

## The taxiways

The airport currently has four main taxiways, which enable aircraft to manoeuvre between the parking areas and the runway and hangar facilities. These require some realignment and levelling, to comply with civil aviation authority requirements, as well as strengthening to achieve the required load bearing capacity.

## Parking stands

The existing apron areas, which are subject to the greatest loads, have also deteriorated over time through routine wear and tear. It is proposed that these are replaced.

This work will be done in phases, with the current aircraft stands relocated to various positions as each stage progresses.

The airport is also proposing introducing "nose-in, push-back" parking. This will allow aircraft to be accommodated within a smaller area, and therefore reduce the number of phases required to reconstruct the whole apron surface.

These areas will be constructed out of concrete, and designed to last up to 30 years under current operational conditions.

## Lighting

The approach and ground lighting, which was installed when the current runway was built in the 1970's, is also now obsolete, making it difficult to maintain. It therefore has to be replaced as part of the surface rehabilitation project.

# Project outline

## The Runway

The most significant element of the project will be the rebuilding of the runway. The bulk of this will involve overlaying the existing surface with between 120mm and 245mm of asphalt or other bituminous material along the entire length.

As well as resurfacing, remedial work is required to correct a number of non-compliances, which have to be addressed as part of this project.

The grass safety areas at either end of the take-off and landing section need to be extended. At present, these are the bare minimum permitted, at 90 metres, and well below the standard requirement of 240 metres. This has to be addressed as a priority, otherwise the airport risks having reduced take off and landing distances imposed by the civil aviation authorities, which could severely impact on its ability to handle flights to and from major UK airports.

The proposed means of achieving this is to shift the existing runway to the west, making use of land that is currently being acquired. This will not provide the full 240m, however it will greatly improve safety margins.

This realignment will also mean constructing an additional new section of runway at the western end.

The existing runway also dips considerably at the western end and has a non-uniform profile along the length. This has to be levelled off, to enable important safety improvements to meet current civil aviation requirements. This will involve infilling up to a level of 1.8 metres in some places.

Overall, it is expected the project will require up to 32,000 cubic metres of asphalt, and an additional 180,000 cubic metres of other infill material.

## Proposed improvements

At present, the hard surfaces at the airport are classified as having a PCN of 22. This is sufficient for aircraft with a fully laden ACN of up to 22. This for instance includes the ATR72-500 that Aurigny is introducing, which has a fully loaded ACN of 18, and the other aircraft types currently in use for passenger flights and freight.

For aircraft with a fully loaded ACN of above 22, such as the Embraer 195 (ACN 35), weight restrictions would currently have to be applied.

However the rebuilding and refurbishment work being proposed would increase the airport's PCN to 36.

In any event, the apron area incorporating the aircraft parking stands would be reconstructed to a new PCN of 50.

This only involves laying an additional 50mm thickness of concrete, but would mean that even if larger aircraft did not come to Guernsey, the life of this pavement area would be extended beyond 30 years.

## Carrying out the work

When the runway was last resurfaced in 1974, arrangements were made to transfer passengers to and from Jersey Airport by helicopter.

However in those days Guernsey Airport was only handling around half the current level of passenger movements a year, and the

use of large helicopters for public transport was far more prevalent.

Such has been the growth in air travel since then, and the enormous reliance that the island now has on its air links, this is no longer feasible.

Work will therefore be carried out in stages at night.

This significantly extends the duration of the project, however it will enable the airport to remain operational during the day throughout.

Work will commence when the airport shuts each evening, and the runway will be reinstated ready for flights to recommence the following day.

November  
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# Airport Times



## Runway Extension

The issue of whether to extend Guernsey Airport's runway from its current length of 1463 metres to 1700 metres was last debated in 2003. At that time the States rejected this option, but resolved it should be reconsidered as part of an overall plan for rehabilitation and upgrading works.

Extending the runway to 1700m would enable the airport to accommodate larger aircraft, which at present cannot operate on the shorter runway.

At this stage there is insufficient evidence available to justify extending the runway as part of these proposed works. However it has been agreed that more research should be done and so the Policy Council is currently carrying out a strategic assessment of the potential impacts on the local economy in not providing a runway extension.

If it was determined that an extension was required it could then be progressed as a separate phase of works at a later stage.

## Guernsey Airport Essential Maintenance

**Guernsey Airport is the gateway to and from the island for nearly a million passengers that pass through the terminal each year. It is also a crucial supply link, with thousands of tonnes of essentials goods and services flown in and out by freight each year, from post and newspapers to fresh flowers and internet goods. It is therefore impossible to understate the importance of this essential lifeline for the island.**

In December 2008, the States will be presented with a report detailing essential maintenance required for the hard surfaces at Guernsey Airport, namely the runway, aircraft taxiways, and aprons. It also includes addressing various areas of non-compliance with current civil aviation requirements, as well as an option for extending the runway to allow larger aircraft to be accommodated in the future.

This represents a huge civil engineering project - one of the largest the island has undertaken - and will take more than two years to complete. Given the scope of the works, it will inevitably require considerable capital expenditure, the timing of which the Department fully appreciates is not ideal in the current economic environment. Nevertheless these works are now essential, and the improvements should see the airport equipped to continue serving the island for at least the next 15 years without the need for further extensive maintenance.

This is an incredibly complex and far-ranging project, and the report going before the States is the culmination of more than four years work. It has required extensive surveys to be carried out to assess the current runway condition and characteristics, and to establish the best way to ensure that Guernsey Airport meets the necessary requirements going forward. Public Services would like to thank all those involved for their important contribution, including the airport management and the Airport Users' Committee for their contribution.

**Deputy Bernard Flouquet**  
Minister, Public Services  
Department

*The proposals are included in the Billet d'Etat for the December States Meeting. Copies of the report are available online at [www.gov.gg](http://www.gov.gg), and at the Guille-Allès Library. Copies can also be purchased from the Greffe. If you have any more questions then you can contact the Airport Development Office on 234957 or email [airport@gov.gg](mailto:airport@gov.gg).*

 **Guernsey Airport**  
A DIVISION OF THE PUBLIC SERVICES DEPARTMENT

## Important classifications

The type of aircraft which can land at any airport is determined by two classifications - one for aircraft and another for the airport surfaces.

## Runway, aprons and taxiways.

A **Pavement Classification Number (PCN)** indicates the current strength of the runway, taxiways and apron. These surfaces are typically constructed of either concrete or asphalt.

In general terms aircraft parking stands are constructed of concrete, as this is the area where the surface is subjected to the heaviest loads and prolonged parking of aircraft during loading.

The runway and taxiways are traditionally constructed of asphalt providing speedier means of reconstruction and maintenance as the surfaces wear over time.

## Aircraft

An **Aircraft Classification Number (ACN)** is specific to the type of aeroplane and its load (e.g. full or half full). Generally speaking, the larger the aircraft, the higher the ACN.



# A far-ranging programme

**Guernsey Airport's runway was last rebuilt in 1974. The degradation of the landing and other pavement areas is not a symptom of neglect, but of routine wear and tear through normal operations of a busy regional airport.**

More than 1,000 passenger flights either take-off or land at Guernsey Airport every week, in addition to the many commercial freight operations, resulting in considerable impact.

Under these conditions, a runway surface would be expected to last between 15 and 30 years, so we have achieved optimum value by making the current one last nearly 35 years.

### Remedial works

Since 1974, remedial works have been carried out on two occasions, in 2000 and 2007. This has extended the operational life of the current surface, and it is important to stress that the current condition of the runway is sufficient for the safe operation of all the aircraft that currently use Guernsey Airport.

However it now requires significant investment and a programme of works which has to be progressed without further delay. This also applies to the other hard surfaces at Guernsey Airport, namely the taxiways and aircraft parking stands, known as aprons.

The work being proposed would significantly improve the condition of the runway, so that certain aircraft which cannot currently operate to and from Guernsey Airport would be able to. This includes the new Embraer 195 that is now part of FlyBE's fleet.

### Non-compliance

In many aspects, including the current profile of the runway and the safety areas at either end, the airport does not comply with a number of current civil aviation requirements.

These are historical anomalies consistent with the age of the runway, which dates back to 1960, and at present we effectively have dispensation for these non-compliances.

However to maintain our existing operating licence, as part of any major rehabilitation project we will be required to address these areas of non-compliance as best we can.

As a general principle, in the interests of improving safety, the airport should achieve compliance with current aviation standards anyway, inasmuch as is practical.

## Project cost

In December 2007, States Members were given an outline cost for the project of around £51 million, which following further survey work has risen to £58 million. However it was made clear at the time that this preliminary budget did not include a number of significant costs, such as land purchase, contingency, and inflation.

With the various additional items now included, the proposed budget is expected to be £84.5 million.

Following the previous States resolution, in November 2003, to investigate a possible runway extension, the December report also includes a detailed budget for this option.

With the additional cost, estimated to be in the region of £34 million, the Public Services Department is unable to recommend a runway extension to the

States at this time. The Department is however fully committed to assisting in further research to be led by the Policy Council to assess the potential detrimental impact of not providing an extension in the future.

Whatever the final decision on any extension, the core

aspects of the refurbishment project - to rebuild the runway and taxiways and replace the existing aprons and lighting system - have to be carried out now to maintain the future operation of Guernsey Airport.

## Background to the project

The current project began in November 2003, when the States last debated a runway extension.

The then Board of Administration was instructed to consider this option as part of a wider ranging review of maintenance and upgrading of the existing runway and other hard surfaces.

This subsequent work began in 2004, shortly after Public Services took over responsibility for the airport.

Engineering consultants Scott Wilson were appointed to carry out a detailed inspection of the current paved areas, and following their report an initial project scope was drawn up and put out for initial tender in May 2006.

RPS Burks-Green were appointed as project consultants in June last year, and began work on a detailed outline of the work, proposals and costings.

## What the States is being asked?

In December, the States will simply be asked to note the report detailing the rehabilitation work required.

Public Services has undertaken to return to the States for approval of any capital expenditure and contractor appointment before the project begins and following the States capital prioritisation debate next March.

## Budget

### Baseline costs

Runway reconstruction	£30,150,000
Taxiways levelling and realignment	£8,550,000
Aprons reconstruction	£10,300,000
Drainage	£4,400,000
Ground Lighting and Navigation Aids	£4,000,000
Miscellaneous items	£400,000
<b>Sub-Total</b>	<b>£57,800,000</b>

### Allowances:

10% accuracy	£5,780,000
Building inflation (from Nov07 to construction - 15%)	£9,537,000
Construction contingency (10%)	£7,311,700
Professional Fees	£1,500,000
Downtime (emergencies, etc)	£1,500,000
Land Purchase Requirements	£500,000
Provision for Nose in Pushback	£600,000
<b>Budget Total</b>	<b>£84,528,700</b>