



Civil Aviation Authority
SAFETY NOTICE
Number: SN-2021/008



Issued: 5 March 2021

**Fatigue Management –
Guidance for Aerodrome Operators and Third-Party Operators
During Covid-19 Changing Conditions**

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	All Aerodrome Operators
Air Traffic:	Not primarily affected
Airspace:	Not primarily affected
Airworthiness:	Not primarily affected
Flight Operations:	Not primarily affected
Licensed/Unlicensed Personnel:	For awareness

1 Introduction

- 1.1 This Safety Notice (SN) discusses the need for aerodrome operators to consider the effects of the Covid-19 pandemic on the fatigue management. Fatigue could have significant consequences on the safety performance of departments such as; airfield operations, rescue and firefighting services and engineering. The Aerodrome Operator should also consider third party operators that are being used to support operations throughout the pandemic, (ground handling agents, fuelling organisations, catering companies etc).
- 1.2 Aerodrome Operators should maximise the use of their Safety Management Systems (SMS) to assess fatigue as a risk in all aspects of operational planning, change management and within day to day operations. All organisations should recognise that safety reporting and behaviours may have changed and seek to validate all available information and safety data. It is, therefore, important that staff are actively encouraged to report fatigue related occurrences and issues.
- 1.3 The purpose of this SN is to promote the importance of managing fatigue within the organisation's operational context including its impact on those involved in management of shift patterns and staff rostering. The current methods of assessing and managing fatigue may require additional considerations and measures to identify and mitigate fatigue risks. It makes recommendations on approaches to take, particularly as the industry seeks to increase operations in the coming months.

2 Background to the Current Situation

- 2.1 During the Covid-19 pandemic, many aerodrome operators have had to cease, reduce or change their normal operations. Departments have had to change their operating practices significantly, with some using furlough, reduced operating hours, changes to existing shift rotas and patterns, exemptions to regulatory requirements and rest requirements to support essential services that need to continue.
- 2.2 In some cases, organisational re-structuring of companies has resulted in redundancies with consequential effects on stress and anxiety for both shift workers and office staff which may affect their fatigue levels.

3 Current Situation Towards a Re-Defined 'Normal Operations'

- 3.1 In order to support the management of fatigue in this new environment, additional strategies need to be added other than just operating within the planned shift pattern; consideration should be given to:
 - The methods and safety performance indicators that the aerodrome operators choose to use that will enable them to demonstrate how they are managing their operational and organisational fatigue related risks.
 - Monitoring that the SMS is delivering an acceptable level of fatigue risk management that meets the safety objectives defined within the organisational safety management policy.
 - Monitoring changes in the operational environment and the organisation that could affect fatigue risk in the operations, and to identify ways in which fatigue risk performance can be maintained or enhanced prior to the introduction of changes.
 - Using the SMS processes to identify fatigue hazards; assess the associated risk; and propose controls and mitigations.
 - Obtaining appropriate management sign-off that the level of residual risk is acceptable.
 - Documenting the strategy for managing any fatigue risk associated with changes.
 - Providing ongoing feedback that drives continuous improvement of the fatigue risk management process and other human performance components within the SMS.
- 3.2 A key principle should be that staff are able to self-declare that they are fatigued and potentially unfit to work within open reporting and just culture principles as defined in Regulation (EU) No. 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 without fear of punitive action.
- 3.3 Aerodrome operators are encouraged to consider operational fatigue in a more holistic approach, which includes staff mental health and wellbeing and the potential effect of these on safety.

4 Some Key Areas that Need to be Considered when Managing and Mitigating Fatigue Risks

Particular attention must be paid to guidance on managing the health and safety risks of shift work/fatigue as set out in HSE's *Managing shift work: Health and safety guidance* (HSG256).

This SN aims to improve understanding of shift work and its impact on health and safety by:

- Providing advice on risk assessment, design of shift-work schedules and the shift-work environment.
- Suggesting measures employers, safety representatives and employees can use to reduce the negative impact of shift work.

- Enabling employers to control, manage and monitor the risks of shift work, thereby reducing tiredness, poor performance and accidents.

There are many different shift-work schedules, each of which has different features and thus there is no single optimal shift system that suits everyone. HSG256 summarises current knowledge and opinion on the various factors that contribute to the design of shift-work schedules and provides practical advice for reducing the risks of shift work. While not part of Aviation regulations, organisations are also reminded of their legal duty of care requirements to their workers under the Health and Safety at Work etc Act 1974 (the HSW Act) and the Management of Health and Safety at Work Regulations 1999 (MHSWR).

In the aerodrome operations context, considerations could include:

- Ensuring that workers have enough time between shifts to commute, wash, eat, socialise and carry out domestic duties, as well as sleep.
- Restricting the number of consecutive night shifts, limit shifts to a maximum 12-hour shifts; and allowing at least two days off after the last night shift in a string of such shifts.

Shifts should be rotated forwards (early shifts changing to afternoons and afternoons changing to nights). Long shifts (both individual shifts and long blocks of consecutive shifts) should be avoided. Overtime should be managed to prevent excessive hours and days being worked without sufficient rest and recovery time. Scope for workers to self-select shift patterns which suit them physiologically should be considered.

There are several further general steps which all organisations should take to address the problem of fatigue and exhaustion in the workplace:

- Fully consulting the workforce and their representatives about the organisation's overall approach and its programmes of work to address the problem of excessive fatigue.
- Developing and communicating a clear policy that destigmatises fatigue, ensuring that the issue is described in such a way as to address safety risk rather than infer laziness.
- Delivering workplace awareness (training and safety promotion) that raises awareness about fatigue and its mitigation strategies, including steps to improve and maintain good health and good sleep hygiene.
- Training line and middle managers in order to raise their awareness and help them to develop necessary interpersonal skills to engage with individuals about fatigue and the issues involved.
- Taking account of fatigue in all risk assessment processes, particularly for safety critical work.
- Reviewing fatigue as a possible causal factor in all accidents and incidents, remembering that fatigue can be cumulative and is affected by workload, as well as time awake.
- Considering any difficulties in travel to and from work which may contribute to fatigue.
- Avoiding workers driving when dangerously tired, both when driving for work and driving to and from work.
- Consider the use of external experts to support fatigue understanding.
- Ensuring appropriate occupational health support.

5 Summary

- 5.1 The effects of the Covid-19 pandemic on staff fatigue, particularly shift workers should not be underestimated. Current methods of assessing and managing fatigue may require additional measures to identify, capture, and mitigate risks resulting from the impact of the crisis on fatigue. Aerodrome operators need to have sufficient operational staff, but they also need to have sufficient competent office-based personnel to carry out the necessary support activities for effective operational fatigue management.
- 5.2 In all cases, operators are reminded to maximise the use of their SMS to assess fatigue as a risk and develop assurance activities that validate all available information and data. This should include actively encouraging staff to report fatigue related events and challenges. This approach would then allow operators to develop an increased understanding of their fatigue risks and enable them to adjust their fatigue management strategy in the new transitional operational environment.

6 Further Information

- 6.1 Additional information and guidance material for fatigue management can be found in the links below:

[ICAO Fatigue Management Manuals](#)

[EASA Fatigue in Aviation Personnel in Covid-19](#)

[Safety Notice 2020/011 - Human Factors Considerations During Covid-19 Restart Activities](#)

[Safety Notice 2020/14 – Aviation Mental Health](#)

[HSG256 Managing shift work: Health and safety guidance](#)

[Human factors: fatigue](#)

[HSG48 Reducing error and influencing behaviour](#)

[Occupational health and extended working lives in the transport sector](#)

Further useful information to support the management of human factors can be found at the CAA Human Factors web pages www.caa.co.uk/humanfactors.

7 Queries

- 7.1 Any queries or requests for further guidance as a result of this communication should be addressed to the Airspace, ATM & Aerodromes (AAA) e-mail contact address: aerodromes@caa.co.uk

8 Cancellation

- 5.1 This Safety Notice will remain in force until further notice.

Appendix 1 Infographic

Fatigue Management — Key areas for Consideration

Sleep, Recovery and Long Duties

Achieving good quality sleep is essential for managing fatigue. Maintaining a stable roster and shift patterns, where possible, will support staff to optimise sleep opportunities.

New Covid-19 procedures may have increased the length of duties and impacted on rest periods. Extra consideration should be given to supporting crew during long duties, the placement of these duties within the blocks of work and rest to optimise recovery.



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If usual layover patterns or accommodation facilities down route have changed, operators should explain the changes to the crew and monitor the new arrangements for rest quality.

Operators should be aware that Covid-19 may have introduced additional stress on staff which may increase susceptibility for fatigue; this hazard should be assessed by the operators' SMS.

Managing fatigue is more than compliance with numerical prescriptive limits. Here are some of the key areas to consider when developing fatigue management strategies.



Crew Responsibilities and Peer Support

Staff have a responsibility to make good use of their rest periods and come to work suitably rested and fit for duty. Where needed, staff should use personal fatigue management mitigations to support their alertness levels and optimise their rest periods. It is also important to communicate with family members the priorities needed for sleep.

Staff should have access to the organisation's peer support programme. Covid-19 has potentially had a significant impact on people's wellbeing and they may need access to operator's support services to provide assistance

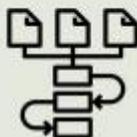


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Fatigue Management Resources

Identify available fatigue management resources as organisational changes may have also impacted on support staff numbers and responsibilities.

Conduct a review of operational specific fatigue risk areas, suitability of mitigations and fatigue risk performance indicators.



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Include a review of the process for receiving and analysing and addressing fatigue reports. This process should be clearly visible and available to all staff.

Circadian Disruption

Operating within the Window of Circadian Low is common for all types of operations. Monitor and seek to mitigate disruption to these duties, especially short notice change. Consider developing extra roster stability rules around early, late and night duties.



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Operators should consider developing roster rules, for planning and day of operation, around these types of duties. This could include the placement of these duties within the pattern of duties and extended periods of rest to enable recovery from these duties.

Reporting

Staff may not feel that they can report issues associated with fatigue at this time. This can be for fear of losing their job or of impacting on the organisation financially.



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Ensure that staff have access to your fatigue reporting policy, the processes that supports it and the tools by which they can access it. Ensure that feedback is provided to crew from any reports that they submit and monitor trends.

While aircraft movements may have declined, aviation continues to be a 24/7 environment, if the rate of fatigue reporting is low, consider other methods of getting fatigue information from staff such as simple surveys or polling.

Workload

Covid-19 may be introducing a number of different workload considerations that could impact on a staff member's fatigue levels.



Staff may be working more intensively or longer periods, this has the potential to increase fatigue levels. Mitigations should be developed to support additional workload requirements.