
Greater Norwich Local Plan Regulation 18: Draft Strategy

Response on behalf of Regional and City Airports
(Norwich Airport Ltd)

March 2020

**Greater Norwich Local Plan
Regulation 18: Draft Strategy**

**Response on behalf of Regional and City Airports
(Norwich Airport Ltd)**

Project Ref:	27293/A5/P12/VY/SO	27293/A5/P12/VY/SO
Status:	Draft	Final
Issue/Rev:	01	02
Date:	March 2020	March 2020
Prepared by:	Victoria Yeandle	Victoria Yeandle
Checked by:	Gareth Wilson	Gareth Wilson
Authorised by:	Gareth Wilson	Gareth Wilson

Barton Willmore
St Andrews House
St Andrews Road
Cambridge
CB4 1WB

Tel: 01223 345 555

Ref: 27293/A5/P12/VY/SO
File Ref: 27293.P12.GNLP.VY
Date: March 2020

COPYRIGHT

The contents of this document must not be copied or reproduced in whole or in part without the written consent of Barton Willmore Planning LLP.

All Barton Willmore stationery is produced using recycled or FSC paper and vegetable oil based inks.

CONTENTS

- 1.0 Introduction
- 2.0 The Site
- 3.0 Question 6: Do you support or object to the vision and objectives for Greater Norwich?
- 4.0 Question 10: Do you support, object or have any comments relating to the approach to Economic Development set out in the Delivery Statement?
- 5.0 Question 15: Do you support, object or wish to comment on the approach for the Economy?
- 6.0 Question 23: Do you support, object or have any comments relating to approach to transport?
- 7.0 Do you support, object or have any comments relating to the approach to employment land?
- 8.0 Summary

APPENDICES

Appendix 1: Site Location Plan

Appendix 2: Local Market Analysis Report: Bidwells and Roche

Appendix 3: Chapter 9 of adopted Norwich Airport Masterplan

Appendix 4: Norwich Airport Development Report: York Aviation

1.0 INTRODUCTION

- 1.1 These representations have been prepared by Barton Willmore LLP on behalf of Regional and City Airports (Norwich Airport Ltd) in respect of the Greater Norwich Local Plan (GNLP) Draft Strategy (2018-2036) document. They are made pursuant to the land known as Site 4, Norwich Airport.
- 1.2 The representations should be read in conjunction with the previous Regulation 18 Consultation, which was submitted to the Greater Norwich Development Partnership in March 2018. These representations seek to assist the Partnership in providing further clarity on why land known as Site 4, Norwich Airport should be allocated for a mix of employment uses in the GNLP.
- 1.3 The representations also respond to pertinent questions raised in the GNLP document.
- 1.4 A site plan of the land, as submitted in the previous Regulation 18 representations, is shown at **Appendix 1**. Specific reference is made to the precise area of Site 4, which is larger than that identified in the Regulation 18 material.

2.0 THE SITE

- 2.1 Site 4 extends to approximately 46.5 hectares (ha) and is located to the north-east of Norwich Airport. It is located approximately 7km north of Norwich city centre. To the east and north lie predominantly agricultural land and villages. To the west is Broadland Northway (A1270). To the south of the Airport is the Airport Industrial Estate (NAIE) and other commercial land uses. Access to the Site is from Broadland Northway (A1270), in the north-east.
- 2.2 The Site is classed as 'brownfield' land. It comprises managed grass, disused taxiway and apron. To the west of the apron, there is a fire training ground, which is proposed to be relocated to another location in the airport. Along the western boundary of the Site there are a number of aviation-related buildings and structures, comprising Petans Offshore Fire Training and Britannia Fire Limited, which are accessed from Bullock Hill to the north.
- 2.3 The Site is located within the administrative boundaries of Norwich City Council (NCC) and Broadland District Council (BDC), which are two out of the three Councils that are preparing the GNLP.

Planning History

- 2.4 In 2013, NCC and BDC granted permission for the following development:

- (1) **"Full Planning Permission for development of the Northern Apron to include detailed planning permission to provide 15,035 sqm of Aviation related B1(c), B2 and B8 floorspace including associated access to Holt Road, Security Hut, Storage Building, Parking and Landscaping and**
- (2) **Outline Planning Permission for up to 80,000 sqm of Aviation related B1(b), B1(c), B2, B8 and D1 use floorspace with permission for access sought in detail and all other matters reserved."**

- 2.5 The pre-let occupier (Maintenance, Repair, Overhaul (MRO) company, Air Livery) that formed the first phase of the development and which was required to enable the upfront site-wide infrastructure, subsequently pulled out.

- 2.6 In 2016, permission was amended to change the point of access to the site from Broadland Northway. The Site has remained undeveloped.
- 2.7 In October 2018, Norwich Airport applied for a variation of condition application to safeguard 30,000sqm (GEA) of aviation-related employment floorspace, releasing 65,035sqm (GEA) for general employment.

3.0 QUESTION 6: DO YOU SUPPORT OR OBJECT TO THE VISION AND OBJECTIVES FOR GREATER NORWICH?

- 3.1 Section 3 outlines the visions and objectives for the GNLP up to 2038. The GNLP states economic growth should be delivered on strategic sites in and around Norwich, with good access to the highway network and public transport. The Plan seeks to create a “strong, enterprising and broad-based economy, and the growth of a wide range of economic sectors.”
- 3.2 Norwich Airport supports the vision for economic growth during the Plan period. Site 4 can be considered a strategic employment site, supporting the GNLP’s vision as it is located with immediate access onto the strategic highway network (Broadland Northway). Broadland Northway provides easy access to the region’s other strategic roads, including the A47 and A140. Site 4 is also located in proximity to proposed residential / mixed use sites shown in BDC’s Growth Triangle Area Action Plan (adopted in July 2016), which will continue to come forward in the GNLP.
- 3.3 To support the previous representations in March 2018, Norwich Airport provided evidence in a Local Market Analysis Report, undertaken by Roche and Bidwells, that demonstrated Site 4’s potential to include large-scale B2 and B8 uses for which there is a proven demand and lack of comparable space in the region. Its size gives the Site the flexibility to support a wide range of economic sectors. A copy of the Report is available at **Appendix 2**.

4.0 QUESTION 10: DO YOU SUPPORT, OBJECT OR HAVE ANY COMMENTS RELATING TO THE APPROACH TO ECONOMIC DEVELOPMENT SET OUT IN THE DELIVERY STATEMENT?

4.1 Section 4 of the Document addresses the delivery of growth in the Plan. Its delivery statement for Economic Development is:

“To promote delivery of jobs, this plan provides choice and flexibility by providing for a wide range of type and size of employment sites. These include strategic sites, capable of accommodating large scale development and high growth knowledge-intensive sectors. Most strategic sites are extensions of already successful developments.”

4.2 Site 4 can contribute to the region’s large-scale development. As mentioned in Question 6, it can support a number of uses, including large-scale B2 and B8 employment space.

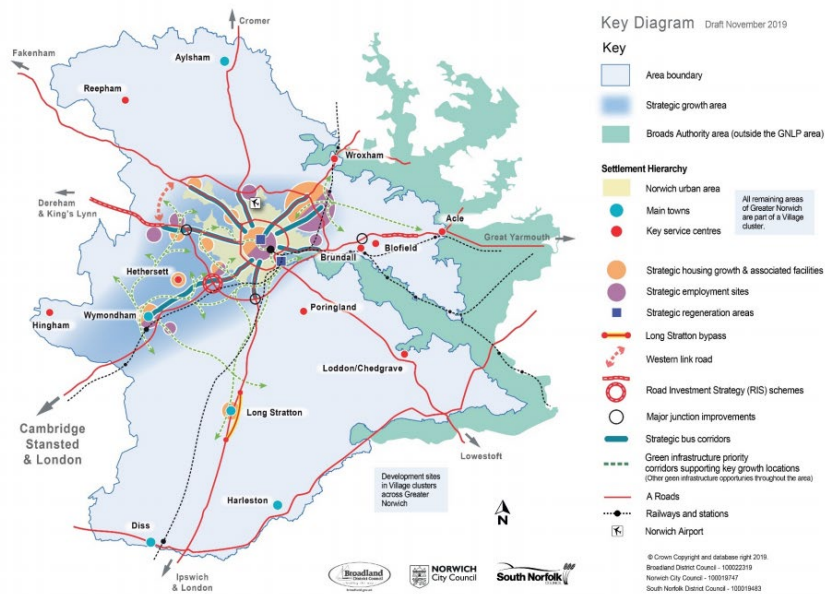
4.3 Norwich Airport proposes an allocation at the Site of a mixture of aviation and non-aviation uses, with the flexibility to release land for general employment depending on market demand. Part of the Site benefits from extant planning consent restricted to aviation-related uses. The lack of market demand has meant that there has been no uptake in aviation floorspace. This has been the case since the original planning permission for aviation-related uses was granted by NCC and BDC in 2013. The planning flexibility to include non-aviation related employment floorspace will help bring the Site into economic use and contribute towards the provision of infrastructure required to support aviation-related employment, which is considered a knowledge-intensive sector by the GNLP.

5.0 QUESTION 15: DO YOU SUPPORT, OBJECT OR HAVE ANY COMMENTS RELATING TO APPROACH FOR THE ECONOMY?

5.1 This section responds to draft Policy 1 (the Sustainable Growth Strategy), which has allocated 360ha of employment land to aid the delivery of 33,000 additional jobs. It highlights the strategic locations for employment use, shown in Figure 1 below. It adds that the total amount of allocated and permitted employment land in 2018 is broadly enough to provide for expected and promoted growth.

Figure 1: Draft Strategic Housing and Employment Locations in GNLP

KEY DIAGRAM



5.2 Norwich Airport partly supports Policy 1 as the Airport area is considered a strategic employment location. It is ideally located on the strategic road network, as shown in Figure 1. The Site is suitable to support a wide range of economic sectors, helping to contribute to the delivery of 33,000 additional jobs throughout the Plan period.

5.3 However, Norwich Airport would question the assertion that the land provided for in 2018 is sufficient for the region's needs throughout the Plan period. The Report undertaken by Bidwells and Roche has demonstrated that the existing employment floorspace is not of a high quality to support new businesses, shown at **Appendix 2**. New companies require flexibility and the Site is able to provide suitable floorspace that is beneficial from a quantitative (it would be the largest single allocation in the Plan) and qualitative (it would

Question 15: Do you support, object or have any comments relating to approach for the Economy?

provide modern floorspace, adapting to companies' requirements and market changes) perspective.

6.0 QUESTION 23: DO YOU SUPPORT, OBJECT OR HAVE ANY COMMENTS RELATING TO APPROACH TO TRANSPORT?

- 6.1 Policy 4 (Strategic Infrastructure) details the strategic infrastructure improvements that are proposed throughout the Plan period. It states that one of the key elements will be supporting the delivery of the Norwich Western Link road.
- 6.2 Norwich Airport supports the delivery of the Norwich Western Link road and made representations to Norfolk County Council in respect of the four potential route options in February 2019. The Western Link is a critical infrastructure improvement that will help facilitate this economic growth by increasing the Airport's accessibility and connectivity.
- 6.3 As the Site connects directly onto Broadland Northway, the Western Link will connect it to the A47 (towards King's Lynn), reducing the number of vehicles using minor roads, improving the economic growth of the Site and increasing its attractiveness as a strategic employment location.
- 6.4 The Western Link Road should be prioritised for construction in the early period of GNLP.

7.0 DO YOU SUPPORT, OBJECT OR HAVE ANY COMMENTS RELATING TO THE APPROACH TO EMPLOYMENT LAND?

7.1 Policy 6 (the Economy) details the Plan’s strategy for economic growth across the Plan period. The Norfolk and Suffolk Economic Strategy, used as evidence to support the preparation of the Plan, has recognised Norwich and Greater Norwich as one of the six ‘priority places’ in the region. The Strategy also categories ‘transport, freight and logistics’ as one of the nine key economic areas for the region.

7.2 The supporting text to the Policy states that the GNLP should support all sectors, including the nine key economic areas to help aid the creation of 33,000 additional jobs.

7.3 The Policy defines Norwich Airport as a strategic employment area and allocates particular areas as follows:

Table 7.1: Norwich Airport: Strategic Employment Area

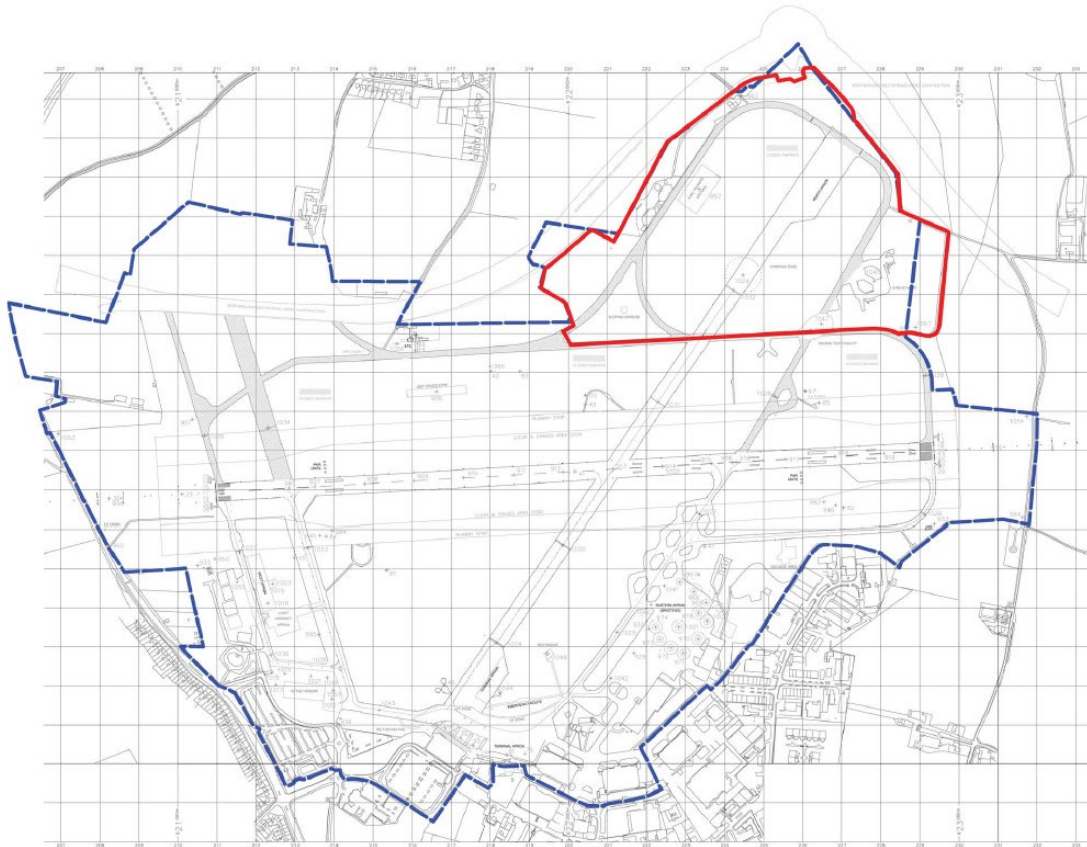
Strategic Employment area and their primary uses	Existing undeveloped land (ha) (April 2018)	New allocation (ha)	Total employment allocations (ha)
The Norwich Airport area and in particular: <ul style="list-style-type: none"> A new site on the northern edge of the airport accessed directly from the Broadland Northway of 40ha of which at least 50% will be reserved for airport related activities. A site of around 30ha at the A140/Broadland Northway junction and focussed on uses benefitting from an airport location. 	35	40	75

7.4 The 30ha allocation was included in BDC’s Site Allocations Development Plan Document, adopted in May 2016.

Incorrect Site Area

7.5 Norwich Airport supports inclusion of the allocated land for employment in Policy 6 and that 50% is allocated for general employment uses. However, the proposed allocation does not include all of the land proposed for Site 4 that was submitted as part of the previous Regulation 18 representations, which extends to 46.5ha. The plan of the Site is below (a copy of the Plan is at **Appendix 1**).

Figure 7.1: Location Plan of Site 4



7.6 The proposed allocation does not include available land to the west and east. It is requested that this land is included in the draft allocation. Paragraph 117 of the National Planning Policy Framework (NPPF) states that planning policies should promote an effective use of land, utilising previously developed land. Airport land is defined as previously developed land by the NPPF and therefore all the land should be made available and be allocated for employment uses.

7.7 The Norwich Airport Masterplan, which has been adopted by NCC and BDC, does not identify the Site for any future airport operational or expansion requirements, with the exception of retaining the required fire training facilities. Paragraph 9.34 of the Masterplan states that it will safeguard 44% of the land (equivalent to 20.5ha out of the total 46.5ha) for aviation-related uses to maximise the opportunity for large-scale aviation-related development. Chapter 9 of the Airport Masterplan is shown at **Appendix 3**. This percentage was agreed between the Airport and NCC. This statement should be reflected in the GNLP since the Airport Masterplan has been adopted by NCC and BDC.

Inclusion of Roadside and Leisure Uses

- 7.8 In addition to providing large-scale industrial space for aviation and non-aviation uses, the Site's direct access onto Broadland Northway (A1270) makes it suitable for the provision of roadside and leisure uses (Use Classes A1-A5 / sui generis / C1 / D2). Broadland Northway is a strategic road, providing connections to other roads on the strategic highway network (notably the A47 and A140). Given its location adjacent to the region's strategic highway network, it is ideally situated for roadside and leisure uses. The future provision of the Western Link will improve the connection of the road still further. Therefore, the uses of the Site allocation should be extended to accommodate Use Classes A1-A5, sui generis, C1 and D2 uses in addition to the existing Class B and D1 Uses. The allocation of retail uses will help to improve the sustainability of the Site as a whole by providing services and facilities for future employees in both aviation and non-aviation industries, reducing the need to make vehicular trips.
- 7.9 Norwich Airport considers that the Policy should include a time limit, which seeks to reduce the amount of aviation-related employment floorspace over time, reflecting market conditions. As part of the 'Call for Sites' representations in March 2018, Norwich Airport submitted a Report undertaken by York Aviation, which examined the existing and predicted operational requirements for the Airport up to 2090. A copy of the Report is at **Appendix 4**. York Aviation's Report concluded that the land to the south of the runway and 20% of Site 4, were sufficient to accommodate operational requirements for the Airport, including MRO companies up to 2090. Through subsequent discussions with NCC, an agreement of 44% retention was reached, which was inputted into the adopted Masterplan. However, the Airport maintains that the Objective Evidence undertaken by York Aviation is valid. Therefore, the allocation should be worded to allow for a greater proportion of non-aviation floorspace should the proposed aviation occupier not be realised in the next 5-10 years. This flexibility is supported by paragraph 81 (d) of the NPPF, which states:

"Planning policies should be flexible enough to accommodate needs not anticipated in the plan... and to enable a rapid response to changes in economic circumstance."

7.10 In conclusion the proposed allocation in Policy 6 should:

1. Be extended to 46.5 ha in total make efficient use of previously developed land, in accordance with national planning policy;
2. Include roadside and leisure uses (Use Classes A1-A5, sui generis, C1 and D2) given its situation adjacent to the region's strategic highway network and to improve the sustainability of the remainder of the Site for future employees (both aviation and non-aviation); and
3. Allow for a greater proportion of non-aviation floorspace to come forward in the event that the aviation floorspace is not realised in the next 5-10 years.

8.0 SUMMARY

8.1 These representations are made on behalf of Regional City Airports (Norwich Airport Limited) pursuant to Site 4, Norwich Airport. They seek to build on the proposed allocation of part of the site in draft Policy 6 of the GNLP.

8.2 The Site is ideally sized and located to provide a mix of aviation and non-aviation floorspace, including logistics and distribution, which is considered to be one of the key sectors of economic growth for Norfolk and Suffolk. The Site addresses the needs of the Greater Norwich region, which is supported by national planning policy. In summary, the key messages of these Regulation 18 representations are:

1. The Need to Extend Site Area

8.3 The proposed allocation should also include the land at Petans and the land to the east of the existing site to make efficient use of brownfield land, as defined in national planning policy. The inclusion of Petans, will also help maintain the aviation-related uses onsite. The size of the entire Site (46.5ha) is in the adopted Masterplan, which is a material consideration for NCC and BDC. Therefore, the emerging GNLP should use the Masterplan as a baseline and allocate the entire Site in Policy 6.

2. To Broaden Uses to Include Roadside and Leisure Uses

8.4 The allocation should also accommodate roadside and leisure uses given its direct access onto the strategic highway network (Broadland Northway (A1270)). The allocation of roadside and leisure uses will also improve the sustainability of the Site overall by providing services and facilities for all future employees.

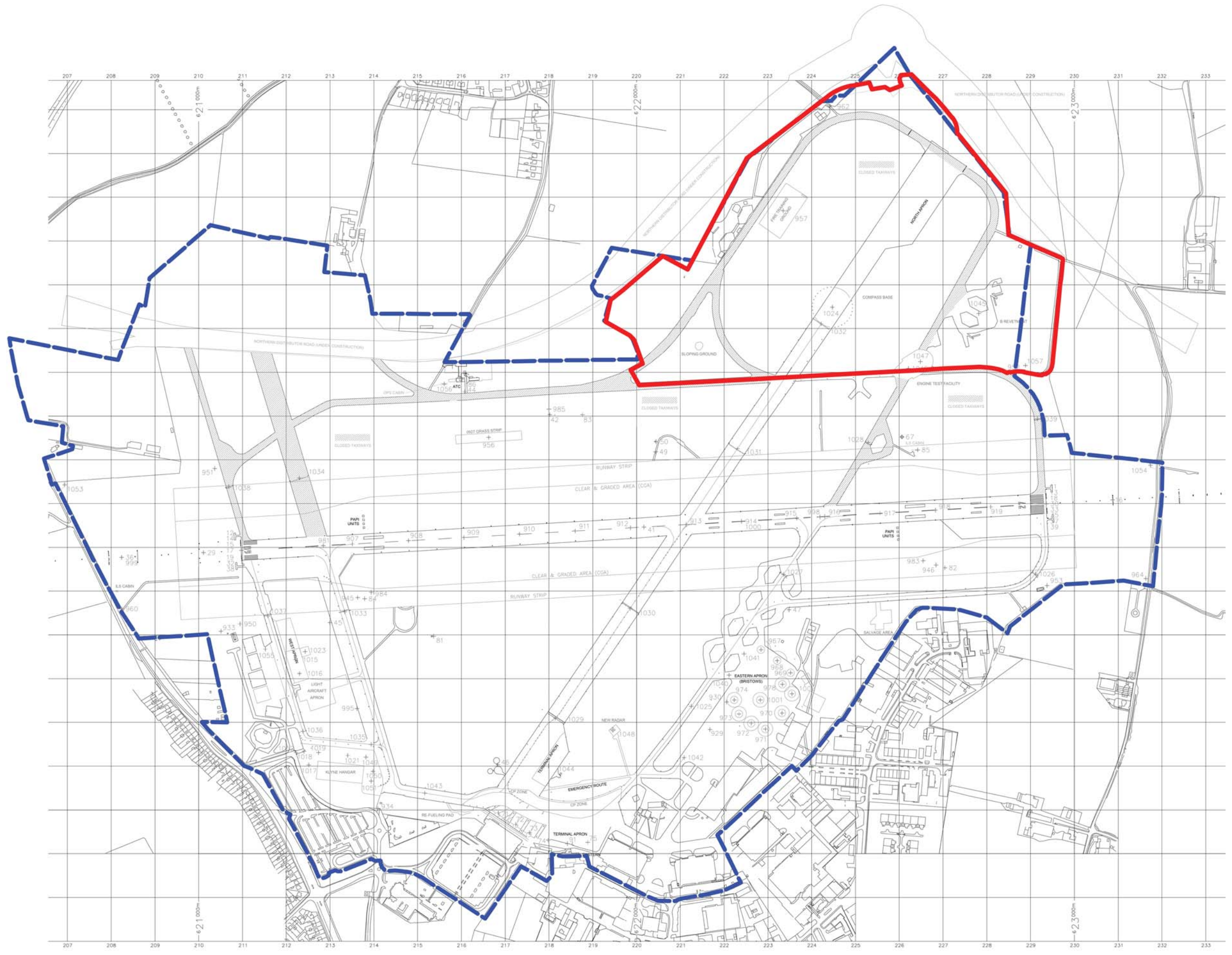
3. To Provide Flexibility to Respond to Demand

8.5 National planning policy states that policies should be flexible to enable changes in economic circumstances. Objective Evidence undertaken by York Aviation has demonstrated that the Airport can provide for its predicted operational needs up to 2090 with only a 20% retention of Site 4. Therefore, the allocation should include a time limit, of 5-10 years, which reduces the percentage of aviation-related uses over time, subject to market demand.

- 8.6 Overall, the Site can contribute to providing a mix of employment uses to support the Greater Norwich region during the Plan period.

APPENDIX 1

Site Location Plan



APPENDIX 2

Local Market Analysis Report: Bidwells and Roche



IMPERIAL PARK, NORWICH – OBJECTIVE EVIDENCE

LOCAL MARKET ANALYSIS

Contents

- 1. Current Market Conditions & How the Market Has Changed since 2012**
- 2. The Supply of Land in and around Norwich**
- 3. Current and Predicted Future Demand**
- 4. The Site and Potential Uses**
- 5. The NDR and its Connectivity**
- 6. The Importance of the Site in a Local and Regional Context**

Appendix

- 1. Schedule of Business Parks and Development Schemes**

Introduction

This report is prepared jointly by Bidwells and Roche Chartered Surveyors.

The two firms are involved in the all major industrial estates and development sites in and around Norwich, and to a wider extent Norfolk as well.

Both firms have been established in Norwich for over 30 years and between them account for **the vast majority** of the industrial and warehousing transactions on an annual basis. They have a proven track record and provide **robust** and impartial advice to developers and property owners **alike**.

They are **at the forefront of current trends & market knowledge and therefore best placed** to comment on the benefits of Imperial Park - taking account of the site's location, size and opportunities for major development.

1. Current Market Conditions & How the Market Has Changed Since 2012

The industrial/warehouse market in Norwich is currently as buoyant as it has been for a number of years, and is characterised by a steadily falling supply of available units, coupled with strong occupational demand.

The total supply of units currently available on the market now stands at 567,469 sq ft. Approximately half these units are below 5,000 sq ft in size, and there is a general shortage of good quality, well located units of over 20,000 sq ft in size.

Importantly, the vast majority of the larger units currently on the market do not suit current occupiers' occupational needs. On the traditional industrial estates to the north of the City around Hurricane Way, Fifers Lane and Vulcan Road in particular, many of the units are **older in style** with limited eaves heights, small yards & car parking areas, and too many columns in the warehouse areas. **This severely reduces flexibility and suitability** from an occupier's perspective. This part of the City can also become very congested at peak times, which in turn **will increase journey times to and from the major trunk road network**.

It is essential that a centre like Norwich does all it can to keep existing occupiers and allow them to expand into new, more suitable premises, which will enable their businesses to flourish and ultimately create more jobs. There has been considerable press coverage recently on the closure of the Britvic/Unilever site, and it is essential that no other large-scale occupiers in particular decide to move out of Norwich. Modern day industrial and warehouse operators require flexible and usable buildings which will make their businesses more efficient.

Invariably, clear, open-plan warehouse space will be required, with minimal, or no columns. For the mid to large sized units in particular, a 7 metre eaves height is typically required. Generous parking, loading, unloading and circulation areas are also needed, which usually means a building to site ratio of 40% to 45% at most. Virtually no existing buildings in the immediate vicinity are able to offer these amenities.

Given the above, Imperial Park represents the ideal opportunity to overcome all these issues and provide local businesses with buildings which will considerably better suit their needs and allow them to expand and flourish over the next five to 10 years.

Imperial Park **will undoubtedly** be the best located, **most prominent and** the most accessible scheme in this area of Norwich and will, therefore, provide the perfect solution to all the issues and problems which have typically held back many companies and businesses who currently occupy older, inflexible and unsuitable buildings.

Take-up in terms of transactional activity for 2017 totalled 228,255 sq ft of existing built space.

The largest deals to take place were:

- 35 Barnard Road, Bowthorpe – 49,240 sq ft let to Brandbank.
- 6 Lansdowne Road, Union Park – 40,250 sq ft let to Middlesex Wines.

A total of 37 transactions took place during the course of the year.

We currently have 32 requirements registered on our books, which total 340,000 sq ft in size. 12 of these requirements are for units of over 10,000 sq ft.

The general feedback from occupiers who we speak to is that they want modern units with good sized yards in accessible locations, which are close to the main arterial or ring roads.

There remains strong demand for freeholds from owner-occupiers, who will typically look to place the property in their Self Invested Personal Pension (SIPP). Importantly, there is very low freehold availability.

Set out below is a summary of availability, take-up, the total amount of requirements and the largest deals to take place since 2012.

YEAR	AVAILABILITY	TAKE-UP	REQUIREMENTS	LARGEST DEALS
2012	1,196,264 sq ft	337,837 sq ft	215,500 sq ft	<ul style="list-style-type: none"> 35 Barnard Road, Bowthorpe – 69,000 sq ft let to Tyco Unit A, Old Hall Road – 61,918 sq ft sold to the Norfolk University Technical College 1-3 Whiffler Road – 19,140 sq ft let to Pentaluck Ltd
2013	957,111 sq ft	545,701 sq ft	410,000 sq ft	<ul style="list-style-type: none"> The former Uniglaze 2 factory, Forest Way, Longwater – 154,122 sq ft sold to Pasta Foods The former Remploy factory, Raynham Street – 53,029 sq ft sold to Robinsons The former Uniglaze 2 factory, Spar Road – 50,663 sq ft sold to Harford Attachments
2014	783,366 sq ft	282,782 sq ft	260,000 sq ft	<ul style="list-style-type: none"> 3 Hurricane Way – 28,735 sq ft sold long leasehold to TSI Structures 408 Coppersmith Way, Gateway 11 – 12,537 sq ft let to MTCE Ltd 1 Arms Park Road, Union Park – 8,458 sq ft let to Saint Gobain
2015	871,644 sq ft	296,673 sq ft	560,000 sq ft	<ul style="list-style-type: none"> The former Yodel unit, Vulcan Road South - 30,673 sq ft let to Tufnells 2d Wendover Road, Rackheath - 29,138 sq ft let to Angling Direct
2016	431,417 sq ft	516,564 sq ft	476,500 sq ft	<ul style="list-style-type: none"> 2 Caley Close, Sweet Briar Industrial Estate – 133,474 sq ft let to Amazon The Former Knowles Capacitors Site, Old Stoke Road - 90,752 sq ft sold to Mattressman

Key points to note over the period are:

- Availability **of existing units** has nearly halved.
- The average yearly take-up figure is 367,968 sq ft.

- Total requirements average 377,000 sq ft per annum.
- There were two transactions over 100,000 sq ft in size, namely the sale of the former Uniglaze 2 Factory at Longwater in 2013 and the letting of 2 Caley Close in 2016.

2. The Supply of Land in and around Norwich

At 115 acres (gross) and with the ability to accommodate in the order of 1 million sq ft of accommodation, Imperial Park will offer Norwich and Norfolk the only opportunity for large scale development. ***This in turn will provide the local economy with a steady long term supply of prime employment land over the next 15 years, or possibly longer. We firmly believe that it is essential for a centre like Norwich to have a scheme of this size and nature in order to safeguard future long term employment prospects. As the scheme is developed out and grows, it will provide a critical mass which will become more attractive to occupiers and local companies.***

For such an opportunity to be successful, location and accessibility will be key. Imperial Park will be ideally positioned to provide this. Being immediately adjacent to and having extensive frontage to the new NDR, it will be one of the best located and accessible sites in the region.

Being accessible to a wide catchment to the north of the City and North Norfolk in general, it will provide businesses and organisations with an ideal opportunity to acquire land or buildings on both a freehold or leasehold basis, which will prove more suitable premises for their occupational needs. Many areas in rural Norfolk are less accessible to the major trunk road network, and with a distinct shortage of modern suitable buildings, Imperial Park will provide an ideal solution and offer a unique opportunity.

The attached table shows the supply of employment land on the various business parks and schemes in and around Norwich.

Points to note are as follows:

- **Sweet Briar Park**

Given the shape and layout of the remaining available land, this could not be reasonably developed in its entirety for a single large unit.

Whilst Sweet Briar Park is situated on the outer ring road on the west side of the City, it is still some distance from the County's main trunk roads, ie the A47 and A11 and therefore not as prominent as Imperial Park. Also, this section of the outer ring road can become congested, mainly at peak times of the day.

Furthermore, there is only a limited amount of employment land still available here, i.e. just over 10 acres.

- **Broadland Gate**

This is a new scheme in the centre of which there are some residential houses. The land with NDR frontage is to be developed for higher value uses which are more in line with the 6 acres currently under offer to Jaguar Land Rover.

There is limited land here for conventional employment uses and, therefore, some of the larger requirements cannot necessarily be catered for within a single usable development plot. It is only a fraction of the size of Imperial Park.

- **Broadland Business Park**

Broadland Business Park provides a mix of office, warehouse and industrial uses, so the general environment will be different from Imperial Park.

Office development has taken place toward and at the front of the Business Park, where occupiers include organisations like Aviva, the NHS Foundation Trust and Lovell Blake Accountants.

The industrial/warehouse development has typically occurred towards the rear of the park to the north of the afore-mentioned office uses. These locations are further away from the A47 and NDR and, therefore, considerably less accessible when compared to a scheme like Imperial Park.

- **Longwater Park**

The available land here is only available on a leasehold design & build basis and it, therefore, cannot cater for either the sale of freehold land or the sale of bespoke buildings.

Again, the available land is not immediately adjacent to the A47 and, therefore, there is a short drive to access the major arterial routes. Towards the rear of the Park, there are a number of general industrial uses, such as waste transfer stations and concrete batching plants.

Given the presence of retail units, and Sainsburys in particular, at the front of the site, property, there can be congestion issues here. Given the general B8 uses, some areas of Longwater Park may be deemed to be less attractive to the more conventional light industrial and warehouse users.

The employment land at Longwater Park is less prominent and less accessible than Imperial Park and the available land is considerably smaller than the total availability at Imperial Park.

- **St Andrews Northside**

Only suitable for offices and not industrial or warehouse uses.

- **Browick Interchange**

Situated to the south of Norwich on the A11 and at 26.4 acres is the largest employment site available in the local market. Could accommodate up to 280,000 sq ft of accommodation. The site still needs to be serviced.

Whilst Browick Interchange offers the largest amount of employment land it is still only 25% of the size of Imperial Park. Being situated to the south west of Norwich it also caters for a different market from a geographical perspective. The town of Wymondham where the scheme is situated has typically attracted occupiers from the immediately surrounding areas who have wanted to remain within the immediate vicinity.

Elsewhere in the County there is also a very limited supply of available and deliverable land.

At Beacon Park in Gorleston, there is only 4.68 acres remaining in the current phase, although there is further land in future phases.

At Snetterton Park on the A11 there is 65 acres, but we understand there may be servicing issues here.

It is essential that Norwich has a large-scale scheme which can deliver good quality modern units and prime employment land over the medium to long term.

The largest current scheme is Browick Interchange, but this only offers in the order of a quarter, in terms of both land and accommodation to be developed, of what Imperial Park could offer.

3. Current and Predicted Future Demand

As mentioned above, the total amount of requirements we currently have registered on our books as looking for space is 340,000 sq ft. This is more or less in line with the yearly average of 360,000 sq ft since 2012.

Given the reducing supply of existing units and the fact this is likely to continue in the future, it is our view that more occupiers will have no choice but to consider purchasing plots of land, or entering into freehold or leasehold design & build packages for bespoke properties.

We also believe there will be future pent-up demand which we are not necessarily aware of at the moment and which will only be realised once the scheme is actively and openly marketed. This would be particularly the **case for parties looking to purchase property on a freehold basis.**

For example, when Bidwells marketed the former Uniglaze 2 factory at Longwater in 2013, there were no known active requirements for 150,000 sq ft at the time. It was only when formal marketing commenced that four companies became interested in the property as they saw it as a good opportunity to potentially expand into a better building. It was ultimately purchased by Pasta Foods who relocated from Great Yarmouth.

During the first two months of this year, we have in particular seen a number of larger requirements in excess of 30,000 sq ft come to the market. **There are currently no suitable existing buildings where these requirements can be satisfied.**

Given the general shortage of suitable buildings in the region as a whole, many companies are having to extend their area of search. As a result, companies from further afield are now considering Norfolk as a possible location, where **this was not the case** 12 or 18 months ago.

The increase in internet retailing has led to increased demand from the delivery companies in particular. For companies like DHL and **other organisations**, accessibility to the main road networks are essential in order to deliver their goods on time. A site like Imperial Park, which is situated immediately adjacent to the NDR, should provide an ideal opportunity to provide access around Norwich and into the wider county as well. Internet retailing is only likely to continue to expand and, therefore, there is likely to be a continued and increased demand in the future from the providers and their delivery companies. With the availability of prime land at Imperial Park, it will provide one of the best schemes in and around Norwich to cater for both increased future demand and pent up demand to be satisfied in a highly important and accessible location.

Given all of the above, we predict that demand for the foreseeable future is likely to be above the yearly average since 2012 and may well be in the order of 450,000 to 500,000 sq ft per annum. With the supply of suitable available buildings continuing to fall, proportionately more of this demand will have to be satisfied on new build schemes where new units can be provided or land purchased.

4. The Site and Potential Uses

Imperial Park is conveniently located adjacent to the A1270, the Northern Distributor Road (NDR), which has recently opened. The site extends to in the order of 115 acres.

The site is suitable for:

- **B1, B2 & B8 Uses**

With the opening of the NDR, **access** to the site is now directly off the dual carriageway. There are **very** limited opportunities **for companies to acquire suitable** large scale B1, B2 & B8 premises in northern Norwich (where most of the established industrial businesses are located) due to the age and configuration of the existing stock. Since the establishment of the Vulcan Road, Fifers Lane and Hurricane Way Industrial Estates in the 1960s and 1970s, there has been a fundamental shift in building design.

Occupiers generally require higher eaves, with new buildings now providing a minimum of 7 metres, as opposed older stock where the average eaves are in the region of 5 metres. Much of the existing accommodation in north Norwich offers lower eaves than the market now **demand**s. In addition, older accommodation is developed to a much higher density, with small inadequate yards and parking. Modern premises are designed to offer **improved parking facilities** and better access for all vehicles. In our experience lack of suitable parking and external hardstanding is one of the key issues which concerns occupiers **most** - because there is no simple way to design a solution. In tandem with the high-density developments which occur on individual plots, older industrial estates are generally developed to a higher density, leading to access problems and parking issues. **A** new scheme at Imperial Park will provide direct, congestion free access to a major business hub.

The ability to develop out new quality B1, B2 & B8 premises offers a new opportunity for occupiers seeking representation in north and north/west Norwich. There are no other suitable sites in the immediate vicinity and, with the two main employment locations being to the east of Norwich, it is imperative that there are

alternatives in a different location. The retention of established businesses in north Norwich is imperative and if no land is available, then occupiers will look for suitable alternative locations, where modern, accessible premises are available.

- **Roadside Uses:**

The location of the site adjacent and with prominent frontage to the NDR, makes it imminently suitable for roadside uses.

Recent examples of new road side schemes in Norwich include:

- 1) McDonald's at Thickthorn, at the junction of the A11 and A47
- 2) Costa Coffee and Broadland Business Park
- 3) Greene King premises at Broadland Business Park
- 4) Upgrade of BP and M&S shop on Mousehold Lane, Norwich

Other roadside schemes for either fast food or retail have been developed over time and there are further requirements in the market for additional fast food restaurants, petrol filling stations and where appropriate small-scale trade counter schemes.

Recent experience has shown that multi-store occupiers, such as Screwfix, now have a format which allows for more, smaller units to provide short drive times for customers to their stores. Screwfix already have four outlets in Norwich and have a further requirement for the east side of the City, close to the A47.

For most if not all occupiers, the issue will be traffic flows. This will take some time to determine and importantly will also be dependent upon whether any other schemes are developed along the route before the subject land is developed

The most appropriate initial development will be for a petrol filling station (PFS) with associated fast food and other food retailers. The ability to provide hotel and pub is considered important for the business park, but the timing of this will be determined to some extent by the occupiers on the park. The drive-by traffic will generate a certain amount of business, but adjacent occupiers will increase the interest in the site. As a location for these types of use, the site is well positioned.

5. The NDR and its Connectivity

The NDR provides significantly improved accessibility to northern Norwich from the A1067 (Fakenham Road) **around** to the Postwick Interchange on the A47 to the east of Norwich. With the opening of the NDR, access to the north of Norwich is now possible, without having to travel through Norwich City centre or around the outer ring road.

At the time the NDR was first considered in early 2000, it was seen as essential infrastructure to assist with economic growth and formed part of the Norwich Area Transport Strategy (NATS). The development of the road provides much needed infrastructure improvement to the north of Norwich, where congestion was causing a stranglehold on some industrial estates and was leading to occupiers looking to move to better located estates, such as the Bowthorpe Employment Area to the west of Norwich and the White Lodge Trading Estate on the south side.

The **new** road opens up large swathes of land for both commercial and residential development, with the principal commercial developments being at Broadland Business Park, Broadland Gate and Imperial Park. There are a large number of residential schemes in Sprowston and Plumstead, where over 11,000 new homes are planned. **In conjunction with this**, it is important to ensure that there are sufficient employment opportunities spread across a wide geographical area, rather than just land to the east of the city. Furthermore, if there is direct access to the NDR from one of the new housing schemes, this could enable access from housing to employment without the need to use the existing road network, limiting congestion and providing a key benefit of the NDR, which is distribution of traffic.

The NDR has opened up significant development opportunities for commercial uses, with Broadland Gate presently under construction having a number of occupiers seeking representation adjacent to the junction of the A47 and the NDR.

Without the provision of the NDR this development opportunity would not have arisen.

The northern quarter of Norwich has no greenfield land for commercial uses, except for Imperial Park which has direct access to the NDR, giving accessibility to the north of Norwich and further afield to mid and north Norfolk, via the A140. Norwich City centre is accessed via Cromer Road and the east of Norwich via the NDR. The north of Norwich has historically been one of the more established locations for business occupiers. Prior to the construction of the NDR, there was potential for the location to suffer with congestion especially at certain times of the day. With the NDR in place, congestion will ease which will make the northern industrial estates and the adjacent land more readily accessible and therefore increase its popularity. This in turn will assist in the generation of jobs and employment in what is a key strategic location.

In commercial property terms, there has been increased popularity in locations such as Hall Road, Bowthorpe Employment Area and Broadland Business Park/Broadland Gate, due to the accessibility of the A47. With the NDR now open, this will increase accessibility and therefore demand for this location.

Importantly, the opening of the NDR provides a unique opportunity for new development at Imperial Park, in an area where there has been limited choice for occupiers and where in particular the age, configuration and condition of existing accommodation makes some of it no longer fit for purpose.

Without Imperial Park being developed, the opportunities for business will be limited to the eastern and southern areas of the city. Recent experience has shown that businesses do want to locate to the north of Norwich, but the age and quality of buildings are not suitable. Other locations such as Rackheath are considered, but ideally businesses wish to remain in Norwich, where there is a larger employment pool.

The site benefits, now that the NDR is open, from significantly improved connectivity. The NDR provides access to the A1067 (Fakenham Rd) to the west and the A47 via Postwick junction to the east. From the A47 all major arterial roads can be accessed, including the A11, A140 and A146. The City centre is accessed via either the A140 Cromer Road, or to the east via the various roads running into the centre from the NDR, including the A1151 and B1150.

When the final section of the NDR is completed to connect up with the A47 to the west of the city, Imperial Park will sit adjacent to one of the major routes in Norfolk. It's position of one of the most accessible and prominent schemes in the region will be further enhanced. With dual carriageway access to a wide geographical area, there will also be no need to traverse the city centre.

6. The Importance of the Site in a Local and Regional Context

The availability of a site for large scale development is vitally important to Norwich and the wider economy. The competing sites are limited in terms of their size and their layouts limit the provision of larger sized units.

Imperial Park provides in the order of 115 acres, with the ability to construct up to 1 million sq ft of industrial and warehouse accommodation. The existing stock around north Norwich is dated, lacking the attributes required by occupiers of eaves height, parking and access and in most cases now likely to be below the Minimum Energy Efficiency Standard proposed by law. The older properties in northern Norwich generally have asbestos roofs and are poorly insulated. Imperial Park will provide a solution to all these issues, which are currently holding back local businesses.

Broadland Gate has a gross area of approximately 45 acres for development. A number of plots have been sold or are under offer and the availability of land for traditional B1, B2 & B8 uses is limited at around 15 acres.

Broadland Business Park has a net developable area of approximately 40 acres for new development, which is split across a number of sites. Both of these business parks are located to the east of the city.

Browick Road, Wymondham is located to the south of Wymondham, adjacent to the A11. It is conveniently located, with good accessibility via the A11, but has a site area of 26 acres.

Imperial Park has a net developable area of around 115 acres, which is substantially greater than both Broadland Business Park and Broadland Gate and therefore offers the only opportunity in Norwich to provide large scale development for existing occupiers or inward investment. The site sits adjacent to the NDR and should provide a ready supply of land for 10-15 years.

The availability of large scale development sites throughout Norfolk and wider East Anglia is limited and one of the pertinent factors for enabling development is the provision of infrastructure. Imperial Park has the most important infrastructure in place, the access road, being the NDR. Locations such as Thetford, King's Lynn and Great Yarmouth have availability of land, but they are generally smaller parcels and not suited to large scale developments. Furthermore, the economics of development are such that without public sector intervention in locations such as Great Yarmouth commercial development do not work.

Land and buildings will be available freehold at Imperial Park, as well as on a leasehold basis. With limited freehold availability elsewhere in and around Norwich, this will provide a steady supply to organisations looking to purchase property.

Norwich is better placed for businesses in terms of employment, transport links (with both rail and airport in close vicinity) and the economics of development are more likely to work. Imperial Park is also adjacent to Norwich Airport and therefore offers both airside and aviation uses, as well as accessibility to the wider European market via Amsterdam.

7. Conclusion

- Imperial Park offers the largest single commercial development sites in and around Norwich and therefore the potential for large scale light industrial, manufacturing and warehousing, which no **other** competing site does. At 115 acres in size, it is four times as large as the next biggest site. It is essential that Norwich has a unique site of this nature for the long term prospects of the local and wider economy.
- Imperial Park will offer occupiers further choice. The other sites are located to the east and west of Norwich, with the land at Wymondham being to the south. This site, being to the north of the city gives another option from a geographical perspective, especially taking account of the present **concentration** of existing businesses, in this area of Norwich. Modern premises are imperative for businesses who want to expand and grow, compared to the older style premises which are not fit for purpose. Not all businesses will be able to afford higher rent, but it is essential to provide **them** with a wide range of options.
- Some of the other business park alternatives are not prepared to sell land or buildings on a freehold basis. The availability of freeholds at Imperial Park will assist in satisfying companies requirements to only purchase property.
- Imperial Park has the potential to provide a long-term supply of prime employment land which could last for 15 years or more. Importantly, it is located in within close proximity to a number of housing allocations which will come forward under the Greater Norwich Development Plan offering opportunity for sustainable employment with potential for cycling to work and importantly without the need to traverse the city centre.
- Imperial Park sits adjacent to the NDR, which will offer dual carriageway access and connectivity to a wide geographical area, without the need to traverse the city centre. Once the final phase of the NDR is complete, the orbital road will offer connectivity to the A47 and beyond via the west, as well as the east and the Postwick interchange. This will further enhance Imperial Park's accessibility and make it more attractive to occupiers.
- Imperial Park offers an alternative to the traditional Northern Industrial Estates. It will not provide direct competition due to the different types of product, but will provide occupiers with a greater choice.

BUSINESS PARKS / DEVELOPMENT SCHEMES IN NORWICH

ADDRESS	SIZE	PRICE	PLANNING	COMMENTS
Sweet Briar Park, Norwich	Up to 10.04 acres	£375,000 per acre	Employment allocation	<ul style="list-style-type: none"> • New scheme to the west of the City centre • Plots sold to Wickes, Pendragon & Viking Storage • Estate road & services in place
Broadland Gate, Norwich	Up to 13.89 acres	£475,000 per acre	Outline permission	<ul style="list-style-type: none"> • New business park situated at junction of A47 & NDR • 6 acres under offer to Jaguar Land Rover • Estate road & services to be in place by end of 2017
Broadland Business Park, Norwich	Up to 18.7 acres	£400 to 500,000 per acre	Outline permission	<ul style="list-style-type: none"> • Established business park to the east of Norwich • Developer will also offer FH & LH D&B packages • Site situated to rear of park, opposite Hewlett Packard data centre
Longwater Park, Norwich	Up to 16 acres	Specification dependant	Outline permission	<ul style="list-style-type: none"> • Established industrial area to the west of Norwich • Leasehold D&B packages only available • Rent likely to be no less than £8.50 per sq ft
St Andrews Northside, Norwich	12.6 acres	£3 million	Detailed planning for 137,240 sq ft of offices	<ul style="list-style-type: none"> • Situated to the east of Norwich, adjacent to Broadland Business Park • Owner will only consider a sale of the whole
Browick Interchange, Wymondham	Up to 26.4 acres	£450,000 per acre	Employment allocation	<ul style="list-style-type: none"> • New business park situated adjacent to A11 at Wymondham • Developer will also offer FH & LH D&B packages • To be serviced

APPENDIX 3

**Chapter 9 of adopted
Norwich Airport Masterplan**

9.0 Phased Growth

Introduction

- 9.1 These proposals have been developed from the passenger forecasts included within Chapter 8 of this Masterplan. The forecasts will be regularly reviewed and if growth is higher than anticipated, then the development proposals will be revised. Similarly, if there is a slowdown in the rate of growth, developments will be deferred. Additionally, advancements in technology may mean that these development proposals are subject to change.
- 9.2 Planning approval will be required for certain future developments in accordance with legislation. Planning applications will be made to the relevant local planning authority.

Development Proposals to 2030

- 9.3 The development proposals to 2030 are shown in Figure 9.1 The proposed facilities will provide the capability of handling the expected 930,000 passengers per year by 2030. However, the pace of development will need to reflect the growth in passenger numbers.

Airport Terminal

- 9.4 Aircraft check-in facilities are moving towards greater automation which will make way for additional capacity in the future within the current terminal building.
- 9.5 In addition, the Airport is in the process of reviewing the internal airside and landside configuration of the terminal building.
- 9.6 Notwithstanding these changes, additional passengers are predicted to use the Airport and allowance should be made for future expansion.
- 9.7 Terminal expansion would take place to the east of the existing terminal building where, at this stage, land has been safeguarded. It is acknowledged that the Regional Freight Building would need to be re-provided.

Scheduled and Charter Apron Capacity

- 9.8 One of the current capacity constraints at Norwich Airport is the available parking area for aircraft both overnight and during the peak operational hours. The current apron for commercial aircraft is located to the north-east of the terminal building. To cope with peak apron demand, additional apron capacity will be sought to the north-east of the terminal. The safeguarding of land for three to four Code D (B757 or smaller) or possible E (B767 or smaller) stands in front of the terminal building and existing stands is proposed.

Maintenance, Repair and Overhaul Infrastructure

- 9.9 MRO operators at Norwich Airport have benefited from the economic conditions which has led to lower costs on the international market, helping to compete with cheaper eastern European operators.
- 9.10 MRO services are a major economic contributor for the Airport and a major regional employer, as set out in previous chapters. The principal MRO operator, KLM UK Engineering (KLMUKE) is also linked to the new International Aviation Academy – Norwich.
- 9.11 Land has therefore been identified and safeguarded for future MRO expansion for both hangar space and apron capacity.
- 9.12 In September 2016, a new Engine Test Facility was opened to the north-east of the Site. This was a £1.4 million investment. The Engine Test Facility comprises a 10m high three-sided acoustic barrier, reducing aircraft noise for local communities. The Facility was built by an East Anglian company and a specialist acoustic company from Germany. This Facility will support the potential MRO expansion.
- 9.13 An area to the west of the Alpha taxiway has been identified for MRO remote parking apron capacity.
- 9.14 An area to the east of the Alpha taxiway has been identified for new hangars for MRO, to the north and south of current MRO facilities.

Offshore Oil & Gas Services

- 9.15 Current predictions for the offshore oil and gas sector point to a decline in gas field activities over time, which could have implications for services for Norwich Airport. However, it is recognised that this is a volatile market that could change, and airport capacity should be

safeguarded to respond to market scenarios in the future as further discoveries in the region could be made. There is also a strong likelihood that much of the oil and gas servicing requirements could be switched to offshore wind installation and servicing and oil and gas decommissioning sectors.

Airport Operating Hours

- 9.16 Norwich Airport recognises the opportunity to extend its chartered holiday flights schedule during the summer months in order to maximise sector utilisation by based aircraft and tour operators generally which cannot be easily achieved within existing operating hours. This may require flights to arrive later than the current 23:00 restriction. Any change in operating hours will be subject to the planning process and assessments, which will be submitted alongside any application.

Runway and Air Traffic Control Infrastructure

- 9.17 There is predicted to be an increase in hourly and total aircraft movements at Norwich Airport to service the increased passenger numbers. The single runway is 1,841m long and is capable of handling medium-sized aircraft only. The smaller 1,285m runway running northeast to southwest was closed in 2006 and is now used only as a taxiway.
- 9.18 The Delta taxiway is currently restricted to some Code C aircraft. The Airport may upgrade this taxiway in the future, or a Code D taxiway connection may be made to the adjacent operational main taxiway to improve the efficient use of the aircraft apron and provide improved aircraft access to the main runway.
- 9.19 As part of the general modernisation and safety improvements proposed for the airfield, additional landing and take-off lights are proposed for the western end of the runway to match those provided to the east, and a second Instrument Landing System (ILS) and Area Navigation (RNAV) is to be installed.

Car Parking

- 9.20 The Airport will encourage a greater use of public transport targeting a shift away from the reliance on private car for journeys to the Airport. The requirement for car parking at the Airport will, however, still increase as passenger numbers grow and is an important part of the Airport's business model.

- 9.21 By 2030 Norwich Airport will need an extra 750 spaces, taking the capacity to 1,734 spaces.
- 9.22 In light of the above potential expansion scenario, allowance should be made for additional airport parking. This could be achieved by either acquisition of the existing Airport Park and Ride (P&R) site if this were to become surplus to existing requirement due to relocation following the NDR completion scheduled for March 2018 or through provision of a multi-deck configuration on the existing car park between 2015 and 2030. Since decking is unlikely to be viable despite offering staged provision, the primary parking expansion solution is proposed to be on the P&R site should that become available.
- 9.23 Norwich Airport will continue to have ongoing engagement with Parish Councils surrounding the Airport in respect of parking proposals in an attempt to discourage passengers from on street parking in Parishes.

General Aviation and Business Aviation

- 9.24 Norwich Airport has a tradition of providing General and Executive Aviation facilities for a variety of operators and aircraft types. As well as helicopter companies, servicing the offshore oil and gas industry, Norwich Airport is home to company owners of aircraft. In addition, the Airport also provides facilities for visitors, General Aviation and, also, the East Anglian Air Ambulance.
- 9.25 Norwich Airport remains committed to the continuing provision of these services and envisages a rationalisation of land use needs with the predominance of these facilities being located to the south of the runway.

International Aviation Academy – Norwich (IAA-N)

- 9.26 The new IAA-N was opened on 24 April 2017 and is a collaboration between the Airport, KLMUKE, City College Norwich and University of East Anglia. It is located to the south and in close proximity to the Airport and is a world-class training facility for careers in the aviation industry.

Utilities Expansion

- 9.27 Norwich Airport has internal services for distribution of telecoms, electricity, wastewater and surface drainage.

- 9.28 A number of these services will need reinforcement / replacement in the future. Norwich Airport is committed to investing in these services to ensure that they have the capacity to support the Airport's future growth.
- 9.29 In addition to these basic services, Norwich Airport has standby electrical generation for essential aviation equipment such as the Air Traffic Control Tower and airfield ground lighting. These key services will be reinforced / expanded as necessary to ensure the continued safe operation of the Airport.

Site 4 – Land North East of the Runway

- 9.30 In 2013, planning permission was granted on 41 hectares of land to the north of the runway for 95,035 sqm of aviation-related employment uses.
- 9.31 The site is located in the north-east corner of the airport comprising managed grass, taxiway, disused runway and apron. The Ground Run Enclosure used for engine testing is to the south-east of the site and the former fire training area is situated immediately to the east of the site comprising an area of concrete hardstanding, scrub and some trees. The current Fire Training Ground is situated to the west of the site. The location of the site is indicated at Figure 9.1 and totals 46.5ha and is known as 'Site 4'.
- 9.32 This planning permission was subsequently amended in 2016 as the pre-let occupier resolved not to proceed and remain in situ at its existing premises. The amended permission factors in the new access to the site from the new Northern Distributer Road, which is due to open in March 2018.
- 9.33 Site 4 is remote from the main Airport and, with the exception of retaining the required fire training facilities, has not been identified for any future airport operational or expansion requirements. Objective Evidence commissioned by Norwich Airport (Appendix 1) identified that circa 20% of Site 4 should be retained within the operational boundary for aviation-related uses.
- 9.34 Following this, NCC commissioned its own independent evidence which concluded that limiting the aviation use to 20% may be a potential constraint on future long term aviation development at the Airport. As a result of further discussions between Norwich Airport and the City Council, this Masterplan will safeguard 44% of the Site 4 Land (20.5ha) for aviation uses to maximise the opportunity for large scale aviation-related development. Norwich Airport will continue to collaborate with NCC, BDC and the New Anglia LEP.

- 9.35 In order to safeguard Site 4, the Airport expects to relocate the DME (Distance Measuring Equipment), from its current location to a location south of the runway.
- 9.36 This new DME site has been safeguarded and does not affect the land north-east of the runway and the existing and proposed MRO hangars to the south of the runway. The current KLMUKE hangars are acceptable in DME safeguarding terms due to their height and orientation. Any future expansion of operations will have to comply with all airport safeguarding requirements, but similar hangars to the existing MRO ones could be developed within the DME area if the demand arose.
- 9.37 In future, it may be possible to relocate the DME if any future infrastructure and operations come forward to the south of the runway. DME safeguarding is subject to airport procedures.

Airspace

- 9.38 The 2013 Aviation Policy Framework recognises the need to provide airspace capacity to support airport expansion. It supports the CAA's Future Airspace Strategy¹ (FAS), published in 2011, with the aim of modernising the UK's airspace system.
- 9.39 The FAS's 2030 Vision is to establish:

"Safe, efficient airspace that has the capacity to meet reasonable demand, balances the needs of all users and mitigates the impact of aviation on the environment."

- 9.40 The Aviation Policy Framework² supports the implementation of the FAS. The Aviation Policy Framework states the following:

"The implementation of the FAS can also play a significant role in delivering our economic and environmental objectives in relation to aviation. For example, by improving the overall efficiency of our airspace we can also at the same time provide significant opportunities to minimise aircraft emissions and air traffic delays."

¹ Civil Aviation Authority: Future Airspace Strategy for the United Kingdom 2011 to 2030

² 2013 Aviation Policy Framework

Local Airspace Capacity

- 9.41 The UK has a complex structure to support an extensive network of arrival and departure routes, with the interaction of various airports having an impact in the capacity of the surrounding airspace.
- 9.42 Norwich Airport currently operates in Class D Controlled Airspace consisting of a Control Zone extending to a radius of 6Nm and Control Areas extending to 12Nm from the centreline of the aerodrome up to an altitude of 4,000 feet. Pilots must obtain permission from Norwich Airport Air Traffic Control (ATC) to enter the Controlled Airspace.
- 9.43 It is mandatory for aircraft to call Norwich Airport to enter Class D airspace. In order to provide a comprehensive air traffic service, Norwich Airport actively encourages airspace users to contact Norwich Airport ATC when operating in the local area, outside controlled airspace. The ATC uses a combination of radio instructions and surveillance radar to manage air traffic.
- 9.44 The Airport participates in the CAA sponsored Lower Airspace Radar Service and provides air traffic services to transit aircraft within 30Nm of Norwich Airport.

Airspace Routes

- 9.45 Norwich Airport's ATC uses radio and surveillance radar to assist arriving and departing aircraft to connect with the national airway system.

Investment Plan and Phasing

- 9.46 The work identified within this Masterplan has been carefully planned and phased to ensure that additional capacity and facilities are delivered when passenger demand and other demand are sufficient.
- 9.47 Large-scale capital projects must be meticulously planned to ensure that they do not impede the operational ability of the Airport. Therefore, a large percentage of the major construction works are done either during the quieter off-peak months or at night, adding an additional layer of complexity.
- 9.48 Furthermore, the large-scale works within this document require planning permission from the local regulatory bodies.

Development Proposals 2030 to 2045

9.49 Given the difficulty of forecasting the volume of traffic so far into the future, Norwich Airport has developed only very provisional plans for the period 2030 through to 2045. The development proposals to 2045 are shown on Figure 9.2.

Runway

9.50 Efficiencies which reduce aircraft CO₂ and noise emissions are being achieved in the industry through a new generation of aircraft and engines. Whilst advances are expected to be applied to all sizes of aircraft, certain efficiencies are gained by a combination of efficiency and size, such as the wide-bodied generation of aircraft.

9.51 These aircraft are currently unable to use Norwich Airport due to its runway length. In addition, although current MRO activities focus on small to medium size aircraft (up to Code D), future contract opportunities could include larger aircraft that would need to land and take off from Norwich Airport. This will also facilitate routes that require larger aircraft to carry more passengers to existing destinations and/or serve new destinations at a greater distance from the Airport.

9.52 It is therefore proposed that a 500m eastern extension to the runway will be safeguarded to accommodate larger aircraft in the future. The proposed extension will be subject to planning permission.

9.53 Although the proposed western extension of the Old Catton Cemetery would bring it closer to the Airport boundary, both the runway extension and taxiway would be designed so as to not affect either the existing or proposed cemetery.

9.54 As a consequence, the Public Safety Zone (PSZ) will be slightly altered to reflect the runway extension. The altered PSZ can be found on Figure 6.1 along with the current PSZs. For more information on aerodrome safeguarding, see Chapter 6.

Air Traffic Control (ATC)

9.55 The current ATC Tower is located on the northern extremity of the airfield, some distance from the terminal and the bulk of the airport operations situated to the south. It is therefore likely that the ATC Tower be relocated to south of the runway. Consequently, land has been safeguarded for such a scenario.

Car Parking

- 9.56 By 2045, Norwich Airport is anticipated to require an extra 1,250 spaces, bringing the total capacity to 2,234 spaces. This additional demand will be reviewed periodically, however at this stage a solution is anticipated through a Park & Ride strategy.

Other Facilities

- 9.57 An area to the south-east of the runway adjacent to KLMUKE, has been safeguarded for a potential new Fire Station.

APPENDIX 4

Norwich Airport Development

Report: York Aviation



York Aviation

Norwich Airport: Imperial Park Development Rigby Group Final Report

Contents

	Page
Introduction	1
Long Term Passenger Demand	2
Market Potential – Non-Passenger Aviation Market	3
Scope of Facilities	8
Conclusions	16

Introduction

1. In February 2018, York Aviation were commissioned by Rigby Group to provide an objective review of the evidence for the aviation related requirement of Site 4, known as Imperial Park. Imperial Park forms part of the Airport Operational Area and benefits from a planning consent for aviation related commercial development. The site is identified in the ongoing Greater Norwich Local Plan consultation as a potential development site but we understand that Norwich City Council and the neighbouring local authorities are seeking objective evidence that the site should no longer be reserved solely for aviation related uses and that the majority of the site can be designated for non-aviation related uses.
2. This aim of this report is to provide the necessary evidence to Norwich City Council, and the neighbouring authorities, of the scale of land likely to be needed to support the long term growth of the commercial operations of the Airport, and to illustrate the need, or otherwise, for Imperial Park in supporting other aviation related activities, such as business aviation, MRO, cargo and general aviation.
3. Whilst, we appreciate that the draft Master Plan identified that Site 4 was not required for core aviation activity, this was not clearly demonstrated by reference to the land that might need to be safeguarded for the longer term (beyond the forecast period to 2045) to ensure that the Airport can continue to support the full range of potential aviation uses. This report then fills this gap in the evidence as well as substantiating the long term potential scale of aviation related development that might realistically take place associated with an airport of the scale of Norwich.

4. The demonstrative evidence we present is divided into two parts:
 - to provide evidence on the expected scale of the market for aviation related activities, particularly MRO and related activity as envisaged as the main aviation related users of the northern Site 4 in the original planning application;
 - to establish that there is sufficient land within the remainder of the Airport site to accommodate these uses and the longer term potential development of commercial aviation at Norwich on the assumption that 80% of Site 4 is released for non-aviation uses.
5. The report is organized as follows:
 - Long Term Passenger Demand;
 - Market Potential – Non-Passenger Aviation Market;
 - Scope of Facilities;
 - Conclusions.

Long Term Passenger Demand

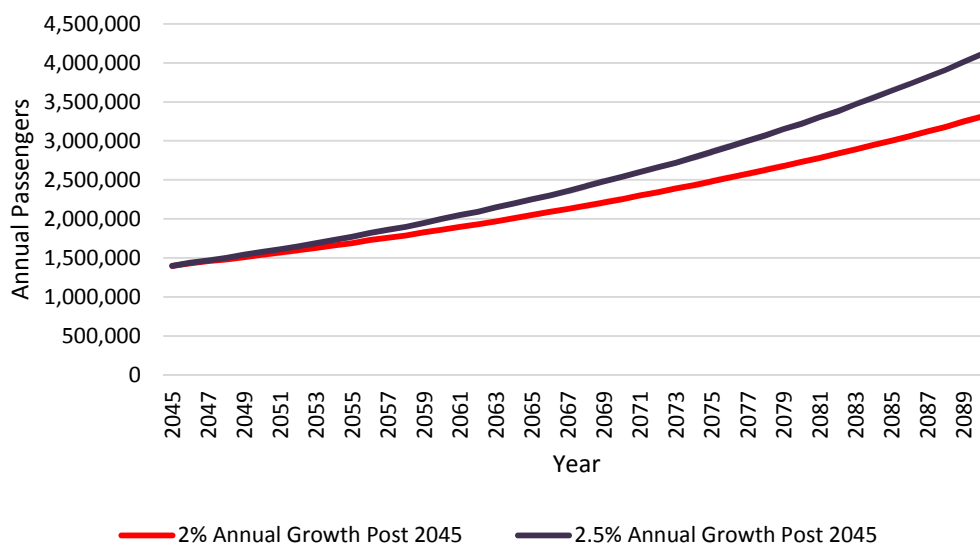
Commercial Passenger Market

6. We have previously produced long term forecasts for NWI to support the November 2017 Master Plan, covering the period to 2045. In considering the required infrastructure, we have not sought to develop detailed forecasts beyond 2045, but rather to apply simple metrics of growth to give a broad picture of when passenger demand may reach key milestone throughputs.
7. The Master Plan forecast shows the Airport reaching 1.4 million passengers per annum (mppa) by 2045, including around 80,000 passengers flying on offshore helicopters. This would place the Airport on a par with airports like Cardiff Wales and Doncaster Sheffield today
8. From this starting point, we have run two scenarios for a further 45 year period to 2090:
 - Applying a long term growth rate of 2% per annum to all non-offshore helicopter passengers; and
 - Applying a long term growth rate of 2.5% per annum to all non-offshore helicopter passengers.
9. In both cases, these growth rates exceed the long term average projected by the Department for Transport (DfT) which is 1.8% in the 2017 DfT Forecasts¹. This may be expected however as a small airport such as NWI could be expected to clawback some market leakage as it grows and offers a wider range of services. However, importantly, by presenting growth rates above the DfT figures, we have sought to provide an upper bound projection to ensure that our assessment of the land required for commercial activities will provide for all eventualities over the longer term
10. In both cases, we have assumed offshore passengers would remain around 80,000 as explained below. The results can be seen in **Figure 1** overleaf but, in summary:
 - At 2% annual growth – The Airport would reach 3mppa around 2085, and will not reach 3.5mppa even by 2090; and

¹ UK Aviation Forecasts, October 2017, Department for Transport

- At 2.5% annual growth – The Airport would reach 3mppa around 2077, 3.5mppa by 2084 and would reach 4mppa by 2089.

Figure 1: Long Term Passenger Projections



Source: York Aviation

- These are indicative figures only to provide an indication of a realistic long term potential for which land would need to be safeguarded for purely aviation related uses. At the upper end of the scale, NWI would be comparable with Leeds Bradford or London City today. We consider the infrastructure requirements and the timescales over which this may be required later in this report.

Offshore Market

- Based on the analysis undertaken as part of our Master Plan forecast, we believe that there is unlikely to be significant growth in the offshore helicopter market. We anticipate some switch from Gas to Windfarm usage, but the growth of the latter is likely to just act to offset the former's decline.
- For this reason, we do not, at this time, believe there is a case for increasing the offshore helicopter passenger figures for 2045, and this is why they remain capped within the overall projections shown above. It must be noted however, that this is an assumption based on current thinking and that there could be changes in circumstances which could lead to further growth/decline.

Market Potential – Non-Passenger Aviation Market

- In this section, we consider the opportunities for other aviation related activities to be attracted to NWI over and above the requirements directly associated with handling passenger flights, albeit that the scale of such activities which could realistically be attracted will be related in large part to the scale of passenger related operations. It is these non-passenger related activities which could generate a need for aviation related facilities to be located in part of Site 4. In this section, we cover:

- Freight Demand
- Business & General Aviation
- Maintenance – MRO
- Airport City type developments

Freight

15. At present, there is a very small throughput of freight at NWI and we understand that this is associated with freight being taken to the offshore gas platforms and with parts being moved between the Netherlands and KLM UK Engineering as bellyhold freight on the scheduled KLM services. Although there is a freight shed, most of the freight going through this is handled by truck and will be handled as bonded freight on the trucks and taken for consolidation at larger airports in the UK.
16. We do not see any reason for this pattern to change or for any significant growth in freight at NWI. The Airport's location away from the main trunk motorway network means that it will be highly unattractive to freight airlines seeking access to the UK freight distribution network, located principally between London and the Midlands. The local market is unlikely to sustain pure freighter operations flights directly.
17. We would not anticipate any need for additional freight handling capacity on this basis.

General and Business Aviation

18. Currently there is a steady, though low scale general and business aviation market at NWI (excluding offshore helicopters). Across this sector the activity will largely be serving the local market, perhaps with some small number of trainee pilots choosing to come to NWI for the flying school. Both the business and general aviation sectors are dominated by the South East of England, with some growth at core cities such as Manchester, but NWI is not located to be able to capitalise on these markets.
19. There has been long term cost pressure on the general aviation market, resulting in some aspects of the sector remaining relatively flat or even declining over the last decade. However, developments in Microlight flying (which covers smaller aircraft now) has led to some regrowth in the sector which may benefit NWI, though the extent of this may be small in overall terms and certainly by nature would not require large areas of hangarage or apron due to the size of the aircraft in question.
20. Whilst larger airports in the UK continue to squeeze out these activities, it is unlikely that NWI will represent a viable alternative for operators to relocate because the nature of general and business aviation is that it should be in convenient locations to maximise the time benefits offered over alternative transport modes. As NWI is not close to any of the Airports which are pricing the sector out, then they will be unable to satisfy the relevant markets.
21. Flying schools in the UK have benefitted from growth in demand from overseas, particularly Asia, and the shortages of pilots more recently in Europe. However, overall the scale of flying school activity remains relatively flat due to the cost and weather benefits of training in other global locations, including Spain and the USA. Furthermore, any boost gained from lack of training facilities in Asia may be reversed as flying schools are established on the continent.
22. Given the limited size of the local market for general and business aviation and its relative remoteness from other markets, e.g. London, we would expect to see only modest growth in this sector over time driven by local demand. Given the levels of activity on the current general aviation apron, we believe that any growth over the medium term could be easily accommodated, and even over the longer term, only minimal expansion of the apron may be required, which would not require a relocation to Site 4.

Maintenance – MRO

23. Norwich Airport is fairly unique among smaller regional airports in the UK in having substantial active aircraft maintenance facilities, provided by KLM UK Engineering (KUE) and Air Livery (aircraft painting). The location of the KUE facility at NWI is historic, resulting from the formation of Air UK in the 1980s out of Air Anglia, and the subsequent retention of the maintenance facility at NWI when KLM took over Air UK. This explains why NWI has MRO activity when larger regional airports such as Newcastle and Leeds have a very limited offer. The KUE facility provides support not only for KLM and KLM Cityhopper fleets, but also undertakes third party work for other airlines and aircraft owners. The scale of the activity makes this attractive to Air Livery as a secondary activity in support of aircraft maintenance. As a result of the KUE facility, there remains a strong pool of skills in the engineering sector at the Airport supported by the presence of the International Aviation Academy.
24. At present, there remains a buoyant aircraft maintenance market in the UK, supported by a combination of independent providers and in-house capabilities at the key airlines. However, for a number of years a large (and growing) part of the market has seen European airlines, including British Airways, easyJet and others, to send aircraft to Central Europe, the Middle East or further into Asia for heavy maintenance, driven by significantly lower labour costs which offset the costs of moving aircraft further afield for maintenance.
25. This has led to only limited growth in the UK market for heavy maintenance hangarage over recent years, with the most recent example being Monarch's hangar at Birmingham, although this came at the expense of the operator's Manchester facility which was subsequently closed as activity was consolidated into Birmingham. More recently, easyJet opened a new hangar at London Gatwick and this will be supplemented at the Airport by a new Boeing-operated hangar but, in both cases, these facilities are designed almost exclusively for line maintenance, and are only located at Gatwick because of the large based fleets which operate during the day and then go for routine maintenance through the night in the hangars. The same is true for the British Airways and Virgin Atlantic hangars at Gatwick and the Thomas Cook and Jet2 hangars at Manchester. This was also an influencing factor in the decision to locate the Monarch hangar at Birmingham, where value could be added in offering both line support and heavy maintenance in a single location. Such facilities could never be attracted to NWI because the based fleet of aircraft now, and in the future even at 4 mppa, would not be sufficient to require such line maintenance facilities over and above the capability of the KUE hangar to provide required line maintenance support.
26. In considering the future potential for MRO in the UK, we have combined our industry knowledge with consultations with three key MRO providers in the UK, KLM UK Engineering, Chevron and Air Livery. Due to commercial sensitivities, the information provided by these companies has been aggregated, but it is worth noting that the picture painted by all three was consistent. There is some emerging evidence, however, that there will be some re-trenching of heavy maintenance back to Western Europe over the coming years driven by three factors:
 - The rapid growth of airlines in Asia means that there will be increasing pressure on capacity there which may displace European carriers;
 - Retention of skilled staff in Central Europe is difficult as many will move to Western Europe on receiving their qualifications to earn a higher salary; and
 - Costs of sending airline staff to oversee maintenance are increasingly high and seen as offsetting cost benefits.
27. This may present some opportunities for NWI to grow in this sector, but these are unlikely to be widespread and are unlikely to require the whole of Site 4. NWI's strengths, which may make it attractive, include:
 - Existing MRO cluster, which can generate synergies such as the shared use of ancillary facilities like the paint shop; and

- Existing skills base and aviation academy will be attractive in a market where there are skills shortages.

28. However, there are factors which will limit NWI's attractiveness, including:

- A preference by many operators to be located at bigger airports where there is significant line maintenance and ad-hoc repair demand to supplement any heavy maintenance, driven by based aircraft or those rotating through as part of their normal schedules;
- The current runway length remains restrictive to widebody aircraft and, hence, those MRO providers who want to offer flexibility on the aircraft sizes they maintain, such as Boeing or Chevron, will be unlikely to consider NWI without the extension. Flexibility to cover aircraft of all sizes is likely to be important to MRO providers. The Master Plan safeguards the option of such an extension, but it will be the passenger market that determines whether this is required, not the low number of movements associated with MRO;
- Although clusters have benefits as highlighted above, operators have highlighted to us that they do not like too much immediate competition around them. They try to differentiate on location, otherwise it leaves only price for differentiation, which can drive down returns. Whilst we would not expect the presence of KUE at NWI to act as an impediment to all future MRO operators, it may limit the number that could be attracted to locate at the Airport and compete within the context of a relatively small local 'guaranteed' market and the limitations on the types of aircraft which could be maintained; and
- Having too many operators in a single location can drive up direct costs as salaries escalate in order to attract the same staff.

29. The scale of hangars which would be needed to support narrowbody maintenance would not be as large as they would if they needed to accommodate widebody aircraft, and hangars that are used for heavy maintenance, as opposed to line maintenance, can be smaller for the same number of aircraft because they will tend to stagger aircraft inside, rather than parking them directly side by side. As an example, the easyJet hangar at Gatwick, used for line maintenance, is 5,400m² and accommodates two narrowbody aircraft, but the Monarch building at Birmingham is around 10,200m², but can handle up to five narrowbody aircraft despite not even being double the size of the easyJet hangar. We overlay the total land area used by the Monarch hangar at Birmingham (including hangar, offices, car park and apron) onto the NWI Site 4 in **Figure 2** below.

Figure 2: Overlay of Monarch Maintenance facility onto Site 4



Source: York Aviation, Google Earth

30. As can be seen, one of the largest new hangars in the UK could be accommodated perhaps 8 times over on the whole of Site 4, generating capacity for 40+ narrowbody aircraft or 16 widebody aircraft. This is far beyond the scale of MRO seen anywhere in the UK and highly unlikely to be achievable in a single location, particularly one where there is little 'line' flying. The proposed reserved strip for aviation related used could potentially accommodate up to 3 such developments, delivering a greater floor area than the combined hangarage at Manchester Airport.
31. Furthermore, there will be intense competition for any new hangar developments in the UK, with airports such as Liverpool and Bristol already preserving land in their emerging Master Plans to attract these operations. In both of these cases, however, there is a recognition that the markets are unlikely to be large enough to fill all available land and so these are viewed as part of mixed-use development.
32. Given the previously identified strengths of NWI, it seems reasonable to preserve a suitable strip of land to allow for some limited long term expansion in the MRO sector. However, on balance with the factors against NWI and the overall space available compared to the smaller areas given over to MRO at comparator airports, it would not be credible in our view to retain the whole of Site 4 for aviation related activity.
33. The timescales over which firms may come to NWI are also uncertain. There could be near-term opportunities for a single hangar, but then it seems likely that future opportunities will be much further out as the Asian market fills and this could be 10-20 years away. This leaves some risk to the short term achievability of the near-term opportunity because it will be hard to commercially justify opening up Site 4 for a single building and operator. This leaves the very real risk that NWI will not be able to capitalise on this opportunity and it will go elsewhere. The loss of such an opportunity in the short term may reduce the benefits of the cluster in the long term when NWI seeks to compete for new operators in the future.

Airport City Type Developments

34. We understand that it has also been suggested that Norwich could attract other aviation related uses to this area, along the Manchester Airport City model. At Manchester, it is proposed to develop some 5 million ft² of offices, logistics, hotels and advanced manufacturing space over the next 10-15 years adjacent to the operational airport² on two sites totaling some 52.6 hectares. This compares to the Site 4 (imperial Park area) of some 46.5 hectares, i.e. of a similar total scale. This development needs to be seen within the context of:
 - the area's designation as part of an Enterprise Zone;
 - the relative scale of Manchester Airport which handled almost 28 mppa in 2017;
 - the proximity of the sites to the M56 motorway and major markets across the Liverpool/Manchester/Leeds corridor.
35. This zone does not include MRO type activity, which is located on a 9 hectare site within the operational part of the Airport. At present there are only three hangars used for MRO at Manchester, with a total floor area of approximately 28-29,000 m², less than three times the size of the Monarch hangar at Birmingham. The Airport's Sustainable Development Plan 2016 proposes that this area is sufficient for MRO type activity as the airport grows, albeit that some of the older hangarage is likely to require redevelopment. This would suggest that the reservation for hangarage development of 7.1 hectares within Site 4 should be more than sufficient to accommodate any reasonable aviation related activity at NWI given that this is in addition to the existing KUE and Air Livery facilities

² www.airportcity.co.uk

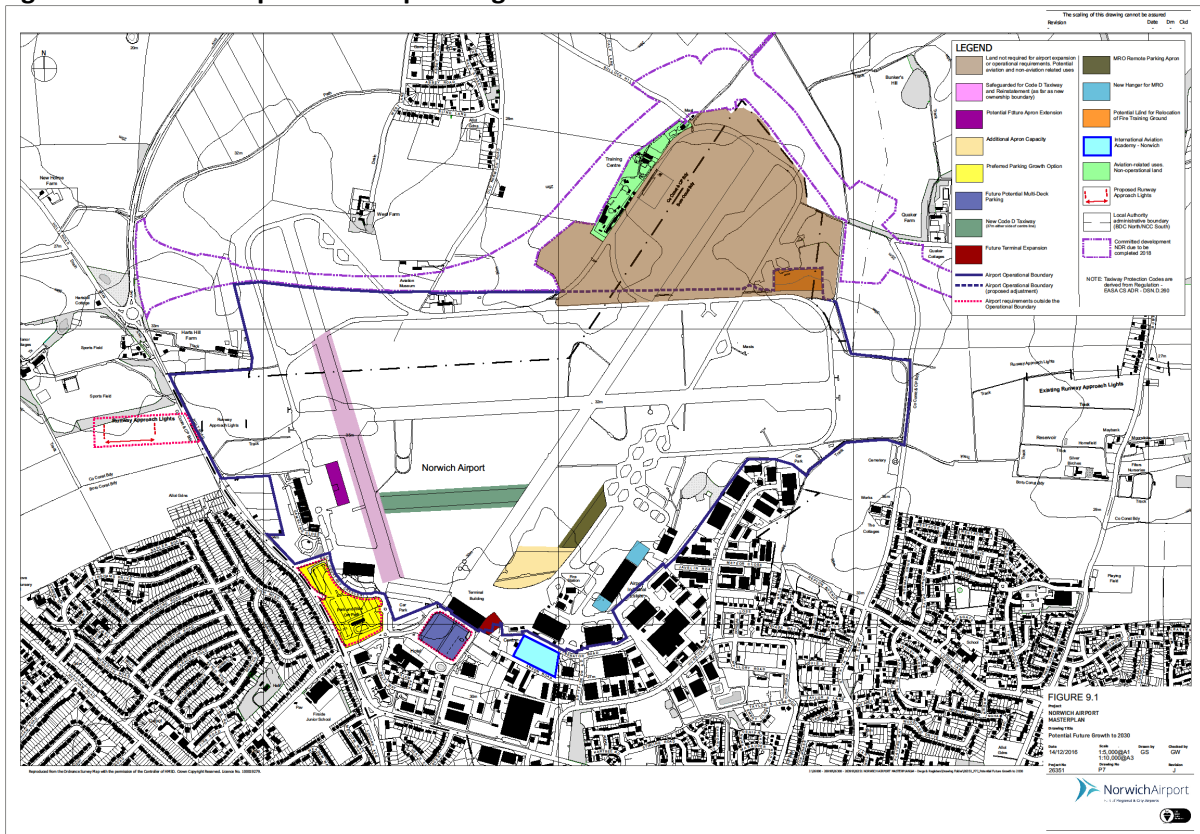
36. In terms of the uses being attracted to the Airport City site, these, in reality, have little direct connection with the operation of the Airport. Major logistics sheds have been attracted for Amazon and DHL and, whilst there is some connection to cargo activity at the Airport, the principal rationale for the location is proximity to the motorway. Similarly the attractiveness of the northern part of the site to office development is, at least in part, related to the direct rail and tram connections to the rest of Manchester. The scale of passenger activity at the Airport will be the principal driver of hotel requirements.
37. Overall, then, we do not believe that Manchester Airport City provides a relevant comparator for Imperial Park at NWI and to the extent that comparisons are valid, the scale of areas reserved for different activities at Manchester strongly suggest that the principal uses which might be attracted to Imperial Park are likely to be non-aviation related and that a reservation of 7.1 hectares for directly aviation related uses would be more than sufficient even for the longer term.

Scope of Facilities

Norwich Airport Master Plan

38. The November 2017 Norwich Airport Masterplan sets out the strategy for the development of facilities to meet the requirements of the traffic forecasts for the two key plan periods to 2030 and from 2030 until 2045. The traffic forecasts for these periods are 0.93 mppa by 2030 and 1.4 mppa by 2045. We have commented earlier on these forecasts in the light of the recent traffic performance at NWI and would expect that growth of this magnitude over this timescale to remain a realistic prospect.
39. To meet the requirements of these traffic projections, the Masterplan sets out phased developments to provide targeted new and modified infrastructure including new taxiway, apron, terminal and car parking facilities.
40. It also provides for the ability of other airport operations such as MRO, General Aviation (GA) and the offshore rotary sector to develop, grow and adapt accordingly. It is in these market segments that could give rise to the need to use of part of Site 4 to the north of the runway. Earlier, we have commented on the growth prospects and potential of these other non-passenger commercial market segments and indicated the extent that each of these are expected to perform during the Masterplan periods to 2045 and beyond. We have, as a central component of this report, identified what the longer term prospects are for these sectors beyond 2045 and will return to this later in this section.
41. **Figure 3** overleaf reproduces Figure 9.1 from the Masterplan which sets out the 'Potential Future Growth' developments to 2030. These comprise a range of developments across the southern part of the site in support of apron and terminal growth for commercial passenger flights, apron development in support of MRO, GA and offshore and other rotary operations, car parking and hangar development.

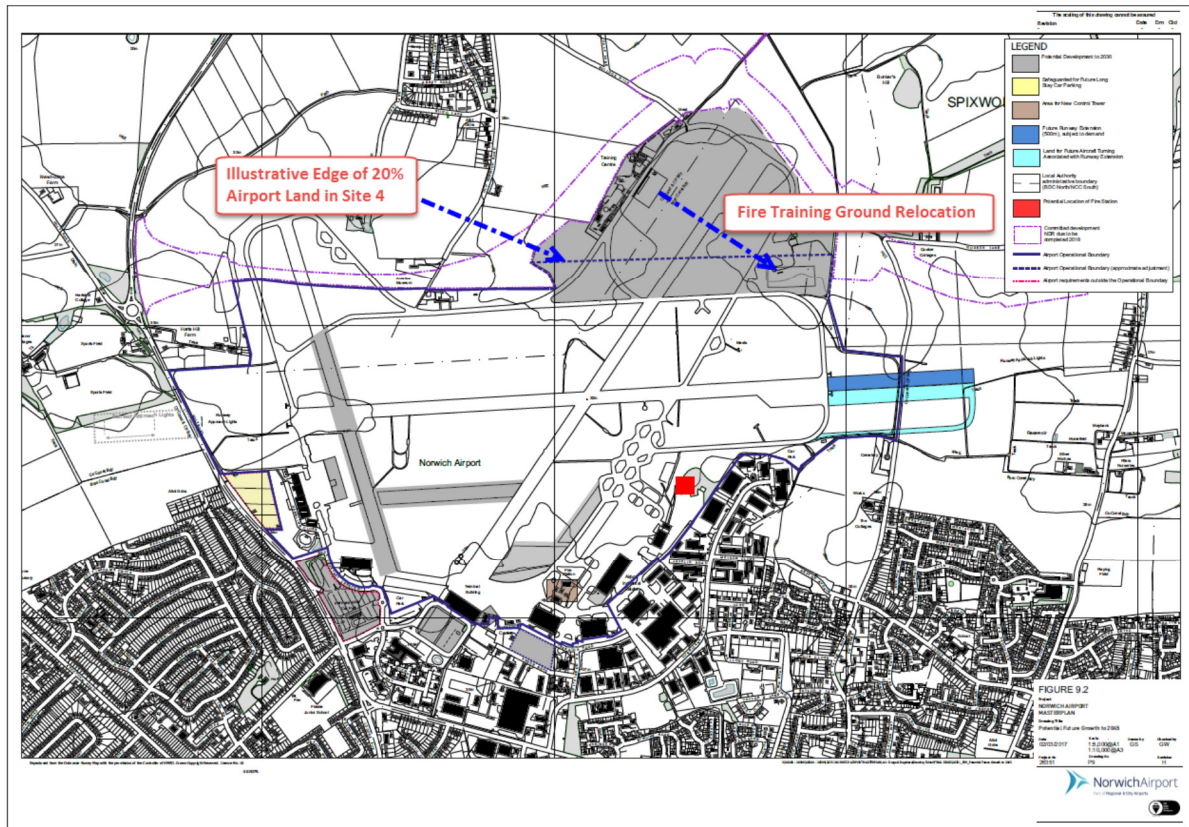
Figure 3: Norwich Airport Masterplan: Figure 9.1 – Potential Future Growth to 2030



Source: Norwich Airport Draft Masterplan, July 2017

42. It also highlights the extent of Site 4 to the north of the runway including the relocation of the Fire Training Ground to the south east corner of this site.
43. There is also a proposed new Code D taxiway running east-west to the south of the runway that will facilitate improved ground circulation for the taxiing of aircraft.
44. What is noticeable from this plan is the extent of available and unused land airside between the runway and the terminal apron areas and between the east and west apron zones that support MRO, GA and the offshore sectors.
45. **Figure 4** overleaf goes on to reproduce Figure 9.2 from the Masterplan that sets out the 'Potential Future Growth' developments to 2045. As well as illustrating the proposals set out above to 2030, the additional developments include additional car parking, a new fire station and the safeguarding of a runway extension.

Figure 4: Norwich Airport Masterplan: Figure 9.2 – Potential Future Growth to 2045



Source: Norwich Airport Draft Masterplan, July 2017

46. The full extent of Site 4 to the north of the runway is illustrated in grey and we have highlighted the relocation of the Fire Training Ground from its original location in the north-west area of Site 4 to its new location to the south-east. This relocation will have taken place during the first plan period to 2030.
47. We have also highlighted the 'blue' dashed line that runs east-west across Site 4. This provides a suitable strip for potential aviation-related hangar development with airside access. Preserving land for three hangars of the scale of the Monarch facility at Birmingham (and more than the MRO facilities at Manchester) and some ancillary activities, as discussed below, would require approximately 20% of the area to be retained for this use, though in reality the demand may never need all of this area as previously highlighted.
48. **Figure 5** overleaf illustrates the Option A 'Illustrative Masterplan' layout for Site 4 taken from the 'Imperial Park, Norwich Vision Document', October 2017. This depicts a range of airport related uses across the southern 20% of Site 4, the area highlighted in Figure 4.

Figure 5: Imperial Park Vision Document – Option A



Source: Norwich Airport

49. In this area we have highlighted the 'Engine Run Up Bay', recently constructed by the airport that will remain in this location long term. To its east is the relocated Fire Training Ground. To the west of this 20% area is a potential new location for the Air Ambulance facility. We understand that the current facility located as part of the complex of hangars and apron to the west of the current airport (south of the runway) is now too small for the Air Ambulance service that wishes to consolidate all of its NWI accommodation in one place (currently it has accommodation at two other locations at the airport in addition to the current hangar and apron).
50. In between these facilities, the Option A layout illustrates a row of hangars and apron.
51. As we have discussed earlier, the potential for additional MRO and other hangar related airport uses at NWI in addition to that that can be accommodated on land to the south of the runway is uncertain and very long term, in spite of the potential gravitation back towards Western Europe of European based MRO from Asia and other regions. Competition from other UK airports for new UK based MRO will be high. The remaining area in the 20% of Site 4 available for potential MRO then serves very much as a 'back stop' in the event that overall MRO, GA, Flying School, etc., activity at NWI outgrows the available land to the south of the runway.

Growth Beyond 2045

52. We next consider how much land NWI might need to accommodate growth above 1.4 mppa in the very long term beyond 2045. We have considered earlier three growth thresholds, 3.0 mppa (approximately twice the 2045 1.4 mppa traffic forecast) along with a 3.5 mppa and 4.0 mppa throughput based upon growth trends of 2% and 2.5% per year. The 3.0 mppa being reached from 2077 to 2085 and the 3.5 mppa reached from 2084 to 2090, depending on the rate of growth, and 4.0 mppa being reached in 2089 based upon a growth rate of 2.5%. These are all a long way out in the latter parts of this century.
53. Earlier in this section, in relation to Figure 3 and the proposals to 2030, we commented on the apparent extent of available and unused land airside between the runway and the terminal apron areas and between the east and west apron zones that support MRO, GA and the offshore sectors.

54. Our approach to gauge whether NWI will have sufficient land to the south of the runway, along with the 20% of Site 4, is to benchmark how much land is used to support operations at a selection of other UK airports that have a throughout in the 2.0 to 4.5 mppa range and compare this with the size of NWI. The airports selected are Aberdeen, Belfast City, Leeds Bradford and Southampton.
55. The areas we have measured are approximate and for consistency have used 'Google Earth' as a basis for the area measurements. The figures are set out in the **Table 1** below and we have divided the areas for the four benchmark airports in to three categories:
- ➔ total site area excluding the runway and associated 300m wide runway strip;
 - ➔ area of apron and taxiway used for commercial aircraft parking; and
 - ➔ the area occupied by the terminal, forecourt, access roads and car parking.
56. The comparator for NWI in this table has been obtained using a CAD drawing file with the same categories of area, except the area of apron and taxiway is the potential available area between the terminal and the runway strip and, thus, includes the apparent available undeveloped area described earlier as a potential expansion zone for such activities. As a cross check, we have also measured the total site area for NWI south of the runway strip in 'Google Earth' and derived a figure of 804,000 m², a very close match to the more accurate measurement of 807,000 m² in CAD. This then provides reasonable confidence that the areas measured for the benchmark airports using 'Google Earth' are sufficiently accurate to make comparisons.
57. Table 1 also combines the total area of the 'Terminal, Forecourt, Access Roads and Car Parking' with the 'Commercial Apron and Taxiway' in the right hand column.

Table 1: Benchmark Airport Site Areas (m²)

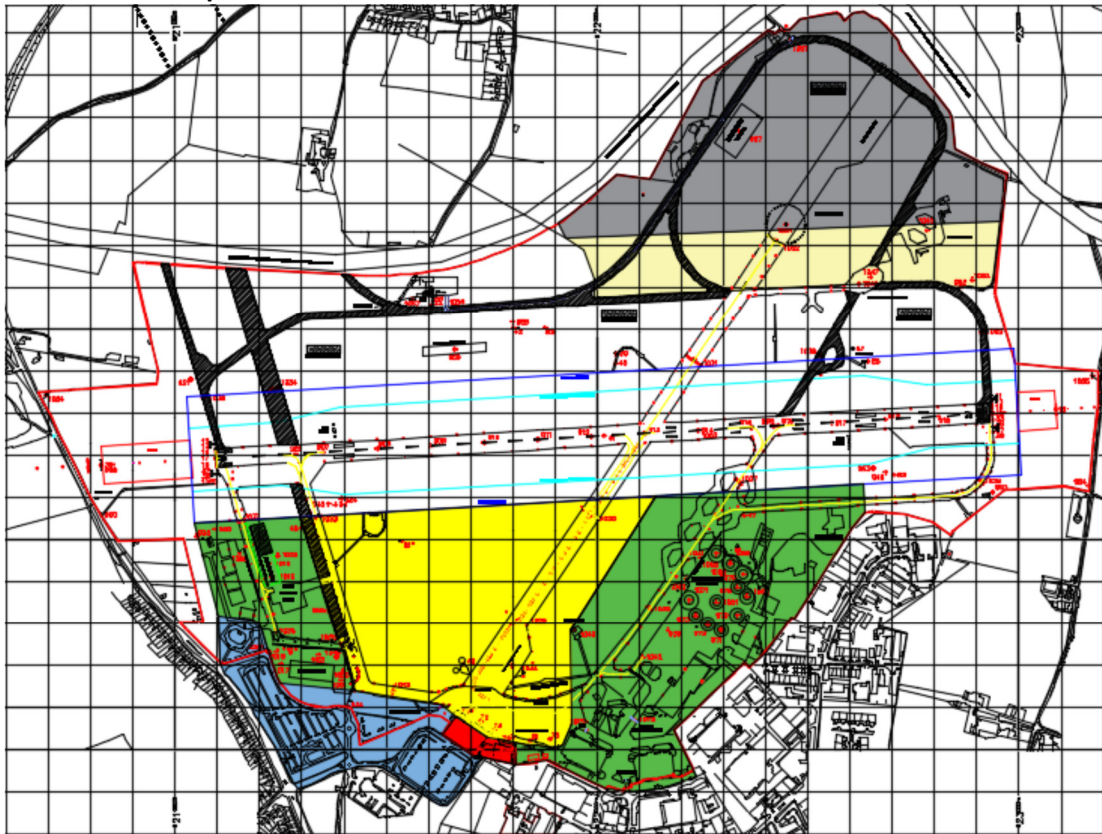
Airport	Mppa (2016)*	Total Site Area	Commercial Apron and Taxiway Site Area	Terminal, Forecourt, Access Roads and Car Parking Site Area	Combined Apron and Terminal Totals
Aberdeen	3	575,000	97,500	103,000	200,500
Belfast City	2.7	187,000***	50,000	137,000	187,000
Leeds Bradford	3.6	454,000	165,000	147,000	312,000
Southampton	2	305,000	54,000	91,000	145,000
Norwich	0.5	807,000	191,000**	111,000	302,000
Notes: *CAA Airport Statistics 2016 **Potential available land at NWI between terminal and Runway Strip ***Excludes extensive site for Bombardier Aerospace complex which has no airside connection					

Source: York Aviation, CAA Statistics, Google Earth

58. Importantly it should be noted that the NWI total site area is only for land south of the 300m runway strip and then excludes any of the Site 4 land.
59. What is striking, is how large the NWI site is at 807,000 m² compared to the other airports. Aberdeen with its significantly larger offshore rotary and fixed wing operation, the associated MRO and a commercial passenger throughput of 3.0 mppa is smaller at 575,000 m². Leeds Bradford at 410,000 m² is around half the size of NWI with a throughout of 3.6 mppa, although it does not have a significant MRO and GA operation.

60. Belfast City Airport has, for the commercial operations, an area only at 187,000 m² - it is a very compact airport. On the opposite side of the runway is the extensive Bombardier Aerospace complex covering an area of 770,000 m². Whilst some of this is adjacent to the Airport, the level of access is limited these days and the vast majority of it is landside. We have excluded this from the benchmarking as the scale and nature of this operation is unique at a British commercial airport. The Southampton Airport site at 305,000m² is split between two compact areas for commercial and other activity including GA.
61. The NWI combined area of 302,000 m² comprising the 191,000 m² of potential airside area and the 111,000 m² of the terminal, car parking and forecourt zones is very similar to the combined 312,000 m² at Leeds Bradford Airport, which handles 4.5 mppa and has plans to grow to 6.4 mppa by 2030. We understand that Leeds Bradford anticipate being able to handle in the region of at least 5 mppa through their site without the need to encroach too much on to land used by non-passenger related activities. There may be a requirement to relocate some car parking activity onto new sites outside the current airport boundary.
62. This would suggest that the 302,000 m² of available space for passenger related and other operations at NWI could support of 4 mppa. This area excludes the use of any part of Site 4 reserved for aviation related uses which would be available in addition to support growth in the other market sectors such as offshore rotary, GA, Air Taxi, Air Ambulance, MRO, Flying school, etc to the extent required
63. **Figure 6** overleaf illustrates, through shaded areas, the key zones of the operation or activity, including Site 4 to the north.

Figure 6: Norwich Airport Site Block Plan



Norwich Airport Site Block Plan Key:

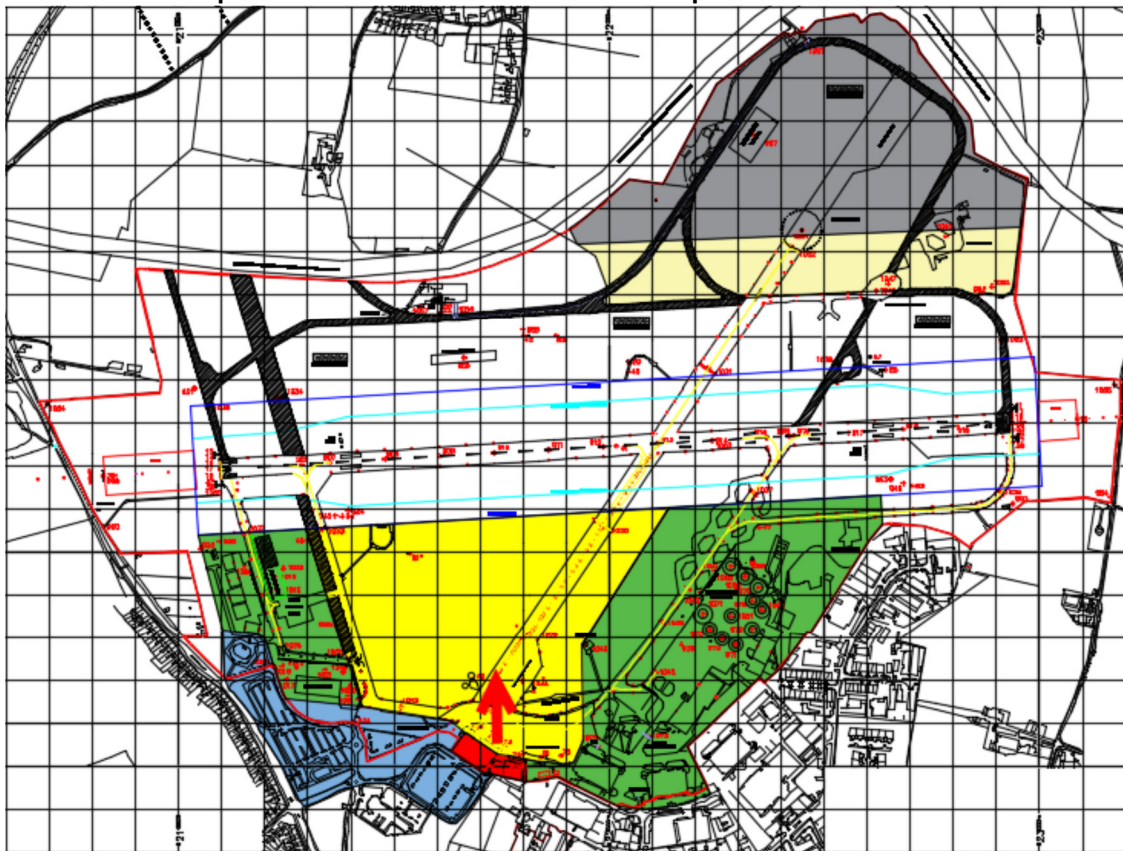
- Potential airside area for commercial apron and taxiways
- Terminal zone including proposed Masterplan extension
- Car parking, forecourt and access roads
- East and West zones for MRO, Off-shore, GA, Air Taxi, Flying Schools, Operational support, etc.
- Site 4 - 20% for Airport related activities
- Site 4 - 80% for non-aviation related developments

Source: York Aviation

64. The 'yellow' area is the potential airside area for commercial apron and taxiways, as discussed earlier. At its south is the 'red' terminal zone including the proposed Masterplan extension. Adjacent to this is a 'blue' zone covering the car parking, forecourt and access roads. The 'green' zones to the east and west cover the various MRO, offshore, GA, air taxi and flying school activities, along with other engineering and operational accommodation in support of airport activities. To the north is Site 4 in two colours, the 'beige' strip along its southern edge is the 20% of the site reserved for airport related activities, the remaining 'grey' area being for the non-aviation related developments.
65. This strip of land that constitutes the 20% of potential airfield related activities located along the southern edge of Site 4 will be in the 'line of sight' of the Control Tower located to the west of Site 4 on the northern side of the runway. Any MRO and other airport related development, together with its associated aprons and taxiways, will likely be south facing in any event. Any important localised areas that need to be observed in detail by the Control Tower can be resolved by the use of CCTV coverage, as is normal practice at all airports.

66. The two 'green' zones cover an area that is much larger than currently occupied by the various non-commercial related aviation activities and as such effectively provide significant space for these to grow and develop in the very long term without impeding the growth of the core commercial aviation activity.
67. Clearly, whilst the 'yellow' zone is substantial, with large areas undeveloped, even if all of the Masterplan proposals to 2045 are implemented, the 'red' terminal and 'blue' car parking and roadway zones are fully developed. In order that terminal and associated car parking (over and above Masterplan proposals) and forecourt capacity can be enhanced beyond 1.4 mppa then more land area will be required.
68. Figure 7 illustrates how the terminal could be expanded northwards in to part of the current commercial apron area, with the commercial apron area shifting northwards and expanded accordingly in to part of the very large 'yellow' area to the north.

Figure 7: Norwich Airport Site Block Plan – Terminal Zone Expansion Northwards



Norwich Airport Site Block Plan Key:

- Potential airside area for commercial apron and taxiways
- Terminal zone including proposed Masterplan extension
- Car parking, forecourt and access roads
- East and West zones for MRO, Off-shore, GA, Air Taxi, Flying Schools, Operational support, etc.
- Site 4 - 20% for Airport related activities
- Site 4 - 80% for non-aviation related developments

Source: York Aviation

69. Similarly, the 'blue' area could be expanded northwards in to the 'yellow' zone to create additional car parking and associated road capacity.

70. This will still support the 3.5 mppa to 4 mppa very long term growth potential of NWI given that it is the combined 'Yellow, Red and Blue' areas that make up the 302,000 m2 of available space.
71. It should be noted that the boundaries between all these areas to the south of the runway are not fixed. The 'yellow' commercial airfield zone could stretch east and west if required and if the 'green' non-commercial areas do not grow significantly beyond the zones they currently occupy.
72. The block plans confirm that NWI will be able to support significant growth beyond 1.4 mppa and still allow land to be available for other non-commercial airport related uses. This in turn endorses the strategy of reserving just 20% of Site 4 for airport related activities to provide a 'flexible' backstop for additional MRO, GA and flying school activity that is not otherwise accommodated to the south of the runway.
73. The KLMUKE and Air Livery expansion, and proposed replacement apron for KLMUKE, outlined in section 3, will form part of the eastern 'green' zone on the block plan. This expansion will only utilise part of the spare land available within this zone.

Conclusions

74. That long term passenger growth scenario beyond 2045 suggests that NWI could reach 3.0 to 3.5 mppa towards the latter parts of the century, and even up to 4.0 mppa. Within this growth scenario off-shore rotary is not expected to grow beyond current levels. Freight traffic will not require additional facilities on site and GA traffic is likely to see only modest growth beyond current levels.
75. The MRO sector enjoys a high quality presence at NWI with two principal players supported by a strong local skills base. However, in spite of the prospect that some UK and European demand for MRO may return to operators in the UK and Europe, NWI will face stiff competition to attract significant additional new hangar development, over and above expansion of existing facilities. Whilst some of this may be attracted to NWI, the strip of land suggested within Site 4 (20%) for aviation related activities of 7.1 hectares for MRO type development is likely to be more than sufficient for any reasonable scale of new development which might be attracted even over the very long term.
76. We have benchmarked the NWI site and the areas of land to the south of the runway with a selection of other UK airports and from this exercise demonstrate that there is more than sufficient land to accommodate at least 4 mppa of commercial passenger traffic alongside the requirements of all the other airport based operations, including expansion of exiting hangarage.
77. Indeed, the 'green' areas to the east and west for non-commercial operations are much larger than that currently used at NWI for these activities, further endorsing our view that even if NWI were to reach 4 mppa later this century, there will still be sufficient land available for all other uses.
78. With the Engine Run-Up Bay, a proposed relocation of the Fire Training Ground in the vicinity of Site 4 and a potential consolidation of the Air Ambulance operation in to Site 4, there remains substantial areas of land within the remainder of the 20% for additional hangars, or perhaps Flying School and GA activities, over and above the areas already highlighted in 'green' to the south of the runway.
79. In overall terms, then, the existing aviation site south of the runway and a reservation of up to 20% of Site 4 will be more than sufficient to enable NWI to fulfil its realistic aviation potential, including its ability to attract other new aviation related tenants and operators. Realisation of these opportunities will require the site(s) to be readily available, given the competition to attract new hangars from many other airports. Hence, the importance of securing other development on the remainder of Site 4 at an early stage to create the conditions whereby NWI is has a readily serviced site to offer.

Originated by: Richard Connelly/Niall Gunn

Checked by: Louise Congdon

Dated: 21st March 2018

bartonwillmore.co.uk

TOWN PLANNING
MASTERPLANNING & URBAN DESIGN
ARCHITECTURE
LANDSCAPE PLANNING & DESIGN
INFRASTRUCTURE &
ENVIRONMENTAL PLANNING
HERITAGE
GRAPHIC COMMUNICATION
COMMUNICATIONS & ENGAGEMENT
DEVELOPMENT ECONOMICS