Brighton City Airport Ltd (BCAL) – Amended Helicopter Circuits

The purpose of this note is to provide the methodology behind the proposed amendment to the Helicopter Training Circuits operated out of Shoreham Airport to enable Adur District Council acting as Local Planning Authority to discharge Planning Condition 44 of Planning Application no AWDM/0961/17 dated 4th February 2020 as amended by Condition 22 of Planning Application no AWDM/0021/22 dated 21st February 2023 related to the mixed development proposed to be constructed at New Monks Farm, Lancing, adjacent to Shoreham Airport.

Background

Brighton City Airport Ltd (BCAL) is the licensed operator of Shoreham Airport. An important revenue stream for the operators of the Airport is the income derived from the Flight Training Schools based at Shoreham which includes fixed-wing and rotary-wing aircraft. As part of the rotary-wing – helicopter -operations, pilots are required to fly prescribed routes into and out of the Airport. To facilitate training requirements, pilots use a helicopter circuit (circling in close proximity to the Airport) predicated on the published Helicopter Training Areas (HTAs).

Prior to the development of New Monks Farm these circuits were flown over the New Monks Farm site which was being used to deposit inert landfill as part of a permitted development as a Golf Course.

During the consultation process for the new mixed development at New Monks Farm, concern was expressed about the impact that low flying helicopters would have particularly on the amenity of the proposed new single form entry primary school proposed as part of the new development and also the impact on the amenity of the new residential development.

A Planning Condition was therefore imposed as part of the hybrid Planning Application no AWDM/0961/17 dated 4th February 2020 as follows:-

"Condition 44 – Prior to the occupation of the 250th dwelling the helicopter training circuit shall be amended to avoid the new housing areas and the revised circuits implemented on a permanent basis by Shoreham Airport in accordance with its letter and accompanying plan dated the 15th January 2019."

The first 250 dwellings of the new development comprised Phases 1 and 2 of the housing development for which fully detailed consent was granted under this Planning Application.

Subsequently a further fully detailed Application no AWDM/0021/22 was submitted for Phases 3 and 4 of the housing development and this was granted on 21st February 2023. Within this Application the Helicopter Circuits Condition was amended as follows:

"Condition 22 – No dwellings shall be occupied unless and until the existing helicopter circuits have been altered and implemented in accordance with the recommendations of York Aviation in its Technical Summary Note dated 7th September 2018 and details of the altered circuits shall be submitted to and approved in writing with the Local Planning Authority in consultation with the airport operator."

The Community Stadium Ltd (TCS) is the lead developer of the New Monks Farm site and TCS have been working in conjunction with BCAL to develop a revised Helicopter Training Circuit to enable this Condition to be discharged.

Methodology and Consideration of Alternatives.

Currently, there are 2 Helicopter Training Circuits published in the UK Aeronautical Information Publication (UKAIP) under the section providing information about Shoreham Airport. The chart in Figure 1 is an extract from the AIP. The primary circuit is based upon HTA Whiskey and is used whenever Runway 20/02 is in use. The alternative circuit (based upon HTA Xray) is used when Runway 24/06 is declared as the runway in use.

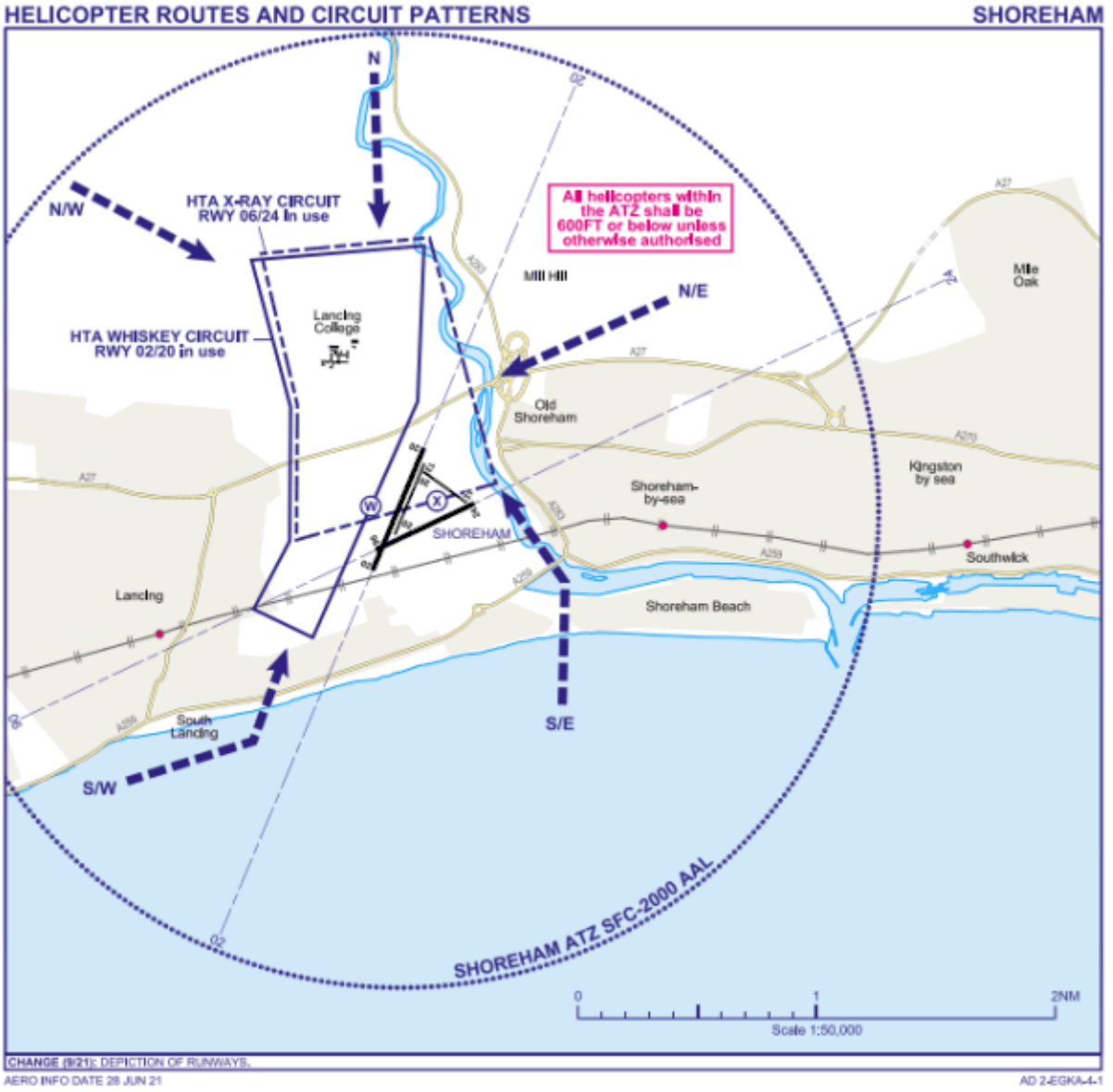


Figure 1: Helicopter Routes and Circuit Patterns – extract from UK AIP

The circuit predicated on HTA Whiskey is entirely restricted to the west of the line of the Approach and Take Off for Fixed Wing Aircraft using the main runway at Shoreham designated as Runway 02/20. Superimposed on a Google Earth Plan of the site, this Circuit is shown by the green line on the plan at Figure 2.



Figure 2: Published Helicopter Training Circuit at Shoreham Airport

When the proposal to amend the Circuit was first discussed with BCAL, during the consultation period on the original planning application, BCAL was under a previous management team and they developed a proposal that was deemed acceptable to the Local Planning Authority. The plan referred to in Condition 44 of Planning Application AWDM AWDM/0961/17 was as shown in Figure 3.

However, whilst the two circuits proposed in Figure 3 avoid overflight of the New Monks Farm development, the circuits would be based on HTA Xray and would:

- introduce complexity to the air operation as a whole
- create challenging flight profiles for students
- cross the line of the Approach and Take Off Fixed Wing Aircraft using the main Runway 02/20 at the Airport

Collectively, these were deemed to impose an unacceptable risk and complexity.



Figure 3: Original Proposal to change the Helicopter Circuits at Shoreham Airport

In addition, the approval mechanism for adjustments of this kind has changed since this proposal was put forward and it is very unlikely that a change of this nature, given the risks that it imposes, would be approved.

During the last 12 months, the current owners of BCAL have set about trialling a number of alternatives to find an optimum solution to meet the recommendation in the York Aviation Technical Summary dated 7th September 2018 *"that where possible the circuits are altered to mitigate as much as possible the overflying of the development, particularly the residential and school sites."*

Whilst any solution aimed to satisfy the recommendation made by York Aviation, it also needed to meet the safety criteria for operations and be suitable for safe and effective integration with the fixed-wing operations.

Figure 4: Features of the New Monks Farm Development and Airport layout

Figure 4 shows the main features of the New Monks Farm development and the key points of the infrastructure that serve the air operations (fixed and rotary-wing) at Shoreham. The alternative circuit patterns considered were:



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- **Modified Runway 02/20 Circuit based upon Whiskey HTA route contained within Country Park and over IKEA site.**

  This option has some benefits as it would amend the helicopter route away from the proposed Primary School over the Country Park and over the IKEA site.

  However, when taking off in a South Westerly direction (into prevailing winds) helicopters would not gain sufficient height to turn within the Country Park. Furthermore, helicopters flying the anti-clockwise route (when Runway 02 is in use) could not manage the tight turns to avoid the New Monks Farm development and land on Whiskey safely. Consequently, this option proved to be unacceptable.

- **Modified Runway 02/20 Circuit based on X-Ray over Country Park and IKEA site.**

  Whilst as above this route would be contained within the Country Park and IKEA it would be unusable while the Airport Development is under construction because of the heights of cranes etc.

However the major issue with this Circuit is that it crosses the line of Approach and Take-Off for Fixed Wing Aircraft on Runway 02/20 which creates a conflict and therefore unacceptable.

- **New Circuit based on Grass Runway 24/06**

  This proposal would have the benefit that it is close to and has easy access to the helicopter parking areas associated with the Flight Training Centre. The proposed design is a short circuit located to the south of the Airport.

  Although the route would overfly land owned by the Dogs Trust and parts of Shoreham Town, the key concern was that it would be difficult to integrate the movements with fixed-wing operations on Runway 02/20 and Runway 24/06 because of identified conflict points between the circuits. Therefore, it was deemed unacceptable.

- **New Circuit Based on November HTA following the Whiskey HTA route contained within Country Park and over IKEA site.**

  This option would have the benefit that it could be used in conjunction with the Whiskey HTA. The circuit, pivoted about the November HTA, would be used in a clockwise direction when taking off into the prevailing South Westerly winds (approximately 70% of all usage) and anti-clockwise direction when the wind was in a North Easterly direction (approximately 30% of all usage). The route to/from November would be over the Country Park and the IKEA site and apart from this there would be no change to the circuit profile outside of the airfield boundary.

  However, it would result in a lower approach over the A27 (than that experienced when using Whiskey HTA) and using HTA November on a more routine basis might impact upon the new Traveller Site on New Monks Farm.

  HTA November was the subject of Planning Application no L/8/01/TP which was granted in 2001 and the HTA has been maintained by BCAL since, although it has not been used much recently. Bringing the HTA back into more regular use would likely have a negative impact on the amenity of Withy Patch residents (who have been relocated into the North West corner of the New Monks Farm site) and therefore the option has been discounted.

- **Modified Runway 02/20 Circuit based on Whiskey but travelling further South and West before turning North.**

  This Circuit would be based upon the use of the Whiskey HTA with a revised pattern with only minor adjustments that would work for both runway directions. It would not require the use of HTA November.

  The proposed route is shown on in red on the plan at Figure 5 below. The existing circuit is shown in green for comparison.

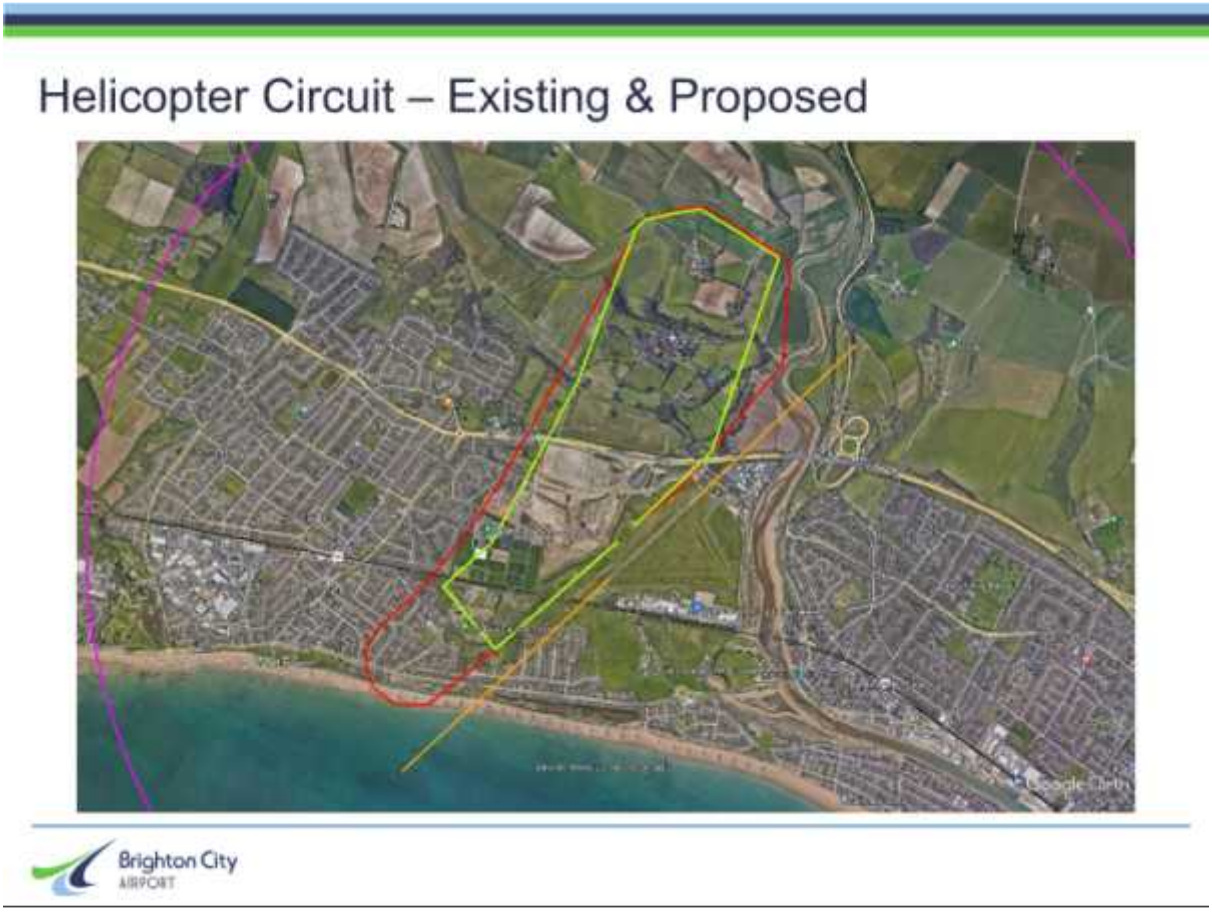


Figure 5: Proposed (red) and Existing (light green) Helicopter Circuits

The main changes are that the Circuit extends further South to the coast. In a clockwise direction, this would permit helicopters to gain further height and the westerly leg of this route which is currently flown at 600ft would be increased to 800ft.

Importantly, there is no change to the final segment of the Easterly leg as that is coincident with the route flown today; consequently, there is no change to the amenity of the Traveller Site. It can however be argued that the Westerly leg has moved further away from the Traveller Site and is slightly higher so there could be a benefit to the Traveller Site.

The revised profile would move the route away from the new School.

To address a potential interaction between helicopters in the proposed Helicopter Training Circuit and the Fixed-Wing Circuits, aircraft joining the Fixed-Wing Circuit crosswind would be instructed to join higher at 1600 ft rather than 1100 ft.

The CAA has already confirmed that this minor change to the airspace arrangements should be determined at a local level. Appropriate safety assurance will be provided and the Air Traffic Control Inspector notified. The process of implementation is therefore relatively straight forward.

On this basis it is recommended that the Helicopter Training Circuits are amended to the route outlined in red in Figure 5. The required notification for the change to be published in the UK AIP will be made and the new circuit will be promulgated and implemented during Summer 2023.

Summary

To discharge Planning Condition 22 of Planning Application no AWDM/0018/23 it is necessary to amend the Helicopter Training Circuits used by the helicopter training schools based at Shoreham Airport.

BCAL is the Licensed Operator of the Airport and has been working in close conjunction with TCS who are the lead developer on New Monks Farm. BCAL has instigated flight tests to evaluate a number of alternative Circuits.

These alternatives have been assessed in terms of safety including the need to avoid unnecessary conflict with the line of Approach and Take Off for Fixed Wing Aircraft using the Airport and the impact on the amenity of the relocated Traveller Site and the new residential development on New Monks Farm.

As a result of these considerations the preferred route depicted in Figure 5 is considered to be the safest and results in the least impact on amenity of residents and the proposed school on the development at New Monks Farm.

It is requested therefore that subject to approval of the Local Air Traffic Inspector and the route being formally published by BCAL in the UK AIP that Condition 22 of Planning Application be formally discharged by Adur District Council acting as Local Planning Authority.