

Dublin Airport

LOCAL AREA PLAN



JUNE 2006



Fingal County Council
Comhairle Contae Fhine Gall



Dublin Airport

LOCAL AREA PLAN



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EXECUTIVE SUMMARY

INTRODUCTION

Dublin Airport is the principle gateway to Ireland and represents the most significant single economic entity in Fingal and the Dublin region. The number of passengers using Dublin Airport has increased from 2 million passengers per annum (mppa) in 1982 to over 18 mppa by the end of 2005.

Average traffic growth projections in passenger numbers indicate that by 2025 Dublin Airport will handle some 38 million passengers. In order to support this growth the number of aircraft movements will increase from 2003 levels of some 166,000 movements to some 304,000 movements per annum.

The Local Area Plan is being prepared in the context of the Fingal Development Plan 2005-2011. The lands which are subject to the proposed Local Area Plan comprise a total of 1084 hectares and are zoned DA (Designated Airport Area) with the objective **To ensure the efficient and effective operation of the airport in accordance with an approved Airport Action Plan.** Objective DAO1 of the Development Plan provides for the preparation of an Airport Action Plan (Masterplan) for the land within the Designated Airport Area. This Plan is a statutory Local Area Plan (LAP) under the Planning and Development Act 2000.

OVERVIEW

The primary role of the Local Area Plan is to provide the optimal future development strategy for the Designated Airport Area whilst ensuring the efficient and effective operation of the airport. The LAP will be used as the principal development control tool for the area and will specify the long-term disposition and mix of uses within the designated area together with the infrastructural development necessary to support these uses.

The Local Area Plan divides the Designated Airport Area into two strategic development zones, one on either side of the cross runway; these are referred to as the Eastern Campus and the Western Campus.

It has been concluded that the development of a second terminal and piers on the Eastern Campus is the most effective way forward to provide the necessary capacity for short term requirements up to 30 mppa.

It is proposed that the development of any further terminal capacity will be located on the Western Campus. The land use plan developed for the Western Campus seeks to provide development zones to cater for the various facilities required in order to allow the airport to reach the maximum development potential for a twin parallel runway system.

The Local Area Plan provides for six general zonings (see Map 1)

1. Runway/Taxiway.
2. Terminal & Apron.
3. Apron Related Development e.g. cargo, aircraft maintenance, fuel farm, general aviation.
4. Core Aviation Related Development Zone e.g. public transport interchange, shortterm car parks, forward taxi facilities, hotels and terminal related offices.

5. Ancillary Aviation Related Development Zone e.g. long-stay parking, taxi feeder park, car hire, staff parking, logistics, aviation related light industrial.
6. Future Commercial Development Zone e.g. office development, hotels.

AIRPORT INFRASTRUCTURE

Runways

To facilitate demand beyond the capacity of the existing runway system, an additional parallel runway is proposed 1690m to the north of the existing main runway. This will allow simultaneous and completely independent operation of the parallel runways. To provide for possible future long haul markets, potential extensions to the existing and proposed runways will be safeguarded.

Terminals and Piers

The Local Area Plan makes provision for a new terminal T2 and Pier E to be located to the south east of the existing terminal T1. The reconstruction and development of piers A and B and the provision of a new pier, Pier D, will complement the new terminal. This will bring the capacity of the existing and proposed passenger handling facilities on the Eastern Campus to approximately 30 million passengers per annum. Terminal facilities to cater for further demand will be provided on the Western Campus.

Aprons

As aprons for commercial aircraft consume a substantial area of ground it is essential that they are laid out efficiently and economically. As the need for passenger stands on the Eastern Campus increases separate provision will need to be made in the Western Campus area for cargo aircraft, aircraft undergoing maintenance, and general aviation (GA) aircraft.

Taxi-ways

A second parallel taxiway will be provided for the existing main runway. The proposed parallel runway has been designed with a parallel taxiway system and a series of rapid exit taxiways. Additional rapid exit taxiways may be required to suit changes in aircraft fleet in the future.

Cargo

Proximity of cargo facilities to passenger aircraft parking stands is important, due to the percentage of cargo carried in the belly-holds of these aircraft. Dedicated cargo freighter aircraft must also be catered for. Expansion of cargo facilities will be catered for in the Western Campus in both the short term and long term. Cargo development in the west will benefit from proximity to the upgraded N2.

Hangarage, Maintenance and Aviation Fueling

In addition to the existing maintenance facilities adjoining the northern aprons of the Eastern Campus, a zone for hangarage and other apron related development is provided in the land use plan for the Western Campus to facilitate a flexible maintenance facility for both line maintenance and overhaul operations. The capacity of the existing fuel farm will be increased to provide for future fuel demands. It is also envisaged that terminal/pier served stands will be ringed by a fuel hydrant system.

AIRCRAFT OPERATIONS

Take-off and Landing

The parallel runways (10R/28L and 10L/28R) will be used in preference to the cross runway 16/34 to mitigate the impacts associated with over-flying of the highly populated areas in North Dublin City. When winds are westerly, Runway 28L will be preferred for arriving aircraft.

Engine Testing

Essential engine testing will be carried out at the center of the airfield. The use of Site 1, located to the north of the airfield, will be discontinued.

SURFACE ACCESS

External Road Access

The proposed road upgrades of the external road network are outlined as follows and are shown diagrammatically in Map 2:

- Airport Box: The upgrading of the R132, Collinstown Lane, the R108, Northern Parallel Road, Forrest Little Road and St. Margaret's Road to dual carriageway standard will form the Airport Box.
- Blanchardstown/Baldoyle Airport Road: This road will also be dual carriageway standard. This will allow traffic that does not need to use the M1 or M50 to access areas to the east of Dublin.
- Link to N2: This road will link traffic from the N2 to the airport and also to the terminal and cargo facilities on the Western Campus area and the associate parking areas.
- Upgrade of the R108 South: Upgrade of the R108, from Collinstown Lane to the interchange with the M50 at Ballymun, to dual carriageway standard.
- Improved/Additional access: It is proposed to construct new and improved accesses off the proposed upgraded R132, Collinstown Lane and Forrest Little Road to the eastern section of the site.
- Upgrading of the M50: Phase 1 of the M50 upgrade is due to commence shortly and will see the construction of an extra lane both north and south bound on the M50 together with the upgrade of interchanges.
- Western Bypass: To allow for future connection to the possible western bypass of Swords, to link with the Airport Box.

Internal Roads

The internal road network will complement the existing and proposed external road network. The key connections to the external road system will be at the eastern and western ends of the Airport area. The proposed improvements at the Eastern Campus are shown diagrammatically in Map 3. A high quality road connection will be provided from the N2 into the Western Campus.

Kerbside Facilities

Passenger set down and pick up facilities at the Airport Terminals will be organised to provide clear definition and safe and high quality environs, with reduced pedestrian and vehicle conflict. In particular, public transport modes of bus and taxis will be segregated from private car operations.

Pedestrian Circulation

The pedestrian environment along the kerbside will be designed to reflect the various set down, pick up, and queuing arrangements that are required to provide satisfactory levels of service.

Ground Transportation Centre (GTC)

To promote public transport interchange a Ground Transportation Centre will be provided to accommodate bus and coach operations. The proposed Metro station will be integrated with the Ground Transportation Centre. These facilities will be integrated with the terminals with a high quality pedestrian environment provided and connections aligned to suit passenger desire lines.

Public Transport

Greatly enhanced public transport provision will be paramount to the success and sustainability of Dublin Airport. The main public transport measures proposed as part of the Dublin Airport LAP are as follows:

- **Metro:** It is the priority of the Council to facilitate the Metro North proposal approved under Transport 21, connecting the City Centre and Swords via the Airport. Map 2 illustrates the Metro North alignment included in the Fingal Development Plan.
- **Improved Bus Infrastructure:** The construction and upgrade of the adjoining road network will allow the bus network to be improved.
- **Rail Link:** The prioritisation of bus links to the new DART station at Baldoyle will serve people coming from the north east and south east of the city.
- **Orbital Metro West:** When the route is selected, lands will be protected to allow for the timely construction of the Orbital Metro.
- **Intermodal Interchange:** An intermodal interchange Ground Transportation Centre is proposed on the Eastern Campus, located directly adjacent to the main terminal buildings and short-term car parking facility, and designed to cater for a Metro station, bus and coach handling.
- **Link between Eastern and Western Campuses:** A high quality linkage between the Eastern and Western campuses will be provided.
- **Link between Intermodal Interchange and Commercial Area:** Any development of the Future Commercial Development Zone will depend on the delivery of the Metro and of a high quality, high capacity link between the Intermodal Interchange and the commercial area.

Car Parking

Short-term and long-term passenger car parking facilities will be developed, phased in accordance with the airport's growth and with improved public transport access. Longterm parking will be provided in a number of discrete locations on the periphery of the airport site, with good access from the external road network and frequent shuttle connections to the terminal buildings. Short-term spaces will be provided in multi-storey car park structures in proximity to the terminal buildings. The vast majority of employee parking and car hire parking will be relocated away from the central terminal area. The growth of employee parking will be strictly controlled.

Mobility Management

A Mobility Management Plan will be formulated and implemented for the LAP lands.

DRAINAGE AND UTILITIES

Surface Water Drainage

A stormwater management system following the principles of Sustainable Urban Drainage will be developed and implemented. Runoff contaminated by de-icing chemicals will be intercepted and collected for separate treatment and disposal.

Ground Water

Strict planning and building control will be applied in order to ensure best practice in terms of drainage management.

Foul Drainage

Provision has been made to cater for the projected development within the catchment of the North Fringe Sewer. Measures to reduce inflow, infiltration and exfiltration will be implemented.

Water Supply

The subject lands lie within the Ballycoolin reservoir supply area. The elevation of these lands will necessitate either connecting to the Blanchardstown High Level System or alternatively providing local pressure boosting. Internal water conservation will be promoted.

HERITAGE

Archaeology

There are some archaeological sites or features listed on the Record of Monuments and Places (RMP) that are contained within the boundary of the Airport LAP. Objectives for the protection of the archaeological heritage are listed in the LAP.

Architectural Heritage

The Local Area Plan Area contains a number of Protected Structures listed on the Record of Protected Structures (see Map4). In particular, the Old Central Terminal Building is one of the most important Modern Movement buildings in Ireland, and particular care will be required in the case of any changes, additions, or interventions to this building or its setting. Objectives for the protection of the architectural heritage are listed in the LAP.

Natural Heritage

The expansion of the Airport over the coming years poses challenges in terms of landscape and biodiversity. Objectives for the protection of the natural heritage are listed in the LAP.

DESIGN CRITERIA

The Local Area Plan will promote quality of design as a core principle. The LAP provides an opportunity to realise a visual coherence that will facilitate the most effective use and enjoyment of the facility. The Council will seek to improve qualitative standards of sustainable design in proposed developments in accordance with the provisions of the Fingal Development Plan 2005-2011.

COMMERCIAL DEVELOPMENT

In Dublin Airport the terminal and pier buildings provide for important commercial services (including retail, duty free shopping and catering) that support the primary passenger facilities and are very much integral to the provision of terminal facilities.

Provision has been made on the designated airport area for the development of airport related development; this includes development such as taxi feeder parks, car hire, staff and long stay parking, logistics and airport related light industry. There is also potential for additional hotel facilities in the short to medium term.

A limited area to the east of the existing core aviation related zone has been identified for possible non-aviation related commercial development, subject to the delivery of the Metro and of a high quality, high capacity link between the Intermodal Interchange and the commercial area (see Map 1). Non-aviation related office development is not permitted under the current Development Plan and therefore, any proposal to develop the identified lands would require a variation to the Development Plan.

IMPLEMENTATION

The provision of the second runway will remove a significant capacity constraint and is the key to enabling all other aspects of the airport to develop. The development of new terminal facilities on the Eastern Campus will bring the capacity of the existing and proposed passenger handling facilities to approximately 30 million passengers per annum. Terminal facilities to cater for further demand will then be provided on the Western Campus. Such facilities should be designed so as to allow for their modular expansion to cater on a phased basis for the full capacity of the twin parallel runway system.

As the airport develops over time, associated airside infrastructure, including apron areas, aircraft stands, taxiways, and facilities for cargo handling and aircraft maintenance, and landside infrastructure, including parking, car hire, taxi and hotel facilities, will need to be provided progressively in advance of demand. The lifetime of this plan is likely to see the gradual expansion of necessary infrastructure onto the Western Campus.

Substantial improvements to landside surface access will be crucial to the successful development of the Airport. The development of additional terminal capacity infers a greatly improved public transport infrastructure and external road network. The improvement of internal surface access at the Eastern Campus, including the rationalisation of kerbside facilities, is also a priority within the life span of this plan. The importance of greatly enhanced surface access to the future of the Airport cannot be overemphasised.

1.0 INTRODUCTION

1.1 GENERAL INTRODUCTION

Dublin Airport is of international and national importance and represents the most significant single economic entity in Fingal and the Dublin region. As Ireland is an island nation, the provision of the appropriate facilities and infrastructure to enable efficient air access is critically important to the further development of the Irish economy. Dublin Airport is the primary gateway to the Country – over 80% of Ireland's international passenger air traffic passed through Dublin Airport in 2003.

The strategic nature of Dublin Airport in terms of Ireland's transportation infrastructure is best demonstrated by the growth in passenger traffic. The number of passengers using Dublin Airport has increased from 2 million passengers per annum (mppa) in 1982 to over 18 mppa by the end of 2005.

Average traffic growth projections in passenger numbers indicate that by 2025 Dublin Airport will handle some 38 million passengers. In order to support this growth the number of aircraft movements will increase from 2003 levels of some 166,000 movements to some 304,000 movements per annum.

If Dublin Airport's key role is to be sustained in the future, it is vital that its future development is facilitated. The adoption of a long-term view is critical and it is essential that plans are properly integrated into the wider planning process i.e. National Spatial Strategy, National Development Plan and County Development Plan. In order to facilitate the projected expansion of the airport, a number of key projects are scheduled to proceed in the plan area, within the short to medium term. These include, the development of a new northern parallel runway, expansion of aircraft aprons, new pier facilities, expansion to the existing terminal building and the development of a second terminal building.

1.2 HISTORICAL DEVELOPMENT OF DUBLIN AIRPORT

In 1936, Collinstown in Co. Dublin was selected as the location of a new commercial airport. Collinstown had served as a base for the Royal Flying Corps, the Royal Air Force and the Irish Air Corps.

Central to the development of the new airport was the construction of an innovatively designed Central Terminal building. The works on the terminal building commenced in late 1938 but completion was delayed by the onset of World War II. The Central Terminal building as constructed consisted of a four-storey, in-situ reinforced concrete framed structure topped by an observation cab.

The Central Terminal Building was placed due east of the intersection of the planned runway system facilitating access for the small aircraft of the day to the runways. This placement of the building would have profound effects on the development of the airport. The proximity of the runway system and the parking demands of modern aircraft, which

could not have been anticipated at the time, would dictate the future disposition of buildings.

Utilised as an origin point for subsequent structures, development sites were laid out symmetrically on either side of the arc-shaped terminal building. The rapid development of the industry resulted in demands for support buildings far larger than could have been conceived of in those days.

Growth in post war traffic caused various internal modifications to be carried out to the Central Terminal Building, mainly to accommodate retail and catering facilities. In the early 1950s, a control tower was added on top of the existing observation cab to improve visibility.

Later in the 1950s, some 17 years after opening, it was becoming obvious that the rate of change of aviation technology was forcing expansion on a building, which was inadequate for the resulting increases in traffic. Hence, an arrivals building known as the North Terminal was constructed to the north of the existing Central Terminal Building.

In the early 1960s, the arrival of jet aircraft and the installation of precision approach and surveillance radar necessitated further modifications to these buildings. The first pier (pier A) was constructed and connected to the Central Terminal Building by a link building in an attempt to cope with the growing traffic.

By the mid 1960s, the purchase by Aer Lingus of Boeing 747 type aircraft represented a quantum leap in passenger carrying capability prompting the need to provide terminal facilities with far greater capacity and handling capability. The completion in 1971 of a new Main Terminal Building and Pavilion integrated with the existing Pier and Link Building resulted in operations migrating away from the Central Terminal Building and the adjacent North Terminal building.

The construction of a new east/west runway in the mid 1980s and the relocation of the Air Traffic Control Centre and Fire Station to new facilities at the far side of the airfield resulted in a further reduction in importance of the now "Old" Central Terminal Building.

Continued growth in cargo handling and maintenance/overhaul requirements prompted the provision of freight buildings and hangars laid out on either side of the Main Terminal Building and the Old Central Terminal Building (OCTB) in a horseshoe configuration.

By the mid 1990s, exponential growth in traffic resulted in a policy of relocating non-operational staff away from the terminal areas where possible. This resulted in less traffic on the internal airport roads system and freed up a large portion of the ground floor of the OCTB with direct access to apron areas. The total length of the ground floor of the OCTB with direct access to the aprons was now brought back into operational use as departures gate lounges.

At this time, construction of a new pier, Pier C, commenced. The various modifications to the Main Terminal Building and an expansion of six

bays added significant capacity to the passenger handling facilities. However, it became obvious that the continued steep growth in traffic and rapidly changing business characteristics required significant infrastructural developments across the operational system, airfield, passenger facilities and landside access.

1.3 BACKGROUND TO THE LOCAL AREA PLAN

The Local Area Plan has been prepared in the context of the Fingal Development Plan 2005-2011.

The lands which are subject to the Local Area Plan comprise a total of 1084 hectares and are zoned DA: 'To ensure the efficient and effective operation of the airport in accordance with an approved Airport Action Plan.'

Furthermore, Objective DA01 of the Fingal Development Plan 2005-2011 states 'To prepare an agreed Airport Action Plan (Masterplan) for the land within the Designated Airport Area, in consultation with the airport authority and all other relevant stakeholders, to serve as the formal basis for Fingal County Council's planning control of change within that zone.'

This plan is a statutory Local Area Plan (LAP) under the Planning and Development Act 2000. The procedures set out under section 20(2) of the Act were followed in the plan preparation in the interest of transparency and the proper planning and sustainable development of the area.

The purpose of the LAP is to provide the optimal future development strategy for the Designated Airport Area. The LAP will be used as the principal development control tool for the Designated Airport Area, and will specify the long-term disposition and mix of uses for that area. The LAP will provide the framework for a high and consistent standard of design for Dublin Airport as an important international gateway location.

This Local Area Plan will remain in force for six years. The LAP takes a long-term view of the development of the area in terms of land use and the general location of infrastructure. The key issues addressed in the LAP include:

1. The safe, efficient, effective and sustainable development and operation of the airport;
2. The nature and disposition of essential airport infrastructure e.g. runway, aprons, terminal areas etc
3. The form and routing of movement systems within the airport complex and the integration of these with external movement systems including inter alia the recently approved Metro;
4. The quantum, location and usage of vehicle parking and set down facilities within the airport complex
5. The type, quantum and location of any commercial facilities within the airport complex.
6. The ability to develop in line with demand on a modular basis.
7. The ability to take account of different and changing operational requirements including different aircraft types and aircraft mixes

1.4 INITIAL PUBLIC CONSULTATION

In accordance with the procedures set out under section 20(1) of the Planning and Development Act 2000, the Council invited any interested parties to make submissions before the Draft LAP was prepared. Twenty-one submissions were received by the closing date of Friday 12th January 2006. The following is a summary of the key issues and concerns:

Impacts on Residential Amenity

- St. Margaret's residents feel that they will be adversely affected by increased volumes of traffic and feel that they have not been consulted with or informed of plans for the area.
- Noise levels are already considered excessive by Portmarnock residents and concern is expressed over the potential increase in noise levels resulting from further airport development.
- Concern is expressed that additional surface water run-off may result from an increase in hard surfaces with the development of the new runway and associated works at the airport.
- Education of children in schools that are located under flight paths is chronically disadvantaged due to constant aircraft noise.
- A Health Impact Assessment should be carried out for the LAP to address concerns of local residents regarding air and noise pollution from airport operations

Suggestions for Land Use

- Helicopter maintenance facilities are required close to Dublin Airport and a site of 10 acres at Cloghran is considered suitable for such development. The LAP study area should be extended to the north to allow for this provision.
- Land at Corballis Cottage and the surrounding lands along the old airport road should be zoned for commercial and airport related uses to allow for the upgrading of the area.
- The development potential of 630 acres of land to the west of the existing terminal is highlighted. These lands would be suitable for development of a terminal and other uses that will facilitate the expansion of the airport. A public private partnership approach is suggested.
- The LAP study should consider the potential of the airport to attract economic activity and the 'airport city' concept should be explored. A site of 151 acres at Harristown, south of the Designated Airport Area, is identified as being suitable to accommodate such activity.
- Lands west of the Air Traffic Control Tower, between the existing and proposed runways should be designated for future airport development to secure employment growth for the region.
- Airport development should allow for a synergy with mixed use development proposed on key sites at Cloghran and Clonshaugh.
- Lands to the south of the airport at Merryfalls, between St. Margaret's Road and the Naul Road is available to facilitate the provision of a southern airport link road to help meet the Council's objective for western access to the airport.

General Suggestions and Recommendations

- An accurate assessment of aeronautical restrictions and limits to development generated from and at the airport and from nearby aerodromes such as Weston and Casement must be carried out prior to preparing a draft LAP.
- The old airport road should be upgraded, to include traffic calming measures and environmental improvements.
- The preparation of a Draft LAP is premature since no decision has yet been made on the planning application for the new runway.
- Car rental facilities should be located close to or adjacent to terminals.
- The provision of a second airport should be considered on a greenfield site outside Dublin to accommodate air transport requirements, and plans for the second runway should be abandoned.
- Huntstown Air Park Limited request that their proposal to develop a second terminal at the airport be considered.
- The economic impacts of airport developments have not been properly assessed and a full Cost Benefit Analysis should be undertaken for the proposed runway in accordance with Department of Finance Guidelines.
- Due consideration should be given to the Masterplan that has already been prepared for the airport by the Dublin Airport Authority.
- Measures should be taken to safeguard the aerodrome in accordance with the obstacle limitation requirements of Annex 14 to the Convention on International Civil Aviation.
- Proposed developments must conform to wildlife management procedures.
- No proposed structure should be sited such that it would interfere with electronic navigation aids used by aircraft or that it would obscure the visibility of aircraft from the Control Tower.

1.5 SECOND PUBLIC CONSULTATION

In accordance with Section 20 of the Planning & Development Act 2000, the Draft Local Area Plan was on public display from Wednesday 5th April 2006, to Wednesday 17th May 2006 at Fingal County Council Offices, County Hall, Swords and Grove Road, Blanchardstown, Rathbeale Public Library (Swords) and Blanchardstown Library, and on the Council's website.

Sixty-one submissions were received during the public display period and a full report on these submissions was submitted to the Council prior to their consideration of the Draft Local Area Plan.

2.0 CONTEXT

2.1 SITE AREA AND DESCRIPTION

Dublin Airport defines the northern extent of the city of Dublin. The Local Area Plan includes an area of some 1,084 hectares defined as a yellow box in the current Fingal Development Plan. It extends from the Northern Diversion Road and Forrest Little Road in the north to the Airport Perimeter Road to the south. The site extends in an east-west direction from the M1 to the east as far as St. Margaret's by-pass to the west.

Prudent long-term planning has protected the approaches to the airport from largescale development. There are no major residential areas in close proximity to the Airport to the east and west, save for St. Margaret's village, which is located immediately adjacent to the western site boundary. The provision of the Airport Red Zones has restricted development on adjoining lands, which might otherwise have occurred, and consequently these lands have remained primarily as agricultural land.

The airport area is framed by a high capacity road network, the M1 motorway to the east, the M50 to the south, and the upgraded N2 to the west. Access to the Airport complex is located at the eastern site boundary via the Swords Road, which links with a major motorway junction on the M1.

Dublin City Centre is some 10km to the south, while Swords is approx. 2km to the north.

The airport lands are described under the following headings:

- Main Airport Campus
- Runways and Airport Lands west of the Main Campus
- Adjoining land uses

2.1.1 Main Airport Campus

The Main Airport Campus is located on the eastern side of the Airport lands and is accessed directly off the Swords Road at the Airport roundabout. The focus of activity is in the area to the northwest where the Terminal Building, Piers A, B and C, the Old Central Terminal Building and car parks A, B and C are located.

There are a number of commercial buildings located within the central area of the Main Airport Campus such as the Holiday Inn Hotel, Avis, Europcar and the Great Southern Hotel. Flight catering facilities, the fuel farm and cargo areas are located on the southern and southeastern portions of the Main Airport Campus.

The lands east of the Main Airport Campus between the Swords Road and the M1 are also included within the Airport LAP boundary. There are a number of commercial units located on this land together with the long-term car parking facilities for the airport. The Alsaa Sports Centre and a limited number of residential dwellings are also located in this area.

2.1.2 Runways and Airport Lands west of the Main Campus

Runway and apron areas command the single greatest land use in the LAP area. Runways 10/28, 11/29 and 16/34 are the three existing runways at Dublin Airport. Runway 10/28, which is the principle runway, is set out on an east-west axis on the southern portion of the airport lands and forms one half of a pair of parallel runways which have been planned for the airport since the 1960s.

Runway 11/29, which forms the northern leg of the original triangle pattern of runways, is restricted to use by smaller aircraft, is not parallel to 10/28 and consequently cannot support fully independent operations. This runway would be replaced as a result of the construction of the proposed new northern parallel runway 10L/28R.

The third runway, 16/34, is located in close proximity to the Old Central Terminal Building (OCTB) and is one of three original runways which were laid out in a triangular arrangement. This runway is currently used during cross-wind conditions.

There are also a limited number of isolated residential dwellings located on the western side of the LAP area.

2.1.3 Adjoining Land Uses

The primary land use adjoining the Airport to the north, south and west is agricultural. The M1 forms a strongly defined site boundary to the east of the Airport.

- Lands to the north: The lands immediately north of the Airport consist primarily of agricultural land with a limited number of one-off residential dwellings. There are also two Traveller halting sites located on either side of Forrest Little Road roughly due north of the main airport complex. Moving further north, a number of new residential developments, which form the southern fringe of the Swords urban area, are visible from Forrest Little Road.
- Lands to the south: Horizon Logistics Park, Harristown car park and the Harristown Dublin Bus Depot are situated on the lands to the south of the Airport between the R122 and the R108. Sillogue Park Golf Course is located further south towards the M50. Moving east, there are sports grounds and commercial premises located at the junction of the Airport Perimeter Road and the R108. In addition, there are long-term car-parking facilities for the airport located at Collinstown Cross at the junction with the Swords Road. The majority of the remaining lands to the south of the Airport are agricultural.
- Lands to the west: The primary land use adjoining the airport lands to the west is agricultural. There is also a cluster of residential development at St. Margaret's Village, which is located immediately beyond the western site boundary of the Airport lands.

2.2 PLANNING FRAMEWORK

2.2.1 National Spatial Strategy (2002 - 2020)

The National Spatial Strategy is a twenty year planning framework with the aim of achieving a greater balance of social, economic and physical development and population growth between regions, resulting in an improved quality of life for the island's inhabitants, a strong, competitive economic position and a high quality environment.

The NSS recognises that much of Ireland's recent prosperity has been generated within the Greater Dublin Area (GDA) and that Dublin's role in the economic well being of the country remains pivotal. The strategy states that it is essential for balanced regional development that the performance of the Greater Dublin Area is built upon so that its success, competitiveness and national role are sustained into the future.

It is essential to the NSS that Dublin can maintain and improve its European and world competitiveness in attracting investment and encouraging people to live in the city area. The continuing economic health of Dublin is critically dependent on a number of factors, in particular an efficient and high quality system of public transport connections within the Dublin Area and good international access particularly through Dublin Airport and Dublin Port.

The National Spatial Strategy also highlights the importance of good national and regional airports and their associated services in terms of Ireland's global competitiveness. It is noted that Dublin Airport has the greatest number of international connections and that 'expanding the level of services available from Dublin Airport to an even wider range of destinations is essential in the interests of underpinning Ireland's future international competitiveness'.

The Strategy further indicates that national and regional benefits of expanded services from Dublin Airport can be enhanced through improved connections with,

- (i) the integrated public transport network proposed by the Dublin Transportation Office in A Platform for Change,
- (ii) the national roads network, and
- (iii) regional airports.

2.2.2 Regional Planning Guidelines Greater Dublin Area (2004 - 2016)

The Regional Planning Guidelines provide a long-term strategic planning framework for the development of the Greater Dublin Area over a 12 year period.

Dublin Airport is identified as a premier international access point to the Dublin region and to the country as a whole. Continued development of the airport is recognised as being crucial to underpinning Ireland's future international competitiveness. Landside access is identified as being a significant issue regarding the future growth of the airport and the guidelines state that this will be improved through the provision of 'an extensive, high quality, fully accessible, integrated public transport network'.

The guidelines further state that in order to achieve predicted airport passenger numbers by 2020, a new runway will be required by 2009 with extended apron facilities and additional terminal passenger processing

facilities. It is also indicated that increased airfreight will require the relocation and provision of additional freight facilities on new sites within the airport area.

2.2.3 Sustainable Development – A Strategy for Ireland (1997)

The stated purpose of this strategy is 'to provide a comprehensive analysis and framework which will allow sustainable development to be taken forward more systematically in Ireland'. It is stated that this will require a continuing adaptation and review of policies, actions and lifestyles.

In order to make transport more sustainable, the Strategy focuses on making transport more efficient, reducing the environmental impact and the intensity of transport, and examining and implementing the internalisation of the external costs of transport.

The strategy recognises that air transport is an increasing source of polluting emissions but highlights that a number of initiatives and actions have been undertaken to address this issue such as implementing standards for noise certification and limitation, monitoring development planning near airports to reduce the impacts on noise pollution, improved aircraft technology and improved attention to operational matters within airports to reduce the noise impacts.

2.2.4 Dublin Transportation Office, A Platform for Change Strategy 2000-2016

A Platform for Change contains proposals for an integrated transport network for the Greater Dublin Area. Relevant recommendations to Dublin Airport are:

- The provision of a Metro system from the city centre to Dublin Airport linking onto Swords.
- The construction of a Luas line from the city centre to Dublin Airport via Santry.

It is also recommended in the strategy that the LUAS and Metro systems be supported by the provision of Quality Bus Corridors (QBC's), which would be operational by 2006.

2.2.5 Department of Transport Investment Programme – Transport 21

Transport 21 with a budget of 34.4 billion euro outlines proposals for an integrated transport system for Dublin, providing for seven new LUAS projects, two Metro lines with a link to Dublin Airport, DART extensions and an underground station at St. Stephen's Green integrating all services.

Transport 21 also includes new commuter rail services for Cork City and Galway City, a new road route connecting Donegal to Galway, Limerick, Cork and Waterford, known as the Atlantic Corridor and the Western Rail Corridor.

The key proposal for the Airport is the implementation of the Metro North line by 2012 linking Dublin City Centre with the Airport and Swords. The predicted journey time by Metro from the City Centre to the Airport is 17 minutes.

Greater Dublin Area Rail Network

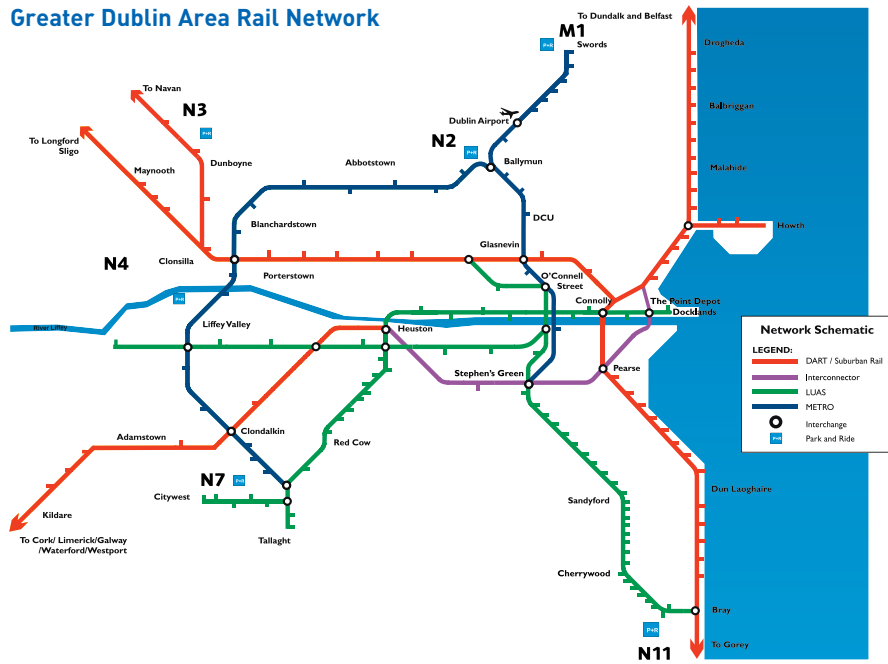


Figure 1: Transport 21 – Greater Dublin Area Rail Network
source: www.transport.ie

2.2.6 South Fingal Planning Study

This is a study prepared by a consortium of consultants on behalf of Fingal County Council, which provided an overall strategy for the proper planning and sustainable development of South Fingal. The primary aim of this study was ‘to advise on a strategic “vision” and framework for South Fingal to 2011 – a rational and flexible strategy to manage the growing pressure for development north of the city – in a way which benefits the local population whilst meeting national and regional needs’.

The primary recommendations of the study proposed the major expansion of the airport to a two-runway two terminal configuration. It suggested that a new terminal be located in the west between the parallel runways, the provision of a Designated Airport Area, the preparation of an agreed Airport Action Plan and the need to strengthen the road system. A key provision was that a spur should be provided from the upgraded N2 in order to access the western side of the airport zone and the provision of a north – south rail spine connecting the city centre to Swords via the Airport.

The findings of the South Fingal Planning Study contributed to the formulation of the policies and objectives of the Fingal Development Plan 2005-2011.

2.2.7 Fingal Development Plan 2005-2011

The Fingal Development Plan acknowledges that Dublin Airport is the most significant single economic entity and the largest employer both within Fingal County and the region as a whole. The Local Authority is the guardian of this national resource and hence seeks to facilitate its development potential within the policies and objectives of the Development Plan.

The Development Plan has provided a specific zoning for the airport lands, ‘DA’ Designated Airport Area, with the objective **‘To ensure the efficient and effective operation of the airport in accordance with an Airport Action Plan’ (Masterplan).** This is the context within which this LAP has been prepared. The lands to the south, located between the Designated Airport Area and M50, are primarily zoned for general Industry (GI and G1), science and technology (ST1) warehousing (WD) and agriculture (RU).

It is anticipated that ‘the future expansion of Dublin Airport and associated development will take place within this area and only confirmed airport-related uses (i.e. those uses that need to be on or near the airport) should normally be permitted therein. The uses indicated in the zoning objective as being ‘Permitted in Principle’ (Appendix 1) are those uses that must be on the airside and/or landside airport area, and represent the core activities associated with operation of the airport’.

The vision for the Designated Airport Area is stated to be:

‘Within this area, only airport related uses (i.e. those uses that need to be on or near the airport) should normally be permitted. The Airport’s detailed development should be planned via an agreed “Airport Action Plan” (Masterplan) for the land within the Designated Airport Area. All development within the DAA should be of a high standard of design, to reflect the prestigious nature of an international gateway airport, and its location adjacent to Dublin City. Minor extension or alteration to existing properties located within the DAA which are not essential to the operational efficiency and amenity of the airport should be permitted, where it can be demonstrated that these works will not result in material intensification of land use’.

The Development Plan outlines four overarching strategies (DAS1 to DAS4) which provide a context for the detailed policies and objectives for Dublin Airport and the South Fingal Fringe which are set out in Sections 4.2 and 6.1 of the written statement (See Appendix). The Development Plan provides a number of policies and objectives which provides for the efficient and effective operation of the airport, the development of a second major east-west runway, the on-going augmentation and improvement of terminal facilities, the protection of surface access, promotion of public transport and the ongoing monitoring and review of noise, air and water quality. There are many other policies and objectives throughout the Development Plan which are of relevance to the development of the Designated Airport Area, for instance, in the heritage, utilities and design sections.

Strategy DAS 1

To safeguard the current and future operational, safety, technical and developmental requirements of Dublin Airport within a sustainable development framework, being mindful of its environmental impact on local communities.

Strategy DAS 2

To promote the continued co-ordinated, sustainable and well planned physical and economic development of Dublin Airport within a Designated Airport Area.

Strategy DAS 3

To promote appropriate land use patterns in the vicinity of the Airport and of the flight paths serving the Airport, having regard to the existing and anticipated noise, safety and environmental impacts of aircraft movements.

Strategy DAS 4

To realise the optimal use of lands around the airport, including greenbelt and employment creation uses, subject to the provision of an adequate integrated transport network adequate to serve any such uses while protecting surface access to the Airport.

2.3 DUBLIN AIRPORT OPERATIONAL AND FUTURE DEVELOPMENT NEEDS

Dublin Airport is one of the fastest growing airports in both a European and global context, having experienced 15 consecutive years of growth, with throughput of some 18.5 m passengers in 2005, compared with 5.8 m in 1990. Annual passenger throughput is currently growing at a rate of approximately 1 million passengers per annum (mppa), and a series of comprehensive forecasting studies project an increase to 38 million by 2025. By 2030, this figure is expected to reach between 42 and 44 mppa.

The magnitude of forecasted passenger growth has implications for all aspects of the Airport’s operation, from the landside roadway system, public transport, and car parking through the terminal and piers to the taxiway and runway system. In outlining a long-term strategy for Dublin Airport, it is necessary to recognise the existing operational needs and requirements of the airport. However, it should be noted that Dublin Airport Authority has a policy of maximising stand utilisation due to the uniqueness of facilitating four home-based operators.

Ryanair continues to expand its network from the airport having pioneered the low cost concept in Europe whilst Aer Lingus, the national airline, continues to develop new routes. With airline network expansion, Dublin Airport continues to respond to a combination of fast turnaround required by short haul operators coupled with more intensive demand from long haul operators. Consequently there is a greater concentration on the development and use of ‘contact stands’ at Dublin Airport. These are aircraft stands that are located adjacent to terminals with passenger access across the apron.

The busing of passengers is also minimised at Dublin Airport (4%). Most airports of equivalent size and importance seek to optimise on ‘air bridges’, whereby passengers can enter aircraft directly, and the number of contact stands to facilitate quick turn around whilst planning for a modest amount of busing at peak periods. The number of rotations achieved per stand ranks amongst the highest in Europe.

Dublin Airport has a significant advantage in its transatlantic routes whereby US Customs Border and Protection process passengers in the airport. With the advent of the ‘Open Skies’ policy, the growth of

transatlantic destinations has significant potential.

Cargo traffic is not excessive for an airport of Dublin’s size. This is likely to be due to a combination of factors. Low cost airlines do not generally carry cargo in order to minimise turnaround times. As a result, air cargo is generally channelled to other major hubs, with Heathrow being the nearest.

The demand for travel is very significant by any standards and the economic success of Ireland has meant that the propensity of the local population to travel is very high indeed. This demand is further supplemented by the success Ireland has had in attracting tourists.

This now means that the existing runway and terminal facilities are approaching capacity. Based on passenger growth forecasts, new and expanded facilities, which will define the future layout of the airport, are required.

Dublin Airport has an exciting future as a new gateway to the Middle East and Far East, as is evidenced with new routes by both Aer Lingus and Gulf Air, with additional destinations under consideration. Whilst London, Paris and Amsterdam are all having difficulty developing additional significant capacity to service the projected increased demand for both physical and environmental reasons, Dublin Airport has the potential to greatly benefit with its proposed additional runway capacity, long term planning and location between Europe and North America.

The role of the Local Area Plan is to facilitate the development of Dublin Airport based on future operational needs. Whilst the projection of existing demand categories can be estimated it is the development of new demands from interlining which present challenges to this plan.

Similarly, it is likely that the processing and handling of passengers will change significantly in the future, in particular, due to new technology, e.g. web check-in. This could result in the remodelling of Terminals over the normal life of the buildings.

The LAP must therefore be a robust planning model to achieve the successful planning, development and expansion of Dublin Airport.

2.4 SURFACE ACCESS CONTEXT

2.4.1 External Road Network

Dublin Airport is located to the north of Dublin City in Fingal. It is situated north of the M50 Motorway and east of the M1. The study area includes the road network between the N2 to the west, the M1 in the east and between the M50 to the south and Forrest Little Road to the north of the airport lands.

The main access roads serving Dublin Airport at present are shown in Figure 2 and listed below:

- M1 – Dublin/Belfast Route
- M50 – Orbital Route
- R132/Old N1
- Ballymun Interchange to Collinstown Lane
- Collinstown Lane (R108) South
- R122 – West to N2 (Dublin to Derry Route)
- North Parallel Road (Barberstown Road)
- Forrest Little Road – North

The airport is very sensitive to any congestion in the vicinity of the main access points and major congestion on the M1 or M50 corridors in particular can significantly impede access to the airport.



Figure 2: Main access roads serving Dublin Airport

2.4.2 Internal Road Network

The Dublin Airport Authority maintains the internal road network and although the Airport Roundabout is the primary access point for the majority of the traffic accessing the airport, there are two other entrances to the airport:

- Via R132 onto Corballis Road South
- From the Cloghran Roundabout via Forrest Little Road onto Castlemoate Road, as shown in Figure 3

The internal road network is a one-way loop system in a "horseshoe" shape, formed by Corballis Road, North and South. The terminal, administration and aircraft maintenance buildings are positioned on the exterior of the internal road network with car parking and other ancillary activities inside. The two roads linking Corballis Road North and South are the Eastlink and Westlink Roads respectively.

On the approach to the existing terminal building, the internal road network splits into two levels; the upper departures ramp and the lower arrivals ramp. The departures ramp caters for private car drop-offs and taxi drop-offs, while the arrivals ramp is only accessible for taxis and buses.



Figure 3: Internal Road Network and Traffic Circulation

2.4.3 Existing Public Transport Network

In recent years significant progress has been made in constructing QBC's. The main QBC accessing the airport is along the Old Swords Road. Currently Dublin Bus operate 12 different bus services to the airport. In addition, Bus Eireann and private operators such as AirCoach and UrBus operate other bus services to and from the airport.

The 12 Dublin Bus routes are the 16A, 230, 33N, 41, 41B, 41C, 41N, 46X, 58X, 746, 747, 748. The 746, 747 and the 748 run directly to Dublin Airport from Heuston Station and Busaras/Connolly Station. Approximately 42 buses run by Dublin Bus arrive/depart at/from Dublin Airport in the AM Peak with 45 in the PM Peak. This is almost one bus every minute. There are approximately 30 buses per hour throughout the day. However, this service mainly occurs in a north/south direction and does not sufficiently cover areas to the east and west of the Airport.

Other bus services have been implemented on a privately run basis. UrBus currently transports passengers from Castleknock via Blanchardstown and the Airport to Swords and visa versa. It is a high frequency, orbital route which transfers passengers to and from North West Dublin. This bus service runs every half hour from Castleknock between 07.00-21.30 and from Swords between 07.49 - 21.49.

Bus Eireann runs buses through the airport to destinations such as Dundalk, Belfast, Derry, Monaghan Galway, Drogheda and Letterkenny. Various other routes can be reached by travelling first to Busaras and then transferring to a regional bus there.

AirCoach operates a private bus service to and from the airport, which serves most of the major hotels in Dublin. It is a high quality, high frequency service that caters for passengers intending to travel in particular to areas in South Dublin City. Currently it operates two different routes (a) Dublin Airport - City Centre - Donnybrook/Ballsbridge and (b) Dublin Airport - City Centre - Leopardstown. They run every 10 minutes between 06.00 - 20.00 and every 20 minutes at all other times except between midnight and 4am when they run only once an hour on the hour.

There are also numerous private operators transferring passengers to and from Dublin Airport to various parts of the country such as Waterford, Wexford, Wicklow, Galway and Athlone. Figure 4 illustrates various bus services accessing Dublin Airport.

At present, approximately 23% of passengers and 16% of employees travel to the airport by bus. The provision of licenses for new bus routes to the Airport could enhance public transport mode share.

Dublin Airport is not located immediately adjacent to major residential areas and consequently, the numbers walking or cycling there are low. Non-motorised transport facilities, such as cycle lanes, bicycle racks, pedestrian crossings etc are not abundant in the vicinity of the airport. There are pedestrian crossings from the short-term car park to the terminal building however there is a lack of footpaths and cycle lanes in the remainder of the airport lands and poor connections to the wider area.



Figure 4: Existing bus routes accessing Dublin Airport

Taxi

The main taxi rank with a covered waiting area is located on the arrivals ramp adjacent to the terminal building. At full capacity the pick up area caters for approximately 300 taxis per hour. There is an additional holding area to cater for 140 spaces, close to the Great Southern Hotel. Taxis can also drop off passengers along the departures ramp.

2.4.4 Car Parking Facilities

Staff: Currently there are approximately 5,360 parking spaces designated for staff. Many of these are located close to the terminal building and as a consequence the peak period for road traffic on the internal roads occurs between 8.00 and 9.00am, when the majority of staff are arriving into work.

Long Term Car Parks: Currently DAA operate 14,000 long term car parking spaces at Dublin Airport with an additional 3,500 spaces privately owned by Quick-Park on the R132. These car parks are remote from the terminal building and passengers are transferred via shuttle buses to and from the terminal building. Therefore, in the current arrangement all of the long term car parking is located away from the main terminal buildings and airport access points. The demand for long term car parking in 2005 was in the order of 20,500 spaces. The resulting shortfall of 3,000 spaces was made up by providing (a) 1,000 additional spaces in Eastlands, using "Block Parking" and (b) 2,000 additional spaces by utilising spare capacity in the short-term car park.

Short Term Car Parks: The short term car parks are located directly opposite the terminal building. There are 3,800 spaces available to patrons. This car park has a higher parking charge, to ensure that those using the car park do so only for short periods of time.

Figure 5 illustrates the current car parking facilities available at Dublin Airport. Note that all the long-term car parking is located to the south and east of the current existing terminal buildings.

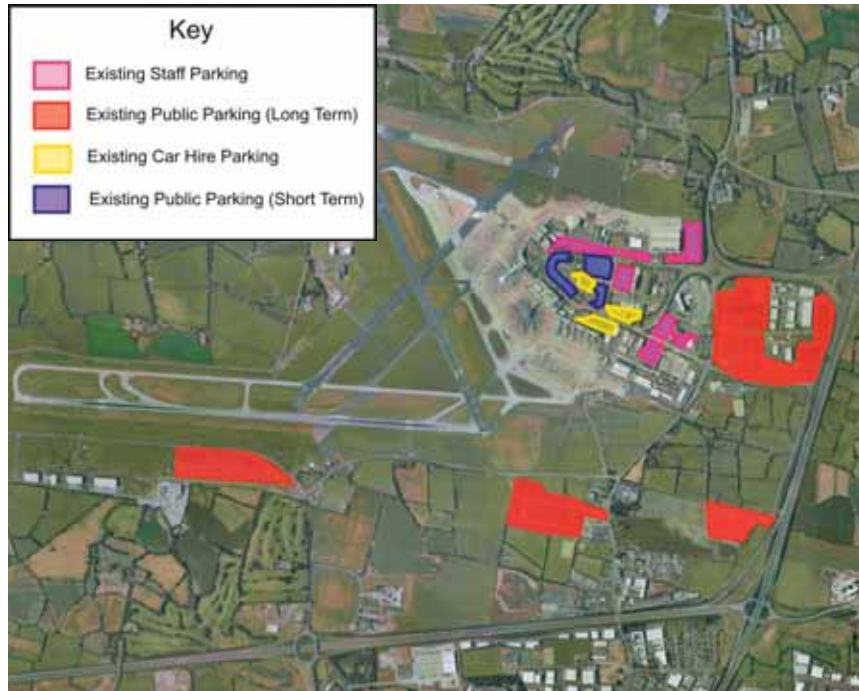


Figure 5: Current car parking facilities

2.4.5 Transport Mode Split

Table 1 illustrates the mode split for 2001 for passengers and staff. There is still a very high proportion of staff using private car transport. In total, 80% of staff use the private car and of those, only 6% are passengers. Public transport usage by staff is lower than that of passengers.

Mode Split

Transport Mode	Passengers	Staff
Private Cars	43.5%	80.2%
Car-Hire	12.0%	0%
Taxis	21.8%	1.5%
Bus/Coach	22.3%	16.2%
Other	0.4%	2.1%

Table 1: Mode Split of PCU's Arriving at Dublin Airport for Passengers & Staff. (DAA Car Parking Strategy 2003)

2.5 HERITAGE CONTEXT

2.5.1 Natural Heritage

Fingal County Council aims to protect, conserve and enhance the County's natural heritage through the comprehensive range of policies and objectives which are set out in Part VIII of the Fingal Development Plan. Fingal County Council is also committed to the preparation and implementation of a County Heritage Plan and a Local Biodiversity Action Plan. The Fingal Heritage Plan was adopted by the Council in November 2005 and includes a number of actions to protect and enhance biodiversity and to raise awareness in relation to it throughout the community.

The area covered by this Local Area Plan consists of lands within the existing airfield and additional agricultural lands outside the existing airfield. Detailed information is available for the area to be impacted by the proposed second parallel runway in the EIS (2004) and the subsequent Addendum to the EIS (2005). This shows that the area within the current airfield consists of three landscape character types: pastoral farmland, urban fringes and the existing airport.

The airport consists mainly of cultivated or disturbed land including a large proportion of airport-managed grassland. Outside the airfield the area consists mainly of agricultural grasslands together with arable land. Fields are bounded by hedgerows and treelines which vary in density and diversity. The EIS also contains information in relation to the plant species, which occur on the site, together with detailed information on birds, and some information in relation to mammals, amphibians, and invertebrates. This shows, inter alia, that the area is used by a range of bird species throughout the year including some species of conservation concern. Four bat species were recorded in the survey and a range of mammals including species such as badger, hedgehog and Irish hare, are also present or likely to be present, together with amphibians such as frog and smooth newt. Most of the insects recorded are commonly occurring species although three less common species were also found. Based on this information it is likely that the remaining area covered by this LAP is similar in nature.

In addition to the above, the area covered by the LAP, including the existing runway complex and airport terminal buildings, is situated at the summit of four separate river catchments including those of the Ward River, the Sluice River, the Mayne and the Santry. The Ward River is a salmonid river and flows into the Malahide Estuary. The Sluice and Mayne Rivers flow into Baldoyle Estuary and the Santry River flows into Dublin Bay. Malahide Estuary, Baldoyle Estuary and Dublin Bay are important nature conservation sites and all have multiple designations including designations under the Habitats and Birds Directives and under the Wildlife Acts 1976-2000.

2.5.2 Built Heritage

Fingal County Council has identified significant structures worthy of protection in its Record of Protected Structures. A number of policies and objectives are contained in the Fingal Development Plan 2005-2011 relating to the preservation of Protected Structures, as well as structures that are located within Architectural Conservation Areas, and examples of vernacular architecture. It should be noted that the Record of Protected Structures is not a static document and that additions, deletions and

amendments can be made to it as variations to the Development Plan.

Within the Local Area Plan lands, the old terminal building is of particular merit. The building was designed in 1937 by a team of young Office of Public Works architects, under the direction of Desmond FitzGerald, and completed in the early 1940's. The building won the Triennial Gold Medal from the Royal Institute of the Architects of Ireland in 1943.

The building is in the 'International Style' and is curved in plan with circular ends. The inner curve forms the entrance with its double height glazed central concourse. The outer curve enabled the maximum number of aircraft to serve the terminal. The outer perimeter is dominated by continuous bands of glazing on each floor, cantilevered viewing platforms, and a glazed central staircase terminated by the control room.

The Terminal building is an example of 'total design', whereby all internal finishes were also chosen by the original architectural team. Thus, all the furniture carpets and lighting, even the cutlery and menu cards for the restaurant, were part of the initial design by FitzGerald and his team.

2.6 DRAINAGE AND UTILITIES

The lands of the Designated Airport Area straddle several river catchments including: the Sluice River, the Ward River, the Mayne River and the Santry River. Development has and is likely to impact on both the quality and quantity of the surface water run-off in these catchments. Any further development will have regard to the Greater Dublin Strategic Drainage Study (GSDSDS) and will require attenuation to greenfield standards and the implementation of Sustainable Urban Drainage Systems (SUDS). SUDS emphasises the retention of runoff at source and employs measures that will both reduce runoff volumes and slow runoff rates. Any development must also have regard to standards set in current legislation – EU Directives and National Regulations including:

- Water Framework Directive 2000/60/EC.
- Phosphorous Regulations SI No. 258 of 1998
- The Water Quality/Dangerous Substances/ Regulations 2001 (S.I. No. 12 of 2001)

With regard to soils and ground water the subject lands are underlain in the main by carboniferous limestone. Any potentially significant impacts relating to shallow aquifers should be quantified and mitigation measures identified.

The subject lands straddle the Blanchardstown High Level Water Supply Area (Ballycoolin Reservoir Source – via proposed elevated storage or pressure boosting currently under construction) and the Airport Water Supply Area (Ballycoolin Source via 24" Forest Little Main).

In relation to the provision of foul drainage the subject lands lie within the catchment of the North Fringe Sewer as delineated in the North Dublin Connection Study by RPSMCOS on behalf of Fingal County and Dublin City Councils.

3.0 OVERVIEW

The primary role of the Local Area Plan is to provide the optimal future development strategy for the Designated Airport Area whilst ensuring the efficient and effective operation of the airport. The LAP will be used as the principal development control tool for the area and will specify the long-term disposition and mix of uses within the designated area. The LAP will work towards a high and consistent standard of design for Dublin Airport, to reflect the prestigious nature of an international gateway airport.

The Local Area Plan consists of a series of maps and written text. The maps give a graphic representation of the proposals of the plan.

The Local Area Plan indicates six general zonings (see Map 1)

1. Runway/Taxiway.
2. Terminal & Apron.
3. Apron related development e.g. cargo, aircraft maintenance, fuel farm, general aviation.
4. Core Aviation Related Development Zone e.g. public transport interchange, short-term car park (MSCP), forward taxi facilities, hotel and terminal related offices.
5. Ancillary Aviation Related Development Zone e.g. logistics, taxi feeder park, aviation related light industrial, staff and long-stay parking, car hire.
6. Commercial Development Zone e.g. office development, (but not retail).

Having regard to the complex nature of the interface between the Terminal/Apron and Core Aviation Development Zones and the wide variety of ways in which this interface can legitimately be treated, the boundary between these zones on the Western Campus has been shown only indicatively. Similarly on the Eastern Campus the interface between these zones will be treated with a significant degree of flexibility.

The LAP generally divides the Designated Airport Area into two strategic development zones, one on either side of the cross runway; for the purposes of the plan these are referred to as the Eastern Campus and the Western Campus. Each zone seeks to maximise yet balance the processing of passengers and spatial demands between landside, terminal(s), piers, aircraft stands, taxiways and runways.

As airports increase in size, the spatial use for primary functions in processing passengers must take priority. As a consequence (in particular because of the spatial demands required of each), in the long term, it is proposed that cargo, maintenance hangars (except critical daily requirements) and car hire facilities need to relocate and consolidate in new individual bases away from and not constraining passenger processing facilities.

EASTERN CAMPUS

Studies, particularly the Pascall and Watson Study 'Capacity enhancement Recommendation Report for Dublin Airport 2005', have concluded that the development of a second terminal and piers on the Eastern Campus is the most effective way forward in the short term to provide the necessary capacity for short term requirements.

WESTERN CAMPUS

It is proposed that the development of any further terminal capacity should be located on the western side of the designated airport area. The land use plan developed for the Western Campus seeks to mirror the eastern developments by providing development zones to cater for the various facilities required to allow the airport to reach the maximum development potential for a twin parallel runway system. The lands would be developed in response to demand generated by airport capacity requirements and other commercial considerations.

Due to the scale and ramifications of airport related choices, it is important that the LAP take a long-term view of the anticipated changes. The proposed configuration outlined within the LAP represents a good utilisation of existing infrastructure and assets whilst providing a balanced and logical arrangement of the landside, terminal, and airside development zones. The LAP will also allow the two parallel runway airport to develop to its full potential and will facilitate a western access to the airport, which can help disperse airport traffic.

The Local Area Plan seeks to provide guidance and objectives for any proposed development within the Designated Airport Area. The written text focuses on areas such as airport infrastructure, aircraft operations, surface access, utilities, heritage, design criteria and commercial development.

4.0 AIRPORT INFRASTRUCTURE

4.1 RUNWAYS

The existing runway system handles a maximum of 46 movements in the peak hour. With additional improvements to infrastructure and procedures this can be increased to 49/50 movements in the peak hour. To facilitate demand beyond this an additional parallel runway is proposed to the north of the existing main runway. Subject to planning permission, the proposed runway will be 3,110m long and 60m wide, with shoulders of 7.5m on either side and will be parallel to the existing main runway 10/28 and separated therefore by 1690m. This configuration and separation allows simultaneous and completely independent operations, thereby maximising the potential of the parallel runways.

The parallel runways, operated in segregated mode (landings on one runway and take-offs on the other) would have the capacity to increase capacity to 74 movements in the peak hour. Operated in mixed mode (landings and take-offs on both runways), the capacity would be increased to 87 movements in the peak hour.

To provide for possible future long haul markets, potential extensions to the existing and proposed runways will be safeguarded. The existing main east-west runway will be safeguarded to cater for a 720m extension allowing for an overall pavement length of 3350m. The proposed parallel runway 10L-28R will also be safeguarded to cater for a 675m extension allowing for an overall pavement length of 3775m.

Runway Objectives

- RW1** To facilitate the development of a second major east-west runway (Runway 10L-28R) at Dublin Airport.
- RW2** To restrict the crosswind runway to essential occasional use on completion of the second east-west runway at Dublin Airport.
- RW3** To safeguard the potential for future runway extensions

4.2 TERMINALS AND PIERS

To maximise the potential of existing infrastructure and to satisfy the needs of the airlines and other users, the Local Area Plan makes provision for a new terminal T2 and Pier E to be located to the south-east of the existing 14 bay terminal T1. This will allow for integration with the existing Pier C. New kerbsides at T2, fully integrated with enhanced kerbsides at T1 would deliver enhanced capacity for pick-up/set-down facilities for public transport and taxis and would balance the provision of interchange facilities between surface access and the terminal processing facilities.

Though capable of independent operation it is expected that convenient access will be provided for passengers, both landside and airside, to the existing terminal facilities.

Central to the design of this terminal will be the provision of passenger links to short term car-parking and any future Ground Transportation Centre, all in accordance with best practice with regard to Mobility Access. Protection of the alignment of the approved Metro will be incorporated as necessary.

The reconstruction and development of piers A and B and the provision of a new pier, Pier D, will complement the new terminal. The enhanced capacity provided by these pier developments is planned to balance the processing capability of the two terminals, T1 and T2.

This will bring the capacity of the existing and proposed passenger handling facilities on the Eastern Campus to approximately 30 million passengers per annum.

Western Campus – Terminals & Piers

Current forecasts indicate that passenger traffic will continue to grow to reach approximately 40 million passengers by the late 2030s. Changes in aircraft type could see numbers rising beyond this figure. It is prudent, therefore to protect the operational areas of the airport by ensuring that western terminal facilities are constructed sufficiently distant from the cross-wind runway to allow for expansion in operations.

Zones designated for Terminal and Pier developments have been structured on this basis and related to parking requirements for likely aircraft types.

Direct surface access to the western N2 will be provided as an integral part of any development provided on the Western Campus. Construction on undeveloped agricultural land facilitates ease of segregation of passenger traffic from commuter (staff) traffic. Convenient road links can be achieved to ensure access to hangarage, cargo, carparking, terminal support facilities and commercial developments with minimal impact on passenger circulation.

Terminal and Piers Objectives

- TP1** To facilitate the on-going augmentation and improvement of terminal facilities at Dublin Airport.
- TP2** To provide for the development of a new Pier D in accordance with planning permission granted.
- TP3** To provide for the extension of Terminal 1 to the north-west of the existing building.
- TP4** To provide for the development of a new Terminal 2 to the south-east of the existing terminal by 2009.
- TP5** To support the development of a new pier, in association with the development of a new Terminal 2.

- TP6** To review current access/kerb facilities at Terminal 1, and improve and upgrade to best practice standards
- TP7** To ensure that the development of a new Terminal 2 is served by appropriate new kerbing that facilitates a high level of integration of transport modes at the terminal
- TP8** To provide for the renovation and extension of Pier B.
- TP9** To review the operation of Pier A in the long-term, and renovate/improve/enlarge as appropriate.
- TP10** To reserve lands to the west of the north-south runway 16/34, between the two parallel runways for the future expansion of the airport to the full potential of the twin parallel runway system, and to define a development box in which the appropriate terminal, pier and apron facilities can be provided.

4.3 APRONS

Aprons are designed to cater for multiple aircraft uses and types such as

- (a) Wide-body aircraft – Codes D, E and F ranging in wingspan from 52m to 80m,
- (b) Narrow-body aircraft – Code C ranging in wingspan from 24m to 36m. (Note: aircraft of 24m wing span or less, aircraft codes A & B, are mainly for General Aviation use and should desirably have a dedicated parking area).
- (c) Building served aircraft - referred to as "contact stands" either in a walk-on, walk-off configuration or airbridge served configuration. Contact stands are especially needed for quick turnaround operations and for wide body operations.
- (d) Remote Stands are isolated stands away from but within a reasonable distance of buildings. They are mainly used for cargo operations, overnight or long stay parking.

As aprons for commercial aircraft consume a substantial area of ground it is essential that they are laid out efficiently and economically.

The Apron build out on the Eastern Campus area for around 30MAP was based on predicted runway movements of 76 peak hour movements as established by NATS and on a dummy schedule for stand demand produced by Dublin Airport based on Traffic Forecasts.

The proposed piers, rather than providing additional stand capacity, will essentially be replacing existing remote stands with contact stands.

Cargo aircraft will be accommodated in the short to medium term generally close to the cargo operation on the south apron and on other general passenger stands as required. As the need for passenger stands increases there will need to be separate provision made in the Western Campus area for these aircraft.

General Aviation (GA) aircraft will move to a dedicated parking area adjacent to the control tower on the west side of Runway 16/34 in the short to medium term. GA operations will move away from their location adjacent to passenger stands on the Eastern Campus area.

Aircraft for maintenance will be accommodated in the short to medium

term generally close to the maintenance operation on the north apron and on other general passenger stands as required. As the need for passenger stands increases there will need to be separate provision in the Western Campus area for these aircraft.

Apron Objectives

- AP1** To facilitate orderly expansion of apron areas, to provide improved and expanded parking facilities for aircraft.

4.4 TAXI-WAYS

The taxiway layout at any airport must be designed to facilitate a circulatory flow of aircraft on the ground. Taxi routes used by aircraft that have recently landed are separated, therefore, from those routes used by aircraft taxiing out for departure. This configuration is designed to minimise the potential conflict between aircraft and to minimise ground movement delays.

The existing taxiway system facilitates the safe and efficient movement of aircraft to and from aircraft stands to/from the runways. The existing main runway 10/28 has one parallel taxiway, which will be enhanced in the future with the provision of a second parallel taxiway.

There must be sufficient queuing space at the runway threshold to allow aircraft to line up and depart quickly thereby maximising the capacity of the runway system.

There must be a sufficient number of rapid exit taxiways strategically located to enable the various aircraft types to vacate the runway as early as possible. Runway occupancy time affects capacity.

As aircraft types change, the optimum location of rapid exit taxiways may also change and additional rapid exit taxiways may be required to suit changes in aircraft fleet in the future.

The proposed parallel runway has been designed with a parallel taxiway system and a series of rapid exit taxiways.

Taxiway Objectives

- TX1** To facilitate the development of new taxi ways where necessary.

4.5 CARGO

Cargo has grown from approximately 46,000 tonnes in 1995 to approximately 150,000 tonnes in 2005, with a number of private sector facilities developed off airport. It is estimated that 2.5% of national freight is carried by aircraft. Proximity to passenger aircraft parking stands is important, due to the percentage of cargo carried in the belly-holds of these aircraft. Adequate vehicle routes are required between cargo sector(s) and the passenger aircraft stands. Dedicated cargo freighter aircraft must also be catered for. The air cargo business

cannot grow to meet demand in its present location, as there is insufficient land for cargo processing buildings. In addition, the apron area serving cargo facilities is particularly deficient.

A second component of air cargo throughput at Dublin Airport is trucked freight.

Circumstances favour the use of trucking for certain freight routes. Though the setting up of "off airport" facilities by forwarding/handling agencies has impacted on this section of the business, it is likely to continue to maintain current levels for the foreseeable future.

Forecasts indicate that cargo carried is likely to reach approximately 200,000 tonnes by 2015. Passenger traffic will be approaching 30 million passengers per annum at this time.

Expansion of cargo facilities will be catered for in the Western Campus in both the short term and long term. Impacts caused by possible future expansion of passenger facilities on the Eastern Campus will be catered for by the consolidation of existing cargo facilities and the displacement of further facilities to the Western Campus. The net effect of this policy will be a split cargo operation with emphasis in the future for dedicated freighter traffic being catered for in the Western Campus.

Cargo development in the west will benefit from proximity to the western arterial route N2 and development on existing agricultural land will facilitate segregation of road freight traffic from passenger traffic, as design on such land will allow for optimum road layouts to be configured. Future consolidation and reduction of cargo facilities in the east will reduce road freight traffic with consequential benefits to the eastern surface access routes.

The current cargo site on the Eastern Campus occupies approximately 5 hectares and is likely to be impacted on by passenger facility requirements thus further reducing its size in the future. Given that the cargo area cannot expand to satisfy current or future demand, it is considered prudent to allocate sufficient zoned land adjacent to apron areas in the Western Campus to cater for all future needs.

Cargo Objectives

- CG1** To monitor commercial requirements of cargo operation.
- CG2** To review complementarity of continued operation of cargo facilities beside the proposed Terminal 2.
- CG3** To reserve appropriate lands on the Western Campus of the airfield with good access to the apron and to the road network, to cater for cargo and other apron related facilities.

4.6 HANGARAGE, MAINTENANCE AND AVIATION FUEL FARM

In the context of airport planning it is necessary to make a distinction between heavy aircraft maintenance and line maintenance. Line maintenance facilities are an integral part of passenger aircraft operations. Heavy aircraft maintenance and overhaul facilities could be located at any appropriate site on an airport or at any airport with adequate runway capacity. Some hangarage is therefore required wherever passenger aircraft are operating and these facilities could be

limited to line maintenance facilities. Some degree of flexibility exists, therefore, both on the existing Eastern Campus and the planned Western Campus to plan for a number of different scenarios.

Consolidation of the operation on the northern aprons of the Eastern Campus is possible at some future date. This could be driven either by the business needs of the operator of the facility or by the encroachment of passenger handling facilities.

A zone for hangarage and other apron related development contiguous with adjacent aprons is provided in the land use plan for the Western Campus to facilitate a flexible maintenance facility. This will protect future requirements for either or both line maintenance and overhaul facilities. Surface access is conveniently adjacent to the main western access connections and the eastern connections and is further facilitated by the ease of segregation of planning on previously undeveloped land.

Due to significant increases in fuel requirements over the past few years, the fuel companies have commenced preparatory design work with regard to the redevelopment of the existing fuel farm where capacity will increase to provide for future fuel demands. During the redevelopment of the fuel farm, it is also envisaged that terminal/pier served stands will be ringed by a fuel hydrant system, significantly reducing the number of bowser movements on the airfield. The fuel companies are also currently exploring the feasibility of connecting the fuel farm with Dublin Port via a fuel hydrant system that will obviate the requirement to transport fuel to the airport over the public road network.

Hangarage, Maintenance and Fuelling Objectives

- HM1** To maintain and support the provision of appropriate airport related activities in the campus, including aircraft hangarage for line-maintenance and overhaul.
- HM2** To maintain fuel farm facilities within the campus area appropriate to the airport needs.

5.0 AIRCRAFT OPERATIONS

5.1 TAKE-OFF AND LANDING

Take-off and Landing – Future Runway Operation

Subject to planning permission being granted for the proposed Northern Parallel Runway (Runway 10L 28R), there will be three runways at Dublin Airport available for take-off and landing, two parallel runways and a cross wind runway:

- Existing (Southern Parallel) Runway 10R 28L (2,637m long)
- Northern Parallel Runway 10L 28R (3,110m long)
- Cross wind Runway 16/34 (2,072m long)

The spacing of the parallel runways will be far enough apart to allow simultaneous and completely independent landings and take-offs. The mode of operation of this runway system will be based on preferences as follows:

Firstly, the parallel runways (10R-28L and 10L-28R) would be used in preference to the cross runway 16-34 to mitigate the impacts associated with over-flying of the highly populated areas on North Dublin City. With a runway parallel to the main runway, the use of the cross runway as an alternative during maintenance periods would not be required and it is therefore anticipated that usage, as a percentage of the total, could fall to the levels required by limits on permissible crosswinds for safe operations, approximately 1-2%.

Secondly, when winds are westerly, Runway 28L will be preferred for arriving aircraft. Either Runway 28L or 28R will be used for departing aircraft as determined by air traffic control (ATC).

This approach has the aim of limiting the numbers of people affected by operations on the proposed northern parallel runway.

Takeoff and Landing Objectives

- TL1** To facilitate the development of a second east-west runway at Dublin Airport.
- TL2** To promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the existing and anticipated environmental impacts of aircraft movements.
- TL3** To implement the policies to be determined by Government in relation to Public Safety Zones.
- TL4** To strictly control inappropriate development and to require noise insulation where appropriate within the Outer Noise Zone, and to resist new provision for residential development and other noise sensitive uses within the Inner Noise Zone, as shown on the Development Plan maps.
- TL5** To make available information on the Noise and Flight Track Monitoring system which measures noise levels generated by aircraft and identifies the flight path taken to and from the airport for each individual aircraft movement and to ensure

that the Noise and Flight Track Monitoring system is upgraded in accordance with best practice.

- TL6** To ensure that the mode of operation of the parallel runways has the least possible impact on proximate communities consistent with their effective operation.
- TL7** To control the type and height of any structures that may be developed along the approaches to the existing and proposed runways in consultation with the Irish Aviation Authority in order to protect the clearways required in accordance with the ICAO Annex 14 Obstacle Limitation Requirements

5.2 ENGINE TESTING

There are currently two sites available for engine testing at Dublin Airport:

- Site 1 is located at the north of the airfield, on the Old 23 threshold
- Site 2 is located on Taxiway P2 at the centre of the airfield near the fire station

There will be a requirement for engine ground running to satisfy the need for testing of aircraft power plant on the aircraft that operate at Dublin Airport. There is also a need for such testing on aircraft that are maintained at the airport.

Engine ground running events are on a downward trend at Dublin Airport as older types of aircraft that require more testing are replaced with modern aircraft types. It is not part of Dublin Airport's strategic development plan to encourage business activities that would increase engine ground running beyond that needed for the safe operation of the commercial aircraft based at or using Dublin Airport.

The site for those engine ground running events that cannot be avoided will be moved away from the northern boundary of the airport and hence away from more populated neighbouring areas within one year of the adoption of this Masterplan.

Future engine testing will be carried out close to the center of the airfield.

Engine Testing Objectives

- ET1** To seek to minimise the noise from future engine testing activities and to relocate the site for those engine ground running events that cannot be avoided away from the northern boundary of the airport, and hence away from more populated neighbouring areas.
- ET2:** To ensure that noise control of engine testing will be carried out in sound controlled areas such as Noise Protection Hangars or Run-up Pens.

6.0 SURFACE ACCESS

6.1 EXTERNAL ACCESS

As Dublin Airport is the principal access point for individuals and air freight arriving in Ireland, it is essential that the external road network is developed to ensure a balanced response to the expansion of Dublin Airport. It is crucial to develop and upgrade the adjoining road network to allow for the expected growth at the Airport.

This road network will allow the airport to be accessible from all the major trip origins/destinations via the existing and proposed road network from the north, south, east and west of the Airport. The development of an adequate road network will have to be undertaken on a phased basis.

The Dublin Transportation Office Multi Modal Traffic (Saturn) Model has been used to help determine the transport requirements for Dublin Airport. The DTO Saturn Model is a strategic model that covers the Greater Dublin Area and is used to determine the benefit of large-scale infrastructure, such as the M50 Upgrade and the Dublin Port Tunnel. The DTO model considers future growth projections in the Greater Dublin Area as a whole, taking account of population, employment and educational trips. The DTO also consult with all local authorities to ascertain where development will take place so that it can be included in the future year model. It is expected that lands surrounding the airport will be developed in time. This model was used to determine the infrastructural requirements necessary to accommodate the anticipated growth at Dublin Airport. The validated 2002 Base Saturn AM Peak Model was compared against 2004 traffic counts and the base and future year's models were updated to reflect anomalies.

While the existing DTO Saturn Model needs to be further refined in order to better reflect the current situation and the future aspirations of Dublin Airport, it was able to provide a strategic assessment of the roads around the airport for input into the LAP.

As the airport grows there will be a major emphasis on review and monitoring. It is therefore proposed that a more detailed model (developed from the DTO Full Area Model) be developed to monitor the growth of the Airport and help passenger growth targets to be achieved in a sustainable way.

The results of the modelling process showed that road infrastructure policies need to be implemented to ensure that the road network can cater for the estimated growth expected at Dublin Airport into the future. Ultimately this should result in the provision of a dual carriageway box around the airport. The internal and external road network should ensure the priority of public transport at all junctions and in conjunction with the provision of continuous bus lanes and the proposed Metro will serve to ensure the continuous flow of public transport.

The proposed road upgrades of the external road network are outlined as follows and are shown diagrammatically in Map 2.

- **Airport Box:** The upgrading of the R132 Collinstown Lane, the R108, the Northern Parallel Road, Forrest Little Road and St. Margaret's Road to dual carriageway standard which will form the Airport Box.
- **Blanchardstown/ Baldoyle Airport Road:** This road will also be dual carriageway standard. This will allow traffic that does not need to use the M1 or M50 to easily access areas to the east of Dublin.
- **Link to N2:** This road will link traffic from the N2 to the airport box and also to the terminal and cargo facilities on the Western Campus and the associated parking areas. This will allow for access to the airport from the west.
- **Upgrade of the R108 South:** Upgrade of the R108, from Collinstown Lane to the interchange with the M50 at Ballymun, to dual carriageway standard. This will cater for the growth in traffic that will be generated by expansion at the airport.
- **Improved/Additional access:** Currently the majority of airport bound traffic accesses the airport via the airport roundabout, with minor levels of traffic using Corballis Road South. It is proposed to construct new and improved accesses off the proposed upgraded R132 Collinstown Lane and Forrest Little Road to the Eastern Campus and to also make provision for direct access to terminal facilities on the Western Campus.
- **Upgrading of the M50:** Phase 1 of the M50 upgrade is due to commence shortly and will see the construction of an extra lane both north and south bound on the M50 together with the upgrade of interchanges. When completed, the M50 will be a three-lane carriageway in both directions. According to the infrastructure timetable in Transport 21, phase 1 is due to be completed by end of 2007, with the entire project completed by the end of 2010.
- **Western Bypass:** To allow for future connection of the possible western bypass of Swords, to link with the Airport Box.

The road network is indicative only. Any final route selection must be mindful of the impact on residents of St. Margaret's, Kilreesk and Millhead and should be finalised only after dialogue locally with these residents. Every effort will be made to avoid crossing the GAA grounds, and, in the event that any of the current facilities at the GAA club are displaced, these will be replaced at a suitable alternative location.

External Access Objectives

- EA1** To maintain and protect accessibility to the airport as a priority and provide for alternative access points to the road network.
- EA2** To implement a programme of road development on the external road network to ensure that a balanced response to the expansion of Dublin Airport occurs.
- EA3** To ensure that the road infrastructure has the capacity to better arrange traffic in the vicinity of Dublin Airport and to cater for the estimated growth in traffic into the future.

- EA4** To develop the external road network on a phased and planned basis.
- EA5** To improve and provide alternative access points to the Airport from the external road network, in particular via Collinstown Lane and Forrest Little Road.
- EA6** To realign and improve and upgrade the road network surrounding the Airport in the form of an Airport Box to dual carriageway standard. The roads proposed for this upgrading are the R132, Collinstown Lane, the R108, the Forrest Little Road, the North Parallel Road and the St Margaret's Road.
- EA7** To reserve an alignment for the Blanchardstown/Baldoye Airport Road from Collinstown Lane to Clonsbaugh Road. This road is to be developed to dual carriageway standard.
- EA8** To provide for road access to the airport from the west, which will include a link from the recently upgraded N2 at Cherryhound Interchange, in the form of a dual carriageway.
- EA9** To allow for future connection of a possible western by pass of Swords to link to the Airport Box.
- EA10** To improve and upgrade the R108 south of Collinstown Lane to the Ballymun Interchange to dual carriageway standard.
- EA11** To develop a strategy to cater for unexpected incidents on the external and internal road networks.
- EA12** To develop electronic signage facilities such as Variable Message Signs (VMS) signage and Intelligent Traffic Systems (ITS) in order to cater for unexpected incidents on the external and internal road network.
- EA13** To provide an emergency access plan in consultation with the relevant bodies.
- EA14** To develop a detailed model (based on the full DTO Area Model) to monitor the growth of the Airport and help passenger growth targets to be achieved in a sustainable way.
- EA15** To carry out a detailed analysis of the effects of the proposed expansion of Dublin Airport on the adjoining national road network and agree proposals including funding proposals, for any capacity enhancements that may be required on the network with the National Roads Authority prior to the implementation of the Masterplan.

6.2 INTERNAL ACCESS

It is a key aim that high quality surface access infrastructure is provided so that passengers, visitors, staff and other persons travelling to and from the airport terminals and other facilities can do so safely and efficiently. In locating and designing transport facilities and kerbsides for the airport terminals, due consideration will be given to the primacy of public transport modes, such as bus and taxi, with priority given to providing for safe, efficient people movement between transport facilities/kerbsides and the terminal buildings. The passenger environment will be developed to provide clear instructions to users through a combination of passive and active management procedures designed to a high standard.

Internal Roads

The internal road network will complement the existing and proposed external road network. The key connections to the external ring road system will be at the eastern and western ends of the Airport area.

At the eastern end of the Airport area, it is proposed to:

- Maintain a high quality connection from the M1 Airport Interchange, with consideration of possible improvements to the Airport access roundabout.
- Provide a corridor for the construction of a northern distributor road through Airport lands, to connect the N2 to the R132.
- Provide for improved capacity on the R132 corridor from the southern distributor and northern distributor roads, using Airport lands if necessary.
- Provide for an independent connection to the west of Cloghran roundabout from the northern distributor road to the internal airport road network.
- Provide for additional access off the R132 between the Airport roundabout and the South Corballis Road.

These are shown diagrammatically in Map 3. At the western end of the Airport area, a high quality connection will be provided from the N2 corridor, with appropriate high quality connections provided to the northern and southern distributor roads.

The internal road network of the Western Campus will be constructed in such a way as to provide for a highly efficient traffic circulation system whilst ensuring the primacy of public transport modes. In this regard, the possibility of facilitating Metro or a light rail network into the Western Campus will be investigated. Alternatively, another form of high quality linkage between the Eastern and Western campuses will be provided. In-depth analysis and consideration will be needed to devise the most appropriate form of linkage.

Appropriate provision for public transport modes, such as bus priority measures, along with facilities for vulnerable highway users with high quality facilities for pedestrians and cyclists will be incorporated into the design of the new roads and into the improvements of the existing roads.

Kerbside facilities

Passenger set down and pick up facilities at the Airport Terminals will be organised to provide clear definition and safe and high quality environs, with reduced pedestrian and vehicle conflict. In particular, public transport modes of bus and taxis will be segregated from private car operations. The kerbside facilities concept enables clear definition of modes and enables operational flexibility. The concepts will follow the principles shown on Figure 6 and are outlined below.

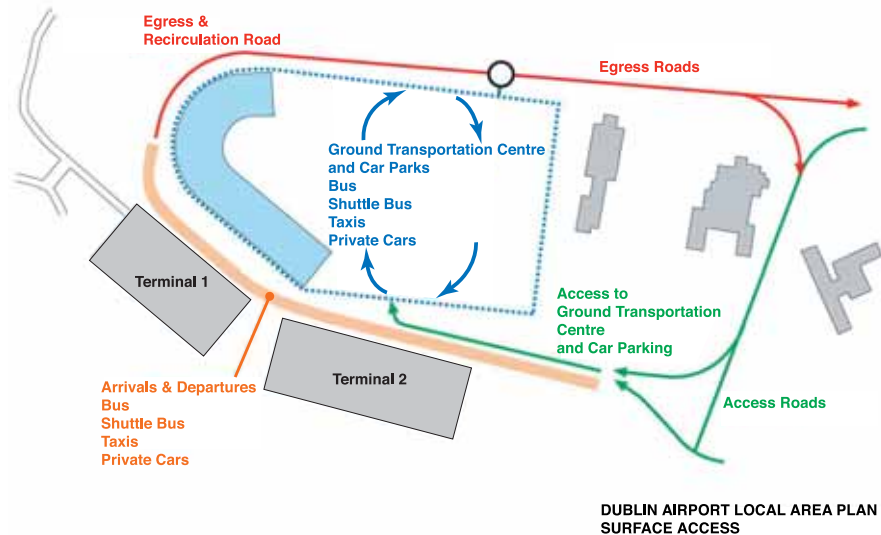


Figure 6

Pedestrian Circulation

The pedestrian environment along the kerbside will be designed to reflect the various set down, pick up, and queuing arrangements that are required to provide satisfactory levels of service. These areas will be located to complement the pedestrian connections between the terminals and other modes, including bus interchange facilities within the Ground Transportation Centre and car parking areas. These pedestrian routes will interconnect with other Airport services within the wider campus area applying high quality and attractive routes for the safe movement of people.

Ground Transportation Centre (GTC)

To promote public transport interchange a Ground Transportation Centre will be provided to accommodate bus and coach operations. These facilities will be integrated with the terminals with a high quality pedestrian environment provided and connections aligned to suit passenger desire lines. The proposed Metro will be integrated with the Ground Transportation Centre. It is planned that bus operations can either access the area directly, to set down and collect passengers, or they can recirculate through the facility having set down passengers on the Departures Road.

This arrangement gives the opportunity to reduce vehicle distance travelled when compared to the existing situation, thus providing operational savings and improving the usability of passenger facilities.

Vehicle Entry Routes to Arrivals and Departures Kerbs

On entry to the airport drivers will be given clear directions to join:

- The Departures Road for set down of passengers from bus, taxi, private car and shuttle bus operations
- The Arrivals Road for pick up by bus, shuttle bus, and taxi operations
- Short term car park facilities within the central area as pick up by private car will not be permitted along the Arrivals Road
- Car Hire parking facilities
- The Ground Transportation Centre where bus operations will be concentrated with facilities for alighting and boarding passengers.

Egress and Recirculation from Arrivals and Departures Kerbs

The road circulation plan will enable drivers of the various modes to move from the Arrivals and Departures kerbs to either exit the airport directly or recirculate to access other passenger interchange facilities. In particular bus services, after setting passengers down, will be able to recirculate to access pick up facilities either in the Ground Transportation Centre or along the Arrivals Road.

Internal Access Objectives

- IA1** To review the circulation of traffic around the airport campus, and assess the need for alterations in road alignment, grade separation, directional movement, and variable messaging signage, in order to provide for safe and efficient movement around the airport campus.
- IA2** To provide a high quality high capacity link between the Eastern and Western campuses.
- IA3** To agree an alignment around the southern airport perimeter for a transport service linking the terminal buildings with long-term car parks.
- IA4** To ensure that passengers' experience of using the airport is prioritised, where facilities and services are designed and operated so as to enhance the experience of people arriving, departing, or moving through the airport.
- IA5** To provide a corridor for the construction of a northern distributor road through DAA lands to connect the N2 to the R132.
- IA6** To provide for improved capacity on the R132 corridor from the northern and southern distributor roads.

6.3 PUBLIC TRANSPORT

Public transport provision will be paramount to the success and sustainability of Dublin Airport. In December 2005 the Government published Transport 21 which set out a programme of major infrastructure projects throughout the Country. The primary projects which are of direct relevance to Dublin Airport are Metro North and Metro West.

Fundamental to a public transport strategy for the Designated Airport Area is that public transport receives priority access to all terminal areas and linkages should be made between all public transport modes in order to provide an integrated transport system. In addition the use of public transport by both passengers and staff within the Local Area Plan lands should be actively promoted.

The main public transport measures proposed as part of the Dublin Airport Masterplan are as follows:

- **Metro:** It is the policy of the Council to facilitate the construction of a rail link connecting Swords to the city centre via Dublin Airport. With the publication of Transport 21, the government has set out a budget and timeframe for the construction of Metro North, connecting the City Centre and Swords via the Airport. Map 2, illustrates the Metro North alignment included in the Fingal Development Plan. The introduction of Metro North is likely to have a greater influence on employee travel than on passenger patterns, due to the trip origin/destinations involved.
- **Improved Bus Infrastructure:** The construction and upgrade of the adjoining road network will allow the bus network to be improved. This will facilitate the provision of east-west bus connections as well as the current north-south connections. An upgrade of the Swords/Airport QBC will allow for a continuous bus lane for this route and the provision of additional buses on the link. The extension of the Ballymun QBC to the Airport will allow for an alternative route for buses accessing the Airport, thus extending the catchment area, in particular for employees travelling to and from the airport.
- **Rail Link:** The prioritisation of bus links to the new DART station at Baldoyle will serve people coming from the north east and south east of the city, with links to the city and regional rail network. This route will run along the proposed Blanchardstown to Baldoyle Airport Road.
- **Orbital Metro West:** When the route is selected, lands will be protected to allow for the timely construction of the Orbital Metro, which will link Tallaght with Metro North via Blanchardstown, Clondalkin, and Liffey Valley.
- **Intermodal Interchange:** It is proposed that an intermodal interchange Ground Transportation Centre be constructed, located directly adjacent to the main terminal buildings and designed to cater for a Metro station, bus and coach handling and short-term car parking facility. This would allow for a greater choice for passengers and will allow for each transport service to be provided to public transport users under one roof.
- **Link between Eastern and Western Campuses:** A high quality linkage between the Eastern and Western Campuses will be provided
- **Link between Intermodal Interchange and Commercial Area:** Any development of the Future Commercial Development Zone will depend on the delivery of the Metro and of a high quality, high capacity link between the Intermodal Interchange and the commercial area.

Public Transport Objectives

- PT1** To encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport.
- PT2** To provide for the development of a transport interchange including a Metro Station at the centre of the airport campus, in accordance with the implementation of Metro North by 2012 under the Government's Transport 21 proposals.
- PT3** To ensure that the development of a Metro Station in the airport campus is undertaken to best international standards for public transport interchanges.
- PT4** To investigate and provide for connection/links from the Western Campus to the recently approved Metro North.
- PT5** To identify and protect an alignment for the Orbital Metro (Metro West) and to ensure connectivity between Metro West and the Airport.
- PT6** To support the provision of bus and taxi facilities including bus lanes, shelters and interchange facilities.
- PT7** To prioritise public transport and taxis on the external and internal road network.
- PT8** To provide and upgrade alignments for new and existing QBC's in particular in an east/west direction.
- PT9** To prioritise bus links to the new DART station at Baldoyle along the proposed Blanchardstown to Baldoyle Airport Road.
- PT10** To encourage the incentivisation of public transport use for both staff and passengers through the use of tax incentives, integrated ticketing and personalised travel plans in co-operation with Government.
- PT11** To provide real time information regarding public transport to allow passengers and staff to optimally use the public transport facilities available
- PT12** To increase emphasis on the promotion of public transport usage among staff and passengers.
- PT13** To provide for Bus priority on approach roads to the Airport as required.

6.4 CAR PARKING

The overall objective in relation to car parking is to develop short-term and long-term passenger car parking facilities in accordance with a coherent and transparent strategy, phased in accordance with the airport's growth, and with improved public transport access. Long-term car parks shall have (a) good access from the external road network and (b) frequent shuttle connections to the terminal buildings. Short-term car parks shall be located close to the terminal buildings so as to minimise passenger walking distances. The main objective in relation to both employee parking and car hire parking is to relocate the vast majority of these spaces away from the central terminal area.

Continued increases in traffic, as a result of increased passengers, will place additional demand on existing car park resources.

When Metro North and West and additional bus services are delivered as outlined in Transport 21, then the volume of passengers and employees travelling to the airport by public transport will increase. This higher public transport mode share will serve to reduce the demand for long term, short term and employee car parking spaces at the airport.

It should be recognised that the provision of car parking spaces at airports is price sensitive and this has an impact not only on space demand at the airport but also off airport development.

Long Term Parking:

- A dispersal policy is to be adopted, whereby car parking is provided in a number of discrete locations on the periphery of the airport site.
- Parking will be provided in the Designated Airport Area within the revised Public Safety Zones.

Short Term Parking:

- Short term spaces will be provided in multi-storey car park structures in proximity to the terminal buildings.
- A new multi-storey car park structure is to be provided adjacent to Terminal 2 with grade-separated connection(s) to the terminal building in the form of bridge(s) over the terminal roads and kerbs.
- Multi-storey short term car parking facilities will be provided in association with terminal facilities on the Western Campus when developed.

Car Hire Parking:

- A limited number of forward spaces will be maintained in the terminal areas.
- Main car hire facilities and spaces will be relocated away from the terminal areas.
- On the Eastern Campus, the main car hire facilities will be relocated to the Eastlands car park where it is envisaged that approximately 1000 spaces and associated facilities will be provided at 30 mppa. In addition approximately 500 forward spaces will be maintained adjacent to the terminal area.
- On the Western Campus a limited number of spaces will be provided in the terminal area and the main car hire facilities and spaces will be provided away from the terminal area.

Employee Parking:

- Dublin Airport Authority currently operates a Mobility Management Plan with the aim of reducing reliance on the private car as the primary means of access to Dublin Airport for employees. Currently approximately 16% of employees use public transport and the aim is to significantly increase this figure in the line with a new and revised Mobility Management Plan for the Designated Airport Area.
- The current development programme for Terminal 2, Pier D and associated works will necessitate the removal of approximately 3,800 employee parking spaces from the terminal area. This will remove a significant volume of road traffic from the terminal area.

- Approximately 1,500 employee parking spaces will be maintained to the west of the R132, in areas remote from the terminal buildings.
- On the Western Campus a limited number of employee parking spaces will be provided, the majority being provided away from the terminal area.

Car Parking Objectives

- CP1** To review the location of bus/coach parking in front of Terminal 1 in conjunction with an analysis of Metro Station, Terminal 2, and Kerb proposals, in order to provide for an efficient multi-mode transport interchange convenient to all airport users.
- CP2** To provide for the removal of staff car parking from the centre of the campus, in order to utilise the land more efficiently for all airport users, and support the implementation of attractive public transport alternatives
- CP3** To provide for the development of short-term and long-term passenger car parking facilities in a coherent and transparent manner, phased in accordance with the airport's growth, and the improvement of public transport access.
- CP4** To provide for the change of location of car hire facilities concurrently with the development of Terminal 2.
- CP5** To facilitate high quality parking facilities on airport lands and appropriate locations in the vicinity of the airport where consistent with the zoning of such lands
- CP6** To identify specific parking zones within the Designated Airport Area to ensure the provision of a planned and co-ordinated distribution of car parking.
- CP7** To provide for (a) good access from the external road network and (b) frequent shuttle connections to the terminal buildings, for long-term car parks.
- CP8** To provide for short-term car parks close to the terminal buildings so as to minimise passenger-walking distances.
- CP9** To control the supply of car parking at the airport so as to maximise as far as is practicable the use of public transport by passengers and to secure the efficient use of land.
- CP10** To limit the growth of employee parking in order to improve public transport usage.
- CP11** To secure the implementation of a parking management strategy, including a real time guidance information system and variable message sign (VMS) system in conjunction with Fingal County Council to maximise the utilisation and efficiency of the car parks.

6.5 MOBILITY MANAGEMENT

Mobility Management Plans are used to influence travel patterns so that they may become more efficient and sustainable. They target private car users who have access to good public transport and non-motorised forms of transport in order to provide them with adequate information to entice them to change their travel patterns.

At present Dublin Airport is easily accessible from the strategic road network of the Greater Dublin Area and from many national routes serving Dublin. The recent extension of the M1 has removed significant volumes of through traffic from the main entrance.

An extensive network of bus and coach services connects the airport to a wide range of local, regional and national locations, with over 700 daily services.

The current modal split of employees and passengers is shown below.

Employees		Passengers	
Transport Mode	Mode Share (%)	Transport Mode	Mode Share(%)
Car - Private driver	74.5%	Car - Private	43.5
Car - Private passenger	5.7	Car - Rental	12
Bus	16.2	Bus	22.3
Taxi	1.5	Taxi	21.8
Bicycle, Motorbike	2.1	Bicycle, Motorbike	0.4
Total	100	Total	100

Current Modal Split of Transport to Dublin Airport
Source: Dublin Airport Mobility Management Plan

The expected continued growth of the airport both in the short and long term is dependant on a transfer of trips, especially at peak times, to more sustainable modes such as public transport, cycling and walking.

The following are proposed principles for sustainable travel at Dublin Airport, which should be implemented as part of a full Mobility Management Plan for the LAP lands.

- **Car Parking Management:** To encourage greater use of public transport and non-motorised forms of travel such as cycling and walking, disincentives will be introduced such as those to curtail the number of spaces available for staff or to introduce a maximum number of days they can park in a month.
- **Provide Travel Information and Journey Planning:** To provide employees and passengers with up-to-date travel information including timetables, VMS signage at public transport nodes, etc.
- **Consider Employee Discount on Public Transport Fares:** To encourage public transport usage by employees using a scheme compatible with integrated ticketing for public transport in Dublin.
- **Improve Facilities for Cyclists:** To improve facilities for cyclists by introducing continuous cycle lanes, adequate parking, shower and changing facilities.

- **Promote increased Walking:** To promote walking by launching a fitness campaign to promote the benefits of walking for health and fitness during the working day.
- **Introduce Flexible Working Arrangements:** To reduce the need to commute and/or to arrive at non-peak hours by encouraging flexible working arrangements.
- **Facilitate Staff Travel Planning among Airport Companies:** To ensure that each major airport employer introduces their own Mobility Management Plan.
- **Integrate Mobility Plan with Nearby Developments:** To promote the integration with nearby and similar type developments to increase the potential of each aspect of the mobility management plan to be a success.
- **Appoint a Travel Co-ordinator:** To appoint a travel co-ordinator that will manage and co-ordinate with all the stakeholders.
- **Establish an Airport Transport Forum:** Establish a forum to Monitor and assess the operation of the Mobility Management Plan including aspects that are successful and not so successful.
- **Personalised Travel Plans:** To draw up individual travel plans for employees depending on their needs.

Mobility Management Objectives

- MM1** To secure the implementation of a Mobility Management Plan for the Dublin Airport Area to ensure a greater shift away from private vehicle usage.
- MM2** To review and update the Mobility Management Plan every 5 years and submit to Fingal County Council for approval.
- MM3** To identify and implement measures to maximise non-motorised and public transport use while minimising the use of the private car.
- MM4** To require that all organisations operating within the Airport Area are signed up to and committed to implement the Mobility Management Plan.

7.0 DRAINAGE AND UTILITIES

7.1 SURFACE WATER DRAINAGE

Several river catchments serve to drain the subject lands. These include:

- Forest Little Stream/Wad Stream/Kealy's Stream – tributaries of the Sluice River which discharges into the sea at Portmarnock.
- Ward River – tributary of the Broadmeadow River which discharges to the Broadmeadow Estuary at Swords.
- Mayne River/Cuckoo Stream – which discharges to Portmarnock Estuary and Mayne Bridge.
- Santry River – Which discharges to Dublin Bay at North Bull Island.

The EU Water Framework Directive (WFD), now incorporated into Irish Law, requires as an objective, the achievement of 'good ecological status' for surface waters by 2015. A key tenet of the Greater Dublin Strategic Drainage Study policy document is that the requirements of the WFD cannot be met unless sustainable drainage systems and a commitment to best practice and continued improvements are implemented.

It is important that Policies UTP18 and UTP19 of the Fingal Development Plan are adhered to in order to restore and maintain 'good ecological status' to surface waters by 2015 as required under the EU Water Framework Directive.

Development downstream of the subject lands should be protected against flooding for a design event of return of at least once in 100 years. This would reduce the risk of flooding to existing development to less than a 1% chance in any year, which is the accepted Office of Public Works standard for flood relief schemes for built up urban areas in Ireland.

Development has impacted and will impact on both the quality and quantity of the surface water runoff in these catchments. De-icing/anti-icing of aircraft, runways and taxiways associated with existing development has been identified as a significant source of water quality impact. The development of the airport has given rise to an increased rate of surface water runoff with a consequent increase in the frequency of flooding. The use of de-icing chemicals on aircraft will be carried out in controlled areas.

Surface Water Objectives

- SW1** To collaborate with the Eastern River District (ERD) integrated catchment initiative.
- SW2** To intercept and collect, for separate treatment and disposal, runoff contaminated with de-icing chemicals in a manner compatible with achieving and maintaining 'salmonoid water' quality in the receiving waters.
- SW3** To develop a programme of measures to enable Objective SW2 to be achieved in respect of existing development by 2008 and to implement these measures within the lifetime of this LAP (2012).

SW4 To develop and implement a stormwater management system following the principle of Sustainable Urban Drainage and in compliance with the recommendations of the Greater Dublin Strategic Drainage Study in respect of new development and re-development of 'brownfield' sites, to inter alia attenuate runoff to pre-development green field rates.

SW5 To implement, in respect of existing developments where practicable, recommendations arising from flood impact assessments under Objective WDO34 of the Fingal Development Plan 2005-2011, within the lifetime of this Masterplan.

SW6 To secure by 2008 a joint study into the real level of foul drainage misconnections and overflows to the surface water system within the airport.

SW7 To secure the implementation of a pilot project to develop a procedure to reduce foul drainage misconnections and overflows in the most cost-effective manner and to develop and implement a systematic programme of rehabilitation works within the airport within the lifetime of this plan and in accordance with Policy UTP8, UTP10 and UTP11 of the Fingal Development Plan 2005-2011.

SW8 To secure the implementation of pollution control measures in respect of oil and fuel storage and handling.

SW9 To secure the implementation of a long term surface water quality monitoring system as part of an environmental management system.

SW10 To secure the implementation of a pollution contingency plan as part of an environmental management system.

SW11 To require, prior to the commencement of all development, that a Sediment and Water Pollution Control Plan be submitted, in compliance with Objective WDO36 of the Fingal Development Plan 2005-2011.

7.2 GROUND WATER

Carboniferous limestone underlies most of the subject lands. The most significant receptor for contaminants is the groundwater in the limestone aquifer, in particular shallow aquifers, which have been shown to be present in the development area. The Water Framework Directive requires as an objective the achievement of 'good status' for groundwater by 2015. It is therefore important that Policy UTP3 of the Fingal Development Plan is adhered to in order to ensure 'good status' for groundwater.

Ground Water Objectives

- GW1** To quantify potentially significant impacts relating to the aquifers and the identification and implementation of mitigation measures for existing and proposed development. Such measures should include strict planning and building control to ensure that best practice in terms of drainage management is implemented and any potentially polluted drainage is appropriately attenuated prior to release to the ground.
- GW2** To secure the implementation of long term groundwater quality monitoring as part of an environmental management system for both construction and operational phases of development.

7.3 FOUL DRAINAGE

The subject lands lie within the catchment of the North Fringe Sewer, as delineated in the North Dublin Connection Study by RPS-MCOS on behalf of Fingal County Council and Dublin City Council. Provision has been made to cater for the projected development within the catchment as a whole, including the subject lands, up to the 2031 scenario. It is proposed to extend the North Fringe branch sewer along the Old Swords Road, as far as Collinstown Cross. The outfall from the existing airport system will be intercepted at this point. It will also be necessary to extend the piped drainage to service development that is currently served by on site treatment systems within the subject lands to the east of the airport. The piped drainage system will need to be extended to cater for proposed development to the west of the airport. Where feasible it is envisaged that the piped drainage will be incorporated into the construction of the proposed road network.

In order to facilitate the supply of serviced land, in respect of foul drainage, both within and adjacent to the subject lands, co-operation with adjoining landowners will be required and where appropriate, provision will be made to cater for upstream development.

In respect of foul drainage the following objectives shall apply:

Foul Drainage Objectives

- FW1** To develop a plan to expand in a sustainable manner and in accordance with Policy UTP5 and UTP7 of the Fingal Development Plan, the drainage system to cater for the proposed development within, and where appropriate adjacent to the subject lands. It is intended that trunk drainage pipelines through the subject lands will be vested in the local authority and will be made available to cater for upstream development.
- FW2** To secure a joint study by 2008, into the true level of inflow, infiltration and exfiltration in the drainage network within the airport and in accordance with Objective WDO13 of the Fingal Development Plan.
- FW3** To secure the implementation of a pilot project, to develop a procedure to reduce inflow, infiltration and exfiltration flows to economic levels in the most cost-effective manner and to

develop and implement a systematic programme of rehabilitation works within the airport, within the lifetime of this plan and in accordance with Policy UTP8, Policy UTP10 and Policy UTP11 of the Fingal Development Plan.

- FW4** Where feasible, to treat at source trade effluent so as to ensure the average strength does not exceed domestic effluent strength prior to discharging to the public sewer.
- FW5** To implement measures to limit oils, fats and grease.

7.4 WATER SUPPLY

The subject lands lie within the Ballycoolin reservoir supply area. The current airport demand is met from an internal reservoir and boosting system. It will be necessary to extend the watermain network to cater for proposed development to the west of the Airport. However, the elevation of these lands will necessitate either connecting to the Blanchardstown High Level System or alternatively providing local pressure boosting. Provision has been made to cater for the projected development at a regional level. Where feasible it is envisaged that the watermain will be incorporated into the proposed road network.

In order to facilitate the supply of serviced land, in respect of water supply, both within and adjacent to the subject lands, co-operation with adjoining landowners may be required and where appropriate provision will be made to cater for upstream development.

It is important that Policy UTP4 of the Fingal Development Plan is adhered to in order to ensure the prudent use of water resources by promoting internal water conservation.

Water Supply Objectives

- WS1** To secure a plan to expand, in a sustainable manner, the water supply network to cater for the proposed development within and where appropriate adjacent to the subject lands. It is intended that the trunk watermain through the subject lands will be vested to the local authority and will be made available to cater for adjacent development.
- WS2** To require the development and submission for approval of a water management and conservation plan as defined under the Water Bye Laws 2004 in accordance with Policy UTP4 of the County Development Plan.
- WS3** To implement measures, including provision of on site storage, to ensure adequate security of supply.

7.5 TELECOMMUNICATIONS

Dublin Airport's extensive IT network infrastructure comprises a wide range of fibre-optic, copper and wireless media covering the Airport's data, voice and video requirements. There is a need to continue to replace, upgrade, and develop assisting systems to cope with the future expansion of the Airport and the projected increase in passenger numbers.

7.6 ELECTRICITY

Dublin Airport power is provided from two principle sources namely the ESB and in house generation from a combined heat and power plant (CHP).

The ESB supply comes in the form of three separate networks.

- A 38kV supply from Finglas.
- A 38kV supply from Santry (Grange substation).
- A 10kV supply from Collinstown (on standby only)

There is sufficient capacity in the ESB supply and the existing Dublin Airport 10kV infra structure, to meet the present lead demands in the airport complex, including the development of a new Pier. There is also a plan in place to deal with electrical infra structure for a 15 year growth. There would however be a need to increase the metering agreement with the ESB from 7MW to 10MW.

7.7 NATURAL GAS

Natural gas is supplied to the Airport by a 250mm diameter main at 4bar pressure. The main is routed around the site with metered connections to each of the various users. The main users are the Flight Kitchen, the Central Boilerhouse, the Passenger Terminal and the Energy Centre Combined Heat and Power Plant.

Initial feedback from Bord Gais is that the incoming main to the site has adequate capacity to provide for expansion to the airport but individual meters may need to be replaced in proximity to the increased demand.

Telecommunications/ Utilities Objective

TU1 To ensure that strategic telecommunication including fibre optic broadband links and utilities (gas and electricity) infrastructure is maintained and upgraded where appropriate, in any development proposals in the LAP area

8.0 HERITAGE

8.1 ARCHAEOLOGY

There are some archaeological sites or features listed on the Record of Monuments and Places (RMP) that are contained within the boundary of the Local Area Plan. These are protected by the National Monument Acts 1930-2004, and are listed in Table 1 and shown diagrammatically on Map4.

There is also the strong potential for unknown archaeological sites to be unearthed elsewhere in the study area if these lands are developed as part of the expansion of the airport. Historical sources indicate that a substantial 13th century dwelling existed at Dunbro that was supposed to rival Dublin Castle. It was the property of Stephen de Fulebourne, then chief governor of Ireland¹. Therefore, it is recommended that an archaeological assessment of the entire LAP Area be carried out, utilising documentation, aerial photographs, and possibly some exploratory excavations.

Table 1: Record of Monuments and Places (RMP) sites within the LAP Area

RMP Ref No	Description & Location
DUO11-046	Ringfort site, Cloghran (Coolock Barony)
DUO14-008	Ringfort possible site, Harristown
DUO14-011	Castle site, Corballis (Coolock Barony)
DUO14-023	Holy Well possible, Toberbununny
DUO14-040	Dwelling site, Harristown
DUO14-090	Inn Possible, Pickardstown

There are also a number of archaeological sites and features just outside the boundaries of the LAP Area, in areas such as St. Margarets, Dunsoghly, Dubber, Cloghran etc., and an assessment of the potential impact of the airport's expansion on these sites should also be carried out. If necessary a mitigation strategy should be devised. The policies and objectives of the Fingal Development Plan seek to ensure that archaeological sites, monuments (including their setting) and objects are protected.

Archaeology Objectives

- AR1** To secure an archaeological assessment of the Recorded Monument sites within the LAP Area in consultation with the National Monuments Section of the Department of the Environment, Heritage and Local Government.
- AR2** To secure the assessment of the potential impact of any new development on archaeological sites bordering and within the LAP Area.
- AR3** To draw up a programme for the investigation of potential archaeology within the LAP Area, in consultation with the National Monuments Section of the Department of the Environment, Heritage and Local Government, with a timeframe for these investigations to start well in advance of any planning applications or development works.

8.2 ARCHITECTURAL HERITAGE

The LAP Area also contains a number of Protected Structures listed on Fingal County Council's Record of Protected Structures (see Table 2 and Map4). These structures are protected under Part IV of the Planning and Development Act 2000. Two of these entries (RPS No. 602 & 610) relate to archaeological features which are also protected under National Monument legislation (RMP Ref. No. DU011-046 & DU014-023). Three of the structures (1937 Terminal Building, Corballis House, and Castlemoate House) are in the ownership of the Dublin Airport Authority and are located within the current airport complex. There are also a number of Protected Structures in the areas surrounding the boundary of the Masterplan, which may be indirectly affected by the plan.

In particular, the Old Central Terminal Building is one of the most important Modern Movement buildings in Ireland, and particular care should be given to any changes, additions, or interventions to this structure or its setting.

Table 2: Protected Structures within the LAP Area

RPS No	Description & Location
602	Holy Well, off Swords Road, Toberbununny
610	Ringfort site, Naul Road, Cloghran (Swords)
611	Castlemoate House, Swords Road, Cloghran (Swords)
612	1937 Terminal Building, Dublin Airport, Collinstown
613	Corballis House, Dublin Airport, Corballis
628	Windmill (in ruins), R122 Road, Millhead

Research of historical maps for the area, accompanied by a field survey have identified structures of potential architectural significance within the LAP Area, that have the potential to be directly affected by the plan (see Table 3). These appear to be mid 18th century structures or earlier. Just before the junction of the R108 and the Naul Road there is a collection of six 18th century milestones incorporated into a piece of public art utilising the remains of the Forrest Tavern and an old cast-iron pump. These milestones originally stood at fixed points along the old Dublin to Naul Road. If this area is to be developed these historic milestones, which have already been moved from their original locations, and the pump should be preserved and incorporated into an appropriate design within the area.

Table 3: Structures of Potential Architectural Significance within the LAP Area

Description & Location
Dunbro House, Dunbro Lane, Dunbro
Dunbro Great, Dunbro Lane, Dunbro
Portmellick, Dunbro Lane, Portmellick
Huntstown House, R108 Road, Huntstown
The Boot Inn, R108 Road, Pickardstown

¹ Ball, Francis., (1902-1920). A History of the County Dublin: Vol. 6

Architectural Objectives

- AH1** To have particular regard to the conservation and protection of the 1937 Old Central Terminal Building and its setting.
- AH2** To ensure as far as is consistent with the development of necessary airport facilities, the conservation of the architectural heritage within the LAP Area and in the areas immediately bordering the study area.
- AH3** To assist the Dublin Airport Authority with the conservation of the built heritage.
- AH4** To devise a strategy for the reuse and retention of the Protected Structures within the Local Area Plan area as far as is consistent with the development of necessary airport facilities.
- AH5** To draw up a suitable scheme for the preservation and retention within the airport area of the historic milestones and pump in the event of any proposal to redevelop the site currently occupied by these features.
- AH6** To ensure that the heritage of St. Margaret's is protected, in particular that preservation orders and any other protective measure are maintained on the following:
St. Margaret's Church and Parochial Hall, St Bridget's Well, the Mill in Sandyhills, Dunsoughley Castle, and St Margaret's graveyard.

8.3 NATURAL HERITAGE

The LAP envisages a large expansion of the Airport over the coming years. This will lead to the development of lands both within and outside the current airfield. This poses challenges in terms of landscape and biodiversity. From a landscape perspective the challenge is to ensure that a high quality landscape is developed within the airport as the LAP is implemented; and to ensure that the amenity value of remaining resources is maximised and a positive contribution is made to the enhancement of the wider landscape. From a biodiversity perspective the challenge is to ensure that biodiversity is conserved and enhanced in so far as consistent with the safe and efficient operation of the Airport, by ensuring that land-take is minimised, that impacts on habitats and species are mitigated to ensure that there is no net loss of biodiversity. Development of the area covered by the LAP must also ensure that there is no resulting deterioration of downstream watercourses or associated wetland habitats, including designated sites, from increased and/or polluted runoff.

It is the Council's policy to protect, conserve and enhance the County's natural heritage including its biodiversity, landscapes and geological heritage. In the context of this LAP it is important to ensure, in the first instance, that land-take is minimised through careful integrated planning. While the impacts of proposed developments on habitats and species must be assessed on an ongoing basis in accordance with the policies in the Fingal Development Plan, it is important that a strategic approach is taken to biodiversity and landscape management within the LAP area.

This will be achieved through the development of a 15 year Landscape and Habitat Management Framework (LHMF) which will guide the development and implementation of the specific landscape and habitat mitigation measures required as development proceeds.

It is the Council's policy that mitigation should take place within the LAP area, wherever possible, and where this is not possible, outside this area but within the local area. Mitigation will include, inter alia, the provision of compensatory habitat, and should be aimed at ensuring that there is no net loss of habitats and that populations of species of conservation concern are maintained. It is also the Council's policy that runoff from developed areas shall not result in deterioration of downstream water courses or habitats. To this end pollution generated by developments within the LAP area must be treated within the development area prior to discharge to local watercourses. The development of the LHMF will also ensure that landscape and biodiversity issues are dealt with in an integrated way. Any negative visual impact of the airport and its operations must be minimised by reducing light pollution, by ensuring that high quality urban design is employed in all developments, and by the development of appropriate on- and off-site landscape schemes. It is also important that high-quality landscape proposals are developed for the interface area between the airport and surrounding lands.

Given the size of the LAP area the development and implementation of the LHMF should also take account of the objectives in relation to biodiversity set out in the Fingal Heritage Plan and the emerging County Biodiversity Action Plan, and where possible should contribute to the achieving of these objectives. Lastly, it is important to ensure that the implementation of the LAP does not degrade ecological resources elsewhere. Therefore, materials used for construction in the delivery of the Masterplan should not be sourced from ecologically sensitive areas and peat products should not be used in landscaping schemes.

Natural Heritage Objectives

- NH1** To secure the completion of a survey of all the lands within the airport zone to determine the habitats and species present taking into account seasonal patterns in consultation with Fingal County Council and the appropriate statutory bodies.
- NH2** To secure the completion of a survey to determine the habitats and species present in, or dependent on, the following rivers: the Ward, the Sluice, the Mayne and the Santry in consultation with Fingal County Council, Dublin City Council and the appropriate statutory bodies.
- NH3** To secure the completion of a Landscape and Habitat Management Framework (LHMF) in order to address the landscape and biodiversity issues involved in the implementation of the LAP within two years of the adoption of this plan. The LHMF shall be formulated by the landowners and the appropriate statutory bodies. The LHMF shall include provision for regular public reporting of progress in relation to the implementation of the specific landscape and habitat mitigation measures.
- NH4** To seek the support of the Dublin Airport Authority in the implementation of relevant actions in the Fingal Heritage Plan, and in the implementation of the forthcoming County Biodiversity Action Plan.

9.0 DESIGN CRITERIA

In all its elements the LAP will promote quality of design as a core principle. This is a necessary strategy to provide the opportunity for the nation to make a statement of pride for visitors and citizens as they arrive in or depart through our principal gateway.

The LAP will provide an opportunity to realise a visual coherence that will facilitate the most effective use of the facility. To provide an attractive high quality environment, which enriches the public realm, the guiding principles of good design, listed below, should be adhered to.

Character: A place with its own identity. The character of an area refers to its existing layout, form, content and fabric.

Continuity and Enclosure: A place where public and private spaces are clearly distinguished.

Legibility: A place that has a clear image and is easy to understand.

Ease of movement: A place that is easy to get to and move through. It is vital that such permeability is tempered by the consideration of safety and security and an articulation of what is public, semi-public and private space.

Quality of Public Realm: A place with attractive and successful outdoor elements. The treatment of surfaces, landscaping, signage, artworks etc. must be considered in an integrated manner and sensitively used as coherent linking eliminates.

Diversity: A place with variety and choice. Proposals should have a mix of compatible developments and uses that work together to create viable places and respond to users needs.

Adaptability: A place that can change easily.

The design of airport infrastructure, for instance terminal buildings, must take particular account of the airport-user's experience. The plan arrangement must facilitate a barrierless ease of use for all people regardless of physical ability.

Measures must be employed that

- minimise level changes,
- minimise travel distances,
- provide facilities that, in the first instance, eliminate queuing and waiting or,
- where queuing and waiting are necessary, that they are actively facilitated through the provision of generous well-designed public spaces, adequate seating, toilets and convenient refreshment areas.

Sustainability

The concept of sustainability involves the recognition that we need to move towards a 'sustainable society', one that can continue to maintain and grow itself indefinitely while at the same time improving quality of life and protecting and enhancing the earth's environmental and life support systems. It is a policy of Fingal County Council to improve qualitative standards of sustainable design in proposed developments in accordance with the provisions of the Fingal Development Plan 2005-2011/ Fingal County Council is committed as a priority to encouraging more sustainable development through energy end use efficiency, and increasing the use of renewable energy, in all new building projects in the designated area within the LAP.

Design Objectives

- DS1** To require that each planning application be accompanied by a design statement, to ensure architectural coherence and quality in the airport area.
- DS2** To require that planning applications for significant developments in the designated airport lands be accompanied by a design appraisal showing how the proposal responds to the site, the locality and policy context.
- DS3** To require that a design appraisal explain: the design principles and design concept; how these are reflected in the development's layout, density, scale, visual appearance and landscape; how the design relates to the site and wider area and to the purpose of the proposed development; how the development will meet the objectives of the Fingal Development Plan and the LAP.
- DS4** To require generous, well-designed public spaces (internal) which reflect the aspiration that the airport becomes a statement of pride for visitors and citizens as they arrive in or depart through Ireland's principal gateway.
- DS5** To improve qualitative standards of sustainable design in proposed developments.
- DS6** To encourage more sustainable development through energy end use efficiency, and increasing the use of renewable energy, in all new building projects within the LAP area by applying the following criteria towards the design and assembly of low-energy buildings of non-residential types:
- Responsible environmental management is required in construction;
 - A menu of superior design and specification towards Sustainable Construction options will include the following:
 - Site layout and associated bio-climatic/ passive solar design measures
 - Use of daylight where it is possible thereby to reduce energy consumption
 - Use of healthy and controllable ventilation systems
 - Use of heat recovery systems including Combined Heat and Power
 - Promotion of water conservation measures
 - Use of building materials with lower embodied energy use in manufacture
 - Use of lower energy efficient lighting systems
 - Incorporation of renewable energy systems, e.g. active solar, heat pumps etc
 - Optimising the use of Building Energy Management Systems
 - Use of Monitoring and Targeting systems to monitor best practice in energy consumption towards reducing CO2 emissions to the greatest extent practicable.

10.0 COMMERCIAL DEVELOPMENT

In Dublin Airport the terminal and pier buildings provide for important commercial services (including retail, duty free shopping and catering) that support the primary passenger facilities and are very much integral to the provision of terminal facilities.

Provision has been made on the designated airport area for the development of airport related development within the lands; this includes development such as logistics, light industrial, taxi feeder parks, staff and long stay parking and car hire.

Within the LAP lands there is also potential for additional hotel facilities at Dublin Airport in the short to medium term. This could include a new 250 bedroom limited service budget and a 200 bedroom four-star hotel facility. Such facilities should be linked to the terminals, and could appropriately be developed concurrently with Terminal 2 and the proposed Metro station.

In recent years, airports across Europe have expanded their operations to develop property including non-aviation related offices, hotels etc. to let on the open market in an effort to boost revenues. In Dublin, despite significant available land in the environs of the airport, the quantum of commercial development is low in comparison to other major European airports.

Within the LAP lands, a limited area has been identified for possible non-aviation related commercial development; these lands are located to the east of the core aviation related zone (see Map 1). This area is outside the public safety zones and as it would not be subject to any aviation/operational restrictions it offers the potential to develop as a landmark office development. Non-aviation related office development is not permitted under the current Development Plan and therefore, any proposals to develop the identified lands would require a variation to the 2005 Development Plan. It is vital that any such Variation would be linked to the delivery of the Metro and of a high quality, high capacity people-moving link between the Metro Station/Public Transport Interchange and the commercial area. Such a link would make the identified site easily accessible to the existing and proposed terminal buildings and to the proposed Metro Station/Public Transport Interchange. However, it is likely that significant traffic would be generated by large-scale non-aviation related commercial development. Surface access to the airport is critical and any commercial development in and around the airport campus will be limited and guided by the fundamental principal that the operational requirements of the airport are prioritised and safeguarded. Hence, any future non-aviation related commercial development within the designated airport lands will be limited in extent and will only be considered in conjunction with the provision of the Metro. Such development can be considered only on lands easily accessible from the Metro station and the Public Transport Interchange. Objectives and policies to ensure that commercial development occurs on a phased and sustainable basis are outlined in this section.

Commercial Development Objectives

- CD1** To support the provision of airport related economic activities in the appropriate locations on the airport campus. Appropriate uses include car hire, airport related offices, tourism facilities and logistics operations.
- CD2** To support the location of appropriate tourist related activities within the airport campus, including new hotel buildings
- CD3** To facilitate limited commercial developments within the designated Airport zone through the zoning of an appropriate area for development.
- CD4** To ensure that the provision of commercial development in the Designated Airport Zone does not prejudice the core functions of the Airport.
- CD5** To ensure that the provision of non aviation related commercial developments is phased in tandem with the delivery of the Metro and other additional public transport facilities.
- CD6** To require the production and implementation of a mobility management plan for each commercial development in accordance with Fingal County Council standards.
- CD7** To require any proposed commercial development to submit a comprehensive Traffic Impact Assessment of the effect the development would have on the internal and external road network.
- CD8** To require provision of a high quality public transport system, linking the core airport campus including Metro station and the public transport interchange with the commercial zone.

11.0 IMPLEMENTATION

The aim of the LAP is to ensure the efficient and effective operation of the airport and promote its continued co-ordinated, sustainable and well-planned physical and economic development. The Masterplan details key developments and projects that are likely to occur in the Designated Airport Area. Clearly, the various components of the plan will not be implemented at once but over the short to long-term. The elements in the plan are not likely to be rolled out in a straight time-line, but have a relational dependence on the delivery of key projects such as the second parallel runway and Terminal 2; and are susceptible to constraints such as market demand, and budgetary capacity.

This section describes some of the potential sequencing opportunities that may arise as the LAP is implemented over time.

Runway

Forecasting studies indicate that Dublin Airport will begin to experience a constraint in operational capacity from 2009 in the absence of a second parallel runway. A planning application is currently being evaluated regarding this key element of the airport's infrastructure. The provision of the second runway will remove a significant capacity constraint and is the key to enabling all other aspects of the airport to develop.

Apron Development

The primary requirement of the Apron will be to provide sufficient stand capacity to accommodate the projected aircraft demand. It is generally possible to develop aprons in relatively modest areas at comparatively short notice.

Aircraft Stands

As the airport develops over time, the requirement for stands will inevitably increase and will need to be provided progressively in advance of demand. The projected aircraft types and sizes determine the precise provision of stands. The delivery of stands can be tackled in incremental groups. The delivery of stands to the Western Campus will need to be co-ordinated with the development of the associated, apron related functions e.g. cargo, aircraft maintenance, and the terminal.

Taxiway

In order to be able to obtain the required access to and egress from the runways, the taxiway system will be improved and expanded in a gradual manner. For example the capacity of runways can be increased by the appropriate provision of Rapid Exit Taxiways (RET's) which are designed to minimise runway occupancy times and therefore create the conditions for optimal runway utilisation. The number and location of RET's depends on the

projected aircraft fleet mix, and given the constantly changing nature of the airline industry, their design will be determined in accordance with need.

Apron Related Development

In order to accommodate the full range of airport activities, appropriate provision is required for cargo, aircraft maintenance hangars, catering and general aviation functions. The areas in the Eastern Campus are nearing capacity. The LAP has identified areas for the gradual expansion of these facilities in the western site. This process is likely to commence early in the life of this LAP.

Terminal Development

It is an objective of the LAP to prioritise the upgrade and utilisation of the existing infrastructure in the Eastern Campus. This will comprise three main elements, the expansion of Terminal 1, the development of Terminal 2, and the provision of additional pier capacity. The Government have indicated a target year of 2009 for this project.

Any potential future development of further terminal development in the Western Campus in the medium to long-term will be required to be delivered in conjunction with the necessary landside and airside infrastructure. The facility should be designed so as to allow for its modular expansion to cater on a phased basis for the full capacity of the twin parallel runway system.

Landside Surface Access

Improvements to landside surface access will be implemented in response to the demands of the developing Airport and from outside of the Airport. The improvement of surface access at the Eastern Campus is the priority within the life span of this LAP. The development of additional terminal capacity infers an improved road network and public transport infrastructure.

It is an objective of the Government's Transport 21 programme (2005) to deliver the City Centre Airport/Swords Metro line by 2012. The timing of the Metro will have a major impact on the timing of other infrastructure and facilities e.g. car parking. Metro will be complemented by ongoing improvements to the infrastructure for road-based public transport, which will play a key role in providing ongoing improvement to the accessibility of the Airport. Bus and cyclist priority will be incorporated into the improvements to the road network so that bus/coach and taxi can continue to account for a significant mode share for those travelling to and from the Airport.

The delivery of Terminal 2 will also provide the opportunity for significant remodelling of the kerbside/road provision adjacent to the Terminals and an upgrade of the roads within the Eastern Campus. Improvements will also be made along the R132 corridor between Collinstown Cross and Cloghran

Roundabout at the eastern edge of the Airport Area to complement this Terminal capacity upgrade.

In the medium to long-term Fingal County Council, assisted by financial contributions from airport and other developments, will provide for a system of high capacity roads surrounding the Airport Area, connecting to the M1 to the east, to the M50 at the Ballymun Interchange to the south and to the N2 at the Cherryhound Interchange to the west. The delivery of this network will be phased to ensure that alternative highcapacity routes are provided to the airport campus. Any significant expansion of the airport in the future Western Campus will be contingent upon the implementation of adequate road infrastructure.

Car Parking

The provision of car parking will be aligned with increasing air traffic. The provision of additional short term, multi-storey car parking will be aligned to the terminal developments; for example as Terminal 2 and the western terminal facility are developed there will be the need for additional car parks and as the annual throughput for these terminals will grow gradually the car parks should be capable of phased delivery.

Over time, the long-term car parking capacity will also need to increase, serving both the Eastern and Western developments. Other parking options will also arise, for example the business/mid-stay parking product as has become commonplace in many international airports.

The implementation of a Metro link and improvements in public transport generally, will provide an alternative for airport staff. This will be important as demand increases associated with airport growth.

As the airport grows, the use of land close to terminal buildings for surface car parking becomes unsustainable over time. Terminal, transportation, and other developments are likely to dictate that these areas will be gradually displaced further and further from the terminals, served by an efficient transport system such as shuttle buses. This is equally the case for car hire facilities.

Landside Developments

The provision of the various landside functions such as hotels, or airport related offices for example are not dependent, (but complementary) on the roll out of airport infrastructure. Such complimentary activities as later detailed, must ensure that there is no interference with rollout of core aviation services and functions, as detailed in this LAP. The development of more intensive employment activity will be related to the implementation of Metro and public transport improvements.

Utilities

This LAP details a number of improvements to water services required to improve the current infrastructure, and facilitate the future expansion of the airport. The implementation of the programmes and projects will be required to fulfil Fingal County Council's objectives for sustainable development and environmental standards outlined in this LAP at all phases of implementation.

GLOSSARY

Apron: Hard surface for Aircraft parking.

Airbridge: Mobile corridor providing access to Aircraft by passengers direct from the Terminal.

Airside: The area which requires Customs and Security clearance to access.

Contact stands: Stands whereby passengers can directly access Aircraft by walking from the Terminal either by Airbridge or walking across the Apron.

Desire lines: The routes that people take by preference, typically this would arise on corners where people would choose to walk the shortest possible route rather than walk along formally laid out routes which may be longer.

General Aviation Aircraft: Aircraft either used by owners or hired out as an airborns taxi service. These are usually smaller aircraft with limited passenger capacity.

Hangar: A covered space used by Aircraft either for 'garaging' or maintenance.

Hubbing: A convenient Airport location whereby passengers may change aircraft to get to their final destination.

Interlining: When direct routes are not available passengers change aircraft at a 'hub' airport to get to their final destination. This is known as 'Interlining'.

Intermodal Interchange: An area where people can transfer between different forms of transport. (E.g. Car, Bus, taxi, Metro etc).

Landside: The areas before passengers go through Security, Customs and Immigration.

N.A.T.S. National Air Transport Services. A UK organisation which sets the Standards for Air Traffic Control.

Pier: A corridor extending out of the terminal against which aircraft can stand so that passengers may enter directly.

Taxi-way: A road whereby Aircraft leave the runway to get to their parking space.

Terminal: The building where passengers are handled prior to entering the Aircraft and conversely where passengers are administered before being allowed to leave and pass land side before entering the country.

APPENDIX 1

The Fingal Development Plan 2005-2011 contains a number of policies and objectives in relation to Dublin Airport as follows:

Airport Operations and Airport Development

- To safeguard the current and future operational, safety, technical and developmental requirements of Dublin Airport, having regard to the environmental impact on local communities (DAP1, TP15).
- To realise the optimal use of lands around the airport (DAP2, TP20).
- To promote the continued, co-ordinated, sustainable and well-planned physical and economic development of Dublin Airport, having regard to its sustainability within Fingal and to Government policies in relation to decentralisation and the National Spatial Strategy (DAP3).
- To protect and enhance the transportation capacity required to provide for the surface access needs of the Airport, which is an important national asset, but also a major source of employment growth potential in its own right (DAP5 and TP16).
- To provide for the efficient and effective operation of the airport within the Designated Airport Area in accordance with the Airport Action Plan when adopted (DAP6).
- To ensure that all development within the DAA will be of a high standard of design, to reflect the prestigious nature of an international gateway airport, and its location adjacent to Dublin City (DAP7).
- To determine a Designated Airport Area for Dublin Airport, and to zone the lands included in that area for uses integral or ancillary to the functions of the airport as such (TO20).
- To prepare an agreed Airport Action Plan (masterplan) for the land within the Designated Airport Area, in consultation with the airport authority and all other relevant stakeholders, to serve as the formal basis for Fingal County Council's planning control of change within that zone (DA01).
- To restrict development which would impede surface access to Dublin Airport (TO26).
- To establish an Airport Consultative Committee, including representatives from local authorities, airport operators, community and other stakeholders, to provide a forum for discussion of environmental and other issues (DA05).
- To require that an urban design statement accompany each planning application for development within the DAA, to ensure architectural coherence and quality in the airport area; this shall demonstrate compliance with the Airport Action Plan when adopted (DA06).

Terminal and Runway Facilities

- To facilitate the early development of a second major east-west runway at Dublin Airport (DA02 and TO21).
- To restrict the Crosswind Runway to essential occasional use on completion of the second east-west runway (DA03 and TO22).

- To facilitate the on-going augmentation and improvement of terminal facilities at Dublin Airport (DA04 and TO23).

Safety

- To promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the existing and anticipated environmental impacts of aircraft movements (DAP8 and TP18).
- To implement the policies to be determined by Government in relation to Public Safety Zones for Dublin Airport (DAP9 and TP19).
- To continue to take account of the advice of the Irish Aviation Authority with regard to the effects of any development proposals on the safety of aircraft or the safe and efficient navigation thereof (DAP10).
- To have regard to the safety and environmental impacts of aircraft movements associated with Weston Aerodrome in the assessment of any relevant development proposal (TO27).

Noise

- To strictly control inappropriate development and to require noise insulation where appropriate within the Outer Noise Zone, and to resist new provision for residential development and other noise sensitive uses within the Inner Noise Zone, as shown on the Development Plan maps (DAP11).
- To prepare a baseline noise study with a long-term horizon taking account of the proposed Airport Action Plan (objective DA07).
- To review the operation of the Noise Zones on an ongoing basis in light of the forthcoming EU Directive on Environmental Noise, the ongoing programme of noise monitoring in the vicinity of the airport flight paths, and the availability of improved noise forecasts (DA08).

Air and Water Quality Management

- To ensure that every aircraft related development proposed in the Airport takes account of the impact of noise on established residential communities (DAP12).
- To ensure that every development proposal in the environs of the airport take account of current and predicted changes in air quality and local environmental conditions. This should form part of the Environmental Impact Statement where an EIA is required, and of the Health Impact Assessment (DAP13).
- To ensure that every development proposal in the environs of the Airport takes into account the impact on water quality and flooding of local streams. This should form part of the Environmental Impact Statement where an EIA is required (DAP14).

Greenbelt

- To continue to foster agricultural uses and to promote recreational and leisure activities within this area for the benefit of the community at large (DAP15).

St. Margaret's and Other Residential Communities

- To restrict housing development in order to minimise the potential for future conflict between airport operations and environmental conditions for residents (DAP16).
- To permit improvement and extension to existing properties in the area where it can be demonstrated that such works do not represent significant intensification of development, and that appropriate consideration of potential noise impacts are incorporated within the proposals (DAP17).
- To develop a consultative board based on international best practices involving the existing communities, Fingal County Council, Aer Rianta and other appropriate stakeholders, to consult about the detailed resolution of the future of the communities in the area and to seek consensus about the nature of change (objective DAO9).
- To prepare a strategy for 'St. Margaret's Special Policy Area' involving consultation between the existing community, Fingal County Council and the Dublin Airport Authority (DAO10).
- To restrict development which would give rise to conflicts with aircraft movements on environmental or safety grounds on lands in the vicinity of the airport itself and of the main flight paths serving the airport, and in particular to restrict residential development in areas likely to be affected by levels of noise inappropriate to residential use (TO24).

M50 Belt

- To maintain and protect accessibility to the airport as a priority (DAP18).
- To promote intensification of existing industrial premises along Swords Road within their existing curtilages, where such development contributes to the consolidation and environmental improvement of the area. Planning applications for extensions to industrial premises should be accompanied by design statements, which demonstrate compliance of the proposal to high quality landscaping and architectural treatment appropriate to their gateway location (DAP19).

Airport Car Parking

- To control the supply of car parking at the Airport so as to maximise as far as is practicable the use of public transport by workers and passengers and to secure the efficient use of land (TP17).

Environmental Legislation and Standards

- To promote the extension of the provisions of the Environmental Protection Act and EU environmental standards to all relevant activities at Dublin Airport including noise control, engine run-up and air pollution (TP21).

Public transport

- To encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport (DAP4).
- To facilitate and promote the development of a new and improved rail based transportation system including a METRO rail link from the City to Swords via the Airport, a new rail line from Clonsilla to Dunboyne and from Baldoyle to Dublin Airport, and additional stations and operational facilities on the Drogheda to Dublin and Maynooth to Dublin lines (TP12).
- To facilitate and promote the development of a METRO line from the City Centre to Dublin Airport and on to Swords by protecting the preferred route identified by the Railway Procurement Agency, preparing and implementing proposals for the integration of this line with the development of adjoining lands in cooperation with the developers of such lands, and implementing a scheme under Section 49 of the Planning and Development Act 2000 to secure contributions from developers of lands in the vicinity towards the cost of developing the line, and co-operating with other public agencies and the private sector in this regard (TO6).
- To identify and protect a route for the proposed Orbital METRO from the Airport through Blanchardstown towards Clondalkin and Tallaght (TO7).

USES PERMITTED AND NOT PERMITTED WITHIN THE DAA AREA

Land uses permitted in principle:

Aircraft Areas: Runways, Taxiways, Aprons, Terminal Airside/Jetties, Fuel Storage, Maintenance Hangars/Engineering Shops, Air Traffic Control/Meteorology, Airline and Handling Agents, Aero Club/GA, Health/Security/etc. (Infirmary, Police, Fire Service, etc.), Airline/Airport Operator Office Facilities, Control Functions: Customs, Immigration, Concessions (Duty Free Shopping, Cafés and Restaurants, etc.) Car Hire Front Desks, Car Hire Holding Areas, Hotel Booking/Information/General Tourist Information/etc. Counters, Hotel (Either Inside the Terminal or Immediately Adjacent), Traffic 'Waiting' (as Opposed to 'Parking') Areas: Drop-Off/Pick-Up, Taxis, Buses, Coaches, Short Term MSCP Parking, Limited Warehouse and Office Space for Freight Companies, Car Parking (Long Term; also for Employees), Freight Forwarders (Back-Up Warehouse Space), Petrol Filling Station, Retail Development Directly Associated with Air Traveller/Airport Workforce Needs, Coach Park, Park'n'Ride, Cargo Handling, Air Catering, Places of Worship, Conference Centre, Childcare Facilities, Cultural Use, Health Centre, Hotel/Conference Centre, Open Space, Public House, Utility Installations, Public Transportation Station, Restaurant/Café.

Land uses not permitted:

Garden Centre, Home Based Economic Activity, Household Fuel Depot, Special Industry, Extractive Industry, Light Industry, General Industry, Motor Sales Outlet, Office-Based Industry, Non Aviation/Airport Related Office, Residential, Residential Institution, Retail Warehouse, Residential Care Home, Science And Technology Based Enterprise, Shop-Discount Food Store, Shops-Major Sales Outlet.



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