

**Date: 24 February 2022**

**Item: Pan-TfL Fatigue Management Programme**

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**This paper will be considered in public**

**1 Purpose**

- 1.1 This paper presents an overview of the progress and next steps for the pan-TfL Fatigue Management Programme. It sets out the progress to date in identifying and managing fatigue risks for TfL employees. It also sets out the approach we are taking to delivering the TfL Vision and Values Colleague Roadmap commitment to have a pan-TfL Fatigue Management Plan in place in 2023/24.

**2 Recommendation**

- 2.1 **The Panel is asked to note the paper.**

**3 Summary and Background**

**Fatigue Risk**

- 3.1 Fatigue is a known risk across transport operations, resulting in slower reaction times, reduced ability to process information and a greater chance of memory lapses. It may also result in decreased spatial awareness, a lack of attention and contribute to an underestimation of risk as well as precipitating microsleeps. Fatigue has the potential to be a contributory factor in incident and near miss data across TfL operations. Moreover, fatigue may have a significant effect on individual health and wellbeing.
- 3.2 The risks outlined above could be realised by any TfL employee regardless of role or function. As such, fatigue is one of pan-TfL Safety Health and Environment (SHE) risks, requiring a holistic view and management as part of a risk-based approach to incident prevention.
- 3.3 Fatigue risk has been exacerbated by COVID-19 and its impact. In December 2021, the rail industry's Passenger Operators Safety Group found that some industry directors have been working 90-hour weeks.
- 3.4 Not only are the direct impacts of COVID-19 related fatigue likely to increase risk but managing and working in the context of the pandemic is likely to have an indirect negative impact on the health and wellbeing of individuals at all levels. We have been taking active steps in TfL throughout this period to manage the risk of fatigue and to promote wellbeing at work.

## Pan-TfL Fatigue Management Programme

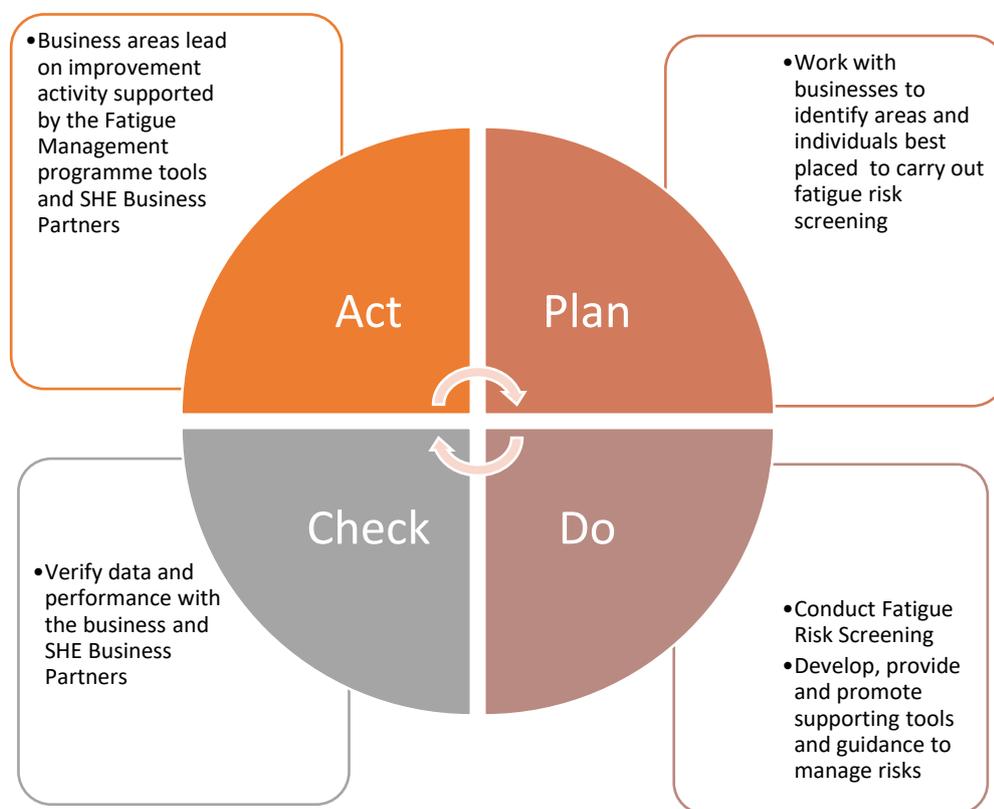
- 3.5 In October 2020, the TfL Executive Committee endorsed the approach of a pan-TfL Fatigue Management Programme, with the following objectives:
- (a) **Increase awareness of fatigue issues** and establish and maintain a holistic, coordinated approach to fatigue management across TfL, aligned with existing systems and processes;
  - (b) **Identify fatigue risk across TfL and priority areas for improvement** and ensure appropriate accountabilities are established across business areas;
  - (c) **Improve overall management of fatigue and wellbeing across TfL** via development and delivery of robust Fatigue Risk Management Systems/Plans, and tools and guidance to support their delivery;
  - (d) **Develop awareness of and embed an open, fair and just culture** around the discussion and management of fatigue, health and wellbeing across TfL aligned to wider SHE Culture programme(s); and
  - (e) **Encourage adoption and development of evidence based best practice** in managing fatigue and wellbeing across all parts of TfL through the trial, development, evaluation and sharing and learning from best practices across TfL and wider industry(ies).
- 3.6 The programme is delivered through three workstreams, structured to provide TfL businesses with the tools needed to identify and manage the risk of fatigue among employees and continually improve.
- (a) **Workstream 1:** Increasing understanding, awareness & effective management of fatigue risk, through risk and sleep health screening.
  - (b) **Workstream 2:** Developing and implementing effective, evidence-based tools and guidance to support risk management and plans.
  - (c) **Workstream 3:** Widening the adoption of good practice across the organisation.
- 3.7 The Programme structure reflects a unified approach to better understanding and managing fatigue. The pan-TfL programme acts to provide central direction and the overall framework. It brings all our fatigue related knowledge, tools, guidance and other activities together, maximising benefit pan-TfL while allowing individual business areas to tailor approaches to specific operational model.
- 3.8 In 2021 we published our organisational Vision and Values, detailing our ambition to have a Fatigue Management Plan in place pan-TfL in 2023/24. This commitment relates to our employees within the business areas we operate directly.
- 3.9 The fatigue programme workstreams work in a logical and cyclical way. The approach to understand and assess fatigue risk, plan and implement effective evidence-based actions has been developed, tried and tested across 11 different TfL departments covering London Underground, Surface Transport, Major

Projects Directorate, General Counsel and Professional Services (see Appendix 1 for breakdown). We are now able to progress the next phases:

- (a) Expanding our screening of business areas to ensure we have good coverage and understanding of risk and executive level visibility;
- (b) Embed fatigue improvement actions and activity within business area SHE Improvement Plans and associated documents such as people plans; and
- (c) Consolidate the work into a Fatigue Management Plan pan-TfL, covering direct employees.

## 4 Progress to date

- 4.1 Our Fatigue Management approach operates in accordance with the widely recognised 'Plan, Do, Check, Act' principles set out in ISO Management System Standards. Figure 1 illustrates the programme in action.



**Figure 1: 'Plan Do Check Act' Principles applied to TfL Fatigue Programme**

- 4.2 Lessons continue to be learned and improvements identified through following this approach, enabling continuous review and improvement. Whilst there is much more to do, significant progress has been made under each of the workstreams since October 2020 and is detailed under each of the workstreams.

## **Workstream 1: Increasing understanding, awareness, and effective management of fatigue risk**

- 4.3 We have developed a digital Fatigue Risk Screening Questionnaire that can be used by all TfL business areas. Each area is different in terms of its operation and function. Fatigue risk screening underpins the efforts of the whole programme through understanding what the key fatigue risks are in any given business area. The questionnaire uses objective criteria to identify aspects of specific area operations that may contribute to increased risk of fatigue among the workforce, enabling understanding and targeted mitigating actions to be taken.
- 4.4 Eleven business areas covering approximately 2,000 staff have been risk screened and provided with recommendations for further fatigue management. Business areas were included from across London Underground, Surface Transport, Major Projects Directorate, General Counsel and Professional Services.
- 4.5 In some areas, such as rail, the regulations distinguish between either 'Safety Critical' (e.g. Train Operators) or 'Non-Safety Critical' (e.g. office-based staff). Our risk screening applies to all our direct employees, but results broken down by these categories to support assessment of risk, consequences and priorities as these differ depending on the individual roles of staff.
- 4.6 Objective risk screening is accompanied by provision of a Sleep Tool Self-Assessment Survey. This tool enables colleagues to gain insight into how to improve their sleep and screen for impairing sleep disorders, including insomnia, Obstructive Sleep Apnoea (OSA) and Restless Leg Syndrome (RLS). The Sleep Tool Assessment has been recently modified to better understand the impact of fatigue concerns from COVID-19 and/or working from home.
- 4.7 Upon completion of fatigue risk screening and informed by anonymised results from the Sleep Tool Assessment, business areas work with SHE colleagues to review results and identify appropriate mitigating activities, using the tools, guidance and controls developed within Workstream 2. Examples include fatigue awareness training, fatigue reporting forms, roster reviews and on-call and shift swap policies.
- 4.8 We are now concentrating on scaling up the delivery so that fatigue risk management screening process and action planning can be rolled out pan-TfL.

## **Workstream 2: Development of effective, evidence-based fatigue management tools, controls, and guidance**

- 4.9 Tools, controls, and guidance for managing fatigue have been identified through TfL risk screening, employee engagement and review of industry good practice.
- 4.10 A good understanding of fatigue issues is needed to support an open culture and enable meaningful action to be taken. We are developing a new and refreshed suite of bespoke fatigue awareness content and training aimed at all TfL employees, including managers, senior managers and content for Trade Unions, friends and family. The first new course provides the foundational awareness applicable to all our staff. This is planned to be launched in Spring 2022 to

coincide with setting of staff objectives and annual improvement planning and tracking.

- 4.11 Supporting information has been brought together and made available to all staff in one place via the pan-TfL Fatigue Management internal SharePoint site. As well as links to training, the site includes TfL and wider industry resources covering sleep and general health, scheduling, shift work, driver fatigue tool kits, process for reporting and managing fatigue at work and links to information on innovative trials or opportunities to participate in research initiatives.
- 4.12 As business areas act or develop tools to meet needs of specific roles in their areas and respond to departmental risk screening results, they are added to the dedicated fatigue site. Examples includes Fatigue Reporting Forms and processes and on-call policies. This approach enables greater transparency of the issues, collaboration, sharing of good practice and lessons learned.
- 4.13 Specific support is provided to individuals who complete the Sleep Assessment Tool by our Occupational Health and Wellbeing department and Employee Assistance Programmes.
- 4.14 The programme is actively encouraging, supporting, and understanding forward thinking research technology trials and innovation. This is a vital part of ensuring we are aware of emerging best practice and further opportunities to introduce fatigue mitigation measures. We take part in and review trials of innovative fatigue, health or wellbeing related research and equipment.
- 4.14 In May 2019, Loughborough University and the Swedish Road Safety Institute published a report into bus driver fatigue. This research was commissioned by TfL to understand fatigue risk among bus drivers. This project sought to understand the extent and nature of fatigue, the contributing factors, and what solutions could be implemented. The research provided recommendations for potential solutions and areas for further focus.
- 4.16 We have since developed Fatigue Awareness Training for Bus Operators; this has been rolled out to around 1,800 individuals across all ten bus operators. This training is to upskill first line managers/supervisors to enable them to have open and honest discussions around fatigue with their staff.
- 4.17 Subject to funding, we intend to fit around 450 buses with fatigue detection technology across all ten bus operators this calendar year. The aim being to assist bus operators developing practices and a more supportive culture in which bus drivers would feel confident in reporting when they are not fit to drive. Should the funding be released, the trial will operate for up to 18 months with a full evaluation undertaken and results shared when available.
- 4.18 Each bus operator has developed a Fatigue Risk Management System (FRMS) and Plan, following good practice, adapted for bus operations. The plans detail how each operator will manage fatigue, using tools including training, roster assessment, best practice in investigation and innovative technologies.
- 4.19 We continue to participate in development of fatigue research and innovation. Working with Surrey University and bus operators, we are conducting research into how biomathematical models can be used to predict the likelihood of an

individual feeling fatigued during their time at work. The aim of this research is to inform improvements of rostering practices used by bus operators.

- 4.20 London Trams Maintenance is also active in progressing innovation and are procuring a trial of a Dynamic Risk Assessment Tool. This will allow managers to assess the actual impacts of working hours on individual's fatigue risk levels.
- 4.21 We are also participating in a research trial with Cambridge Brain Sciences to better understand the impact of different shift lengths on an individuals' cognitive performance. Three short cognitive assessments are undertaken at the beginning and end of their working day to assess changes in cognitive ability. Understanding these impacts will support identification of evidence and science-based mitigations and future evaluation of such measures.
- 4.22 The approach to the pan-TfL Fatigue Management Programme, enables information and learning from all activity to be shared across the business.
- 4.23 We have come a long way in terms of providing mitigations, but still have work to do in adapting fatigue tools, controls, and guidance so as to be suitable and applicable for our variable operations, and in identifying and embedding further good practice.

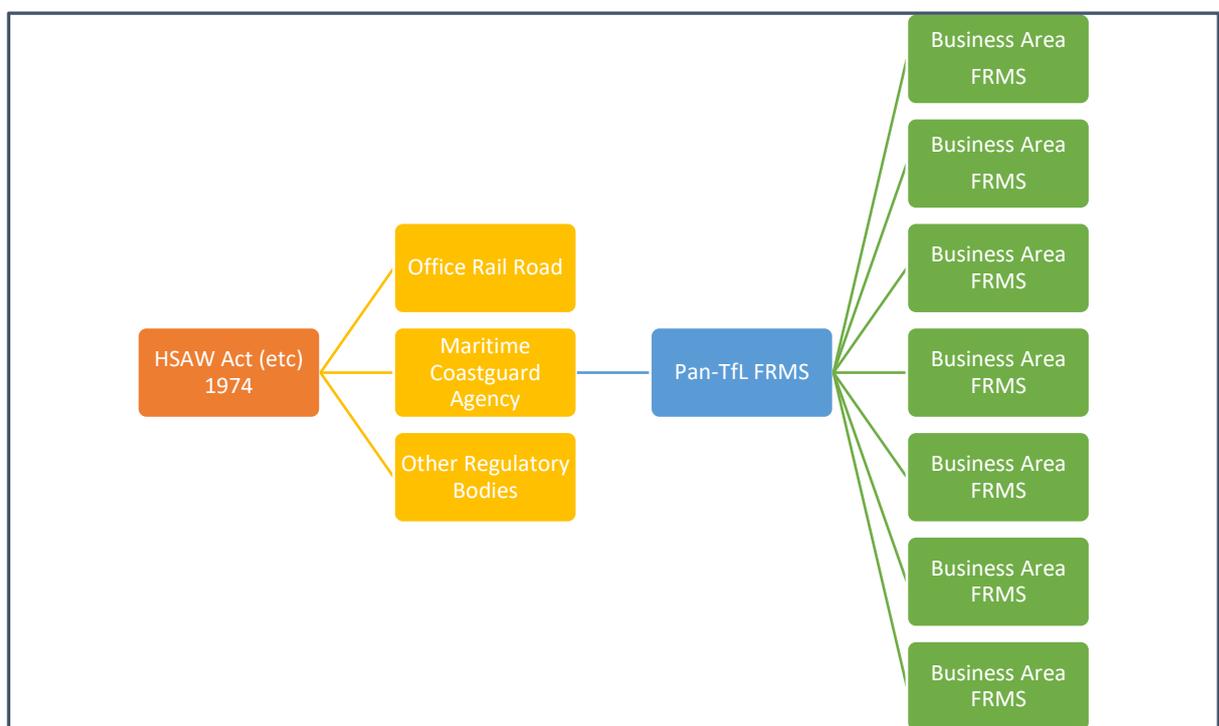
### **Workstream 3: Encouraging continued adoption of best practice engagement**

- 4.24 The programme is supported by a communications strategy, using internal channels to continually engage colleagues and reinforce messages, leading to more open dialogue on the issue.
- 4.25 Individuals are coming forward with personal stories in raising awareness. A recent colleague blog on living with Fibromyalgia-related fatigue achieved 762 views. A further colleague blog will detail how completing the Sleep Tool Self-Assessment Survey led to his diagnosis of Obstructive Sleep Apnoea and the 'life changing' support he received as a result.

## **5 Developing a pan-TfL Fatigue Management Plan**

- 5.1 Given the progress, tested approach and understanding from our learning, we are now able to expand the programme to meet our Vision and Values colleague roadmap milestone of delivering a Fatigue Management Plan pan-TfL in 2023/24.
- 5.2 The challenge is to develop an approach to Fatigue Management that applies to all of TfL at the same time as enabling specific adaptation and application for specific areas and their specific fatigue risks and needs
- 5.3 Some areas of TfL are subject to specific regulations or standards relating to fatigue management. The Health and Safety at Work etc Act 1974 applies to all of our employees. For some modes, such as rail and river, there may be specific regulatory requirements that apply to their operations. The Health and Safety Executive (HSE), Office of Rail and Road (ORR), Maritime and Coastguard Agency are responsible for enforcement, issuing guidance, standards and codes of practice.

- 5.4 Furthermore, beyond any minimum regulatory requirements, several guidance frameworks detailing good practice or in fatigue management exist, developed by industry bodies and organisations such as the HSE and ORR.
- 5.5 Our proposed approach aims to ensure that all our business areas know about and meet the desired minimum standard for fatigue risk management, while also identifying, enabling, and encouraging opportunities for continued progression and maturity in fatigue risk management.
- 5.6 The model is set out in Figure 2. Applicable regulations, codes of practice, standards and guidance relating to fatigue will be captured and provided in a central Fatigue Risk Management System Framework. Business areas will be able to review the system and requirements applicable to them to develop a tailored Fatigue Management Plan for their areas.



**Figure 2: Proposed TfL Fatigue Risk Management System Framework**

- 5.7 The Framework will identify ‘what good looks like’ and is proposed to include progressive requirements in terms of fatigue management including what:
- Must** be done (based on legal and regulatory requirements);
  - Should** be done (existing good practice, based on known standards, guidance); and
  - Could** be done (emerging best practice, trials and innovation).
- 5.8 At the very minimum, all business areas must meet the regulatory requirements for fatigue management. Setting out good practice ‘Shoulds’ and the options for

innovation 'Could's' provides a progressive framework with several benefits including:

- (a) enables measurement of fatigue management maturity in different areas;
- (b) sets out requirements in a way that supports and encourages progression and continual improvement;
- (c) acknowledgement of what has already been done or is in progress;
- (d) enables identification and recognition of more mature areas from which others may learn;
- (e) supports setting of objectives and targets; and
- (f) provides a framework against which progress can be monitored and the pan-TfL Fatigue Management Plan audited.

5.9 The aspirations of the 'shoulds' and 'coulds' can become the 'Business as Usual' 'musts' and 'minimums' see of the future.

5.10 The existing pan-TfL Fatigue Management Programme structure will support businesses in these endeavours. Requirements and guidance on how to demonstrate meeting requirements will be developed through continued engagement with business areas, governed by the Fatigue Management Steering Group.

5.11 The pan-TfL Fatigue Management Plan process will be embedded within our SHE Management System. This will also ensure that we are able to assure and audit business areas against the requirement in line with existing audit cycles.

## **6 Governance and Programme**

6.1 The delivery of the pan-TfL Fatigue Management Plan is to be overseen by the Fatigue Management Steering Group, made up of representatives from across business areas and supporting functions. We also liaise directly with Human Resources on culture and leadership. Our proposed approach to taking rolling the programme out across the organisation has been agreed by this group.

### **List of appendices to this report**

Appendix 1: TfL Departments that have undertaken pilot on risk screening

### **List of Background papers**

None

Contact Officer: Lilli Matson, Chief Safety, Health and Environment Officer  
Email: [LilliMatson@tfl.gov.uk](mailto:LilliMatson@tfl.gov.uk)