



Cyrrus Your Aviation Specialist



Aviation Consultancy at its best.

Specialist aviation support to help
solve problems for airports and airport
developers

► www.cyrrus.co.uk

“

Cyrrus' team of aviation consultants were the first to successfully demonstrate site feasibility for a planned international airport. Where other rival firms had failed, Cyrrus' team of aviation experts not only met this challenge but surpassed it, by delivering a compelling solution for enabling the airport build. For me, this reinforces their world-class pedigree in aviation consultancy.

”

CEO - The Whitelake Consortium.

Enabling Excellence In Aviation

Cyrrus is a leading international consultancy providing a range of specialist aviation support services to help airports and developers manage and overcome the varied and often complex technical requirements associated with the running of an airport or delivering development projects on or adjacent to airports.

With a strong reputation in the Industry for outstanding technical capabilities, our international services are cost effective and have been optimised over time to address real airport issues. We take the time to listen to your needs, understand your challenges and provide clear advice and guidance to maximise project success and Return on Investment.

Cyrrus has the experience, the people and the knowledge to help you successfully deliver your next project.



We will help you get the very best out of your existing airport or design you a new one.



We are skilled in airspace developments, with 100% success rate in airspace change proposals in the UK and abroad.



We specialise in innovative technology solutions to address your operational and engineering needs.



The effective safeguarding of your airspace, environment and navigational aids, both on and off airport, is one of our core strengths.

About Us

As a leading international consultancy to the aviation industry, Cyrrus has grown its reputation by providing relevant advice, reliable service delivery and a determination to ensure project success no matter how large or small the project. We are also proud to tell you that we own patents for innovative solutions designed specifically to solve key issues in the Industry – demonstrating not just outstanding technical capabilities but a strong commitment to solving real world problems.

We are known for providing honest and reliable advice that truly helps both airports and developers with the challenges they face. When the way forward looks too hard to contemplate, Cyrrus is often the organisation that is called upon to solve the difficult problems.

Why not give us a call or email – there is no obligation but you may be pleasantly surprised to learn how we could help solve your problems.

“Cyrrus takes the time to listen to client's needs, understand their requirements and provide crucial advice and guidance. All projects are led by an experienced director and supported by a specialist team, selected to provide the most suitable blend of experience and skills to ensure project success.”

Supporting Airports

Cyrrus recognises the many challenges faced by management at today's modern airports. Changes in legislation, growing passenger and cargo numbers as well as updating and installing new infrastructure and buildings, all add to the workload and complexity of managing an airport. Our aim is to help you address these challenges in a way that reduces stress, minimises disruption and maximises your return on investment. Our many years of experience and industry-leading knowledge enables us to address the various technical challenges you may be facing.

Supporting Developers

We work closely with organisations that deliver services, technology and construction projects on or around airports. With a team of highly knowledgeable and experienced staff, we can help you address any impact that your project may have on the safety and/or operation of the neighbouring airport or aviation activity. We have helped developers across the globe deal with the technical complexities that make successful delivery to airports such a challenge. We will provide advice where needed and help you understand exactly what is required at every stage of the process. We can attend key stakeholder meetings with you to ensure you are well represented.



Working with Cyrrus

The products and services Cyrrus offer are based on Communications, Navigation and Surveillance, and Air Traffic Management standards established through international agreement. However, what makes the Cyrrus products and services stand out are:

- The range of options available to meet defined requirements, through cost-effective, efficient and future-proof solutions.
- Our ability to provide unbiased, independent opinion underpinned by reasonable and rational argument measured against internationally accepted standards and recommended practices.
- The quality of our deliverables e.g. reports and support materials.
- Our delivery of projects on time and on budget.



Our vision is to continue to develop Cyrrus as a leading, internationally recognised company providing aviation consultancy and technology expertise. We aim to add value to all activities in which we participate and strive to be the best in our business area. Through our professional methodology and Research and Development activities, we aim to be recognised as successful innovators.



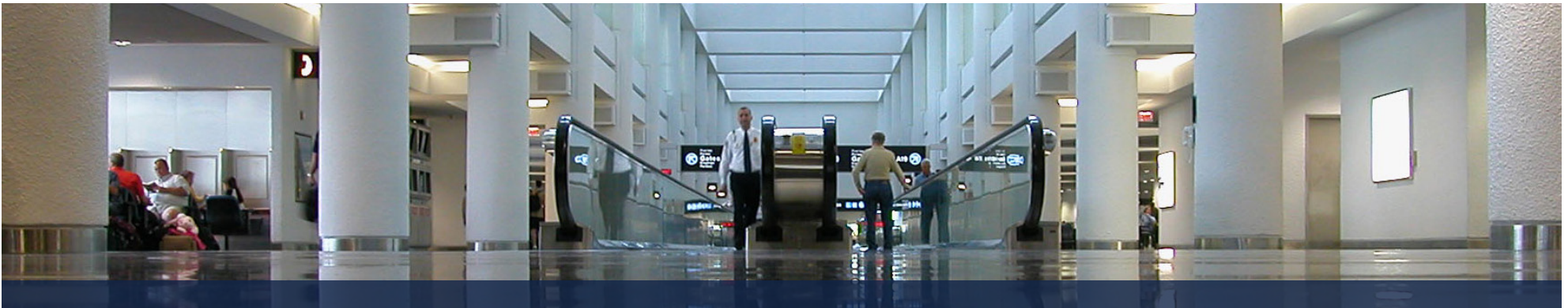
Our core value is one of honesty and integrity: we aim always to do the 'right thing' in a professional and personable way; we will meet our commitments, and work to engender the trust of all our clients. Much of our Company's business comes from customers who return to Cyrrus because they appreciate our ability to deliver projects to a realistic time and budget.



We will strive to advise you appropriately, deliver excellence in our results, act as a true partner and keep you informed of progress throughout the project.

Airport Development

Airports need to constantly develop and expand in a controlled and sustainable manner to meet increasing traffic demand. Cyrrus expertise can play a vital role in ensuring that airport development potential is maximised. Development and progress may be achieved either through better use of existing assets and infrastructure, or by realising the full benefits of new development and technology.



Maximising Potential

Whatever the development needs of the airport, Cyrrus can ensure that maximum benefit is derived in terms of:

- Safety
- Regulatory compliance
- Efficiency
- Cost
- Sustainability
- Timescales
- Future proofing

Minimising Risk

Cyrrus leads carefully managed, industry best practice processes to capture accurate operational, user, technical and safety requirements to ensure project risk is minimised and maximum benefits realised; considering at all times, the potential commercial impact.

Airport Development

We have a wealth of experience in Airport Development Projects. We are recognised and respected internationally for our expertise in airport project management. Through innovation, Cyrrus has successfully assisted many airports in maximising the utilisation of their existing infrastructure.

By innovative means, we have facilitated development at airports which would be denied by conventional thinking.

SAFETY

- Safety Management System
- Safety Cases
- Safety Audit
- Safety Training
- Risk Assessments

RUNWAY OPTIMISATION

- Categorisation
- Declared Distances
- Extensions
- Runway End Safety Area
- Aircraft Performance
- Obstacle Restrictions

CAPACITY STUDIES

- Airspace
- Runway
- Apron

AIR NAVIGATION SERVICE PROVIDER

- Air Traffic Control Requirements
- Air Traffic Engineering Requirements
- Tender Process
- Contract Requirements

BUILDING DEVELOPMENT

- Maximising Potential:
 - On-Airport
 - Off-Airport
- Location
- Orientation
- Mitigations
- Control Tower Building Design

AIRPORT PLANNING

- Runway Design
- Taxiway Design
- Apron Design
- Control Tower Building Design
- Control Tower Building Location
- Rescue and Fire Fighting Service Location
- Building Locations
- Airside Facilities

AERONAUTICAL GROUND LIGHTING

- Approach
- Runway
- Taxiway
- Stands
- Apron
- Precision Approach Path Indicator
- Obstructions
- Audit

PROCUREMENT

- Communications, Navigation and Surveillance
- Tender Packs
- Tender Evaluation
- Contract Negotiation

Airspace

Despite challenging economic conditions, airports have seen an unprecedented increase in air transport movements over recent years. This has required the revision of operational systems, noise compliant routings, new navigational technologies, such as the use of the Global Navigation Satellite System, and the integration of arrival and departure procedures into the existing Air Traffic Control en-route network.



Instrument Flight Procedure Design

Cyrrus is an accredited Instrument Flight Procedure design organisation approved by the United Kingdom Civil Aviation Authority and Irish Aviation Authority. We can provide new Instrument Flight Procedure designs based on conventional and satellite-based navigation. In addition, Cyrrus will maintain and safeguard your Instrument Flight Procedures under a controlled, quality-assured regulatory-approved process. We can also review and optimise existing flight procedures for efficiency and potentially to reduce environmental impact.

Airspace Change

Airspace is a finite resource and often has to support a diverse set of users that include commercial, military, general aviation and leisure aircraft. Cyrrus has the expertise and experience to research, design and progress the most sophisticated airspace change proposals from conception through to implementation.

Airspace

Cyrrus staff have a wealth of experience in airspace projects. We are recognised and respected internationally for our expertise in Air Traffic Management. Cyrrus is an accredited supplier of Instrument Flight Procedures in the United Kingdom and Ireland.

Cyrrus has a 100% success rate in delivering Airspace Change Proposals at the first attempt, a success rate unrivalled in the Industry.

PROCEDURE DESIGN SERVICES

Conventional
Global Navigation Satellite System
Area Navigation
Required Navigation Performance
Standard Instrument Departure
Standard Terminal Arrival Route
Instrument Approach Procedure
Point in Space

AIRSPACE DESIGNS

Terminal
En-route
Regulated

AIRSPACE CHANGE

Design
Consultation
Implementation

OPTIMISATION

Environmental
Efficiency
Capacity



Safeguarding

Development in the vicinity of airports must be controlled to ensure that the safety and effectiveness of air operations are not impaired. Therefore, it is essential that any proposed building developments are assessed to ensure that there is no adverse effect on the airport operation or aircraft safety.



Technical Safeguarding

Cyrrus uses highly advanced software to enable computer simulations of Instrument Landing System, Very High Frequency Omni-directional Range, Distance Measuring Equipment and radar performance. The resulting modelling enables us to assess the effect of proposed developments on air operations, and to offer mitigation to allow maximum development to be undertaken without compromising aviation safety and efficiency.

Obstacle Safeguarding

Cyrrus utilises 3D computer modelling of the obstacle environment to assess the effect of proposed developments on Obstacle Limitation Surfaces and Instrument Flight Procedures. Cyrrus also develops bespoke safeguarding criteria and maps for airports and facility operators. Advanced graphics are used to create easily interpreted user-friendly presentations.

Safeguarding

Cyrrus has a wealth of experience in safeguarding projects. We are internationally recognised and respected for our expertise in aviation safeguarding. Cyrrus uses modelling and computer simulation to determine the effects of development and, if required, how these effects can be mitigated..

We have provided aviation safeguarding services to numerous airports, developers and Air Navigation Service Providers in Europe, the Middle East and Asia.

OBSTACLES

Obstacle Limitation Surface
Instrument Flight Procedure

WINDFARMS

Mapping
Radar
Mitigation

GLINT AND GLARE

Solar Power
Buildings

COMMUNICATIONS

Very High Frequency
Ultra High Frequency

NAVIGATION SYSTEMS

Instrument Landing Systems
Distance Measuring Equipment
Very High Frequency
Omni-directional Range
Tactical Air Navigation
Non-Directional Beacon
Ground Based Augmentation System
System Performance Modelling
Critical Sensitive Areas

SURVEILLANCE SYSTEMS

Primary Surveillance Radar
Secondary Surveillance Radar
Surface Movement Radar
Precision Approach Radar
Direction Finder

LIGHTING/VISUAL

Obscuration
Line of Sight
Lights Likely to Cause Confusion
Lasers

MAPPING

Obstacle Limitation Surface
Technical
Instrument Flight Procedure
Windfarm
Critical/Sensitive Areas

Technology

Communications, Navigation and Surveillance systems form an integral part of Air Traffic Management. These personnel possess many years of experience as active civil and military air traffic controllers, air traffic engineers and project managers at domestic and international airports.



Systems Engineering

By employing best practice, industry recognised systems engineering process to each project, our expert team of systems engineers provide the optimal result to deliver, fit for purpose, safe and cost effective solutions to meet the operational requirement, in a timely manner.

Innovation

Cyrus has developed patented radar data processing systems to address windfarm interference to Primary Surveillance Radar, radar performance monitoring, and Mode-S code conflict detection.

Technology

The Cyrrus team has a wealth of experience in Airport Technology and Engineering Projects. We are internationally recognised and respected for our expertise in procurement of safety critical products and services. Cyrrus has developed patented radar data processing technology to address surveillance problems facing airports.

We have successfully completed major Air Traffic Management and Communications, Navigation and Surveillance projects around the World.

INNOVATION

Radar Video Signal Enhancer
Aerium
Mode S Interrogator Code Conflict Indicator
Smarter
Scenario Test Generator

PLANNING AND COMPLIANCE

Capital Expenditure
Air Traffic Engineering Condition Survey
Engineering Audit

SYSTEM DESIGN

Communications
Navigation
Surveillance
Fibre Optic and Copper Networks

TRAINING

Air Traffic Safety Electronic Personnel
Surveillance
Instrument Landing Systems
Safeguarding

TEST AND COMMISSION

Factory Acceptance Test
Site Acceptance Test
Radar Performance
Commissioning
Compliance
Technical Handover
Operational Handover

REQUIREMENTS CAPTURE

Operational
User
Regulatory
Safety
Technical
Process
Business

PROCUREMENT

Specifications
Model Form of Contract
Tender Pack
Tender Evaluation
Contract Negotiation
Managed Service

PROJECT MANAGEMENT

Schedule
Budget
Actions
Issues
Risks
Opportunities
Lessons Identified

Moving Forward

Find out more

We hope we have given you an insight to the specialist aviation services that Cyrus can provide to help with your airport or development needs. We will continue to add news, views and technical insights as well as case studies to our website so please feel free to visit any time to learn more.

If you would like to discuss your requirements further, please email or give us a call info@cyrrus.co.uk | +44 (0)1845 522 585





London Luton Airport



Regional & City Airports



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YOUR ISLAND GATEWAY



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