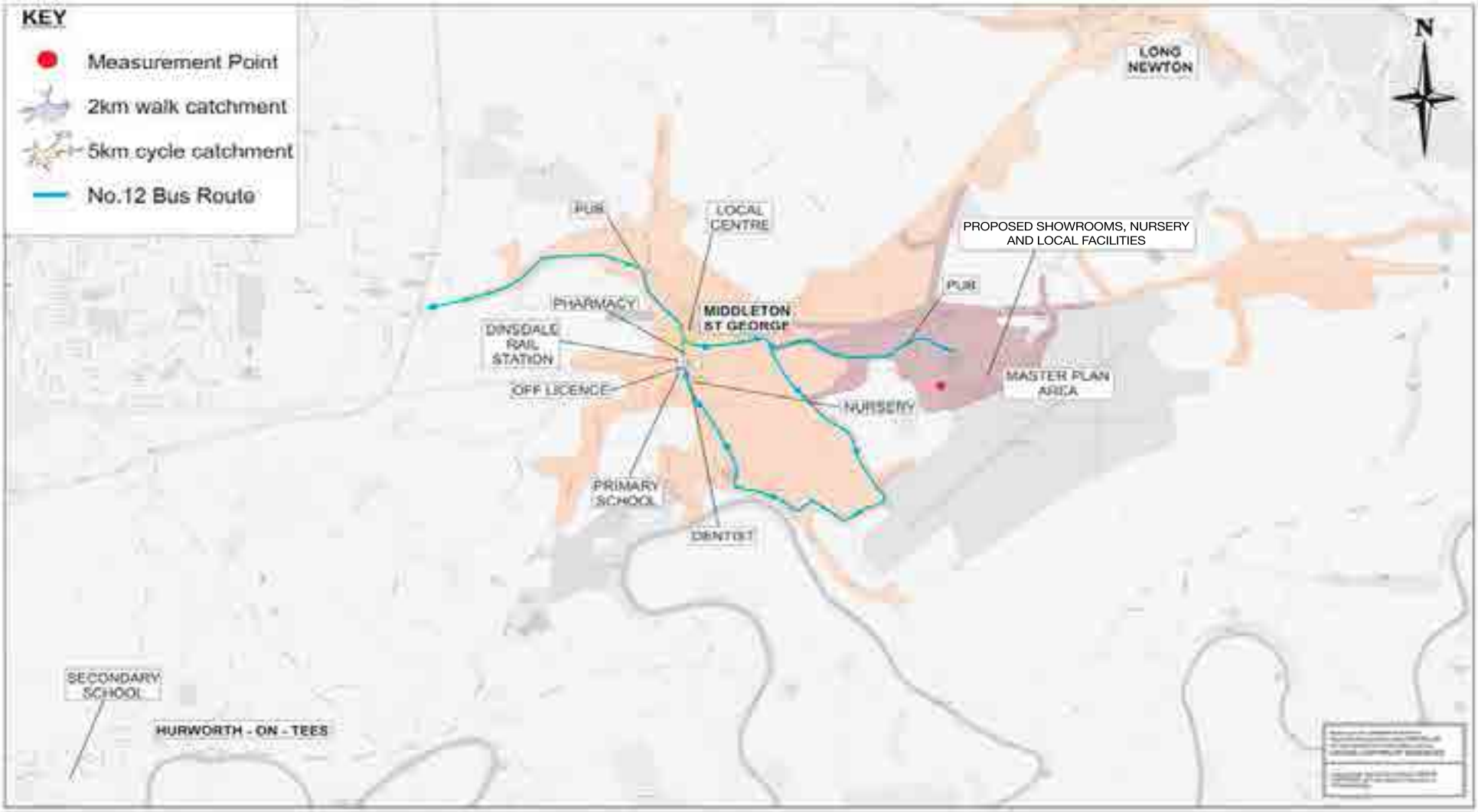
Appendix 5.1:
Accessibility Plans


KEY:
Primary Routes
Other Main A Roads
Hartlepool
Middlesbrough
Darlington
Long Newton Interchange
Master Plan Area
A19
A66
A174
A1(M)
A66(M)
DTVA MASTER PLAN
SURROUNDING ROAD NETWORK
Plan A


NOTES
Important CDM / H & S Note
NOTES
TEES VALLEY METRO REGENERATION
Tees Valley Airport
Proposed Arrangement
Network Rail

Plan B


KEY
ECML/Cross-Country Rail Line
Tees Valley Rail Line
Durham Coast Line
Existing rail station
Proposed TVM station
Existing catchment
With improved bus service to the East
With Dinsdale shuttle bus
With proposed TVM station
N
Direct trains to Scotland
Newcastle Upon Tyne
Durham
Sunderland
Hartlepool
Seaton Carew
Redcar Central
Saltburn
Middlesbrough
Darlington
Dinsdale
Thornaby
Bishop Auckland
MASTER PLAN AREA
Richmond
Northallerton
Thirsk
Direct trains to York, Leeds, Manchester Birmingham, London, South West
DTVA MASTER PLAN
EXISTING AND POTENTIAL FUTURE PUBLIC TRANSPORT CATCHMENTS
Plan C



tthc
the Traffic, Transport & Highway Consultancy

M13040-C-003		DTVA MASTER PLAN
AUG 2013		EXISTING 2KM WALK AND 5KM CYCLE CATCHMENTS
CB	JB	NTS

Plan D

tthc the Traffic, Transport & Highway Consultancy	M13040-C-011		DTVA MASTER PLAN
	OCT 2013		EXISTING CYCLE FACILITIES SURROUNDING THE MASTER PLAN AREA
	GB	JE	NTS

Plan E

Appendix 6.1:

Tees Valley's Economic Performance

Tees Valley's Economic Performance

Economic information included in this appendix includes:

- A summary of current social and economic characteristics referencing published research by Tees Valley Unlimited;
- A historical trend analysis of Tees Valley's economic performance referencing data published by Experian;
- A SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) drawn from material published by Tees Valley Unlimited; and
- An employment forecast referencing Experian data.

Current Economic Profile

The current economic characteristics in the Tees Valley have been profiled by Tees Valley Unlimited in a document entitled "Tees Valley EU Structural and Investment Funds Strategy", prepared in October 2013. An extract of from this document covering the economic output, employment, enterprise and skills characteristics is provided at Figure 1 below:

As shown in Figure 1 Tees Valley is facing a series of structural economic challenges. These include driving up GVA levels and maximising the GVA benefits associated with its industrial base. The current challenges also include increasing the employment rate and addressing youth unemployment, improving the enterprise rate (a measure of number of enterprises per 10,000 population) and skills levels.

Past Performance

The following leading economic indicators have been compiled in order to chart the past performance of the Tees Valley authorities in the context of the North East and the UK51:

- Business base by sector
- Gross Value Added (GVA)
- Total employment (absolute numbers and indexed)
- Unemployment rates

These show how Tees Valley has been significantly affected by the recession with a sharp decline in employment experienced relative to the UK as a whole and that the employment structure of Tees Valley in 2012 shows relatively lower representation in key sectors including the service sector (finance and insurance, professional and other private services). In this context it considers where the best opportunities to stimulate economic growth are likely to arise and how these apply to DTVA.

This is not intended to provide an exhaustive review of the Tees Valley economy but rather to focus on key economic indicators. The future potential of the Tees Valley economy is also considered within this Appendix, with reference to an employment forecast prepared by Experian and focusing on employment change by sector.

	Economic output	Employment	Enterprise	Skills
Current situation/ trend	Tees Valley contributes £10billion of GVA per year to the national economy	Tees Valley has a population of 663,000 people and a working age population of 424,000, but only 281,000 jobs	The enterprise rate is lower than the national average, but showed a significant increase in 2012	Number of residents in Tees Valley with NVQ Level 3 (48%) still trails the national average (55%), although it has increased in the last year.
Comparison with national average	GVA per head in Tees Valley is 77% of the national average	64% employment rate in Tees Valley compared to 70.5% nationally. Need 28,650 additional jobs to close the gap.	254 enterprises per 10,000 population in Tees Valley, 61% of the GB average.	25.2% of residents are qualified to NVQ Level 4 compared to 34.4% nationally.
Recent progress	GVA per head falling slightly in Tees Valley over the past decade	Employment rate up 0.8% year on year, showing signs of recovery after reaching a low point in September 2011	Number of enterprises up 630 year on year and one year survival rates now above the national average.	A larger rise in advanced apprenticeships in Tees Valley than the national average in the last year.
Major challenges	Ensuring Tees Valley captures the GVA benefits from its industrial assets	Youth unemployment at 32%, above the national average of 21%. Overall unemployment at 12.8% compared to 7.8% nationally.	Low enterprise rates and rates of commercialisation (North East has lowest number of patents filed and granted in the UK).	Low skills rates compared to national average (13.1% of people have no qualifications, compared to 8% nationally).
Opportunities	Build upon industrial assets which contribute significantly to GVA and £4billion annually to UK exports (North East is the only region with positive balance of payments)	Recent signs of private sector employment growth with FDI investment of £1.5billion over last 3 years.	Enterprising and innovative firms being developed in Tees Valley in growth sectors such as digital, new energy, subsea and green chemicals	Excellent FE and HE infrastructure across Tees Valley with significant expertise in our colleges and universities (84% of employers found new Tees Valley graduates prepared for work).

Figure 1: Economic Challenges

Source: Tees Valley Unlimited (October 2013) – "Tees Valley EU Structural and Investment Funds Strategy"

Employment: 1997-2012

Total full time equivalent employment has been profiled for the years 1997 to 2012, with 1997 reflecting the earliest year for which data is available in published Experian econometric forecasts. The year 2012 reflects the last full year of employment data.

Over this period total employment in the UK grew by total employment in the UK grew by 7%, compared to a decline of -2.2% within the North East region and a decline of -7.7% in Tees Valley.

Figure 2 below illustrates the trends in employment change across these different spatial scales. Employment data has been indexed, with the value "1" denoting employment in the base year of 1997 and subsequent values representing change (+/-) from this baseline.

It is clear that there was a divergence in employment trends in the late 1990s and early 2000s that is notable between the UK, the North East and Tees Valley.

In particular there was more volatility evident in the employment results for Tees Valley than those for the UK. Over the period 1997 to 2008 there were several peaks and troughs in employment, compared to the trend of relatively uninterrupted growth at UK level. Tees Valley and the North East economies were also significantly affected by the onset of the recession, with a sharp decline in employment evident.

From 2009 onwards, total employment in the North East and Tees Valley has been recovering with notable growth in total employment in the years 2011 to 2012.

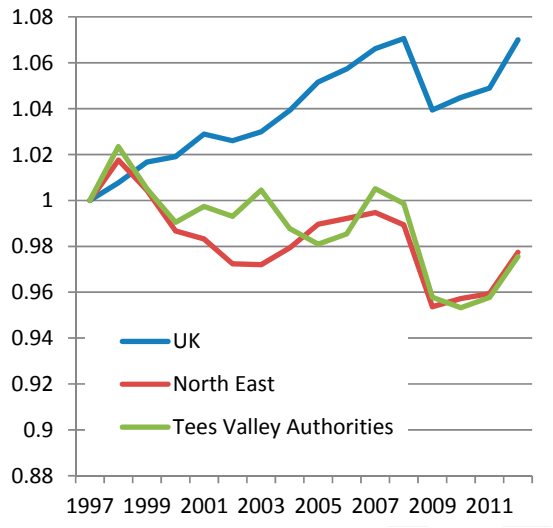


Figure 2: Indexed Total Employment Change (1997-2012)

Source: Experian (2013)/ Turley

Employment by Sector

Figure 3 present a comparison of employment proportions by broad sector and includes a "location quotient" for the Tees Valley. The location quotient Tees Valley includes above UK average concentrations of employment in extraction and mining; manufacturing; utilities; construction; transport and storage; and public services. By way of contrast, the Tees Valley contains relatively weaker representations of employment in service sector industries such as wholesale and retail, information and communications, finance and insurance and professional services when compared against the UK.

Sector	% Total Employment			Tees Valley Location Quotient
	Uk	North East	Tees Valley	
Agriculture, Forestry & Fishing (Thousands)	0.8%	0.5%	0.7%	0.84
Extraction & Mining (Thousands)	0.3%	0.3%	0.5%	1.97
Manufacturing (Thousands)	10.2%	12.6%	11.4%	1.11
Utilities (Thousands)	1.3%	1.5%	1.8%	1.39
Construction (Thousands)	4.9%	5.0%	6.3%	1.29
Wholesale & Retail (Thousands)	15.7%	13.9%	14.1%	0.90
Transport & storage (Thousands)	5.6%	5.4%	6.5%	1.16
Accommodation, Food Services & Recreation (Thousands)	8.2%	7.7%	6.8%	0.83
Information & communication (Thousands)	4.3%	3.0%	3.0%	0.71
Finance & Insurance (Thousands)	3.9%	2.4%	2.4%	0.61
Professional & Other Private Services (Thousands)	19.5%	15.3%	14.5%	0.74
Public Services (Thousands)	25.4%	32.3%	32.0%	1.26

Figure 3: Employment by Sector (%)

Source: Experian (2013)/ Turley

The recessionary period from 2008 onward has been characterised by a dramatic slowdown in construction based activities, public sector job cuts and the continued fragility of manufacturing activities due to global competition and exchange rate sensitivities. Tees Valley's noted relative concentrations of employment in construction, public sector and manufacturing sectors are reflected in the employment changes in evidence over the 2008-2011 period.

Unemployment Rates

Unemployment rates have been profiled using data from the Annual Population Survey and covering the period 2004-2012. A summary of unemployment data for the various areas of comparison is provided at Figure 4.

Over the period 2004 to 2012 unemployment rates in the Tees Valley authorities have consistently registered higher than North East regional and UK comparator levels. Unemployment rates peaked

in 2012, registering at over 12% across the Tees Valley authorities, compared to unemployment rates of approximately 8% at UK level. Elevated unemployment levels in the Tees Valley predate the credit crunch and the onset of the recession.

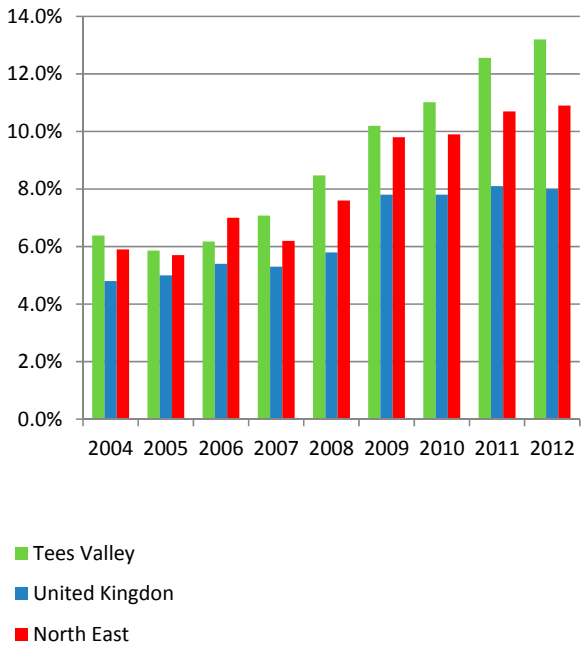


Figure 4: Unemployment Rates

Source: Experian (2013)/ Annual Population Survey/ Turley

GVA

GVA is a measure of the total value of goods and services produced in a local economy. GVA has been profiled across the three spatial levels, using an index with the value "1" representing GVA levels in 1997 and subsequent change being expressed in relation to this base year. The results are illustrated at Figure 5 below.

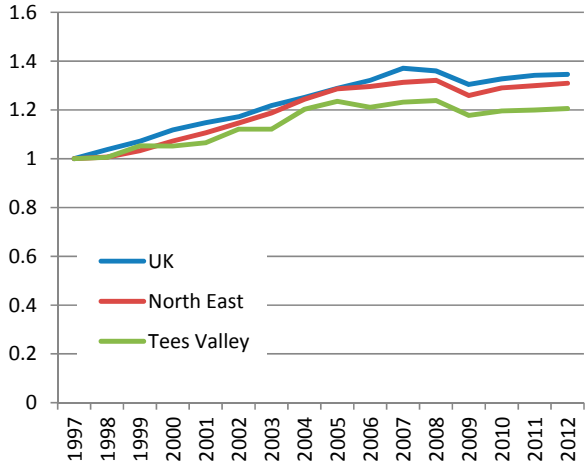


Figure 5: GVA (Indexed to 1997 levels)

Source: Experian (2013)/ Turley

Figure 5 illustrates that total GVA has increased since 1997 at all levels of analysis including Tees Valley. GVA growth in Tees Valley has generally tracked the North East, although has been more incremental in its pattern of growth. GVA peaked in 2005/2006, with a period of general stability to 2007/2008. After this time the impact of the recession is clear in Figure 5. Post 2009, GVA levels in Tees Valley have been growing, alongside growth at North East and UK levels.

GVA per capita data provides a direct and comparable measure of productivity. Data has been sourced from Experian and covers the period 1997-2013. This is presented at Figure 6.

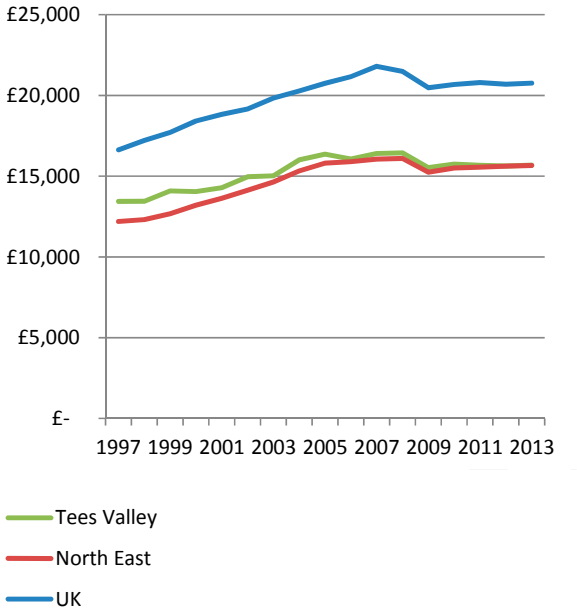


Figure 6: GVA per Capita (2009 prices)

Source: Experian (2013)/ Turley Associates

There are notable differences in GVA per capita levels between the UK and Tees Valley and the North East. This notable productivity gap has not closed over the period 1997-2013. GVA per capita in Tees Valley has closely tracked North East levels since the onset of the recession in 2008.

Summary

In summary, the headline indicators considered demonstrate the structural differences between Tees Valley's economy and that of the UK. Tees Valley faces challenges associated with growing employment levels as the local economy recovers from the recession, addressing high levels of unemployment and enhancing productivity levels.

This snapshot of the regional and local economy highlights how important it is to protect existing jobs and facilitate creation of new jobs.

SWOT Analysis of the Local Economy

The following strengths, weaknesses, threats and opportunities are summarised from information published by Tees Valley Unlimited.

Strengths

- Critical mass of process activity
- Critical mass of non-process manufacturing activity
- Emerging and growing sectors
- Proximity to offshore developments
- Presence of innovation support
- Land supply including an Enterprise Zone
- Built and natural offer

Weaknesses

- Reliance on large manufacturers
- Low rates of exporting
- Low enterprise rates
- Maturity of the process sector
- Energy intensive activities
- Reductions in process integration
- Access to business finance
- Over-dependency on the public sector and lower levels of private sector jobs
- Skills shortages
- Market failure in business accommodation

Opportunities

- Investment in transport infrastructure unlocking development sites
- The digital media market
- Demographic trends driving opportunities in healthcare provision
- Opportunities to grow financial, business and professional services sector
- Growth in container traffic through Teesport
- Growing demand for advanced manufacturing products and services
- Buoyant European Oil and Gas sector
- Onshore and Offshore Low Carbon opportunities
- EU2020 targets/ other international treaties
- Integrating the process cluster

Threats

- Continued slow growth in domestic, European and World Markets
- Exposure to commodity markets for processed goods
- Overcapacity of process industries
- Emissions permits and carbon taxes
- Nationalisation of innovation infrastructure
- Workforce supply – contraction of skilled workforce over time

A full description of the strengths, weaknesses, opportunities and threats is provided in the Tees Valley Unlimited documentation referenced above.

Future Performance

The future potential of the local economy has been considered in the context of Experian econometric forecast data (Quarter 2 2013) which was the latest data available at the time of research. In line with the approach taken to the historic assessment of the economy, local results are benchmarked at UK and regional levels to provide a relative assessment of future performance.

Total Employment

A long term forecast of employment change has been sourced from Experian. This highlights that over the period 2013-2031, 3.3 million jobs are forecast to be created at UK level (+13.4% change), 100,000 jobs at North East level (+11.5% change) and 32,000 jobs within the Tees Valley representing a +12.8% change). These employment forecasts are represented at Figure 8 (Tees Valley and North East) and an indexed representation of employment change is provided at Figure 9.

The employment forecast suggests that in the future the Tees Valley authorities will increase employment at a faster rate than the North East region, and will potentially track UK levels of projected growth closely. Despite relatively strong rates of projected growth, it should be noted that the Tees Valley does face significant employment creation challenges as its economy emerges from the recession.

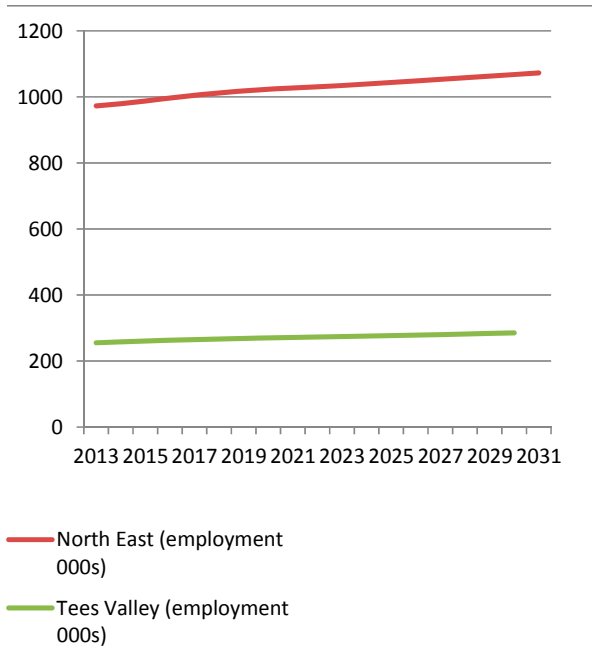


Figure 8: Employment forecast (2013-2031)

Source: Experian (2013)/ Turley

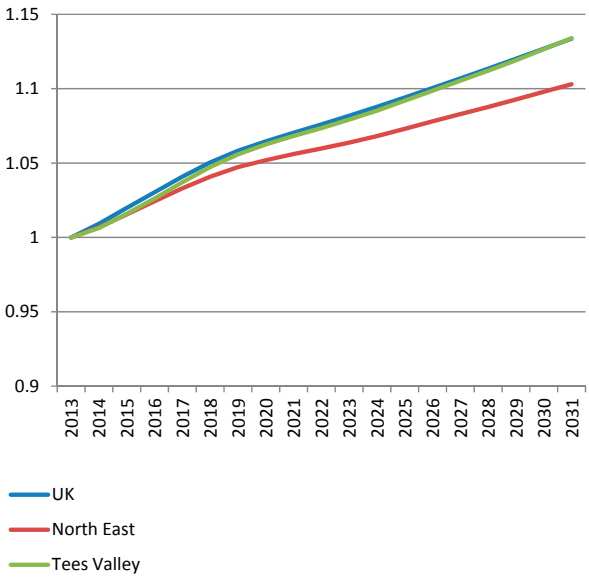


Figure 9: Indexed Employment Change (2013-2031)

Source: Experian (2013)/ Turley

Employment Change by Sector

Sector	UK	North East	Tees Valley
Agriculture, Forestry & Fishing	-7.3%	-7.9%	-11.4%
Extraction & Mining	-17.0%	-32.2%	-61.6%
Manufacturing	-25.7%	-28.0%	-32.9%
Utilities	19.0%	19.1%	21.5%
Construction	26.7%	26.7%	25.6%
Wholesale & Retail	9.9%	8.1%	10.6%
Transport & storage	29.9%	28.9%	37.4%
Accommodation, Food Services & Recreation (Thousands)	24.0%	21.5%	23.4%
Information & communication	21.2%	16.5%	16.6%
Finance & Insurance	18.1%	16.5%	15.6%
Professional & Other Private Services	22.8%	20.0%	29.4%
Public Services	12.9%	12.6%	13.5%

Figure 10: Employment by Sector (2013-2031)

Source: Experian (2013)/ Turley

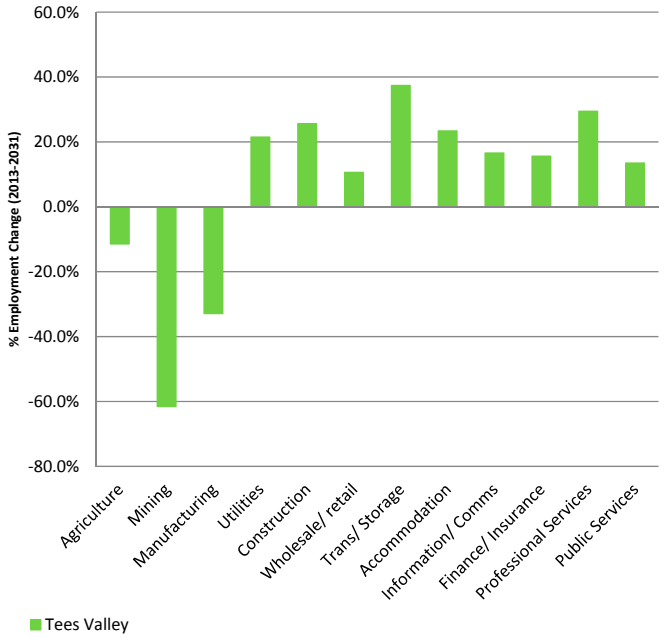


Figure 10: Employment Change by Sector (Tees Valley, 2013-2031)

Source: Experian (2013)/ Turley

Projected trends in employment by sector are profiled in Figures 10 and 11. The following broad sectors are forecast to increase employment over the period 2013-2031 at a faster rate in Tees Valley than the North East and/or UK comparators:

- Utilities
- Transport and Storage
- Wholesale and Retail
- Accommodation, Food Services and Recreation
- Professional and other private services

These broad sectors provide opportunities for economic growth in the North East and Tees Valley more specifically. Sectors that are forecast to decline in overall employment terms over the same period in Tees Valley include:

- Extraction and Mining related activities
- Manufacturing
- Agriculture, Forestry and Fishing

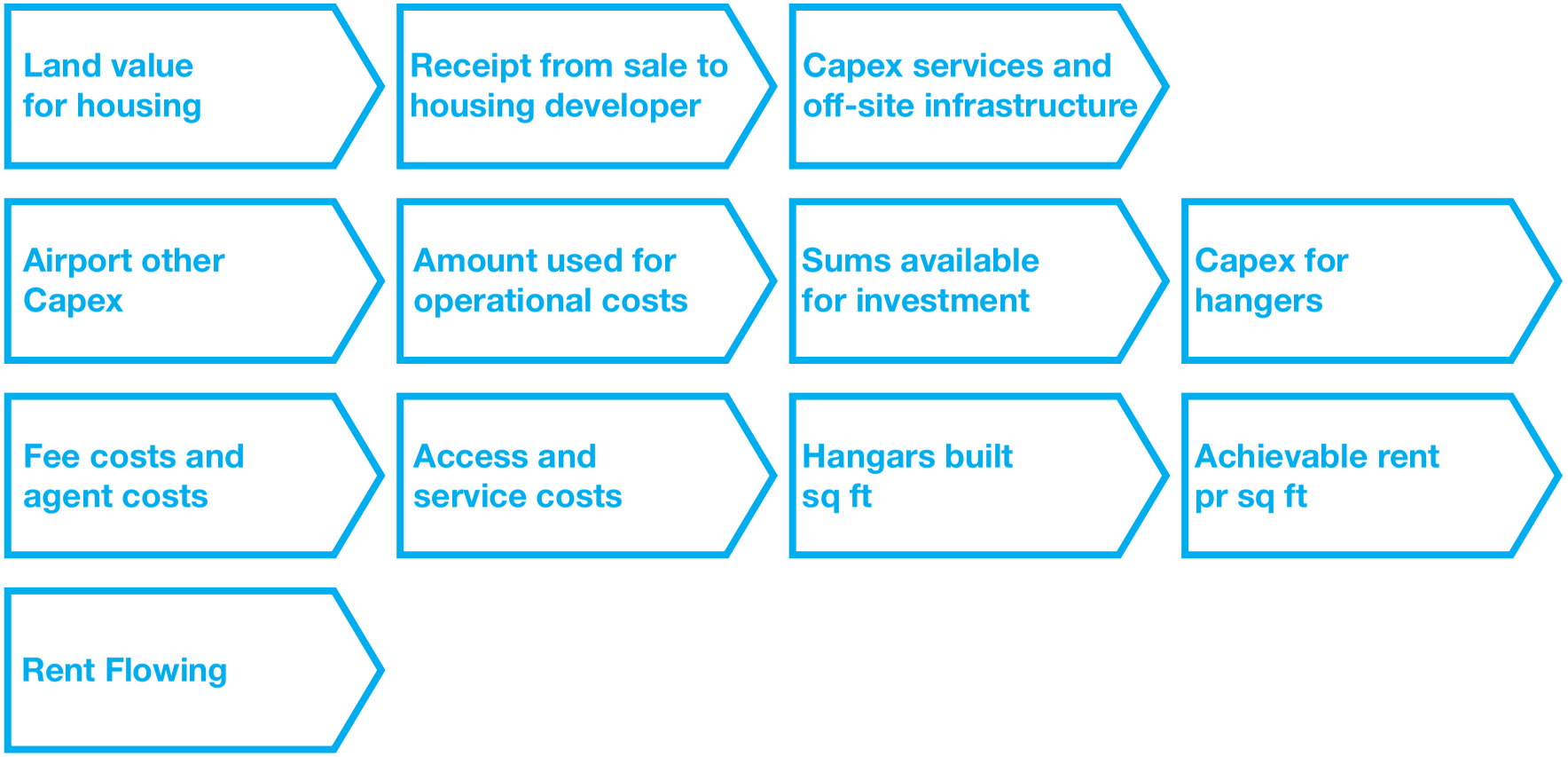
Summary

In summary patterns of employment change have been relatively volatile in Tees Valley over the longer term and compared to the trends experienced in the North East and the UK. Tees Valley has been significantly affected by the recession with a sharp decline in employment experienced relative to the UK as a whole. The employment structure of Tees Valley in 2012 shows relatively lower representation in the service sector of the economy including finance and insurance, professional and other private services. These general economic trends will have had a negative impact on the demand for flights to and from DTVA during the recession.

Tees Valley is now poised to emerge from the recession and potentially achieve employment growth rates that track the UK, and exceed the North East regional comparator. A range of sectors will potentially contribute to employment growth, including the transport and storage sector which encompasses logistics, warehousing and air transport related activities.

These findings highlight the continued importance of investment in the local economy, measures to support employment creation and a focus on supporting those “higher growth” sectors which can yield the best employment prospects for the area.

Appendix 7.1:
Development Logic Chain

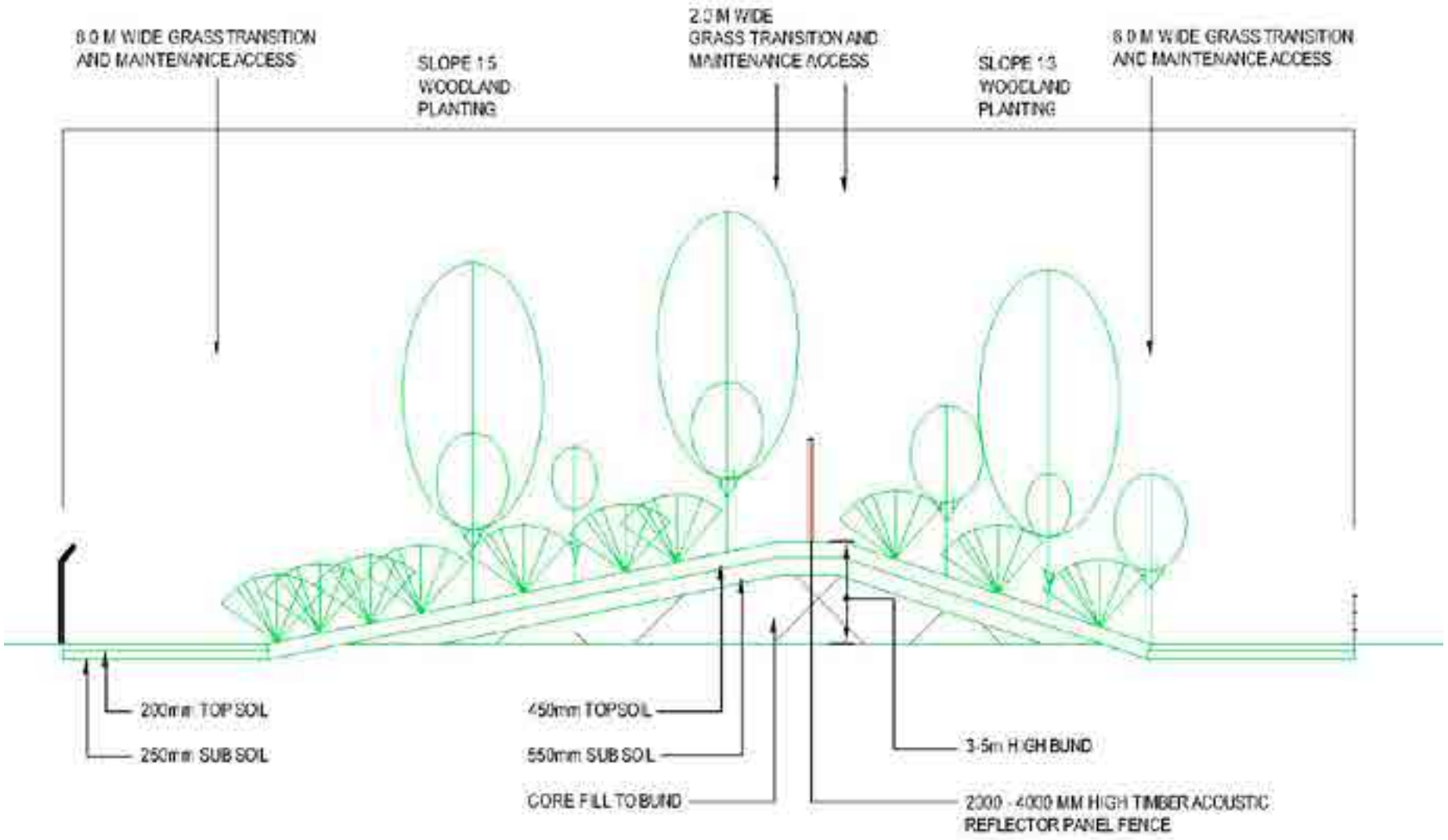

Land value for housing
Receipt from sale to housing developer
Capex services and off-site infrastructure
Airport other Capex
Amount used for operational costs
Sums available for investment
Capex for hangers
Fee costs and agent costs
Access and service costs
Hangars built sq ft
Achievable rent pr sq ft
Rent Flowing

Appendix 8.1:
The Indicative Framework Plan

N.B. Master Plan Area includes land within the ownership of Durham Tees Valley Airport and other ownerships in the vicinity.
Layouts shown are indicative .


Existing Buildings
Proposed Buildings
Housing Areas
Master Plan Area

Appendix 8.2
Indicative Acoustic Bund


8.0 M WIDE GRASS TRANSITION AND MAINTENANCE ACCESS
SLOPE 1:5 WOODLAND PLANTING
2.0 M WIDE GRASS TRANSITION AND MAINTENANCE ACCESS
SLOPE 1:3 WOODLAND PLANTING
8.0 M WIDE GRASS TRANSITION AND MAINTENANCE ACCESS
200mm TOPSOIL
250mm SUB SOIL
450mm TOPSOIL
550mm SUB SOIL
CORE FILL TO BUND
3-5m HIGH BUND
2000 - 4000 MM HIGH TIMBER ACOUSTIC REFLECTOR PANEL FENCE

Appendix 8.3

Approved Southside Planning Drawings

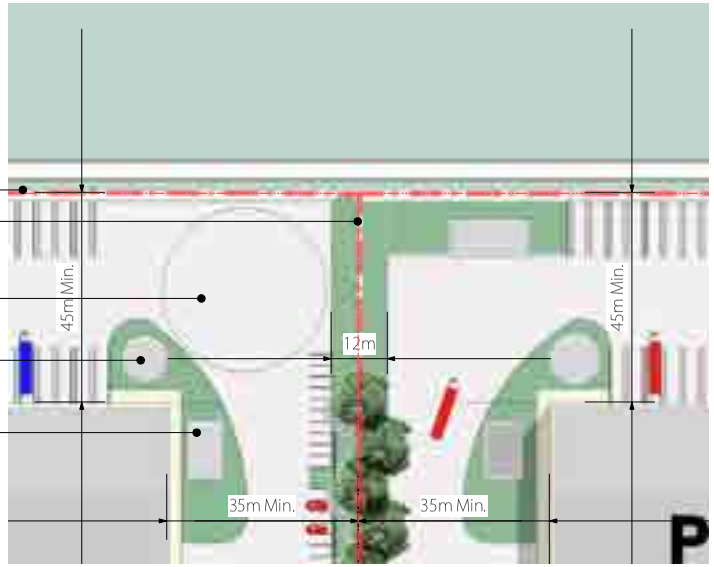
NOTES / REVISIONS

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Proposed Masterplan
SCALE:	1:2500@A1
DRWN: SK	CHKD: DAC REV'D: 31/03/08
JOB NO.	
DWG NO.	**S1596 / PO-04**

Plan Detail - Plot Access

Plan Detail - Roundabout At Lot End



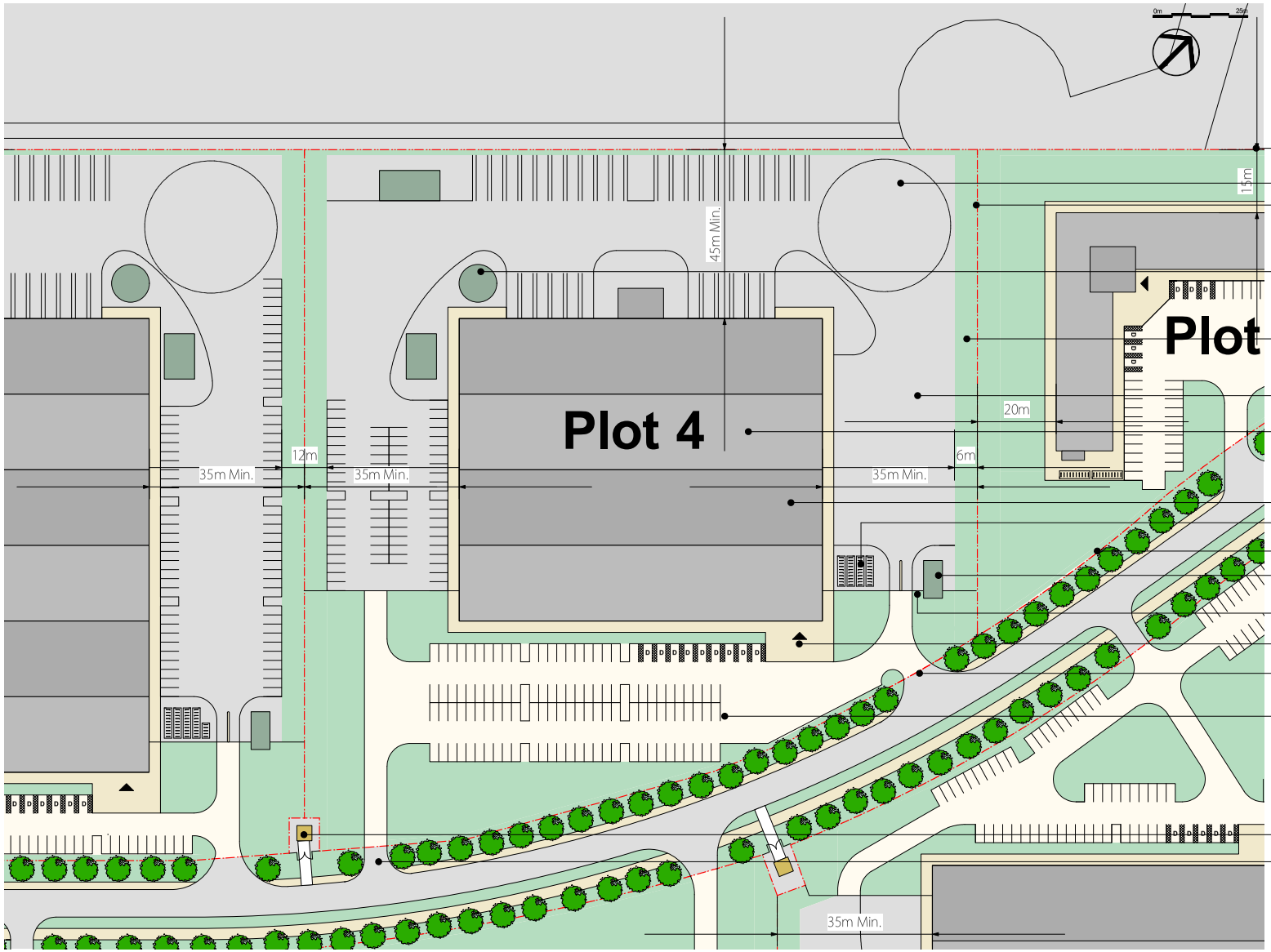
Plan Detail - End Plot To Reserved Airstrip Area

0m 25m

NOTES / REVISIONS

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Detail Plots - Access Road & Boundaries
SCALE:	1:500@A1
DRWN: SK	CHKD: DAC REV'D: 31/03/08
JOB NO.	
DWG NO.	**S1596 / PO-08**



NOTES / REVISIONS

Rev. A 19.06.08 Car Parking numbers revised. Disabled Parking bays & Cycle storage added.

- Airside Fence Type 'A' (Refer To Drawing D109490_PL_21)
- Turning Circle 35m Dia.
- Paladin Fence Type 'C'
- External Plant
- Landscape Buffer Zone
- Concrete Hardstand
- Plot 4 (Refer To Drawings S1596 / PO-12 & 13)
- Kingspan KS1000 LP/CR Roof Cladding in Meadowland Colour
- Cycle Storage (80 Spaces)
- Paladin Fence Type 'C'
- Security Lodge (Refer To Drawing S1596 / PO-27)
- Security Fence (Refer To Drawing S1596 / PO-27)
- Main Entrance
- Plot Access
- Plot 4 Car Parking (178 Spaces including 9 Disabled Bays)
- Substation (Refer To Drawing S1596 / PO-27)
- Plot Access

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Detail Plot Layout - Plot 4
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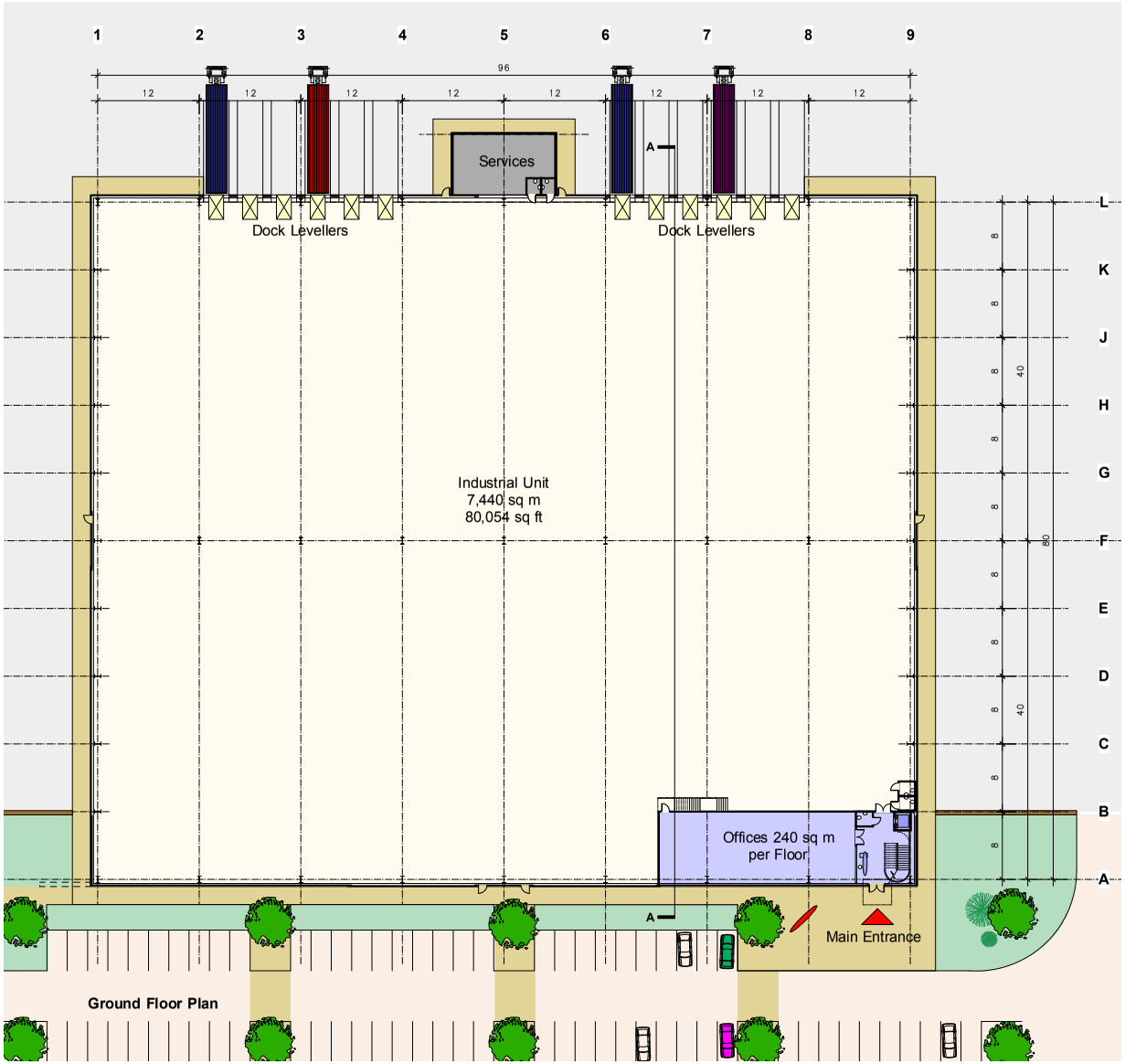
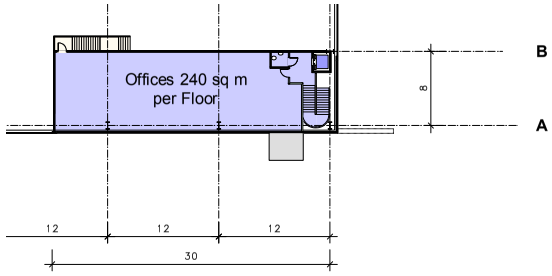
DRWN: SK	CHKD: DAC REVD: 31/03/08
JOB NO.	
DWG NO.	**S1596 / PO-11A**



0m 15m

NOTES / REVISIONS

Plot 4



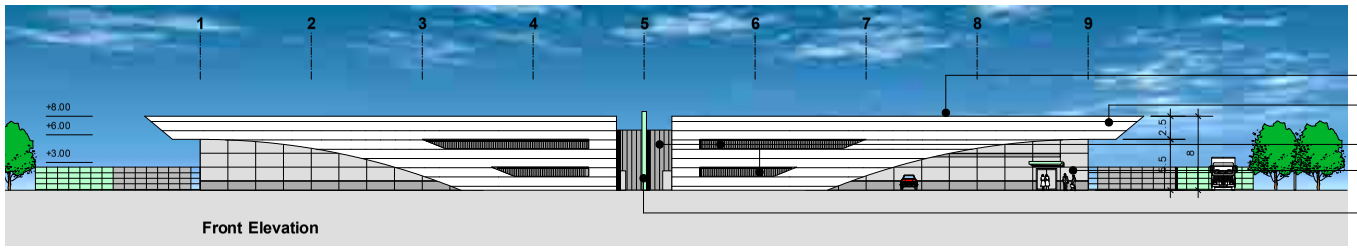
Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Plot 4 - Floor Plans
SCALE:	1:250@A1
DRWN: SK	CHKD: DAC REV'D: 31/03/08
JOB NO.	
DWG NO.	S1596 / PO-12

0m 15m

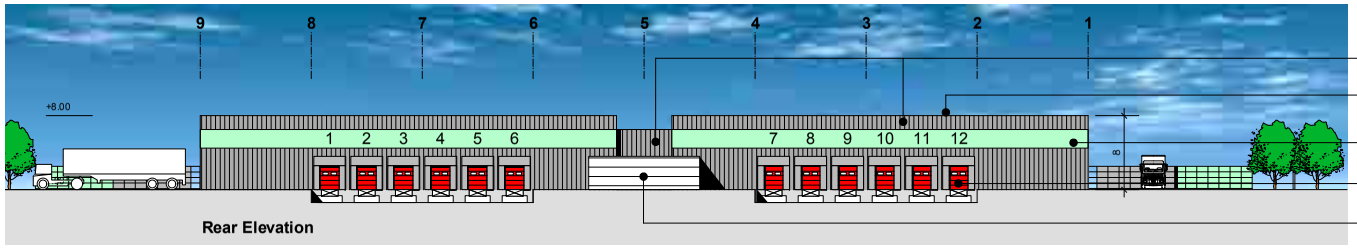
NOTES / REVISIONS
Rev. A 25.06.08 Building height revised.

Plot 4



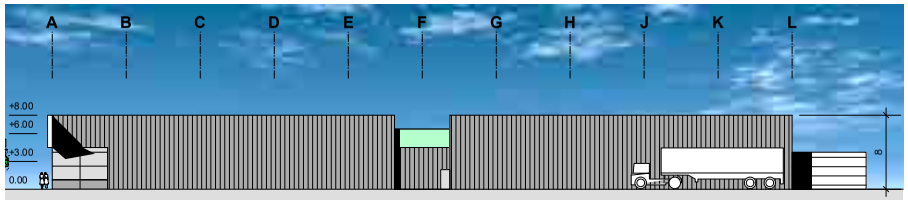
Front Elevation

Kingspan KS1000 LP/CR Roof Cladding in Meadowland Colour
Kingspan KS1000 Flat Panels in Pearl/White Colour Ral 9010
Kingspan KS1000 RW Vertical Wall Panels in Diamond Metallics Colour Ral 9023
Double Glazing PPC Aluminium Frame Curtain Walling in Ral 9023 With Clear Glazing Fritted at floor levels
Kingspan KS1000 RW Flat Panel in Pastel Green Colour Ral 6019

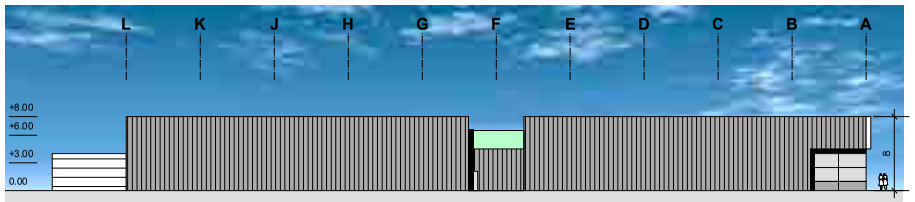


Rear Elevation

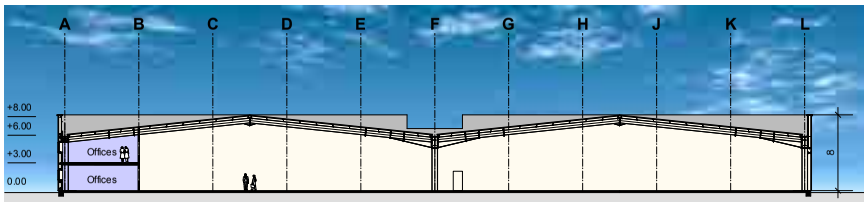
Kingspan KS1000 RW Vertical Wall Panels in Metallic Diamond Colour Ral 9023
Kingspan KS1000 LP/CR Roof Cladding in Meadowland Colour
Kingspan KS1000 RW Flat Panel in Pastel Green Colour Ral 6019
Loading Bay Doors PPC Frame in Diamond Metallics Colour Ral 9023 Doors to be in Red Colour Ral 3000
Kingspan KS1000 Flat Panels in Pearl/White Colour Ral 9010



Side Elevation



Side Elevation

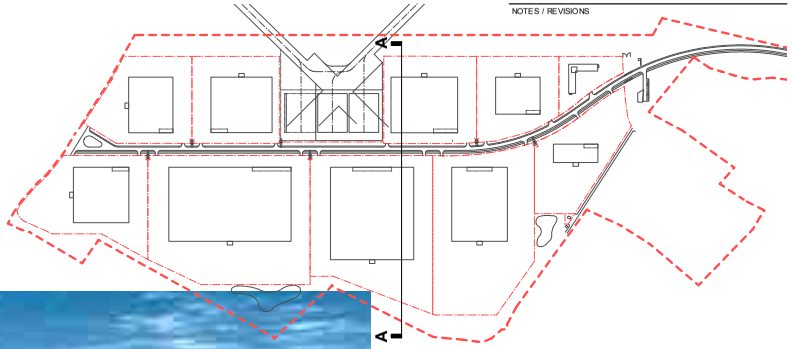


Section A-A

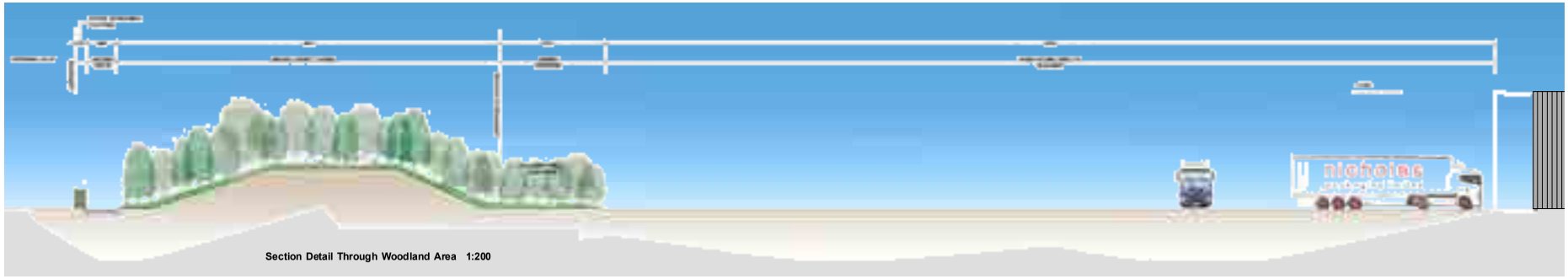
Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE: Skylink International Business Park
DRAWING TITLE: Plot 4 - Elevations & Section
SCALE: 1:250@A1
DRWN: SK CHKD: DAC REV'D: 31/03/08
JOB NO.
DWG NO. S1596 / PO-13A

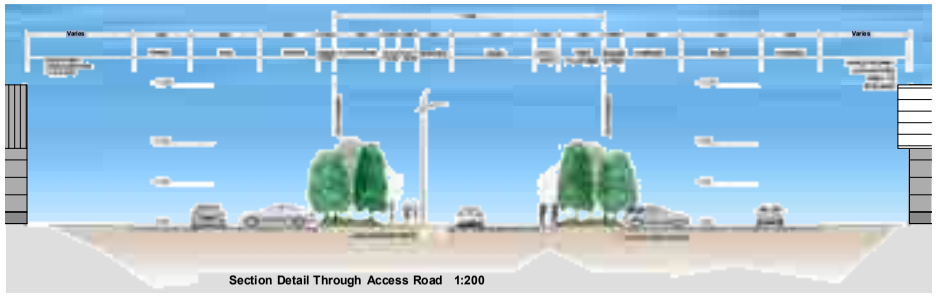
NOTES / REVISIONS



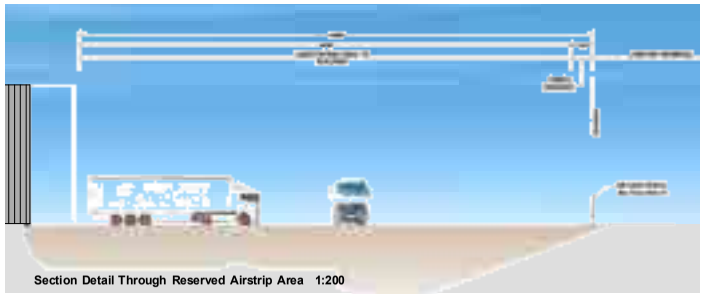
Section A-A 1:1000



Section Detail Through Woodland Area 1:200



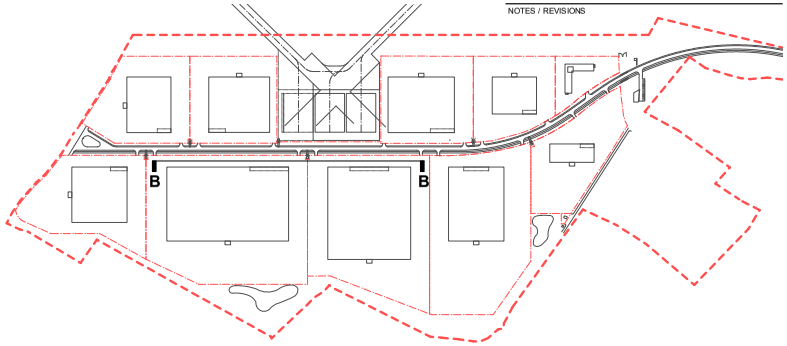
Section Detail Through Access Road 1:200



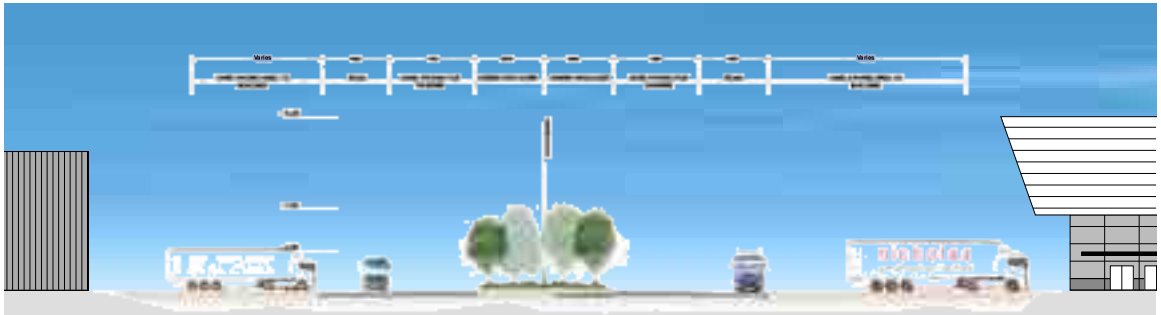
Section Detail Through Reserved Airstrip Area 1:200

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Site Cross Section / Detail Sections
SCALE:	1:1000/1:200@A1
DRWN: SK	CHKD: DAC REV'D: 31/03/08
JOB NO.	S1596 / PO-09
DWG NO.	



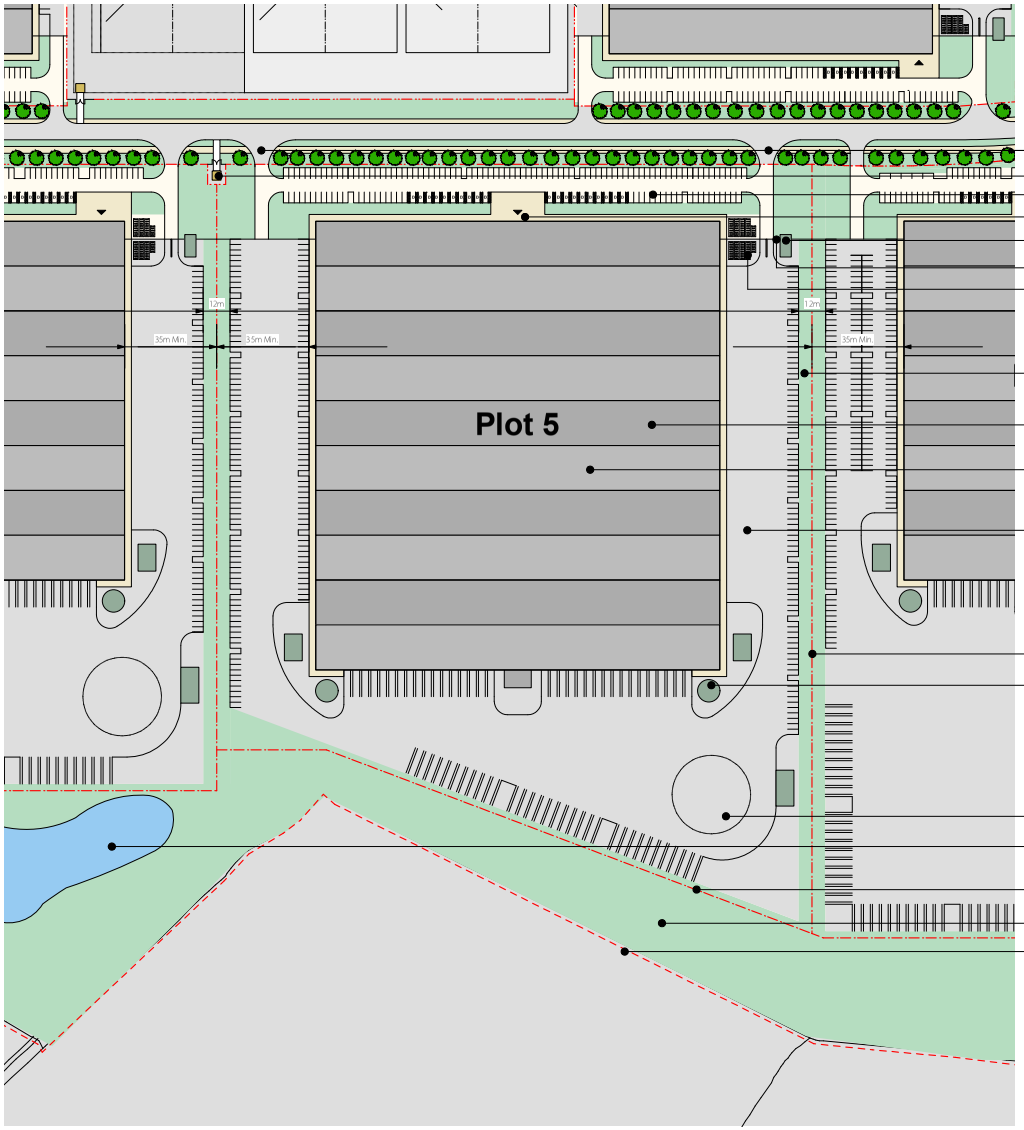
Section B-B 1:1000



Section Detail Through Plot 1:200

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Site Long Section / Detail Sections
SCALE:	1:1000/1:200@A1
DRWN: SK	CHKD: DAC REVD: 31/03/08
JOB NO.	
DWG NO.	S1596 / PO-10



Plot Access

Substation (Refer To Drawing S1596 / PO-27)

Plot 5 Car Parking
(368 Spaces including 19 Disabled Bays)

Main Entrance

Security Lodge
(Refer To Drawing S1596 / PO-27)

Security Fence
(Refer To Drawing S1596 / PO-27)

Cycle Storage (184 Spaces)

Landscape Buffer Zone

Plot 5
(Refer To Drawings S1596 / PO-18 & 19)

Kingspan KS1000 LP/CR Roof Cladding
in Meadowland Colour

Concrete Hardstand

Paladin Fence Type 'C'

External Plant

Turning Circle 35m Dia.

Drainage Pond

Paladin Fence Type 'C'

Landscape Mounding to Boundary
(Refer To Drawing S1596/PO/DEP-29)

Landscape & Highway Fence Type 'B'

NOTES / REVISIONS

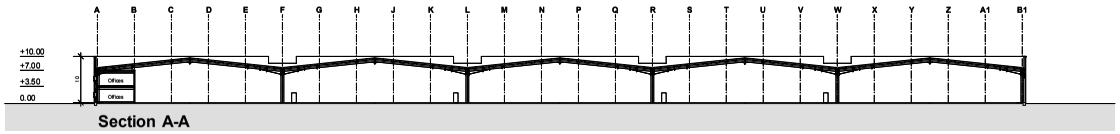
Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Detail Plot Layout - Plot 5
SCALE:	1:1000 @A1
DRWN: SK	CHKD: DAC REVD: 19/05/08
JOB NO.	
DWG NO.	**S1596 / PO-38**

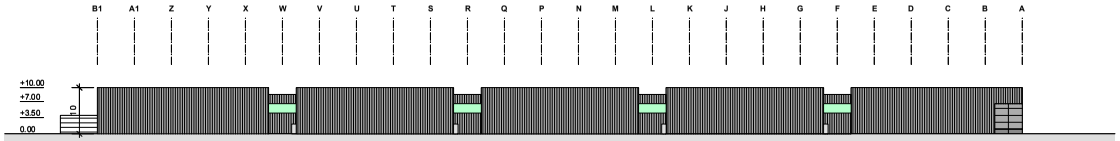
0m 25m

NOTES / REVISIONS
Rev. A 25.06.08 Building height revised.

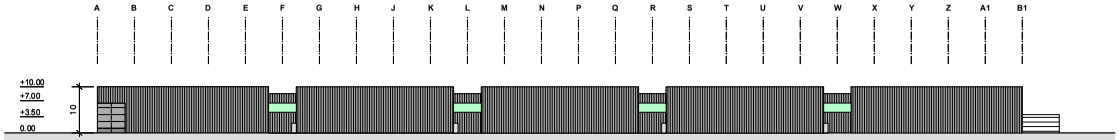
Plot 5



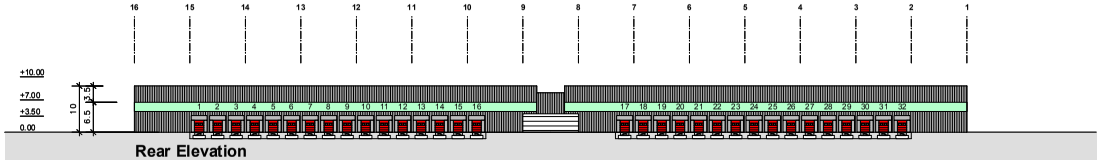
Section A-A



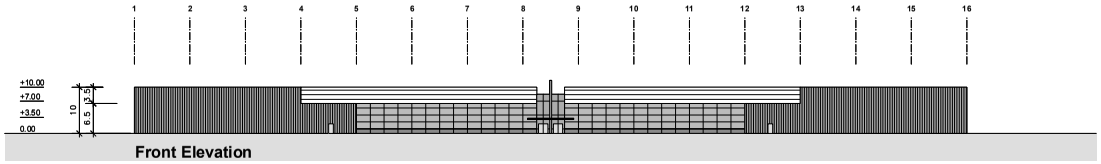
Side Elevation



Side Elevation



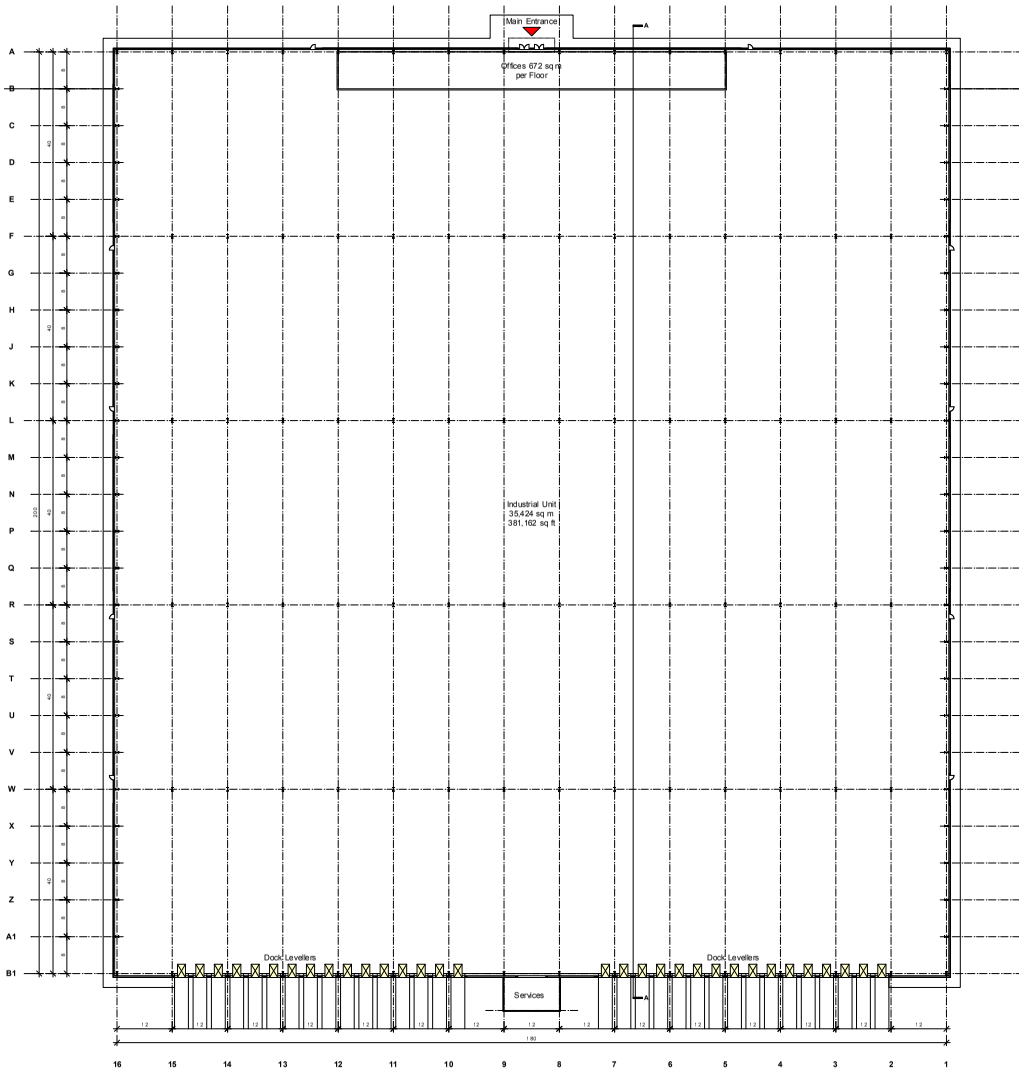
Rear Elevation



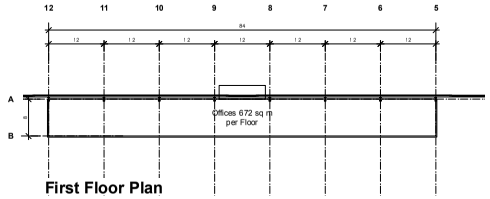
Front Elevation

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Plot 5 - Elevations & Section
SCALE:	1:500@A1
DRWN: SK	CHKD: DAC REVD: 31/03/08
JOB NO.	
DWG NO.	S1596 / PO-19A



Ground Floor Plan



First Floor Plan

0m 25m

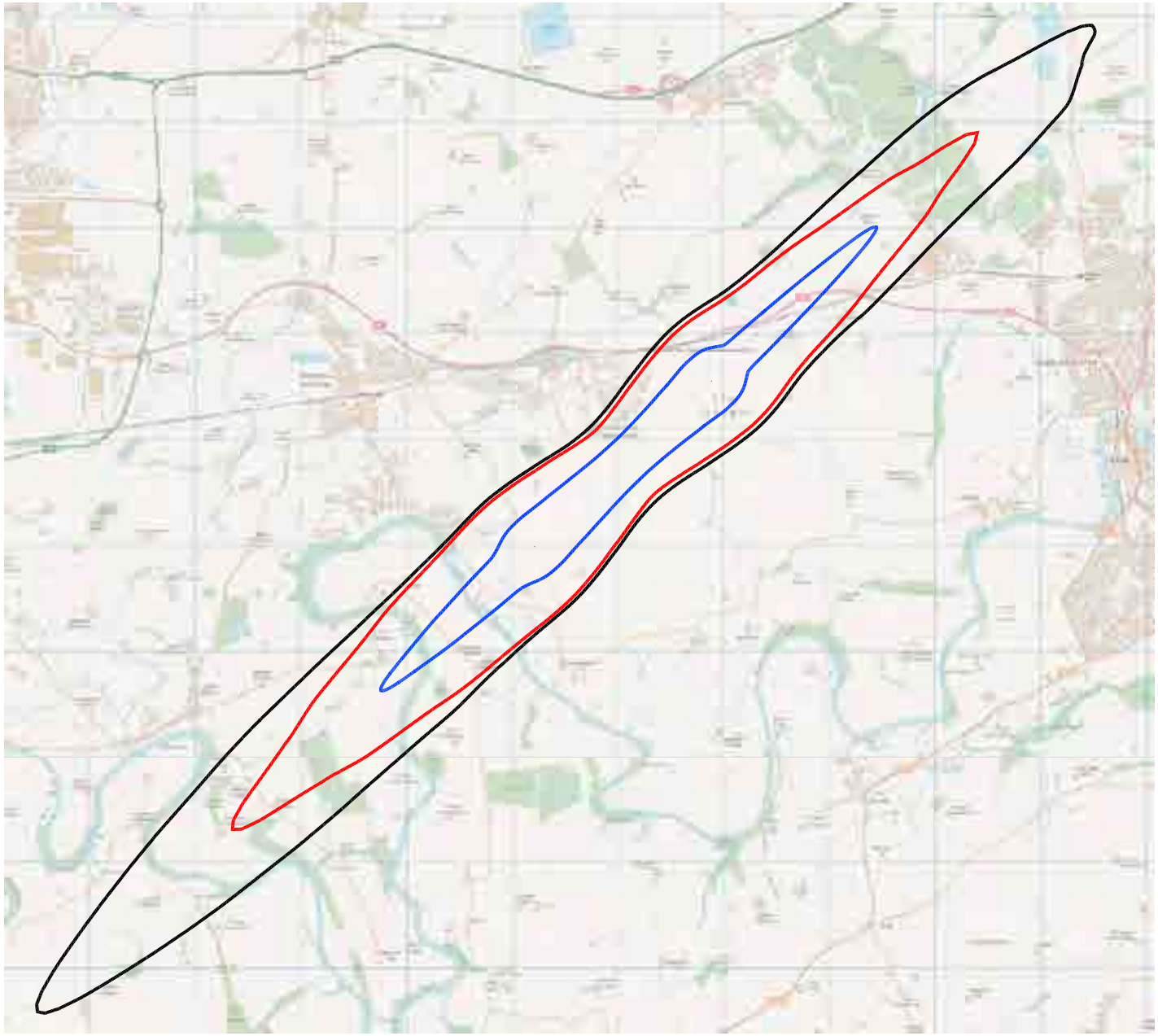
NOTES / REVISIONS

Plot 5

Skylink International Business Park, Durham Tees Valley Airport

JOB TITLE:	Skylink International Business Park
DRAWING TITLE:	Plot 5 - Floor Plans
SCALE:	1:500@A1
DRWN: SK	CHKD: DAC REVD: 31/03/08
JOB NO.	
DWG NO.	S1596 / PO-18

Appendix 11.1:
Noise Contour Modelling



LEGEND:

- "2004" Noise Contour, 57 dB $L_{Aeq,16h}$
- 2015 Noise Contour, 57 dB $L_{Aeq,16h}$
- 2020 Noise Contour, 57 dB $L_{Aeq,16h}$

REVISIONS

Bickerdike Allen Partners
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DTVA
Master Plan - 2013

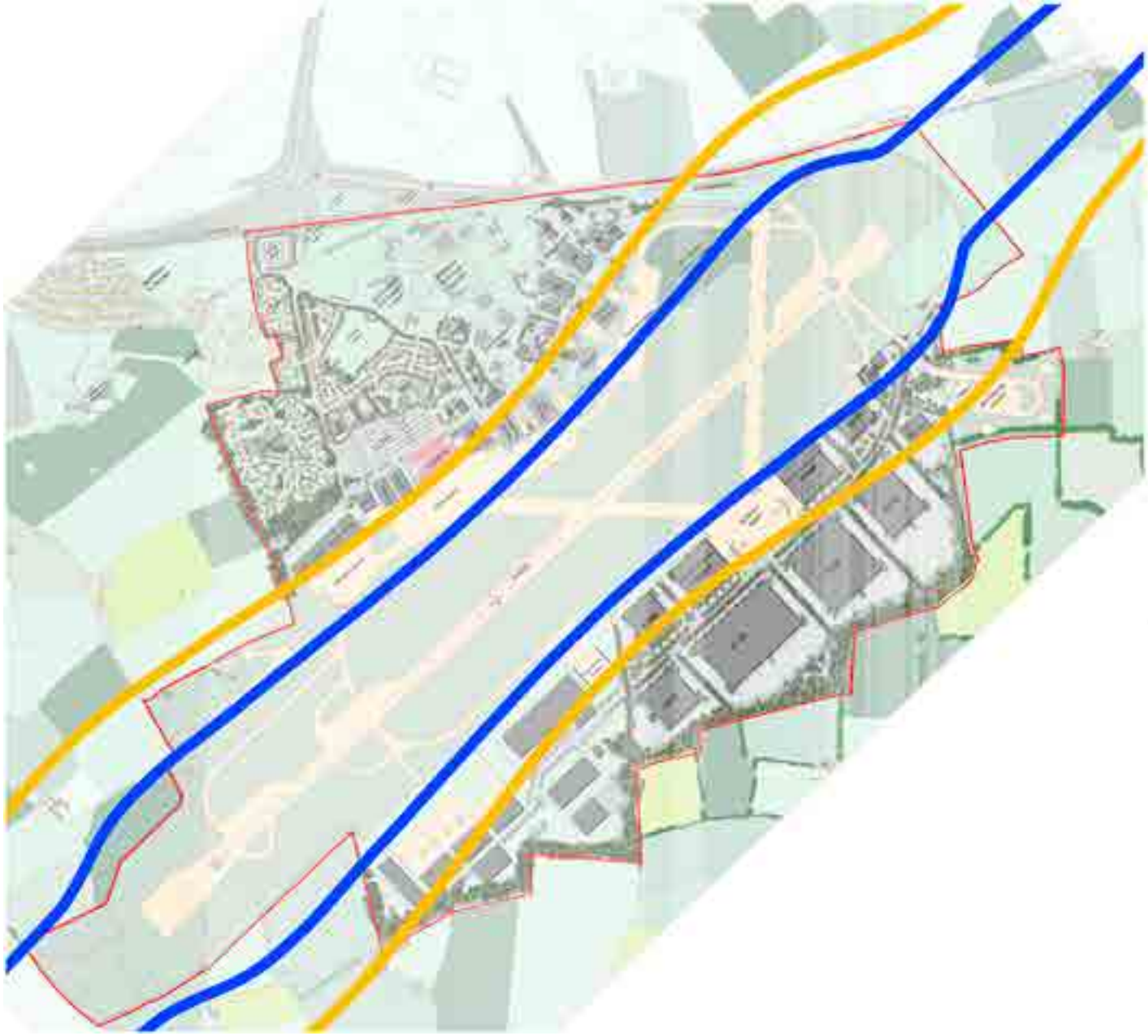
Daytime Aircraft Noise Contours
Comparison of Baseline "2004",
Approved 2015 & Forecast 2020

DRAWN: DC CHECKED: JGC

DATE: 16/10/2013 SCALE: 1:50000@A4

FIGURE No:

A9671/MP/11.1



LEGEND:

Daytime Noise Contour, 57 dB $L_{Aeq,16h}$

Night-time Noise Contour, 48 dB $L_{Aeq,8h}$

REVISIONS

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Allen
Partners
Architecture
Acoustics
Technology

DTVA
Master Plan - 2013

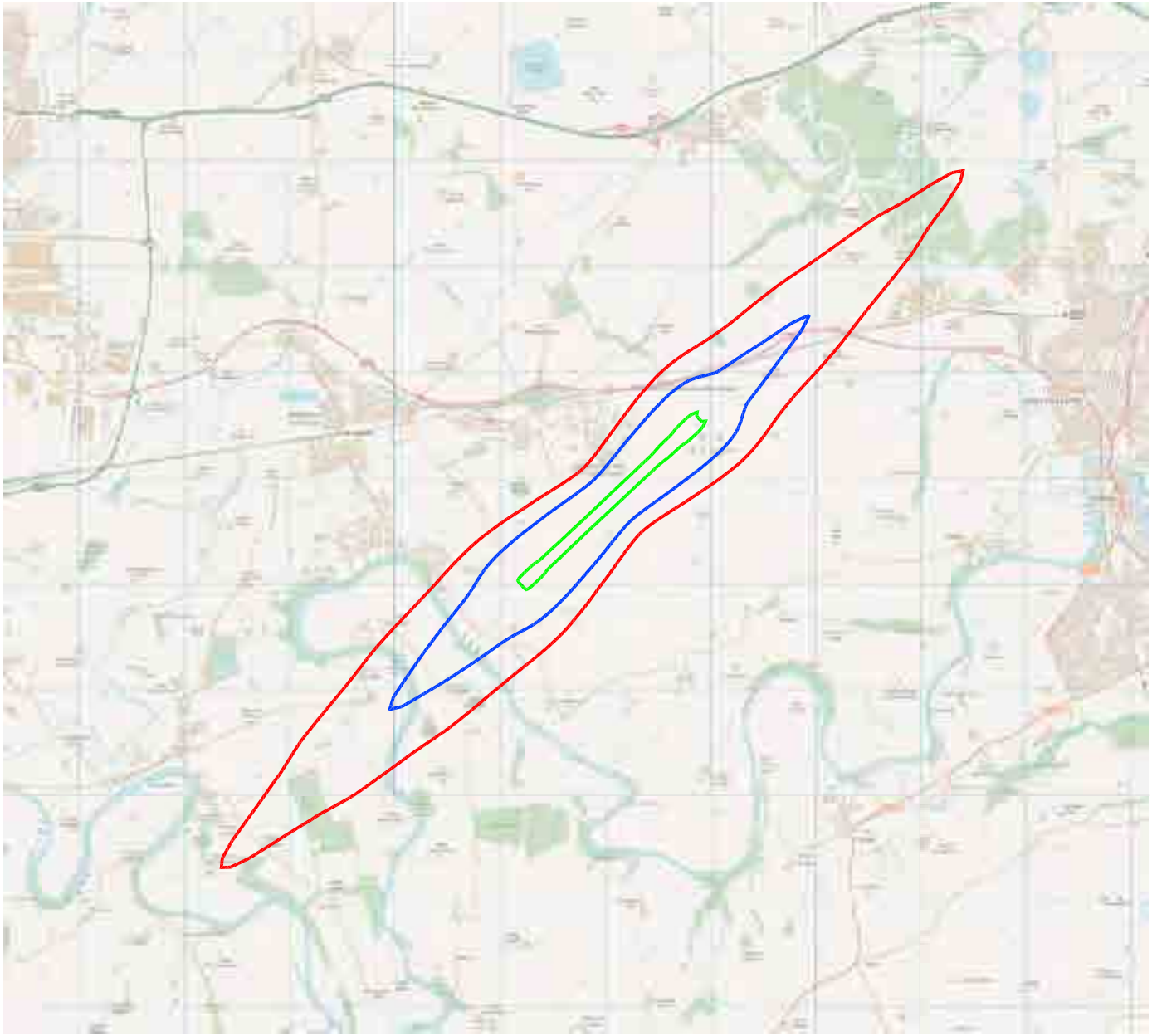
Aircraft Noise Contours
Comparison Daytime and Night-time
Forecast 2020

DRAWN: EV CHECKED: DC

DATE: 14/04/2014 SCALE: Not to Scale

FIGURE No:

A9671/MP/11.2



LEGEND:

- "2004" Noise Contour, 57 dB $L_{Aeq,16h}$
- "2004" Noise Contour, 63 dB $L_{Aeq,16h}$
- "2004" Noise Contour, 69 dB $L_{Aeq,16h}$

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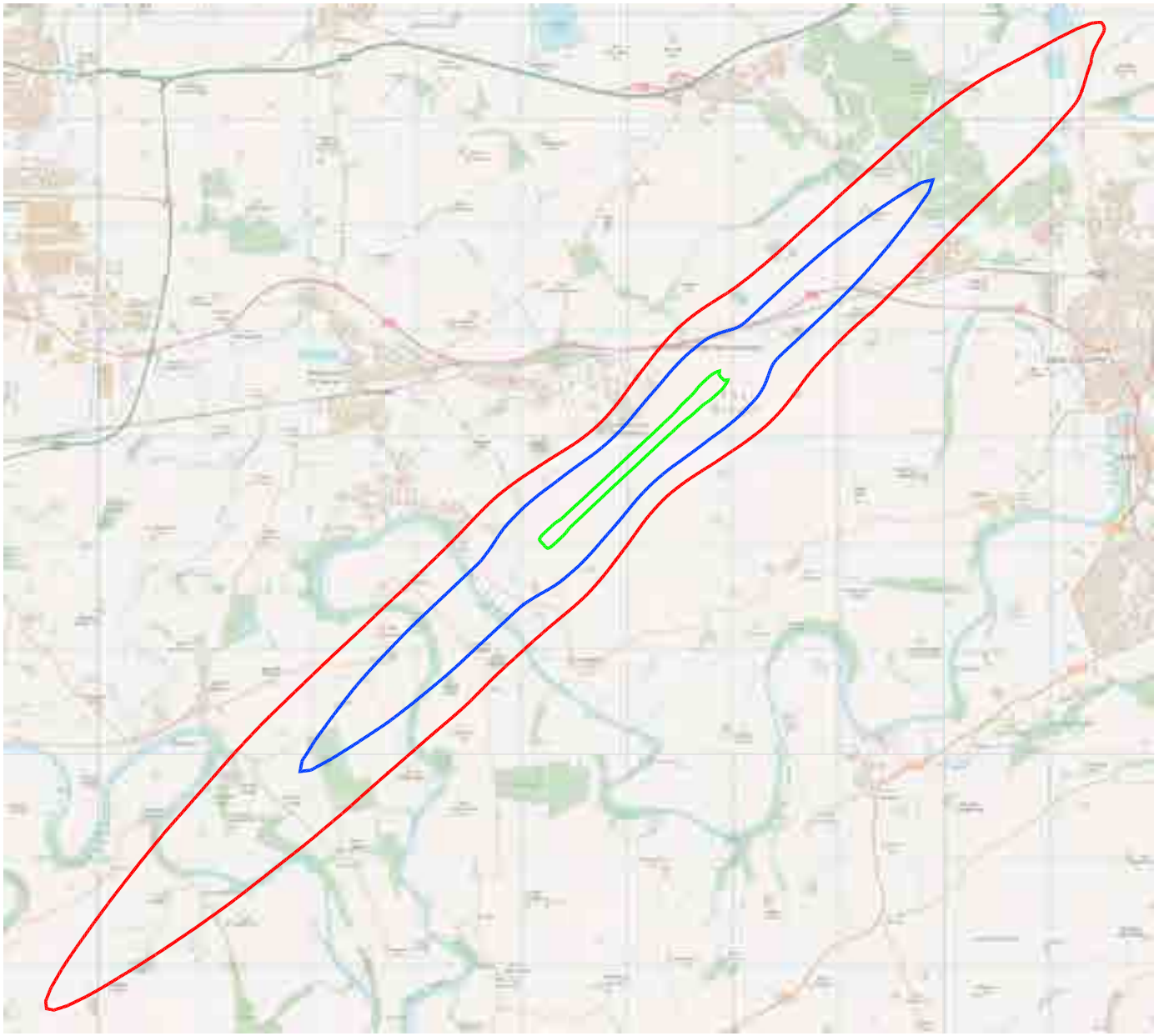
DTVA
Master Plan - 2013

Daytime Aircraft Noise Contours
Baseline "2004"

DRAWN: DC	CHECKED: JGC
DATE: 16/10/2013	SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.1



LEGEND:

- 2015 Noise Contour, 57 dB $L_{Aeq,16h}$
- 2015 Noise Contour, 63 dB $L_{Aeq,16h}$
- 2015 Noise Contour, 69 dB $L_{Aeq,16h}$

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DTVA
Master Plan - 2013

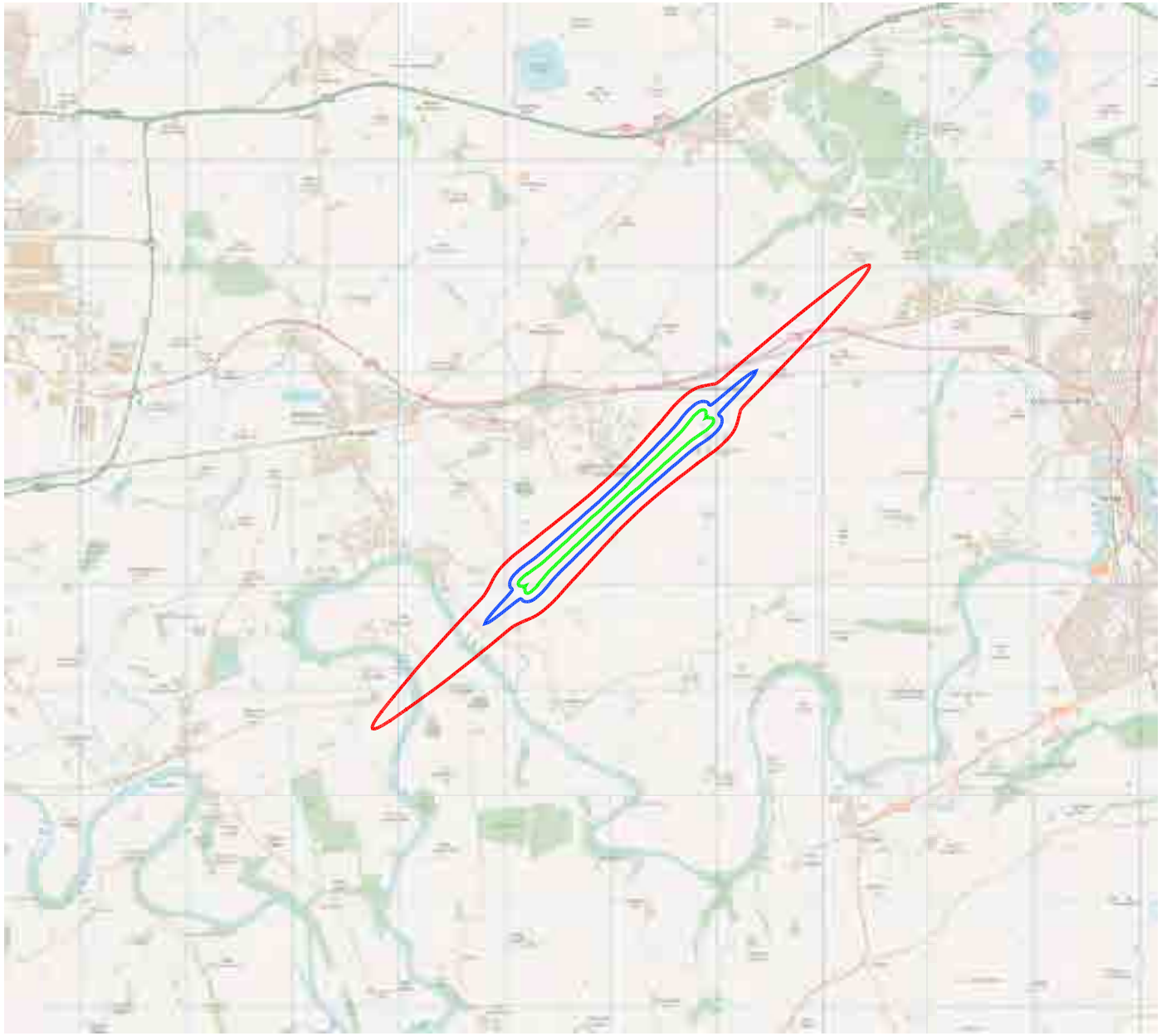
Daytime Aircraft Noise Contours
Approved 2015

DRAWN: DC CHECKED: JGC

DATE: 16/10/2013 SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.2



LEGEND:

- 2020 Noise Contour, 57 dB $L_{Aeq,16h}$
- 2020 Noise Contour, 63 dB $L_{Aeq,16h}$
- 2020 Noise Contour, 69 dB $L_{Aeq,16h}$

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DTVA
Master Plan - 2013

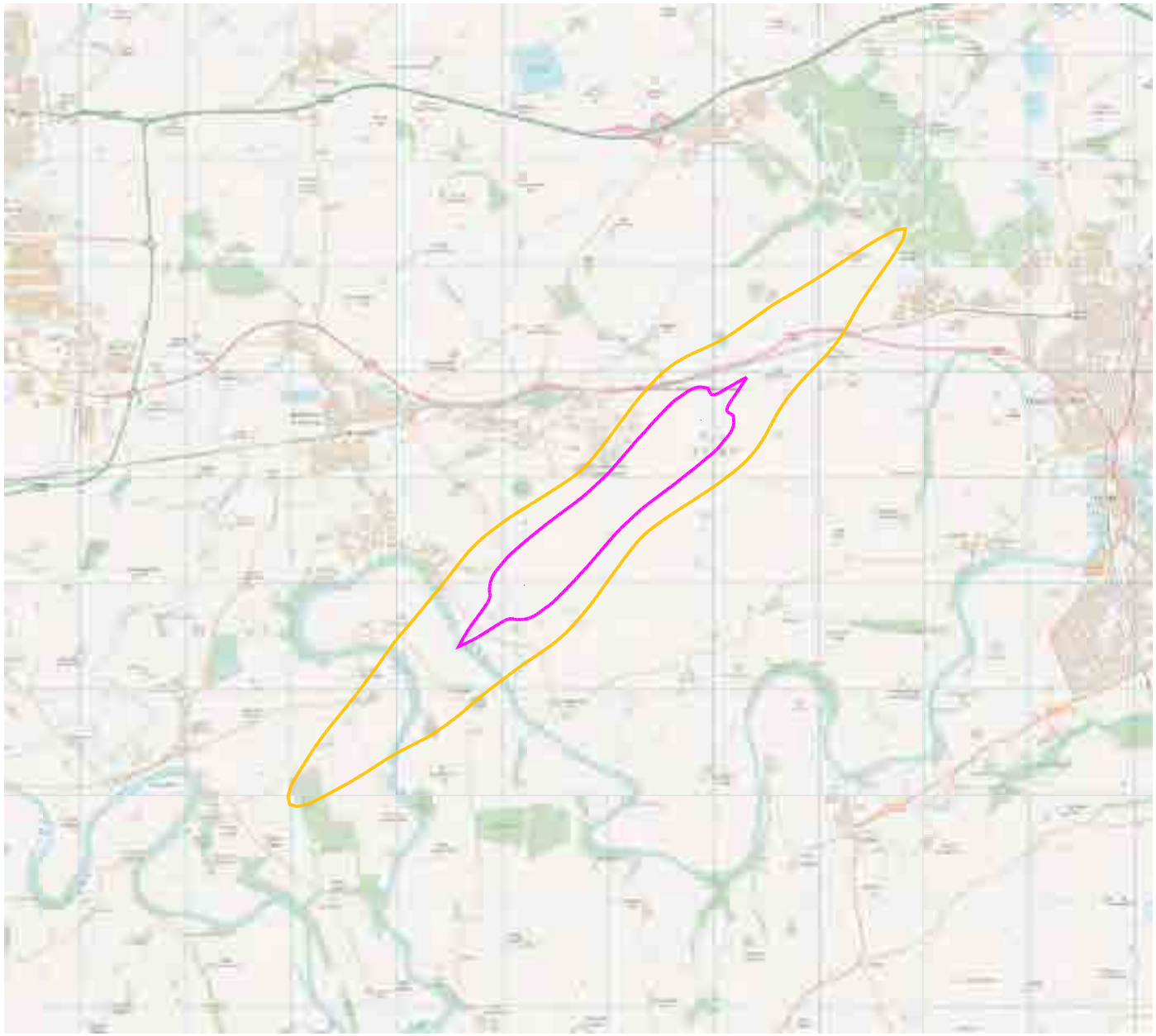
Daytime Aircraft Noise Contours
Forecast 2020

DRAWN: DC
CHECKED: JGC

DATE: 16/10/2013
SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.3



LEGEND:

- 2004 Noise Contour, 48 dB $L_{Aeq,8h}$
- 2004 Noise Contour, 55 dB $L_{Aeq,8h}$

REVISIONS

Bickerdike Allen Partners
Architecture Acoustics Technology

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DTVA
Master Plan - 2013

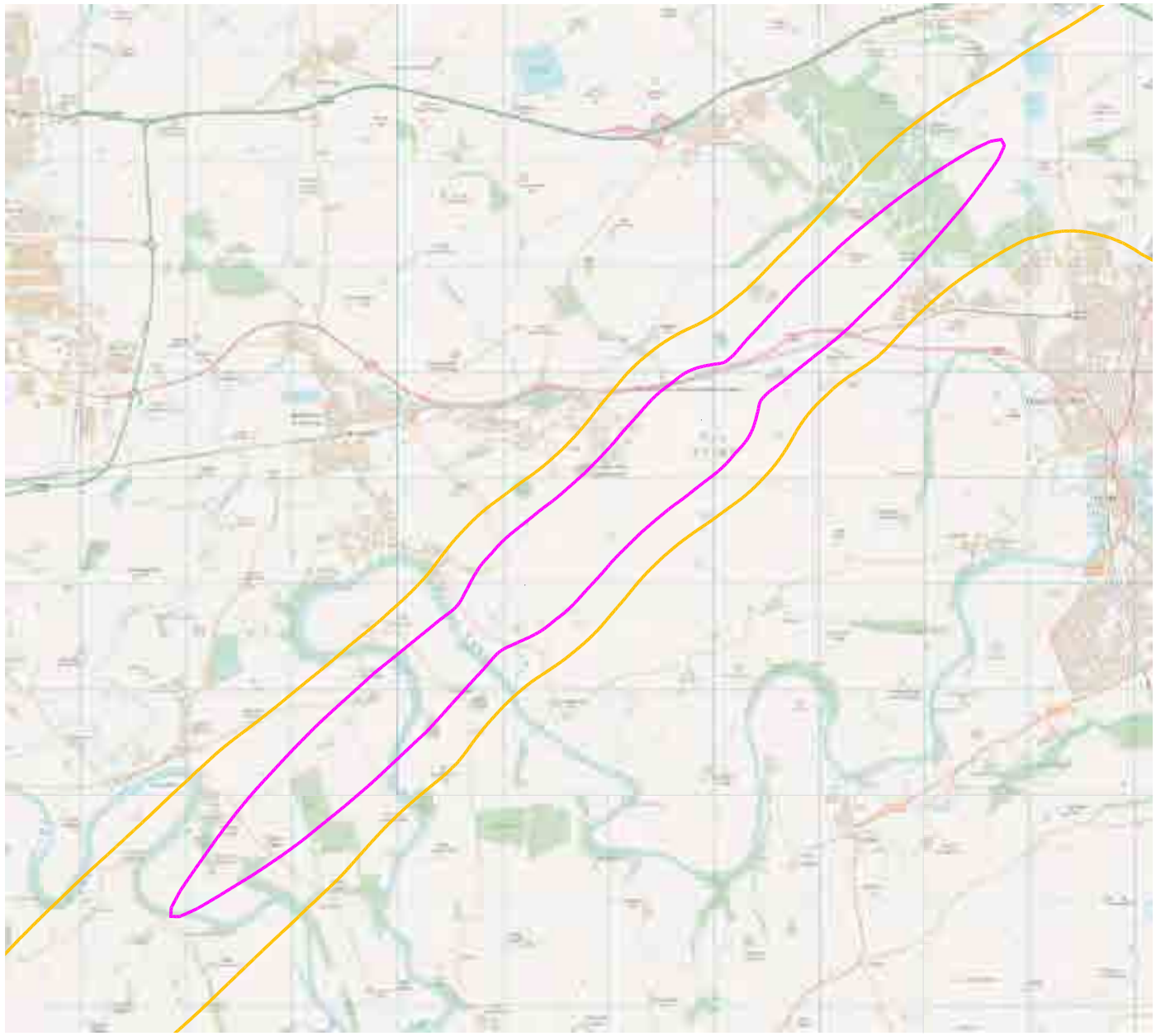
Night-time Aircraft Noise Contours
Baseline 2004

DRAWN: DC CHECKED: JGC

DATE: 16/10/2013 SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.4



LEGEND:

- 2015 Noise Contour, 48 dB $L_{Aeq,8h}$
- 2015 Noise Contour, 55 dB $L_{Aeq,8h}$

REVISIONS

Bickerdike Allen Partners
Architecture Acoustics Technology

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DTVA
Master Plan - 2013

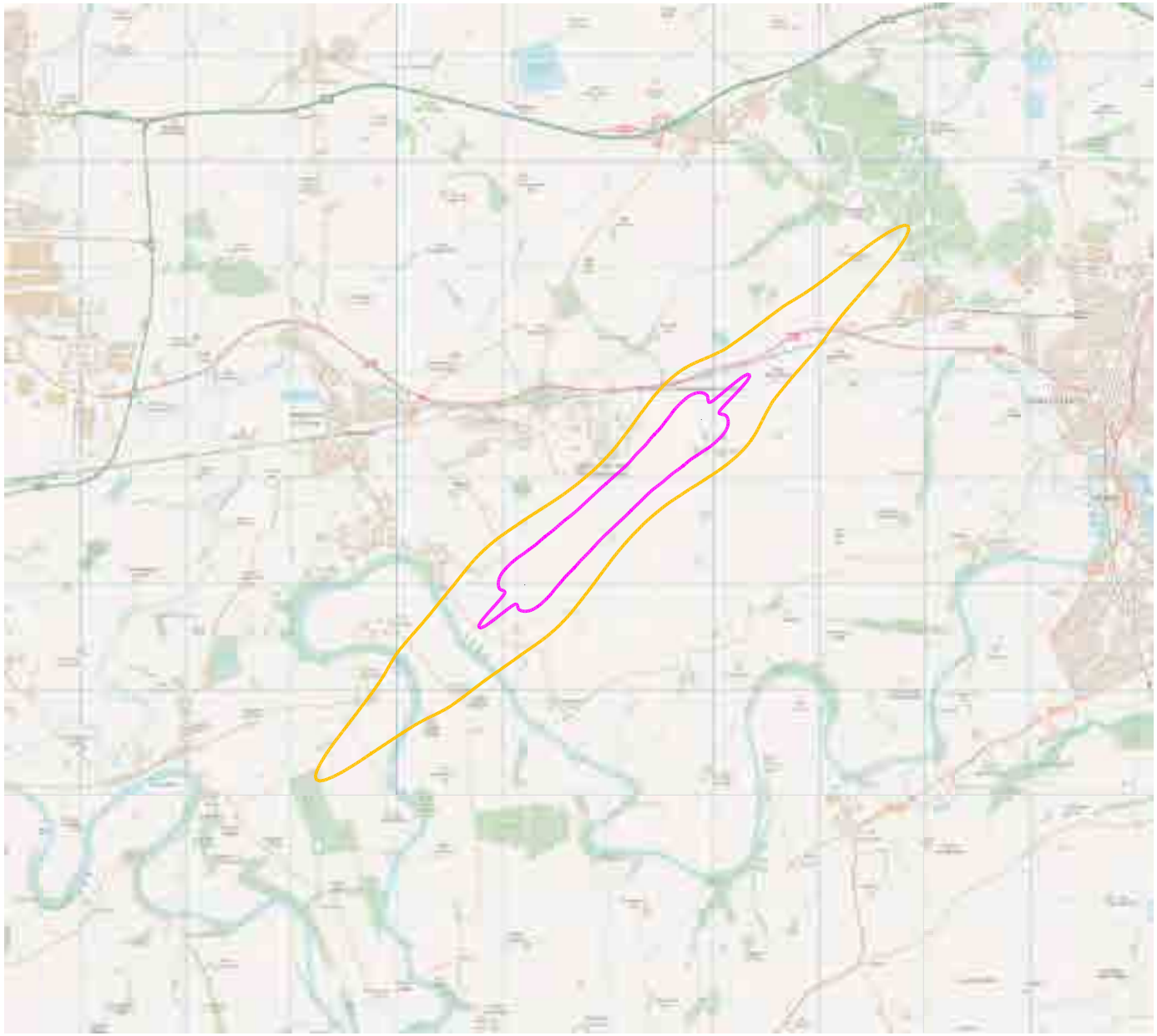
Night-time Aircraft Noise Contours
Approved 2015

DRAWN: DC CHECKED: JGC

DATE: 16/10/2013 SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.5



LEGEND:

- 2020 Noise Contour, 48 dB $L_{Aeq,8h}$
- 2020 Noise Contour, 55 dB $L_{Aeq,8h}$

REVISIONS

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Architecture Acoustics Technology

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DTVA
Master Plan - 2013

Night-time Aircraft Noise Contours
Forecast 2020

DRAWN: DC CHECKED: JGC

DATE: 16/10/2013 SCALE: 1:50000@A4

FIGURE No:

A9671/MP/A11.6

Glossary and Abbreviations

Glossary

Aircraft Movement

An aircraft taking off or landing at an airport. For aircraft traffic purposes one arrival and one departure are counted as two movements.

Aircraft Stand

A position on the apron at which aircraft can be located where all normal servicing activities are carried out, including the enplaning and deplaning of passengers. Stands may be remote or adjacent to the terminal building.

Airside

The restricted area of the Airport to which the public do not have general access and which includes the Customs Examination Area.

Air Quality Standards

A nationally defined set of concentrations for nine pollutants below which health effects do not occur or are minimal.

Air Quality Objectives

A nationally defined set of health-based concentrations for nine pollutants, seven of which are incorporated in Regulations, setting out the extent to which the standards should be achieved by a defined date, taking into account costs, benefits, feasibility and practicality. There are also vegetation-based objectives for sulphur dioxide and nitrogen oxides.

Air Taxi Movement

Movement by an aircraft of less than 15 tonnes MTWA operating on a non-scheduled service. These are predominantly sole-use charter operations.

Air Transport Movement (ATM)

Landing or take-offs of aircraft engaged on the transport of passengers, cargo or mail on commercial terms. All scheduled movements, including those operated empty, loaded charter and Air Taxi movements are included.

Ambient Noise

The totally encompassing sound in a given situation at a given time usually composed of sound from many sources near and far. This is usually represented by the equivalent continuous sound level (LAeq(T)).

Annual Passenger Throughput

Refers to total 2-way passengers passing through the Airport in a year.

Apron

A defined area on the aerodrome provided for the stationing of aircraft for the embarkation of passengers, the loading and unloading of baggage and cargo and for parking.

"A" Weighted Decibel (dB(A))

Internationally accepted unit for most noise measurement and represents the sound pressure level weighted to correspond to the frequency response of the human ear. A difference of 3dB(A) may just be noticeable and a difference of 10dB(A) represents a doubling or halving of subjective loudness.

B1 Development

Buildings to be occupied by land uses within Class BI of the 1987 Use Classes Order – defined as offices (except financial and professional services), research and development of products and processes and any industrial process being a use which can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash dust or grit.

B2 Development

Buildings to be occupied by land uses within Class B2 of the 1987 Use Classes Order – defined as offices (except financial and professional services), research and development of products and processes and any industrial process being a use which can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash dust or grit.

B8 Development

Buildings to be occupied by land uses within Class B8 of the 1987 Use Classes Order – defined as storage and distribution including, wholesale warehouses, distribution centres and repositories.

Background Noise

The underlying sound in a given situation at a given time usually composed of sound from many distant sources. This is usually represented by the sound level exceeded for 10% the time (LA90,T).

Bund

An embankment which acts as a visual and/ or noise screen.

Business Aviation Movements

Non-commercial movements operated on aircraft of 2730kgs MTWA or greater (with no upper weight limit) conducting business operations (e.g. aircraft owned and operated by Shell or Ford).

Cargo Movement

Cargo Movement is a flight carrying solely freight and/or mail and associated cargo attendants.

Decibel (dB)

Logarithmic ratio used to relate a sound pressure level to a standard reference level.

Development Plan Document (DPD)

A plan prepared by a Local Planning Authority to guide development and land use.

Domestic Services

Are services flown entirely within the United Kingdom, Isle of Man and Channel Islands.

Drop Off/Pick Up (DOPU)

Passengers dropped-off and picked-up at an airport by family or friends.

Environmental Impact Assessment (EIA)

A process for identifying and evaluating the likely effects of a proposed development on the environment in accordance with the Town and Country Planning (Environmental Assessment Regulations) 1999.

Environmental Statement (ES)

A statement prepared under the above EIA Regulations including a description of the project; the measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects; the data required to identify and assess the main effects which the project is likely to have on the environment; an outline of the main alternatives studied and an indication of the main reason for the option taken forward (taking into account the environmental effects); and a non-technical summary of the information.

Freight

Is the weight of property carried on an aircraft including; e.g. the weight of vehicles, excess baggage and diplomatic bags, but excluding mail and passengers' and crews' permitted baggage. Freight in transit through the airport on the same aircraft is excluded.

General Aviation (GA) Movements

Commercial movements including Air-Taxis, positioning and local movements and all non-commercial movements including private aircraft operations and aero-club instructional flights.

Gross Value Added (GVA)

Estimated annual financial contribution to the economy arising from the development.

Instrument Landing System (ILS)

A precise navigation system for aircraft used under instrument flight rules.

LAeq(T) – Equivalent Continuous Sound Level

LAeq,16h – Equivalent Continuous Sound Level is a notional steady sound level which would cause the same A-weighted sound energy to be received as that due to the actual and possibly fluctuating sound from 07.00 to 23.00 (day-time). It can also be used to relate periods of exposure and noise level. Thus, for example, a halving or doubling of the period of exposure is equivalent in sound energy to a decrease or increase respectively of 3dB(A) in the sound level for the original period.

LAmax – Maximum Sound Level

The maximum sound level measured on the A-weighted scale occurring during an (aircraft) event.

Landside

That area of the Airport to which the public have general access.

Listed Building

A building or structure included on the Statutory List of Buildings of Special Architectural or Historic Interest compiled by the Department of Culture, Media and Sport. Graded I, II* and II.

Local Movements

Commercial flights undertaken for press, survey, agricultural and fisheries flying, or public entertainment purposes, and flights performed under a Police Air Operators Certificate.

Military Movements

Movements exclusively for military purposes using military aircraft.

Mitigation Measures

Actions proposed to reduce or avoid adverse impacts and to enhance the beneficial impacts arising from a development.

New Homes Bonus

The New Homes Bonus is a grant paid to Councils for new homes built.

Nitrogen Dioxide

A common atmospheric pollutant covered by the Air Quality Regulations.

Northside

The Master Plan area which lies to the north of the runway

Official Movements

Movements for official purposes (excluding Air transport Movements) by British or foreign civil Government Departments; e.g. movements by aircraft of the Civil Aviation Authority's Flight Calibration Services, the Queen's Flight and flights performed under a Police Air Operators Certificate.

Other Non-Commercial Movements

Non-revenue earning movements by air transport operations or manufacturers for the sole purpose of moving their own personnel or stores from one place to another, for delivery, refuelling or maintenance of empty aircraft and air transport flights forced to return to base by bad weather, engine failure or other causes.

PM_{10}

Particulate matter less than 10 micrometres aerodynamic diameter.

Positioning movements

Movements by aircraft moving into position for scheduled or charter transport flights or returning to base after such flights, including empty Air Taxi Movements.

Private Movements

Movements for purely non-commercial purposes by private owners or other private aircraft operations, excluding aero-clubs movements.

Public Safety Zone (PSZ)

Areas of land at the end of runways in which development is restricted in order to minimise the number of people on the ground at risk of death or injury in the event of an aircraft crash in take-off or landing.

Scheduled Services

Are those performed according to a published timetable, including those supplementary thereto, available for use by members of the public.

Southside

The Master Plan area which lies to the south of the runway

SUDS

Sustainable Urban Drainage Systems are a sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than what has been the conventional practice of routing run-off through a pipe to a watercourse.

Surface Water Run-Off

Water which travels across the ground, rather than seeping into the soil.

Taxiway

A defined path on an aerodrome established for the

Abbreviations

AADT	Annual Average Daily Traffic
APD	Air Passenger Duty
AQMA	Air Quality Management Area
ATC	Air Traffic Control
ATM	Air Transport Movement
APF	Aviation Policy Framework
BAGA	Business and General Aviation
CAA	Civil Aviation Authority
CIA	Chemical Industries Association
CTV	Connect Tees Valley
dB	Decibel
DBC	Darlington Borough Council
DCS	Darlington Core Strategy
DEFRA	Department of the Environment, Food and Rural Affairs
DfT	Department for Transport
DPD	Development Plan Document
DTVA	Durham Tees Valley Airport
EIA	Environmental Impact Assessment
EMEA	Europe, Middle-East, Africa
ES	Environmental Statement
EU	European Union
EZ	Enterprise Zone
FAA INM	Federal Aviation Administration Integrated Noise Model
FBO	Fixed Based Operator
FTE	Full-time Equivalent
GA	General Aviation
GDP	Gross Domestic Product
GDPO	General Permitted Development Order
GVA	Gross Value Added
ha	Hectares
HCA	Homes and Communities Agency
HGV	Heavy Goods Vehicle
ICAO	International Civil Aviation Organization
IFTC	International Fire Training Centre
$L_{Aeq,T}$	Equivalent “A” weighted Continuous Sound Pressure Level over specified time T
L_{Amax}	Maximum “A” Weighted Sound Pressure Level
LPA	Local Planning Authority
LTP	Local Transport Plan
MoD	Ministry of Defence
MPG	Darlington Councils Making and Growing Places DPD
MPPA	Million Passengers Per Annum
NHB	New Homes Bonus
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
ONS	Office for National Statistics
OPITO	Offshore Petroleum Industry Training Organisation
ppa	Passengers Per Annum
PSR	Primary Surveillance Radar
PSZ	Public Safety Zone
PUDO	Pick Up Drop Off Car Park
RELDD	Stockton Regeneration and Environmental Local Development Document
RFFS	Rescue and Fire Fighting Service
SBC	Stockton-On-Tees Borough Council
SLTP	Stockton on Tess Local Transport Plan
TVU	Tees Valley Unlimited
VPH	Vehicles Per Hour
µg/m3	Microgrammes Per Cubic Metre
WYG	White Young Green

Document produced by:

Turley

Durham Tees Valley Airport Master Plan