

FAREHAM

BOROUGH COUNCIL

Report to the Executive for Decision 19 June 2023

Portfolio:	Policy and Resources
Subject:	Solent Airport Investment Programme
Report of:	Director of Planning and Regeneration
Corporate Priorities:	Maintain and extend prosperity

Purpose:

To review the existing programme of investment at Solent Airport, Daedalus and to consider further investment to address safety and compliance issues and extend the services that the airport offers to its customers.

Executive summary:

The existing programme of investment at Solent Airport, Daedalus was approved on 7 March 2022. Much of this work is now in progress, however some elements require review.

Further investment in the airport is required to enable its continued safe operation and to continue to deliver the Council's Vision to develop a vibrant and sustainable airfield. The proposed programme of investment in the control tower, fuelling facilities and hangarage is required to support existing airside activities.

Recommendation:

It is recommended that the Executive agrees that:

- (a) the Capital Programme allocation for Taxiway Maintenance of £2,700,000 be reduced to £1,700,000;
- (b) the Capital Programme allocation of £1,100,000 for the Aeronautical Ground Lighting System be increased to £2,800,000;
- (c) the Capital Programme allocation of £25,000 for installation of self-fuelling facilities be removed;
- (d) the Capital Programme allocation of £400,000 for aircraft parking be removed;
- (e) £25,000 be added to the Capital Programme for essential repairs to bring Hangar P back into use;

- (f) £165,000 be added to the Capital Programme for new airport fuel supply assets;
- (g) £380,000 be added to the Capital Programme for immediate improvements to the Visual Control Room at the Control Tower on safety grounds; and
- (h) the Director of Planning and Regeneration, following consultation with the Executive Member for Policy & Resources, be delegated authority to award contracts for each of the above Schemes.

Reason:

Investment is required both to ensure the continued safe operation of the airport and to maintain and grow the airport's competitive position by removing some of the identified operational constraints. Proposals for investment in the airport are regularly reviewed to ensure that they remain valid and continue to offer appropriate returns.

Cost of proposals:

The total additional cost of the updated Airport Investment Programme is estimated at £5,523,700, an increase of £833,700 on the previously agreed £4,690,000 programme.

In accordance with the Daedalus Financial Strategy, there are sufficient Daedalus-related capital receipts to fund the increase.

Appendices:

A: CONFIDENTIAL Solent Airport Investment Programme

By virtue of paragraph 3 of Part 1 of Schedule 12A of the Local Government Act 1972 - Information relating to the financial or business affairs of any particular person - and category 7A - Information which is subject to an obligation of confidentiality - of Schedule 12A Local Government Act 1972 and the Council's Access to Information Procedure Rules.

It is not in the public interest to publish this information as it would harm the Council's ability to achieve best value on both contracts and rental income in the future, as well as give unfair financial advantage to potential investors in respect of any future competitive bids thus removing the necessary element of market competition that drives best value principles.

Background papers: **CONFIDENTIAL Solent Airport Strategic Review Report 2 – Investment Plan Egis, July 2021**

Reference papers: **None**

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Executive Briefing Paper

Date:	19 June 2023
Subject:	Solent Airport Investment Programme
Briefing by:	Director of Planning and Regeneration
Portfolio:	Policy and Resources

INTRODUCTION

- On 7 March 2022, Executive approved a £4,700,000 programme of capital investment in the Council's assets at Solent Airport, Daedalus to enable its continued safe operation and to continue to deliver the Council's Vision to develop a vibrant and sustainable airfield. The investment programme will provide facilities and services to support existing airside activities and improve the airport's competitive position by removing some of the identified operational constraints.

Airport Investment Programme	2022/23	2023/24	2024/25	2025/26	Total	Funding Source
	£	£	£	£	£	
Managed Hangarage	105,000				105,000	HCA Grant
Taxiway Maintenance		2,700,000			2,700,000	Capital Receipts
Aircraft parking	200,000			200,000	400,000	HCA Grant and Capital Receipts
AGL/PBN	1,300,000				1,300,000	Capital Receipts
Self-Fuelling Facility	25,000				25,000	HCA Grant
Grounds Maintenance Facility	160,000				160,000	S106 Contribution
Total	1,790,000	2,700,000	0	200,000	4,690,000	

EXISTING AIRPORT INVESTMENT PROGRAMME

- Much of the work approved last year is in progress:

Airport Investment Programme	Progress to Date
Managed Hangarage	Completed
Taxiway Maintenance	Urgent works completed. Remainder under contract

Aircraft parking	Not started
Aeronautical Ground Lighting	In progress
Performance Based Navigation	In progress
Self-Fuelling Facility	Not started
Grounds Maintenance Facility	In progress

Taxiway Maintenance

3. £2,700,000 is approved in the Capital Programme to undertake safety improvements to the active taxiways. As advised last year, despite the safety imperative, the tender process for a contract of this value was lengthy. In view of this, a programme of urgent works was identified and undertaken in 2022 at a cost of £20,000.
4. The contract for the remaining works has been let, with the total estimated cost of the project now at a value of £1,700,000, a saving of £1,000,000 on the estimated budget.
5. It is recommended that £1,000,000 be removed from the Capital Programme allocation for taxiway maintenance.

Aeronautical Ground Lighting

6. The installation of aeronautical ground lighting at Solent Airport is an essential strategic investment in line with the Daedalus Vision for Daedalus “*to become a premier location for aviation, aerospace engineering and advanced manufacturing businesses, creating skilled employment opportunities for local people, under-pinned by a vibrant and sustainable airfield*”. The installation of Aeronautical Ground Lighting (AGL) at Solent Airport is a key objective of this Vision and Strategy. AGL, in conjunction with the Performance Based Navigation instrument-based approach procedure considered below, will increase airport movements and help increase the operational viability and usable capacity of the airport by extending the periods during which it can safely be used, especially outside of the summer months. Should the additional capital funding be approved for the installation of AGL, the facility will be open for use in March 2024 and the airport will extend its opening hours to 09.00 – 18.00 year-round.
7. Rambolls UK were appointed in June 2022 to design and project manage the installation of the aeronautical ground lighting. An extensive programme of work is being undertaken. The necessary regulatory consents for the project were received from both Fareham and Gosport Borough Councils in April. Tenders for the installation works were returned on 25 April 2023. Following further clarification from each tenderer, the lowest priced tender is recommended for appointment. Valid for 90 days, the contract award must be made by 24 July 2023.
8. However, the price of the lowest tender takes the overall cost of the scheme over the approved capital programme allocation. This had already been highlighted to the Executive as a risk during consideration of the Capital Strategy report on 6 February 2023.
9. The total estimated cost of the scheme is now £2,800,000, however, the scheme will be value-engineered to deliver it at the lowest possible cost. The Business Case has also been updated to reflect trends as a result of demand and revenue performance in the 2022/23 financial year. Further details are attached at Appendix A.
10. Our Airport Operator, Regional and City Airports Ltd, advises that the runway lighting

will improve the airport's revenue position, primarily by providing certainty that aircraft will be able to land as planned, despite poor weather. This was supported by independent expert consultants, Egis, in 2021. Tenants at the airfield have also highlighted the desirability of AGL to improve the airport's usability during the shorter daylight hours of winter, and in conditions of low cloud and poor visibility. Customers will benefit from more flexibility to plan their use of the airport knowing that, if they run late for example, they will still be able to land. RCA are also aware of a number of potential airport customers and companies who might otherwise have chosen Solent Airport and Daedalus to visit or operate from over the years, but have decided against it because of the risk of needing to divert in poor weather or after dark. The installation of AGL may also attract new tenants to the airport whose operations rely on this level of certainty.

11. With the cost of the scheme increased, and ongoing maintenance and operational costs fully re-evaluated and updated, the Business Case now returns predicted repayment periods of between 11 and 30 years, based on three commercial risk and reward scenarios and the potential to attract new based commercial, charter or repair, maintenance and overhaul (RMO) operators. The most likely scenario predicts a return within 13 years, which is within the expected 15-20 year lifecycle period of the AGL equipment.

Performance Based Navigation

12. Regional and City Airports Ltd were appointed in November 2022 to project manage the introduction of the Performance Based Navigation system, with aviation consultancy Cyrrus contracted to undertake the design and stakeholder management.
13. Discussions are ongoing to gain Civil Aviation Authority (CAA) approval under regulatory documents CAP1961 and CAP1616. These are expected to conclude in December 2023.
14. While the Performance Based Navigation system and Aeronautical Ground Lighting are not interdependent, PBN implementation is less likely to be approved by the CAA without AGL and similarly AGL makes significantly more operational and practical sense if PBN is implemented.
15. A bid for funding from the Civil Aviation Authority's GNSS Rollout Programme in October was unsuccessful. Unfortunately, the funding that the CAA initially expected from the Department for Transport was significantly reduced as other transport objectives were prioritised.
16. Subject to the above, the Performance Based Navigation system is estimated to be operational at Solent Airport next Spring.

Self-Fuelling Facility review

17. The Council's airport operator, Regional and City Airports Limited, had initially recommended that delays in refuelling aircraft during periods of high demand for fuel could be avoided by installing a self-fuelling facility at the existing fuel farm. This would help prevent lost fuel revenue from customers who chose to fuel elsewhere as a result and improve control of late payments and staff efficiency. Competitor airports, such as Popham and Biggin Hill, offer self-serving fuel facilities. A capital programme allocation of £25,000 was approved.
18. However, the proposed location at the fuel farm has since been reviewed and is

considered unsuitable for a self-serve facility due to the limited access to this area. The only access point is Taxiway Echo which must be traversed from Taxiway Bravo or the exit from Runway 23. This is not ideal during peak operations as this would significantly restrict traffic movement to and from the airport. This location could work for self-serve in the future if the existing taxiways were reconfigured, although this may increase emissions from taxiing aircraft. The best location for a self-serve fuelling facility would be close to the Control Tower; however this would have significantly increased costs in terms of civil works, intercept and tanks, in addition to the actual facility itself, and is not considered a worthwhile investment at present.

19. It is recommended that the £25,000 for the installation of self-fuelling facilities be removed from the Capital Programme.

Aircraft Parking review

20. Members approved a capital budget of £400,000 to provide a phased programme of hardstanding on the grass area north of the Control Tower that could be used year-round for aircraft parking. This proposal was intended to improve the services offered at the airport and increase airport revenues.
21. However, given that additional investment is required to address safety and compliance issues at the airport that were not identified in 2022, set out later in this report, it is recommended that the capital programme allocation for the Aircraft Parking Scheme be removed to free up resources for essential capital works. The proposals to improve the airport's services by providing aircraft parking will be revisited once the approved Airport Investment Programme has been delivered.

PROPOSALS FOR ADDITIONAL AIRPORT INVESTMENT

22. The estimated costs for this additional investment have been advised by officers, in dialogue with airport operator RCA, supported by soft-market testing and the provision of budget prices. The estimates include sums for fees, preliminary works and contingency and do not reflect the expected tender prices. Actual costs will be refined as each project progresses through the procurement and contract tendering stages.

Managed Hangarage Review

23. The medium-term strategy for managed hangarage at Solent Airport is to maintain space for at least 24 aircraft on the site identified for Swordfish Business Park in the west of the airfield, returning GA hangars 15 and 16 to tenanted use.
24. Members approved a budget of £105,000 to undertake essential repairs to Bellman 4 and Hangar U, purchase an aircraft tug and demolish Hangar Q. Hangars T and P would be closed temporarily, awaiting additional demand. Further investigation revealed that it was more economic to repair Hangar T and to close Hangar U. The total cost of the works, which were completed in August 2022, and the aircraft tug, was within budget at £93,700.
25. In parallel, the regulatory consents for change of use of GA Hangars 15 and 16 have been sought and the existing tenants are preparing to move across to the west of the airfield. Their relocation to the repaired hangars was delayed for several months due to other commercial interest in Bellman 4 but this eventually fell away.
26. There is growing demand for hangarage at the airport, which can be accommodated by undertaking essential works to Hangar P. This hangar is generally watertight and the

doors operate with relative ease, but it does not comply with current fire safety requirements. A secondary means of escape is required. A badger sett is currently preventing removal of the vegetation around the rear fire door and an alternative fire escape may need to be constructed. The internal partitioning needs to be removed and the hangar cleared of previous users' debris.

27. Repair costs to bring the Hangar P into a safe and usable condition for an additional five or so years have been estimated at £25,000, and completion is estimated at six months from instruction.
28. Confidential Appendix A sets out the business case that supports this proposal and demonstrates a payback period of approximately 2 years.
29. As such, it is recommended that £25,000 be added to the Capital Programme for essential repairs to Hangar P.

Replacement Fuel Bowser

30. The Council is responsible for the supply and maintenance of airport vehicles and, as such, they are subject to the standard inspection and maintenance regime. The vehicle fleet at Solent Airport consists of two fire tenders, a Ford Ranger 4x4, a minibus and a fuel tanker. These vehicles have been excluded from the Council-wide fleet review because they are in the main only operational on private land, have low annual mileage and therefore do not need to be included in a regular fleet replacement programme. However, the 1987 fuel tanker now requires replacement for safety reasons.
31. The sale of aircraft fuel is an essential service offered by the airport. Currently, two types of fuel, AvGas and JetA1, are offered: AvGas, aviation gasoline, is used primarily for small, general aviation aircraft with spark ignition piston engines, while JetA1 is kerosene and used primarily for larger aircraft with turbine engines.
32. JetA1 is supplied to customers using a rigid 9000L fuel tanker, while AvGas is supplied to customers using a bowser towed by the Ford Ranger 4x4. Several alternative options have been considered to reach the budget estimate, with choices around the type and size of mobile unit, replacement with new or used, the potential for carbon reduction and whether to lease or purchase outright. Initial market testing of these options suggests that a smaller 6000L replacement rigid tanker would cost in the region of £165,000 but that a separate new towable bowser and new tow vehicle would offer the best value and would have additional advantages in terms of overall operational resilience and flexibility to meet any changing demand in fuels. However, all options will be explored during the procurement process.

Alternative Aviation Fuel Supply

33. AvGas contains additives, such as Tetra Ethyl Lead (TEL), which can be harmful to the environment. While there is no statutory requirement to monitor emissions for aircraft if they have a certified maximum take-off mass of less than 5,700 kilograms, and thus data is not widely available, there is some pressure on the aviation industry from environmental campaigners to find alternatives to AvGas.
34. Use of lower lead fuels is increasing across the aviation sector. UL91 Octane is already approved by the European Union Aviation Safety Agency (EASA) and at present is suitable for around 55% of aircraft with spark ignition piston engines planes. As such, UL91 would need to be an additional offer to Avgas 100LL for some time. The fuel remains in relatively low demand because it carries a £0.10-15ppl premium and

currently only around 10 UK airports offer it.

35. UL91 could be supplied to Solent Airport by the current AvGas supplier, initially direct into a suitable mobile unit. The best option for enabling this new fuel supply would be the purchase of a new towable bowser that could be towed by the same new tow vehicle that would be used for the JetA1 bowser. Initial market testing appears to show that lease and lease/purchase options are not common for this type of vehicle and that a small 2000L towable bowser may cost in the region of £25,000.
36. The additional costs around this new fuel supply are minimal, but there is no financial benefit from this service enhancement because UL91 sales would simply replace Avgas sales. It is proposed that an additional 2000L towable bowser for the supply of UL91 be added to the tender specification for the Jet A1 replacement vehicles, with the option to lease or to purchase if the Capital Programme allocation is not exceeded.
37. As such, it is recommended that £165,000 be added to the Capital Programme for new airport fuel supply assets.

Visual Control Room

38. Solent Airport became a CAA licensed aerodrome in 2014 and in 2018 an Aerodrome Traffic Zone (ATZ) was established. In 2019, in line with the Council's published Daedalus Vision and Outline Strategy, the service offered from the Control Tower from an Air Ground Communication Service was upgraded to a Flight Information Service.
39. When providing an Air Ground Communication Service, the Radio Operator is reliant on voice reports from pilots to build a picture of the traffic in the local airspace. With a Flight Information Service, pilots are offered a higher level of service, with joining suggestions and a more comprehensive report of local area traffic when operating within the local area and especially when joining the circuit. Pilots remain responsible for the navigation and collision avoidance of the aircraft, but the Flight Information Service Officer (FISO) has regulatory responsibility for taxiing aircraft.
40. Solent Airport's existing Visual Control Room (VCR) is unchanged from when Solent was an unlicensed airfield, without an ATZ and operating only an Air Ground Communication Service. Shortly after the FISO service was introduced, the Council's airport operator, RCA, advised that the VCR made operating the FISO service extremely difficult and built in unnecessary risk. A significant number of Air Ground Communication Service airports in England have better VCRs than Solent Airport and there are no other airports in England that operate a Flight Information Service that have a VCR as poor as that at Solent Airport.
41. In addition to the upgraded Air Traffic Service, the planned growth of the airport has also increased the risk. On a busy day, Solent Airport accommodates as many as 350 movements, with aircraft landing or taking off every 2-3 minutes, together with aircraft taxiing around the airport and aircraft traffic in the local airspace. Reduced demand during the COVID19 pandemic masked the issues in 2020 and 2021, but now traffic levels are returning to 2019 levels. Strategies are in place to increase traffic further at the airport, up to the planning cap of 40,000 movements, to offset the cost of operating the airport with fees and charges for airport users. As traffic increases, so does the risk of incidents.
42. In October 2022, the CAA, concerned about the limited visibility, recommended that a revised risk assessment process be introduced at the airport. As a result, the risk rating

for the VCR has recently been revised from Low to High.

43. The Council must act to address this safety risk. Essentially, there are two options: improve visibility from the Control Tower VCR or permanently reduce the flight service back to Air Ground Communication Service. Given the Council's aspirations for the growth of the airport and its consequent employment benefits, set out in the Daedalus Vision, officers have assessed how the visibility can be improved.
44. In consultation with RCA, officers have considered several options, including improving the existing VCR area, constructing a new VCR on top of the existing tower, constructing a new VCR elsewhere on the airfield and installing a digital tower. The feasibility, practicality, airport operational impacts, safety benefits, high-level specification, regulatory implications, budget costs and delivery programme of each option has been assessed with the key objective being to achieve improved risk rating that is the best value for money and that is sustainable in the long term.
45. It is recommended that £380,000 be added to the Capital Programme for investment into VCR improvement on safety grounds.
46. Assuming the works are approved and added to the Capital Programme, construction will start as soon as practicable after the end of the statutory Call-In period, taking into account any regulatory and airport operational requirements. The CAA approval processes for a new VCR are anticipated to be significant and as such the Capital Programme allocation has been split over the next two years.

FUNDING THE REVISED INVESTMENT PROGRAMME

47. A revised Airport Investment Programme is summarised below:

Airport Investment Programme	Actuals 2022/23	Budget 2022/23	Budget 2023/24	Budget 2024/25	Total	Funding Source
	£	£	£	£	£	
Managed Hangarage	93,668	93,700	25,000		118,700	HCA Grant
Grounds Maintenance Facility			160,000		160,000	S106 Contribution
Taxiway Maintenance	20,134	20,100	1,679,900		1,700,000	Capital Receipts
AGL	174,657	174,700	2,625,300		2,800,000	Capital Receipts
PBN	12,400	12,400	187,600		200,000	Capital Receipts
Airport Fuel Supply Assets			165,000		165,000	HCA Grant
Visual Control Room			75,000	305,000	380,000	Capital Receipts
Total	300,859	300,900	4,917,800	305,000	5,523,700	

48. This will be funded as follows:

Funding Summary	Original	Revised	Difference
	£	£	£
HCA Grant	330,000	283,700	46,300
Capital Receipts	4,200,000	5,080,000	-880,000
S106 Contribution	160,000	160,000	0
Total	4,690,000	5,523,700	-833,700

49. Overall, an additional £833,700 funding is needed for the revised programme, which can be funded from Daedalus-related capital receipts in line with the Daedalus Finance Strategy. A total of £330,000 HCA grant funding was originally going to be used but this has now reduced to £283,700 for the revised programme. The purchase of the new fire truck, approved in February and bought in 2022/23 for £23,000, will also be funded from the HCA grant, leaving a balance of £23,300 which will be added to the Daedalus Site Wide capital budget.

CLIMATE CHANGE CONSIDERATIONS

50. The operational carbon footprint for Solent Airport in 2021/22 was 56.2 tCO₂e, with the site's vehicle fleet accounting for 24% of total emissions. The current fuel tanker that needs to be replaced produces around 1.6 tCO₂e per year. Electric options that produce lower emissions will be explored as part of the procurement process, however, they will have to be both commercially viable and meet service requirements.
51. Outside of the proposed investment programme, a draft Climate Change Action Plan is being developed for Solent Airport that aims to identify ways to reduce the sites operational emissions where feasible. As part of this, Hydrotreated Vegetable Oil (HVO), which is a biofuel that significantly lowers carbon emissions and can be used as a direct replacement for diesel, will be rolled out across the airport's operational fleet.

CONCLUSION

52. Proposals for investment in the airport are regularly reviewed to ensure that they remain valid, prioritise safety investments and continue to offer appropriate returns.
53. Much of the existing programme of investment at Solent Airport, Daedalus, approved in March 2022, is now in progress. Further investment in the airport is required to enable its continued safe operation and to continue to deliver the Council's Vision to develop a vibrant and sustainable airfield. As such the original proposal has been reviewed, with some elements removed or deferred in order to fund higher priority requirements.

Enquiries:

For further information on this report please contact Sarah Ward, Head of Strategic Sites (Ext 01329 824668)