

GatewayEast
Economic Blueprint

FINAL DRAFT

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1 Introduction

This Blueprint for GatewayEast sets out how Sheffield City Region (SCR), Peel Land and Property Ltd (Peel Group), Doncaster Sheffield Airport Ltd (DSAL) and Doncaster Metropolitan Borough Council intend to work together to realise the economic opportunity of this growth cluster.

GatewayEast is the single largest development land opportunity in SCR, located 3 miles to the south east of Doncaster Town Centre. At its heart is Doncaster Sheffield Airport (DSA), the growth anchor and one of the UK's newest and fastest growing airports. The 2018 Draft DSA Masterplan sets out a diverse and visionary proposition for a c.1m sqm (c.11m sqft) fully sustainable mixed-use community. This Blueprint seeks to set out how partners will work together to realise the ambition set out in this masterplan.

The core ambition is for GatewayEast to develop as an innovation-led growth cluster which could eventually become an established innovation district to build on and complement the successes that have been achieved over the past decade at the Advanced Manufacturing Innovation District (AMID).

The SCR Strategic Economic Plan (SEP) sets out the ambition to co-develop a series of new innovation and growth clusters, each with their own specialisms. A key part of this, is the potential for GatewayEast to become a cluster for low carbon aviation and associated technology, building on the Government's commitment to decarbonise transport and the ability for airports to become drivers of productivity growth.

National Aviation policy and the Independent International Connectivity Commission report both encourage development of Airports and Ports as economic clusters and suggest that such clustering in turn helps to improve the productivity of the wider UK economy. As recently as March 2020, in the DfT document *'Decarbonising Transport'* the Government has reaffirmed that *'Airport expansion is a core part of boosting our global connectivity and levelling up across the UK.'* Economic development agencies globally have been actively pursuing policies to encourage Innovation District formation close to commercial airports.

The SEP recognises that we must bring forward a combination of mixed-use developments, large strategic opportunities and strategic regeneration in key growth areas. We need to focus on a small number of big opportunities - sites and developments that have the scale to benefit the wider city region. This will demand a much more joined up approach, as outlined in this GatewayEast Blueprint, between local authorities and other public agencies to share resources and jointly deliver, as well as private sector investment.

This Blueprint therefore represents a package of interventions, including infrastructure, which partners will work together on in order to seek to realise the potential of the GatewayEast innovation-led growth cluster.

2 GatewayEast Vision

2.1 GatewayEast Innovation Cluster Ambition

GatewayEast is a 1,600 acre (647 ha) site that is ideally connected to the national strategic road network (SRN) via Great Yorkshire Way (completed in Spring 2018) and to international markets via Doncaster Sheffield Airport (DSA). Already home to around 100 businesses, the operational airport presence has already been the catalyst in beginning to develop a high value aviation-linked cluster that today includes Cessna Textron's UK Service Centre, 2Excel, National Police Air Service and Redline Assured Security.

Fully integrated into the submission Doncaster Local Plan (to be adopted in Winter 2020), the GatewayEast opportunity extends to c.543,000 sqm (c.5.85m sqft) of commercial development over and above what already exists, together with up to 3,000 new market and affordable homes, the first 1,200 of which are expected to be delivered during the Local Plan Period up to 2035.

In early 2020, Peel Group secured planning approval for 325,000 sqm (3.5m sqft) of additional advanced production and logistics space on GatewayEast, adding to its previously permitted consents for 55,750 sqm (0.6m sqft) already under development. This is all in addition to commercial space and several hundred residential units consented and delivered in accordance with the original airport planning permission. The Masterplan vision (launched for consultation in 2018) establishes a comprehensive mixed-use development opportunity, with distinct employment and residential hubs formed around a Central Plaza and community hub for retail, hospitality, leisure and community/health services. All core components required for the development of a genuinely sustainable innovation cluster, as seen in the Advanced Manufacturing Innovation District (AMID).

GatewayEast already has excellent national and international road and air connectivity. DSA itself anchors the overall proposition. Its airside infrastructure and unconstrained airspace combine to provide a real opportunity to transform it from a regional airport into an intercontinental airport of scale, providing global connectivity for both passengers and freight. This will be further differentiated by the proposal for a dedicated East Coast Main Line (ECML) rail link to the airport.

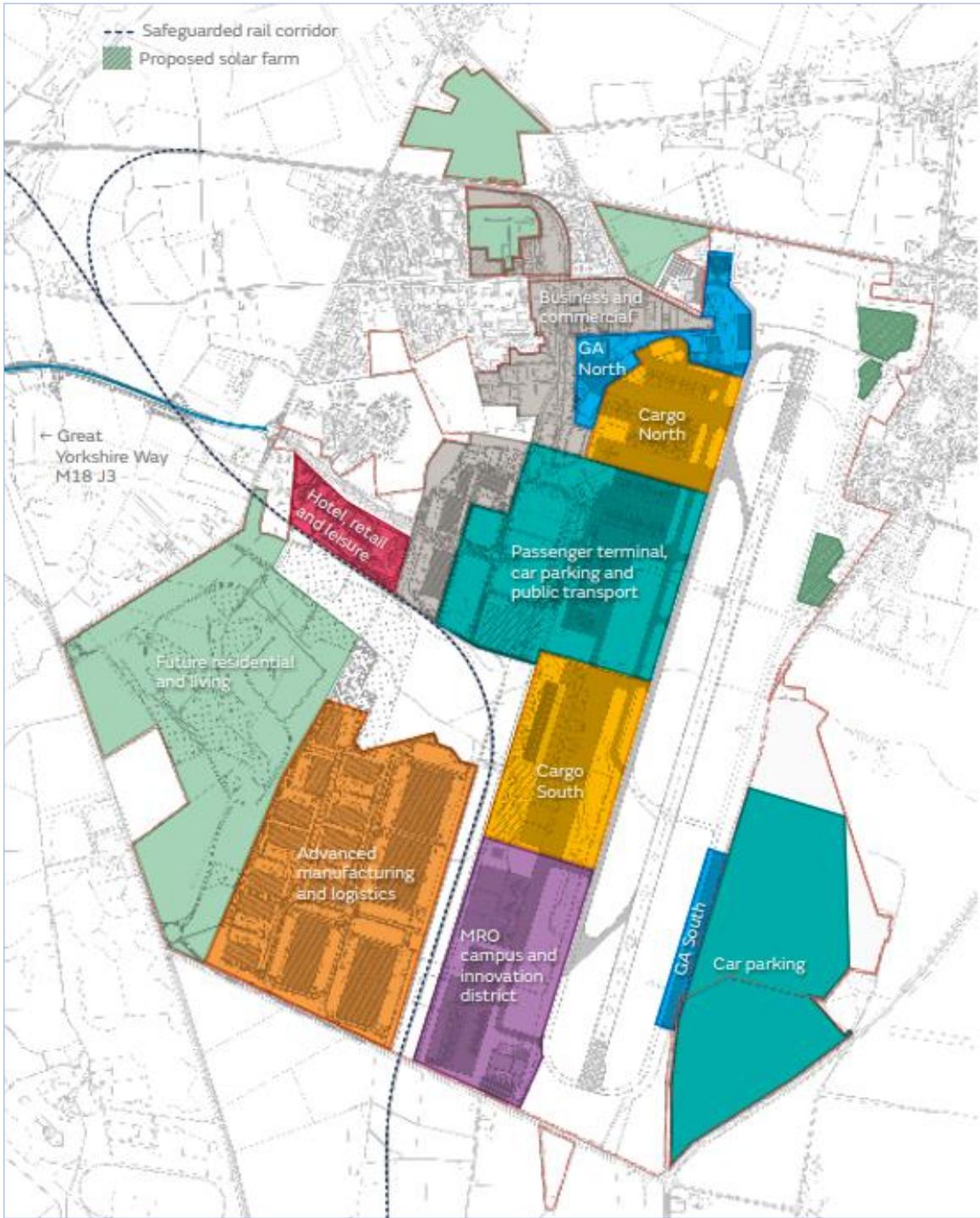
The GatewayEast Rail project has the potential to be SCR's most economically transformational transport scheme in terms of creating jobs and growth in the short, medium and long term and the Strategic Outline Business Case assumes an annual air passenger throughput (PAX) of c12m per year, compared to a current throughput of c1.25m. However, in terms of runway capacity, DSA could accommodate in excess of 25m PAX. GatewayEast Rail will also form another addition to SCR's capacity for freight infrastructure, alongside nearby freight terminal capacity at Iport and in Doncaster itself.

The locational advantage of GatewayEast coupled with the proposed rail link and airport expansion ambition means that GatewayEast would be well placed should Government policy progress as expected with the establishment of a number of Freeports around the country. The Government recently launched a consultation exercise on the establishment of Freeports and a joint SCR response has been submitted to alongside a Prospectus outlining the benefits of locating a Freeport at GatewayEast.

The existing aviation cluster at GatewayEast has largely formed through market forces, demonstrating the competitive advantage of road and air connectivity and the presence of a growing anchor tenant airport. GatewayEast Rail will dramatically extend the reach of GatewayEast and its appeal to businesses, but at present the location lacks an innovation trigger needed to stimulate the development of this cluster.

The DSA masterplan allows flexibility for key innovation assets to form, and with an airport anchor, a growing aviation cluster and a hugely important sustainability agenda, there is real and tangible potential for an initial aerospace innovation focus. A key trigger component will be the agreement to work with the University of Sheffield in developing a low carbon aviation research facility at GatewayEast.

The roadmap for how we achieve this innovation cluster ambition is set out in this Blueprint.



2.2. GatewayEast Economic Potential

The ambition for each of the SCR Growth Clusters is that they have been identified because they have the potential to create change at scale and generate wider benefits for the City Region. GatewayEast delivery will significantly increase job capacities and densities locally and expected ‘spillover’ effects will also support growth well beyond the innovation cluster core.

The pace and scale of agglomeration will be broadly linked to airport PAX growth, with growth likely occurring from a mix of significant forecast increases in PAX nationally and through efforts by DSA to increase its current market share of UK PAX, mainly through planned connectivity improvements that will both extend DSA’s overall market catchment and encourage a greater retention of PAX from with SCR. Growth to c.12m passengers is being targeted by 2050.

Evidence from the US experience demonstrates that ‘airport city’ and ‘aerotropolis’ activities typically form along arterial transport nodes extending up to 25 miles from an airport, with growth concentrated on key junctions / connection points. In the GatewayEast context, this is most likely to form along the M18/M1/A630 route between GatewayEast and Central Sheffield, an area that includes the AMID and already contains c.454,000 jobs within 5 miles of key junctions - around 58% of SCR’s jobs.

The M18/M1 route already has very high levels of ‘airport prevalent sectors’, and despite the relative immaturity and modest passenger numbers of DSA, 75% of the existing jobs are in airport prevalent sectors compared to just 43% nationally, inferring a very good foundation for an aviation linked innovation cluster growth.

Modelling of economic impacts has identified potential for a further 52,800 gross FTE jobs at capacity, of which 13,800 could form on GatewayEast, alongside the 100 businesses and c.1,000 jobs already present.

In taking account of leakage, displacement and multiplier effects, over the longer term it is estimated that around 35,650 net FTE jobs could be supported across SCR through GatewayEast and spillover growth, with potential to generate around £1.56bn in GVA annually – representing a 5% increase in SCR’s employment density.

Innovation District Economic Potential			
	By 2025	By 2030	By 2050
DSA PAX	3.3m PAX	4.7m PAX	11.8m PAX
Gross GatewayEast Airside FTE jobs	3,330 FTEs	4,830 FTEs	8,980 FTEs
Gross GatewayEast Landside FTE jobs	3,070 FTEs	4,780 FTEs	4,810 FTEs
Gross Spillover FTE jobs	8,650 FTEs	27,210 FTEs	39,020 FTEs
Total Gross Innovation District FTEs	15,050 FTE	36,830 FTEs	52,800 FTEs
Net SCR jobs	10,160 FTEs	24,860 FTEs	35,640 FTEs
Per year GVA Impact	£446m GVA pa	£1.09bn GVA pa	£1.56bn GVA pa

Evidence from the US experience shows that a wide range of industries form, with half of all jobs likely to be in typically high value sectors. With a healthy range of entry level

and lower value sector job opportunities also attracted, a truly inclusive innovation cluster can form, offering a range of occupation and job roles for the local population.

3 GatewayEast Roadmap

The following sections set out a roadmap for developing the GatewayEast innovation cluster opportunity, outlining the context, ambitions and early commitment of intent by Peel Land and Property, Doncaster Sheffield Airport Ltd and SCR.

The roadmap has been structured around five themes:

1. Developing a high value innovation cluster
2. Sustainability
3. Connectivity
4. Land and development
5. Airside Growth

3.1 Developing a high value innovation cluster

Context and Opportunities

A successful airport adds substantial value to the investment potential of the region it serves and to date, the growing cluster of high value GatewayEast aviation activities has been largely market led due to the presence of DSA as the anchor. Airport-linked businesses already present include maintenance, repair and overhaul (MRO) activities such as Cessna Textron's UK Service Centre and 2Excel, alongside 'blue light' services including the National Police Air Service and Childrens Air Ambulance, together with Redline Assured Security.

Developing an aviation-led innovation offer is the obvious immediate opportunity for high value specialisms at GatewayEast.

SCR's Universities have been operating at the forefront of UK and Global research and innovations for many years now, and SCR's University-led interdisciplinary research strengths are now widely recognised for influencing policy makers, translating research into practice and discovering novel therapies and solutions. SCR Universities are addressing some of the world's most pressing challenges, including driving forward low-carbon technology ambitions.

Drawing on these strengths, the aim is to establish a University-led future mobility innovation cluster at GatewayEast with direct runway access built around innovation fuels, battery technology and electrification and light weighting technology (wings and fuselage). The runway would become part of a 'living lab' as well as a key piece of transport infrastructure.

More widely, there are opportunities for further collaborations among other proximate northern and midlands universities.

Ambitions and Commitments

The ambition is for a fully integrated and collaborative research, development and training offer at GatewayEast, built on the core capabilities of SCR University and wider northern and midland region research strengths. This will not only bring innovation to existing already high value activities at GatewayEast, but it will also enable start-up and scale up companies to thrive and act as magnets for talent.

The following key actions have been identified to take this forward:

- Development of a shared proposition and Memorandum of Understanding with the University of Sheffield to explore options for building on University core capabilities to set out a plan for how the key components necessary to develop

an innovation cluster can be put in place, with the goal of securing an on-site University outreach/hub facility at GatewayEast.

- Engage with other pan-regional research institutions to explore further innovation opportunities.

3.2 Sustainability

Context and Opportunities

Tackling climate change is amongst the most pressing challenges globally and the transport sector, including aviation, must do its share to tackle emissions. Whilst reducing road emissions is SCR's biggest challenge, UK aviation currently accounts for 7% of UK emissions,

The propensity for increased overseas and domestic air travel, means there are inevitable environmental consequences associated with increased air movements, in much the same way as growth in most UK industries will have some adverse environmental effects.

Concerted efforts across industry and Government are where possible seeking to mitigate adverse environmental impacts associated with expected aviation growth. The aviation industry has come a long way in a reasonably short time - evidence for UK success in this is that PAX growth since 2010 has totalled +26%, whilst associated emissions growth has been held at +5%. Nevertheless, the DfT's latest aviation forecasts pre-Covid predict +53% growth in PAX movements through UK Airports by 2050 and as airport owners and operators, Peel Group/DSAL will ultimately seek to increase DSA's PAX share to ensure a successful and financially sustainable airport.

Peel Group/DSAL and SCR have limited control over the propensity of individuals to fly, but both have a role in ensuring that forecast growth in demand for air travel from residents and businesses is managed and provided for in the most sustainable way possible, and there is acceptance that strategies to move towards zero carbon will need to be agreed.

A crucial aim is for people from within the City Region and wider DSA catchment to be able to fly from DSA rather than travelling ('leaking') to more distant airports; this leakage adds to the carbon footprint of such air journeys. At present, every year, 3.58m passengers travel from the four South Yorkshire authority areas to fly from more distant airports. This leakage results in an additional (net) 80m vehicle miles (conservative estimate) every year, which in turn adds 22,600 tonnes of carbon, equivalent to the emissions arising from the electricity consumption of 26,300 typical homes.

Ambitions and Commitments

Sustainability lies at the heart of SCR and Peel Group's ethos and a 'land based' mitigation strategy will deliver a range of on the ground measures designed to ensure sustainable outcomes, including:

The following key actions have been identified to take this forward:

- Encouraging greater use of DSA as the airport of choice, limiting currently high levels of 'leakage' of PAX from SCR to other UK airports. This will ensure the UK makes best use of existing runway capacity to negate the need for future construction of further runway infrastructure elsewhere, thereby enabling the UK to avoid the unnecessary carbon cost of runway construction whilst also accommodating its national passenger growth in the most sustainable way.

- Promoting sustainable land-based travel measures to encourage a modal shift away from car travel. This includes securing GatewayEast Rail connectivity, expand public transport provision to key centres and deliver a tram-train connection to Sheffield City Centre.
- Reducing GatewayEast's carbon footprint by deploying new cleaner technologies to progress towards the Innovation District being a 'net zero' carbon producer.
- Peel Group and DSA to invest £2m in a DSA Solar farm to provide for over 25% of the airport's current electricity needs and explore options for future Innovation District solar farm expansion. In addition, undertake a comprehensive viability review of owned woodlands to establish potential for 'carbon bank' offsetting through biodiversity enhancement.
- Investment by DSA in energy efficient airfield and terminal infrastructure, including to invest in on site Electrical Vehicle (EV) infrastructure for customers and airport staff.
- Commitment by DSA to work with responsible aviation partners, including Europe's Greenest Airline (Wizz Air) and TUI, who also have a strong sustainability agenda.
- SCR and Peel/DSA to develop a Sustainability Plan for GE and DSA

3.3 Connectivity

Context and Opportunities

DSA's catchment area of 5.5m people make 8.4m air journeys per year. For SCR, 3.6m air journeys are made by residents, but just 7% of these journeys are made via DSA.

Every year, 3.58m passengers travel from the four South Yorkshire authority areas to fly from more distant airports and this 'leakage' to alternative airports (principally Manchester) results in these air passengers driving around 80m more vehicle miles each year than if they were to fly from DSA.

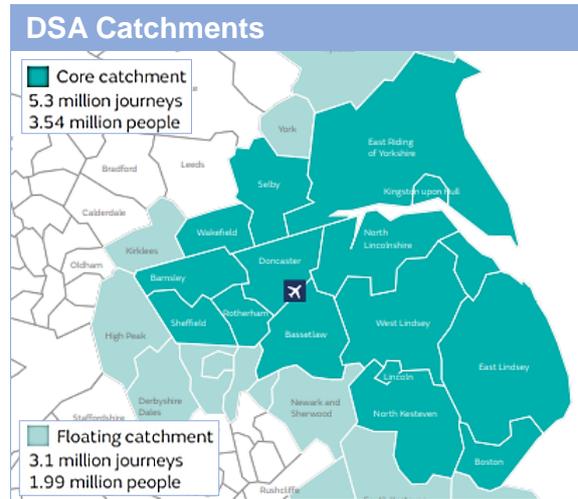
This leakage is valued at £23m of net road journey time disbenefits per year, or £233m in user disbenefits over 10 years, and around 23tn of unnecessary SCR CO2 emissions yearly, equivalent to the CO2 impact arising from electricity demands for powering over 26,000 typical homes. The economic benefits associated with these 3.58m passenger journeys are also 'leaked' to other regions from which these passengers are flying.

This means that, alongside ongoing efforts to strengthen the airports' offer to help to ensure DSA increasingly becomes the airport of choice, ongoing investment is needed to improve surface access to the airport which will also help to contribute towards our net zero climate change ambitions.

Ambitions and Commitments

Partners are committed to ensuring a financially sustainable and successful airport achieved through a modal shift in travel to and from the airport and GatewayEast. This will be achieved through:

- GatewayEast Rail connectivity, to provide a catchment of 9m people (compared to 2.4m currently) with direct highly sustainable access to DSA within a 90-minute rail journey via a new East Coast Mainline (ECML) rail station and providing platform capacity relief and increased utilisation at Doncaster Rail Station.
- Expanding public transport provision from key SCR population centres for GatewayEast journeys, including a potential tram-train connection between GatewayEast and Sheffield City Centre.



3.4 Land and development

Context and Opportunities

The landside development opportunity at GatewayEast Innovation District comprises over 260 ha (650-acre) of development land, with 325,000 sqm of recently consented new landside advanced production and logistics (APL) space and 55,750 sqm of previously permitted space already under development. Captured within the overall site masterplan, this makes it the single largest land opportunity within SCR. Free of major restrictions to development such as green belt or flood risk, it is a ready-made ideal opportunity for innovation cluster formation.

The masterplan provides for full length freight sidings, alongside the proposed new GatewayEast Rail line, between the larger development platforms on the APL site and the airside cargo transit sheds, to provide full tri-modal integration and connectivity, further differentiating and increasing the economic value of the GatewayEast proposition.

Utilising the latest construction methods and technologies, opportunities identified within the GatewayEast masterplan include:

- ***Research, Innovation and Training hub*** – the development of the innovation cluster centred around a ‘living lab’ for accelerating development and innovation in technologies crucial to ensuring decarbonization of aviation.
- ***A New Sustainable Community*** – providing up to 3,000 quality modern market and affordable homes for GatewayEast and SCR’s growing workforce.
- ***DSA Plaza Retail and Leisure Hub*** – proposes the delivery of a well-formed retail, hotel, food and beverage and community services hub immediately alongside the proposed GatewayEast rail station, to ensure a sustainable community thrives.
- ***Business and Commercial*** – the continued expansion of commercial accommodation around GatewayEast, including the opportunity for additional conferencing and business networking space.
- ***Integrated Hub Infrastructure*** – provision of fully integrated efficient road and pedestrian links and carparking, alongside proposed rail connectivity, to provide excellent connectivity and the delivery of supporting utilities, energy and green infrastructure, all helping to reduce the need to travel.

Ambitions and Commitments

The ambition is for the innovation cluster to form the key ingredients necessary for the formation of a future Innovation District, boasting a sustainable vibrant community that attracts and retains high value businesses and talent. This is backed by partner commitments to:

- Explore the best delivery model, including potential mayoral development corporations, to drive forward, incentivise and streamline delivery.
- Identify a package of infrastructure required to unlock the development potential of GatewayEast linked to future Government and City Region funding.
- Develop a distinctive proposition for GatewayEast which can be used to secure private-led investment in commercial and residential schemes.

3.5 Airside Growth

Context and Opportunities

The 2017 DfT Transport Aviation Forecasts predict that even with constrained airport runway capacity, there will be a 17% increase in air PAX movements via GB airports by 2030, extending to +53% by 2050, with much of the growth expected outside of the South East.

Runway capacity is very limited at various GB airports and some (particularly South East airports) already operate at near capacity, leading to the need for substantial northern airport growth. Even if only half of the national forecast growth occurs there will still be a significant market and national policy opportunity for DSA PAX growth given its 25m plus runway capacity.

DSA is currently handling around 1.25m PAX and Peel Group and DSAL have set out plans to significantly increase DSA's national market share of air PAX, including ambitions in partnership with SCR and Doncaster Council to deliver sustainable rail infrastructure to increase its market penetration among SCR residents and to extend its 90 minute rail catchment area to around 9m people along the Eastern side of the country.

The SCR loan funding will support Terminal Capacity expansion plans and could, by 2022, enable the Airport to handle around 3m PAX per year, helping DSA to handle airline growth to achieve a critical PAX threshold that is widely regarded as being required for airports to achieve financial sustainability.

Over the longer term, there are ambitious targets for DSA to grow to 7.2m PAX per year by 2037, with further growth towards c.12m PAX by 2050. This will require significant terminal and airport infrastructure upgrades, largely on the c.260 ha (650-acre) airside estate.

The attraction of a growing airport with critical mass will open up wider opportunities for airside aviation growth, with masterplan ambitions identifying capacity for:

- ***GatewayEast Cargo Facilities, Logistics and Advanced Production*** – providing efficient and competitive import and export operations, with identified (a) Cargo North co-location logistics supply chain, (b) Cargo South logistics and advanced manufacturing clusters and (c) GatewayEast Rail freight sidings opportunities.
- ***General and Business Aviation Facilities*** – creating an unrivalled environment for the growing aviation industry, with space for further advanced maintenance repair and overhaul (MRO), private aviation and other non-commercial aviation companies. This will build upon existing high value MRO activities at DSA which includes one of Cessna Textron's European service centres and 2Excel activities.
- ***Expanded Airport Terminal and Airfield Infrastructure*** – with north and south terminal expansion potential to double the size of the existing building to enable handling of increased PAX beyond the planned short term identified terminal reconfiguration solution. Land is also safeguarded for all necessary additional taxiway, apron, stand and air service infrastructure.

Ambitions and Commitments

The airside ambition is to ensure that DSA functions as an efficient and financially sustainable airport that not only attracts a high number of airlines and PAX, but also provides an even stronger economic anchor for attracting, securing and catalysing growth of the aviation cluster. This ambition is backed by Peel Group, DSAL and SCR commitments to:

- Continue promoting DSA as the airport of choice among airlines and customers, developing pitches and propositions to Airline operators.
- Delivering the short-term Terminal Building solution to enable DSA to handle around 3m PAX annually and progress feasibility of longer-term terminal expansion planning to ensure sufficient capacity beyond 3m PAX.