



In order to deter and prevent trespassers gaining access, LU staff follow the arrangements contained in the LU Rule Book for the opening and closing of stations and for station security. LU also has extensive security arrangements to prevent illegal access. Trespass is also managed by use of the powers to convict, under the provisions of the British Transport Commission Act.

The intranet-based Management System: *Managing HS&E with contractors and suppliers* sets out the arrangements in place whereby LU ensures HSE risks are taken into consideration when selecting suppliers and purchasing goods and equipment.

The Asset Performance Managers Handbook: *Materials and Stores* sets out requirements for materials management and appropriate risk management. Risks associated with the introduction of new materials are assessed in line with the change management process outlined in Section 7.

Fire risks, including use of appropriate materials, and workplace risks, including Control of Substances Hazardous to Health (COSHH) assessments, are managed through LU's standards regime, including LU's Category 1 Standard: *S1085 Fire Safety Performance of Materials*.

## **4.5 Monitoring risk management arrangements**

The Top Event risks that are currently reflected in the LU QRA have evolved from initial work carried out in 1988 to identify the major hazards that had the potential to affect the LU network. This initial work was undertaken in the form of a hazard identification exercise, Fault Tree Analysis and consequence analysis. New failure and event data has progressively been incorporated in the QRA models as part of on-going review. The Category 1 Standard: *S1526 The Assessment and Management of Health, Safety and Environmental Risk*, describes the arrangements which ensure that the LU QRA is reviewed and developed. The LU QRA review work plan is reviewed regularly and Top Events updated in line with this plan.

The regular review of the LU QRA ensures any gaps in understanding of risks are identified and their precursors and controls are understood and incorporated into the LU QRA. This is facilitated through structured hazard identification (HAZID) sessions, the incorporation of independent risk assessments, and the review of incidents occurring on the LU network, the mainline railways or international railways.

The TfL Director of Health, Safety and Environment is accountable for maintenance and improvement of the risk assessment processes. To ensure risk assessments remain valid, LU assesses changes to activities for their potential impact upon WRA and CRA.

Employing managers are responsible for ensuring that risk assessments are carried out, that they remain valid and that they are reviewed in light of changes, e.g. following an incident, or at least every three years. The central risk assessment database is used to monitor WRAs and CRAs to ensure that timely reviews take place. This is also monitored through audit activities.

Requirements for monitoring actions and controls are set out in the intranet-based Management System: *HS&E in everyday activities*. This sets out requirements for planning and managing PGIs, HSE Tours, management systems checks, etc.



## **Section 5: Procedures to meet technical specifications and procedures for operations and maintenance**

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## 5.1 Safety, operational and technical instructions

All documents, including LU standards, are accessible via the Management System library. This provides access to all company documents for TfL/LU employees (via the LU intranet) and suppliers (via the internet), and ensures users are accessing the latest versions. The standards library includes the documents in the following table.

The LU Policy: *P020 Asset Management Policy* sets out LU's plans to select, inspect, maintain, renew, improve and dispose of our assets in order to maximise customer satisfaction, maintain high levels of safety, manage risks, minimise whole life costs and enable delivery of LU's outcomes and priorities. This policy is supported by detailed documents relevant to different asset types, infrastructure and operation which sets out requirements for different stages of the lifecycle (design, implementation, operation, maintenance and decommissioning), as appropriate. Further details are set out in Section 15.2.

Standard topic	Sub-group
People	Competency and licensing Customer interface Management Security Training
Stations	Station assets (further subdivided by station asset type – infrastructure, civils, premises, power, lifts and escalators) Station operations
Trains and Infrastructure	Train and infrastructure assets (further subdivided by asset type – signalling, rolling stock, permanent way, communications, engineering, etc.) Train operations
Plant	On track plant
Health, Safety & Environment	Health, Safety and Environment (HSEMS)
Management	Asset management Assurance and compliance Business management Standards management
Rule Books	Publications (for information) Publications (Protection & Track Access) Publications (Stations & Trains) Rule Books and supporting information Upgrades Network Improvement SAP Team (NIST) Useful forms

**Table 5.1 Topic structure of the LU standards**



## **5.2 Production and monitoring**

In accordance with LU's principles of risk ownership and accountability, designated managers are responsible for developing the content of standards and making sure that they are up to date. Directors are accountable for ensuring compliance with LU's Management System, including standards, in their directorate. Compliance with the Management System and standards (by LU and contractors) is ensured through local HSE monitoring and audit, where appropriate. The relevant audit process, which includes monitoring of compliance with HSE standards, is set out in the TfL Internal Audit Manual and a supporting Work Instruction: *WOO85 HSE & Technical Audit process* (set out in Section 12).

Section 7 describes arrangements for the introduction of new or revised LU Management System documents, including standards, and for controlling change.

A bulletin listing all amendments to LU standards is issued every four weeks via the Management System library. Suppliers can request access to the library and access to LU standards.

Standards, and the supporting documentation, provide clear direction on the stage of the lifecycle or process to which the standard applies, for example, all or specific stages of a process/lifecycle.

## **5.3 Corrective action**

### **5.3.1 Queries to standards**

Category 1 Standard: *S1646 Queries to Standards* sets out the formal mechanism to query or ask for clarification of standards, or raise issues such as resolving disputes on the intent behind a standard or correcting errors and/or conflicts with another standard.

LU issues a formal response via a written notice which is then attached to the standard. Queries and their associated written notices are communicated via email to internal stakeholders and external suppliers.

### **5.3.2 Management of non-compliance to standards**

LU has two mechanisms for dealing with non-compliance:

- Temporary Approved Non Compliance (TANC) - the arrangements are defined in the LU Category 1 Standard: *S1642 The Management of Temporary Authorised For Use Non-Compliance (TANC)*. This requires the regularisation of non-compliances which are either discovered through routine maintenance, asset inspection or audits. The TANC process applies solely to LU standards.
- Concessions - the mechanism by which all identified non-compliances with LU standards are regularised, as set out in the LU Category 1 Standard: *S1641 Concessions to Standards*. In reviewing the concession request, the LU responsible manager, supported where necessary by an HSE Manager, will consider the safety implications of the concession. The most safety significant concessions are subject to peer review by the LU Directors' Risk and Assurance Change Control Team.



## **Section 6: Targets**

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## 6.1 Introduction

The London Underground *Health, Safety & Environment Policy* (P002) commits LU to developing improvement plans to improve HSE management and performance. The London Underground Board ensures that challenging targets are set each year. Targets are cascaded from LU's top level scorecard to local scorecards as appropriate.

This section explains how targets are set, the planning process enabling targets to be achieved and the process by which safety performance is improved.

## 6.2 Setting targets

The purpose of scorecards and targets is to drive a change in performance, including improving safety performance. The process and accountabilities for scorecard setting are described in the Manager's Handbook: *H-045 Business and resource planning* and the Category 1 Standard: *S1566 Monitoring health, safety and environmental performance*.

Typically, the performance scorecards include relevant safety performance indicators such as:

- accidental customer injuries
- accidental injuries to staff
- lost time injuries (LTIs)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) reportable accidents

Targets for Key Performance Indicators are developed annually and agreed by the Board at corporate level and then cascaded into the business. A number of factors are taken into account when setting Key Performance Indicators and the associated targets. These include H&S performance for the previous year, changes within LU, emerging risks, outputs from incident investigations, audits or other reports, changes in regulatory requirements. Targets may be quantitative, e.g. number of RIDDOR reportable accidents or qualitative, e.g. a ORR Railway Maturity Model score. The targets also take into account the broader TfL HSE vision and goals, national railway industry strategy, e.g. the RSSB's health and safety strategy 'Leading health and safety on Britain's railways' and other relevant national and international bodies.

All LU scorecards and the status of performance against targets are available on the LU intranet. Scorecards and performance metrics are also an integral part of the asset maintenance regime described in Section 15.

Once targets have been agreed, performance is monitored and reported regularly at local and senior levels. HSE performance is included as standard in LU period performance reports which give Directors clear information on performance against H&S standards. Review of these reports provides Directors with the opportunity to take actions when targets are not being achieved. Similar reviews occur at appropriate levels within each team.

The HSE Directorate is responsible for ensuring that LU is involved in the Railway Safety and Standards Board (RSSB)-led discussions on the railway health and safety improvement plans. This ensures that LU has visibility of and can contribute to other railway safety initiatives. This also provides a comparative benchmark for LU's safety improvement programme(s) and allows LU to identify suitable actions to meet any commitments required as a train operator on Network Rail infrastructure.



LU is also a member of the Community of Metros (CoMET) which allows benchmarking against non-UK metros and identification of best industry practice and safety improvement opportunities that may arise from this.

### 6.3 Meeting targets

LU activities require a strategic and sustained level of planned investment to ensure assets are fit for purpose over the whole of their planned life. This is documented in the Handbook: *H-045 Business and Resource Planning*.

Corporate level planning is achieved through the corporate business planning cycle including investment appraisal, the Health, Safety and Environment Improvement Plan and the development of Line Asset Network Plans (LANPs). Alongside LU's Asset Strategies, the LANPs enable and inform the identification of areas of future investment required to feed future TfL Business Planning.

The TfL Director of Health, Safety and Environment is accountable for advising the Board on appropriate health and safety objectives and supporting the development of the plans. These processes contribute to the delivery of the LU vision which influences the management of safety risks.

The London Underground Plan and the TfL Health, Safety and Environment Improvement Plan (which includes London Underground) are communicated to the business. Each Director is accountable for developing their own action plans that contribute towards corporate level delivery.

The results of performance scorecards are utilised in the setting and monitoring of the performance of individual managers as described in Section 8.

The monitoring of performance against targets is undertaken period by period throughout the year at LU, directorate and business unit level. The directors review operational performance at the London Underground Board meeting and more frequently through visualisation meetings in the local teams.

In the event that performance is falling behind target, significant improvement actions are identified through analysis of underlying causes for safety management issues, risk assessment and findings from audits and incident investigations. The action is reviewed by the London Underground Board meeting or via senior manager meetings to ensure that there is a robust implementation plan with appropriate key milestones. In addition, this review process ensures that:

- appropriate accountable managers and action managers are identified,
- scope of work, deadlines and completion requirements are clearly defined, and
- the requirements for assured closeout are defined.

Accountable managers for delivery are identified for all improvement actions. The accountable manager is responsible for ensuring that appropriately detailed implementation plans are developed and regular updates provided.

Safety related actions arising from location specific risk assessments, monitoring and audits are captured in local action plans. For each action, timescales and an accountable manager are allocated. Progress against these plans is monitored by local management. The TfL HSE and Technical Audit Programme includes checks to ensure local safety improvement actions have been implemented.

At least twice a year, the TfL Director of Health, Safety and Environment reports to the Board on progress on the safety aspects of the London Underground Plan.



## **Section 7: Control of new risks**

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## 7.1 Introduction

LU's change management arrangements ensure that the safety implications of any proposed change, introduced by any party affecting the LU network or its operations, are assessed before the change is made.

## 7.2 Aims of change management

The objectives of change management are to:

- ensure changes are identified at the appropriate time
- correctly identify the safety implications of proposed changes,
- ensure changes are planned safely,
- ensure changes are implemented to plan,
- ensure changes are implemented safely, and
- review the changes following implementation to ensure the change has been effective and has not had any adverse safety consequences.

LU requires the objectives above are met whenever any non-routine change is implemented. This is achieved through application of the LU Category 1 Standard: *S1538 Assurance* via the Manager's Handbook: *Change Control*.

## 7.3 Scope of change management

The requirements to assure and verify changes apply to changes that could affect the safety of anyone affected by LU operations. The scope of the change management process includes:

- organisational or management changes
- changes to staffing levels
- operational changes
- changes to the Management System, including standards
- changes to assets (including functional changes)
- changes from third parties, e.g. other transport undertakings, which impact on LU
- impact of LU changes on third parties, e.g. other transport undertakings
- changes to inspection or maintenance regimes.

Routine changes and deviations, carried out in accordance with authorised standards, procedures and instructions, are not included in the scope of LU Category 1 Standard: *S1538 Assurance* as they are an integral part of day-to-day activity which will have already been considered and allowed for in the development of the specified safe systems of work for carrying out these activities.

The LU change management arrangements describe the responsibilities and actions to assess, review and implement non-routine changes. The manager or executive body, e.g. London Underground Board or DRACCT, with the authority to approve a change ensures this is complied with.

LU's requirements for communication with managers and employees is an important aspect of change control. Requirements for health and safety communication and consultation are defined on the intranet-based Management System section: *Communicating and consulting on HS&E* and described further in Sections 2.6 and 9. The change management requirements are set out in Managers' Handbook: *Change Control*. Where necessary, these requirements are highlighted to managers undertaking change by the HSE directorate.

## 7.4 Evaluation of new risks

When a change is proposed, the safety risks of the change are assessed in accordance with the risk assessment arrangements described in Section 4.2 as required by LU Category 1 Standard: *S1538 Assurance* (further described in Section 14). This includes an assessment by someone with the competence to identify hazards, assess risks and determine actions necessary, before, during and on completion of the change. Where changes have safety or other risk implications, a Change Assurance Plan (CAP) is produced which:

- assesses and records the impact of the change (including safety assessment)
- demonstrates how safety and other risks will be maintained or reduced to a level which is ALARP before, during and after the change.

As part of this process, consultation is undertaken with affected parties, including Health and Safety Representatives where the change affects employees' health and safety. This process applies to changes proposed within LU or by a third party, e.g. another transport undertaking.

Change to an existing LU standard, or the development of a new standard, may be required as a result of the output from the risk assessment process, corporate planning processes, safety related incidents, local identification of a need or an external influence such as legislation/external standards. Any party may propose a new standard or a change to an existing standard. Controlled deviation from an LU standard is managed through the TANC and concessions processes detailed in Section 5.

The safety assurance requirements have been integrated into the standards change documentation. Each proposal for a new standard, or change to an existing standard must be safety assured in accordance with change management arrangements.

Change proposals are submitted to DRACCT for approval. DRACCT is supported by a Filter Group that deals with less significant changes. For changes that are complex or pose significant risk (determined by the DRACCT Filter Group), DRACCT provides an overview of the assessment's quality and provides documented feedback to managers on what further assurance may be required. DRACCT will accept the change when a robust case has been made.

Changes which constitute a significant change to the LU Safety Certification or Safety Authorisation are advised to the Office of Rail

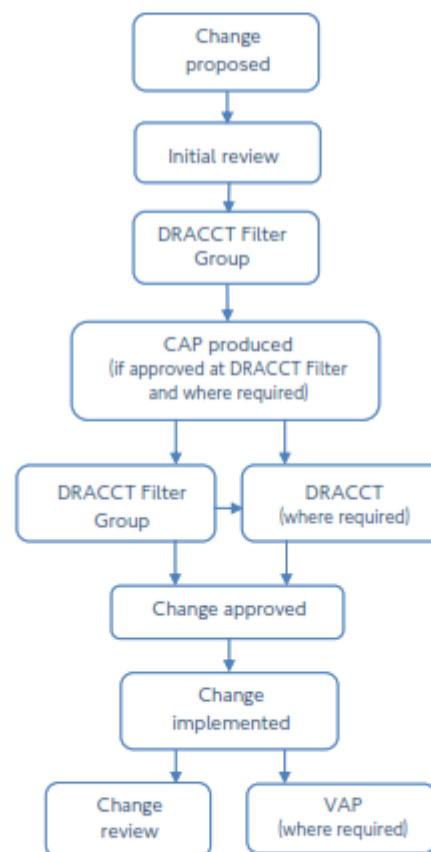


Figure 7.1 LU change process



and Road (ORR). They are also notified to other affected operators to enable them to highlight any concerns to the ORR.

For less significant changes, the HSE Managers, working with their counterparts in the supplier organisations where appropriate, provide an overview of the implications of change to ensure safety issues are adequately addressed.

As LU's assurance standard is a Category 1 standard, suppliers are required to have arrangements in place to provide safety assurance in line with this standard.

## 7.5 Validation of change

On completion of the necessary reviews and approvals, including DRACCT approval, the change is communicated to all affected parties and implemented in accordance with the measures stated in the CAP.

The manager authorising a change is responsible for monitoring the implementation of the change and ensuring it is carried out in accordance with the accepted CAP. This includes implementation of any required controls.

During more detailed planning or implementation, if a need is identified to significantly deviate from the proposals in the accepted CAP, the authorising manager is responsible for ensuring that the safety implications of the deviation are assessed and a revised CAP is developed and accepted.

Where required (by the change manager, DRACCT Filter Group or DRACCT), the CAP implementation plan will set out relevant monitoring, checking, review and other validation to ensure that that change has been implemented effectively and safely.

## 7.6 Safety verification

LU's requirements for compliance with the safety verification provisions of ROGS are set out in Category 5 Standard: *S5540 Safety Verification*. This document describes the safety verification process applied where new or altered vehicles or significant differences to infrastructure are introduced and they bring the potential for a significant increase in levels of risk.

The London Underground Engineering Director has overall accountability for the safety verification process and is designated as LU's Independent Competent Person (ICP) under ROGS.

Where safety verification activity is required, the independence of the Engineering Director, and/or any resource appointed to undertake safety verification, is achieved by recognition of the functional reporting line to the TfL Director of Health, Safety & Environment (or a person appointed by the TfL Director of HSE).

For projects which require safety verification, a Verification Activity Plan (VAP) is produced, in line with Category 5 Standard: *5-539 Verification of Assurance*. The VAP is the mechanism through which LU drives the delivery for a written safety verification scheme. The VAP, which may be part of the CAP, identifies, using a risk-based approach, specific issues which require monitoring during and after the change to ensure safety risks are managed effectively.

These requirements are embedded in Pathway, the TfL project management methodology, which is part of the LU Management System and is mandatory for LU programmes or projects.



## **Section 8: Training and maintenance of competence**

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## **8.1 Introduction**

In order for arrangements for HSE management to be effectively implemented and operated, it is essential that employees and others who work on or about LU's infrastructure are competent to do so. TfL and LU have comprehensive arrangements for the management of recruitment, training, assessment and competence to ensure that this is achieved through all levels of the workforce.

## **8.2 Competence and training roles and responsibilities**

The LU Competence and Compliance team is responsible for maintaining the competence management documentation and verifying its content, and providing support to business users.

Responsibilities for managing employee competence across LU are discharged through Human Resources (HR) standards and intranet-based Management System content. The intranet-based Management System section: *Performance and development conversations* sets out management responsibilities for managing competence, in line with the Competence Management System.

Employing managers are responsible for the quality and integrity of competence assessments and for ensuring sufficient competent resource is available, employees have access to appropriate information, and competence development plans are in place. Managers of safety critical employees have the following responsibilities:

- establishing and maintaining a register of all posts within their area of responsibility that are safety critical
- issuing and updating authority to operate
- monitoring hours worked
- ensuring that safety critical training and development requirements are kept up to date and competence assessment is carried out on a continuing basis.

The Skills Development team is responsible for the design and provision of effective and efficient training material and resources. The Skills Development teams work with the relevant managers/teams to ensure that training is available at appropriate time, i.e. to accommodate varying work patterns to ensure that competence is maintained.

Where required and due to a very specialist requirement training will be sourced externally to ensure the desired level of competence is achieved and maintained.

## **8.3 Competence System**

### **8.3.1 Recruitment**

The HR requirements for recruitment and selection of LU employees supports the organisation's aim to attract well-motivated people, who will enable TfL/LU to achieve its objectives and deliver LU's services safely and effectively.

The recruitment and selection process is documented on the intranet-based Management System: *Recruitment*. This process is:

- based upon a person specification and job description for each post that describes the experience, knowledge, skills, behaviours and qualifications required for successful job performance
- designed to consider each applicant objectively against job requirements and make appointments in accordance with these.



These processes are measured and monitored for fairness, reliability and validity to ensure that the TfL/LU objectives for recruitment and selection are met.

### **8.3.2 Training**

In accordance with the intranet-based Management System section: *Performance and development conversations*, all LU employees receive the appropriate training and development to enable them to perform their jobs safely and effectively. General requirements include:

- employees to have a competence development plan which is reviewed regularly, access to learning and development advice, guidance and opportunities
- equipping employees in identifying their own development needs and the knowledge to ensure that steps are taken to meet those needs
- monitoring and evaluation of the efficiency and effectiveness of all operational learning activities.

On appointment to role, initial training is given, an assessment of knowledge and competence is undertaken and location-specific training is provided.

### **8.3.3 Performance development and competence review**

The effective performance management of employees helps achieve LU's goals and objectives. It ensures that employees individually and collectively understand how they can contribute towards the achievement of these goals and objectives. The Performance and Development process provides company standards for target setting and measurement.

Performance and development management is carried out informally and formally. Managers are encouraged to regularly discuss individual and team performance with their team. The intranet-based Management System section: *Performance and development conversations* outlines the requirement for managers to carry out a formal discussion of performance and development at key points in the year. These formal review meetings provide the opportunity to review performance against overall operational competence, clarify expectations and standards and to identify related development needs.

### **8.3.4 Competence monitoring and assessment**

After completing the core training, where required, trainees shadow a competent person for a period of time determined by the competence requirements (time varies depending on role). This is followed by a practical assessment where required by the competence system. Trainees are assessed in accordance with the competence system. Subject to completion of this assessment and with reference to knowledge assessments conducted during core training, authority to operate work is issued by the employing manager. Further assessments then take place where required by the competence system.

The reassessment of competence is ongoing and timescales for when this is carried out are detailed in the relevant role specific competence plans. Competence is also monitored and reviewed by managers locally. LU ensures that those who do not meet the competence requirements are provided with competence development action plans and where necessary are stopped from undertaking the activity.



### **8.3.5 Record keeping**

Records of the competence of each member of LU staff, TfL employees who directly support LU or suppliers' employees/contractors undertaking safety critical activities are required to include as a minimum:

- each activity that the person has been assessed or reassessed as competent to carry out
- records of assessment completed
- the expiry date of the competence.

They are retained for a period at least equal to twice the normal period between assessments. Employee training is recorded within Human Resources and/or by local management. This ensures that line managers are aware, in advance, of the expiry dates of licences and training courses are programmed as necessary. This also ensures local managers are aware of details of any medical restrictions that may apply to their staff.

## **8.4 Safety related tasks**

The ROGS Regulations, place specific requirements on employers to ensure that employees are suitably trained and supervised when carrying out safety critical tasks as part of railway operations. LU discharges these obligations through its Competence Management System which identifies what competence needs to be managed in relation to the risks pertaining to each task, which are identified through the risk assessment process detailed in Section 4. Details of safety related tasks can be found in Section 17.

## **8.5 Compliance**

Individuals carrying out any form of safety critical work for which there is a competence management system are informed regarding the competence requirements, including any LU standards they need to comply with, and the content and frequency of any assessments and/or re-assessments.

These are detailed in the competence requirements related to their work activities. Requirements are set in respect of:

- initial training and assessment of knowledge on appointment
- location based requirements
- initial assessment of competence
- on-going assessment of competence.

Competence is monitored and reviewed by managers locally. LU ensures that those who do not meet the competence requirements are provided with competence development action plans and where necessary are stopped from undertaking the activity.

Changes to the Competence Management System are subject to the assurance process and the task and risk assessments are reviewed at defined frequencies and whenever jobs change.



## **Section 9: Safety information**

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## 9.1 Introduction

This section details the arrangements for the provision of safety information to:

- LUL employees
- suppliers
- other railway operators
- external parties
- customers.

General health, safety and environmental communication requirements for LU are contained on the intranet-based Management System sections: *Communicating and consulting on HS&E*, and *Managing HS&E with contractors and suppliers*, LU standards including LU Category 1 Standard: *S1311 Customer information - stations* and the LU Rule Books.

## 9.2 Internal communication

The principal methods of communication with employees rely on centrally developed information being cascaded down through the management levels. The LU Head of Communications is responsible for communicating corporate non-critical safety information. The TfL Director of Health, Safety & Environment is responsible for communicating urgent safety information (via Safety Alerts) and some non-critical safety information. The intranet-based Management System section: *Communicating and consulting on HS&E* sets out requirements for the HSE directorate and local managers for communicating this urgent safety information.

Managers are responsible for ensuring information is cascaded to employees in their area. Local or company-wide communications events are held on an ad-hoc basis if there are significant matters or concerns to address. Specific information of health, safety and environmental significance is communicated in a variety of ways, including the following:

- Health and Safety notice boards
- Intranet updates
- employee surveys – Viewpoint is the regular survey carried out within LU. The findings are communicated across LU and are used by local managers to identify improvement actions which can be built into future business plans
- 'On The Move' - the organisation's magazine aims to reinforce messages, launch campaigns and communicate current issues, including those relating to health and safety matters
- induction training - provided to all employees on joining LU, including basic health and safety information
- employee bulletins - emailed to all relevant staff and printed locally for those without access to email
- Safety Alerts and Safety Bulletins
- Other mechanisms – e.g. TeamTalk briefings, Centurion Briefing Packs, Safety Hours.
- Traffic Circular - see details below.

Different mechanisms are used for communication depending on the target audience.

Vital/urgent safety critical information is communicated via Safety Alerts. These are issued by the HSE Directorate and managers are required to share relevant information in Safety Alerts (in line with the requirements set out by the intranet-based Management



System: *Communicating and consulting on HS&E*). Where required, procedures, instructions, guidance are changed in line with LU's change management process (described in Section 7).

There are a number of structured mechanisms by which staff can pass on safety information to their supervisors or managers, e.g. through the Health and Safety communication and consultation mechanism (as outlined in Section 2.6), Team Talk discussions, feedback on employee surveys, etc.

Receipt, by any manager, of information of regulatory concern or action from a health, safety and environmental regulator is notified to the appropriate HSE Manager who assesses the significance of the information, takes any required action and circulates to those affected.

Suppliers are required to provide LU with specific health, safety and environmental related information to ensure LU has adequate knowledge about their risks.

### 9.2.1 Communication of operational information

Some of the significant risks associated with the day-to-day operation of the railway are mitigated by operational communications, for example, on train and station announcements to communicate with customers, other LU employees and suppliers/contractors working on the station.

There are also a number of communication tools within LU. Those with a bearing on safety are set out below. Where Network Rail or Train Operating Companies' information is relevant, this information is included in the appropriate document.

- Connect - LU's network-wide mobile communications system.
- Traffic Circular - latest available information about aspects of railway operations, sent to operational staff on a two weekly basis including timetables and track, signalling and equipment alterations. Also includes details of the status of other publications, to ensure the latest versions are being used.
- Guide to Switching Traction Current On And Off
- Defective In Service Information (DISI) - actions that Train Operators of each type of Passenger Rolling Stock must take to deal with defects either in or out of service to ensure practice, during traffic hours.
- Line Supplements - information and instructions specific to each line, published on the intranet and in hard copy.
- Working Timetables - the train schedule for each line. Train staff receive them on an individual basis from Duty Managers. These are sent directly to Train Crew Service Control depots. Station staff have access to a reference copy.
- Scheduled Train Frequency Tables - used to determine if traffic hours track access is safe and viable.
- Rule Book and associated publications - periodic or special publications that supplement the LU Rule Books, all of which are also available on the LU Intranet site.
- Look Ahead - contains details of planned work (for the forthcoming week) carried out on or about the track where this may affect others' access requirements. The target audience include the Track Access Control, Power Control and Service Control teams, and people who have booked work. It is also used by people who



have non-exclusive general access works to check for work site clashes. This is published on the Rule Book intranet site with copies posted on the Access department site. Suppliers and contractors can register to view the publications.

- Nightly Engineering Protection Arrangements (NEPA) - published every day and sets out details for the coming night, i.e. details of first and last trains, and traction current switching times. The target audience is protection staff. Those involved in Protecting Workers on the Track (Engineering Hours) activity must read the NEPA before booking on.
- Engineering Notices - issued daily; this is the final version of the Look Ahead and may contain details of late requests of an urgent nature. They are published on the Rule Book intranet site with copies posted on the Access department site.
- Planned Work Reports - detail work to be undertaken at LU stations. Weekly reports and additional daily information is published on the Access Team intranet site.
- Timetable Notices - issued when there are changes to the Working Timetable. Paper copies are sent to Train Crew depots affected and managers ensure Train Operators receive them.
- Operational Standard Notices (OSN) - used to publish and brief changes to rules.
- Rule Book Briefing - used to brief changes to the Rule Book and are communicated to relevant staff.

To ensure that communication of the listed publications is effective, the intranet-based Management System requires appropriate managers/supervisors to ensure:

- employees are aware of publications as soon as possible after receiving them
- employees are instructed in revised procedures, guidelines, standards etc. and that they understand and follow them
- employees sign for all printed publications they are issued with and if material is received electronically, an audit trail is developed to prove that employees have received or been made aware of the contents
- that up to date copies of publications are available at their stations, depots, signal boxes, control rooms and signalling control centres.

There are also requirements for operational employees to:

- be familiar with publications which affect them
- make sure they are aware of new publications which affect them
- make sure the publications are current
- sign for all publications they are issued with.

### **9.3 Communication with customers**

The TfL Marketing Communications team, with the TfL Director of Health, Safety and Environment, are responsible for communicating with customers. The Director of News at the TfL Press Office is responsible for communicating with the media. The TfL Press Office is notified of any health, safety or environmental matter that is likely to arouse media interest to ensure that the appropriate response is provided.

LU carries out a variety of campaigns which aim to provide safety information to customers. This information is provided to customers via posters across the network (in stations and train cars), supported by station and train PA messages, information on social media, in London print media, etc. A number of safety messages are also





embedded within the infrastructure (Mind the Gap signs on platforms, yellow and white lines on the platform, etc.). A range of customer safety information is available on the TfL website.

## 9.4 Communication with other railway operators

Communication with other railway operators over corporate issues and safety matters is managed by the National Rail Agreements Team in line with contract obligations, as detailed in Section 13, by the relevant operational team or by the Health, Safety & Environment team. Communication through is complemented by the communication of Network Rail's Regional Weekly Operating Notices which are transmitted electronically by Network Rail to key LU operating staff for information. The LU NOC receives Network Rail alerts on defective equipment. The technical aspects of these notices are reviewed by the Engineering Director as appropriate and communicated internally and to suppliers where appropriate.

The Managers Handbook: *Working with Stakeholders* sets out requirements for working with local operators. At a local level, interfaces with other railway operators are the responsibility of the relevant Area Manager or Train Operations Manager. Issues of greater significance or network-wide issues must be referred to the National Rail Agreements Team. This includes discussing and resolving safety issues.

## 9.5 Safety Critical Communications

Requirements for safety critical communications are set in *Rule Book 01 Communications*. This covers:

- giving and receiving messages including the use of communications protocols
- using communications equipment
- reporting emergencies
- station communications including handing over information and conducting safety briefings.

A review of the safety critical communications is conducted on a period or quarterly basis using a volume sampling method. The Manager's Handbook: *Monitoring operational communication* requires that centurion level managers undertake monitoring of the effectiveness of safety critical communications and take corrective action where necessary.





## **Section 10: Accidents, incidents, near misses and other dangerous occurrences**

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## 10.1 Incident reporting and investigation

Incident reporting and investigation requirements are set out in the following management system documentation:

- Category 1 Standard: *S1556 Incident Reporting and Investigation* (defines the requirements for the notification, reporting and investigation of health, safety and environmental incidents)
- Intranet-based Management System section: *Managing formal incident investigations and their outcomes* (defines the requirements for managing formal investigations, the criteria for formal investigations, and requirements for completion of formal investigations)
- Category 5 Standard: *S5557 Incident Reporting and Local Investigation* (LU except JNP) (defines the requirements to ensure that a robust method of recording and investigating local incidents is maintained to prevent recurrence)
- Procedure: *PR0603 Incident Reporting and Immediate Investigation* (JNP) (defines the requirements for reporting and investigation of health, safety and environmental incidents)

LU standards are held on the LU intranet (as described in Section 2.3).

### 10.1.1 Incident reporting

Requirements for incident reporting cover:

- ensuring awareness of the need to report incidents
- the roles and responsibilities of those involved in the reporting of incidents
- reporting arrangements for different types of incident
- the need to notify employee health and safety representatives and other operators
- safety alerts that require urgent communication
- standard reporting forms and their distribution
- additional incident records e.g. for staff assaults and Signals Passed At Danger
- record keeping
- confidential reporting systems.

All HSE related incidents must be recorded at the earliest opportunity, within 24 hours and by the end of the shift if possible. All recorded incidents are entered onto the LU HSE electronic incident reporting systems. LU incidents which occur on Network Rail infrastructure are logged on the RSSB's Safety Management Information System.

LU's Category 5 Standard: *S5557 Incident Reporting and Local Investigation* sets out the requirements for notifying the ORR (TfL Team) and RAIB of incidents in order to comply with the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and the Railways (Accident Investigation and Reporting) Regulations.

### 10.1.2 Incident investigation

The intranet-based Management System section: *Managing formal incident investigations and their outcomes*, defines the types of incident that require a formal investigation. Once the investigation is completed and the draft Formal Investigation Report (FIR) is prepared, the commissioning manager submits the report to the LU Directors' Risk, Assurance and Change Control Team (DRACCT) for peer review and acceptance of the report, actions, time scales and allocation of accountable managers.



The commissioning manager may only close the investigation when:

- DRACCT has confirmed that the terms of reference (including verification activities) for the investigation have been met
- recommendations and actions are clearly defined, have accountable managers assigned to them and have agreed completion dates
- the report and recommendations have been accepted by DRACCT
- recommendations have been entered on the FIR action tracker.

For particularly significant incidents, the FIR may also be submitted to the London Underground Board for review. At the discretion of the Board, regular reports on progress with the implementation of the recommendations may be requested.

Once finalised, the FIR is circulated to relevant staff and placed on the intranet where appropriate specific recommendations for sharing of lessons learnt are included in the FIR.

Submission and review of FIRs by Directors and senior managers at DRACCT ensures that high quality FIRs are produced. The HSE Directorate also carries out ad hoc reviews of FIRs to ensure that the investigations and reports meet the standard required.

For incidents that do not require a designated Formal Investigation, a local investigation is undertaken. Local investigations are normally commissioned by the local accountable manager for the area where the incident occurred. As happens with an FIR, actions and recommendations are made which allow sharing and implementation of lessons learnt.

Where an incident occurs on Network Rail infrastructure, LU complies with the relevant Railway Group Standard.

### **10.1.3 Investigator – resource and training**

The intranet-based Management System section: *Managing formal incident investigations and their outcomes*, requires that the HSE Team set and maintain the competence requirements for incident investigators and ensures that competent resources are appointed. Competence requirements are met through a combination of formal training and previous experience assisting in a formal investigation or leading a smaller investigation.

## **10.2 Improvement actions**

All RAIB or ORR reports/recommendations on LU incidents are reviewed at DRACCT and, if requested, by the directors at the London Underground Board. Where appropriate, actions are agreed, timescales set and accountable managers defined. These actions are tracked and, once completed, formal closure is requested through the ORR.

LU has established arrangements for the review of reports of significant incidents which occur outside LU and the development of an appropriate LU response. This includes ORR and RAIB reports, and also any safety incident that might have a bearing on LU's arrangements or operations.

The focal point for such reports is the HSE Lead Investigator, who undertakes an initial review and evaluation in order to establish the potential implications for LU and to identify who within LU or its main suppliers needs to receive a copy of the report and undertake a more detailed review and, where required, develop improvement actions.



## **Section 10 – Accidents, incidents, near misses and other dangerous occurrences**

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Responses or action plans are co-ordinated by the HSE Lead Investigator who also arranges for appropriate peer review via DRACCT. Agreed actions are tracked and monitored.

Analysis of incidents and incident types within LU is undertaken within the Insight team. Information, including trend analysis, is presented to HSE and business managers in weekly, periodic and quarterly Safety Performance Reports. This is used in the implementation of improvement and preventative measures.

Further detail on the analysis of incidents to improve safety performance is included in Section 2.7.





## **Section 11: Emergency planning**

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## 11.1 Emergency planning

LU has three levels of emergency plan:

- the LU Network Plan which covers major incidents that may affect a number of lines or the entire LU network involving stations and trains, e.g. major power failure, major loss of communications systems, major flooding and terrorist attack
- line plans which cover incidents (stations and trains) that may affect specific lines, and form part of each Service Delivery Unit's emergency plan, e.g. stalled trains, loss of local signalling or power control, infrastructure failures, derailments, etc.
- local plans which cover specific locations, e.g. stations, service control centres, train crew depots.

A specific emergency plan is also maintained by the Head of Network Operations specifying the arrangements and methodology to be adopted in response to a major incident affecting the supply or distribution of electrical supplies. These plans (SYS Plan 1 and SYS Plan 2) deals specifically with a complete failure of the national grid supply to London or the loss of a bulk supply point. In this event, an emergency power supply will be provided by Central Emergency Power Supply (CEPS) and local supplies by Off Line Battery Inverter (OLBI) or Uninterruptible Power Supply (UPS) units installed in all sub-surface stations. This plan differs from the LU Network Plan which covers major power failure incidents, regardless of cause.

All emergency plans are integrated and mutually support one another. The findings of the risk assessment process are used to structure the content of these plans, as necessary. The LU Contingency Planning Team is responsible for managing the LU emergency plans. Local emergency plans (including Congestion Control and Emergency Plans), Line Emergency Plans (LEP) and the Network plan are available on the LU intranet. Access to some emergency plans is limited due to their confidential nature.

LU's requirements for emergency planning and related arrangements are contained in the Manager's Handbook: *H-038 Providing emergency, contingency and business continuity and security support*. Requirements for managing incidents are set out in Rule Book 2: *Managing incidents*. The Rule Books defines different categories of incidents, e.g. Category 1 incidents include incidents where there is potential for trains to be stalled for more than 30 minutes, serious infrastructure damage, serious injury or loss and for major flooding event, a major power failure, Person Under a Train incident and other similar incidents. The Rule Books defines actions and accountabilities for managing these incidents safely.

For incidents involving other infrastructure managers and train operating companies (either on or adjacent to other infrastructure), TfL/LU employees work jointly with other relevant organisations to deal with the initial incident and investigation. If an incident occurs on Network Rail property, then the Network Rail Emergency Plan comes into operation.

## 11.2 Third party co-operation

Where required, third parties, such the Department for Transport's Land Transport LSecurity Team (LTS), (formerly known as TRANSEC) emergency services, large event organisers or other transport undertakings, are involved in the development of LU's



emergency plans. This close working, including joint development of Congestion Control and Emergency Plans at LU stations, allows LU to build more robust and effective emergency plans.

London Underground is classified as a Category 2 responder in the Civils Contingencies Act 2004. The Act and supporting Regulations places duties on LU to co-operate and share information with emergency services which will enable the Emergency Services to plan their response to a major accident on the railway. These duties cover risk assessment, emergency planning, Business Continuity Plans, Warning and Information and Promotion of Business Continuity Management.

LU works with a number of emergency services, including the London Fire & Emergency Planning Authority, British Transport Police, London Metropolitan Police and the Ambulance Services. LU also works with local authorities and other public bodies, such as Public Health England and the Environment Agency, as required. Regular formal and informal interfaces and interaction is well established with the Emergency Services. For day-to-day issues, communication and interface with the Emergency Services is managed by the London Underground Control Centre in line with requirements set out in Rule Book 2: *Managing incidents*. This interface is clearly defined and well established. Rule Book 2: *Managing incidents* also sets out responsibilities for working with the Emergency Services and external agencies. Regular meetings are held with the different Emergency Services which allow both parties to maintain an overview of our interfaces, arrangements for operating a safe railway, sharing appropriate information and lessons learnt from incidents, etc. LU also interfaces with the Emergency Services through the London Resilience Forum as appropriate.

Whilst LU involves the emergency services in exercises in respect of its emergency plans, emergency plans are not, by agreement, routinely provided as they are predominantly for the utilisation of LU staff and managers. However, stations' Fire Compliance Plans are made available to the Fire Service. These plans and the axonometric diagrams show the physical layout and configuration of sub-surface stations including the fire precautions and controls. These plans are maintained by the Contingency Planning and Resilience team.

### 11.3 Training

LU ensures that its employees are trained and prepared in emergency planning arrangements through specific role and competency requirements, training modules and participation in emergency exercises. Details on training and competence are set out in Section 8 and communication in Section 9.

The Manager's Handbook: *Emergency planning and equipment* requires the production of emergency plans that define individual roles and responsibilities in degraded and emergency conditions. It also establishes arrangements that provide effective response to all types of incident. Suppliers are required to produce emergency plans through clauses in their contracts.

Staff are trained to handle a comprehensive range of emergencies as required by the Rule Books as part of the continuous development training. Managers receive training for dealing with emergencies that are appropriate to their post. All operational employees also undertake fire training.



Periodic table-top and live emergency exercises are carried out in accordance with a rolling programme to test the effectiveness of emergency plans and their interaction with other agencies, including other transport undertakings. These are multi-agency exercises involving the emergency services. These exercises enable LU to demonstrate its ability to respond to emergencies and review the effectiveness of current arrangements. Table-top testing of the LU Network Plan is carried out at least once a year. Line Plans are tested with both table-top and live exercises held at least once a year.

## 11.4 Roles and responsibilities

Incidents on the LU network are managed in accordance with emergency planning arrangements and the incident organisation structure set out in the LU Rule Book. This defines the roles of all those involved in incident response and sets out the arrangements that are put into place following an incident.

Rule Book 2 sets requirements for:

- initial actions following an incident
- co-operation with others
- roles, responsibilities and actions
- incident control structure, including a 'gold, silver, bronze' control structure
- preservation of evidence
- additional arrangements for particularly serious or protracted incidents
- special events requiring the implementation of incident control arrangements
- interfaces with Network Rail and other operating companies.

Effective communication is managed through clear identification of responsibilities as set out in the Formal Incident Management system in the Rule Book 2.

A senior LU manager, the Senior Operating Officer (SOO), is rostered on shift 24/7 and is based in the LU Control Centre (LUCC). The SOO assumes overall command during an incident and is responsible for formulating the strategy for dealing with the incident and its effects on other LU services outside of the incident site.

Where necessary, the LUCC also calls out the Emergency Response Unit (ERU) and advises the Office of Rail and Road (ORR) (TfL Team), Rail Accident Investigation Branch (RAIB) and others as appropriate.

LU's mobile communication system (Connect) allows communication across all aspects of the network during normal and degraded operations, and is available for use by the emergency services.

The ERU provides emergency response capability across the whole LU network on a 24-hour standby basis, and is trained to deal with all foreseeable rail related incidents. Through mutual aid agreements, the ERU supports Network Rail when incidents occur on its infrastructure. The ERU takes part in a minimum of one live emergency exercise per year.

For incidents that require significant or protracted recovery arrangements outside the scope of the incident organisation, the Head Network Operations and Resilience will initiate the Emergency Recovery Process, working with the Emergency Planning Manager. In the event that the impact of the incident has implications beyond the Line, the SOO will initiate the recovery process at network level.





Where it is established that an emergency recovery response team is required, this is established by the relevant senior manager in conjunction with the Resilience Planning Manager. The role of the team is to assess what is required in order to return LU lines or network services to normal operation, and developing the arrangements to achieve this including priorities, strategy, funding requirements and additional resourcing needs.

The requirements for undertaking a post-incident assessment and developing and delivering the recovery plan are embodied in the LU Network Plan.



## **Section 12: Audit**

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## 12.1 Introduction

Within London Underground's safety and technical assurance regime, audit is an important means of establishing the level of compliance with requirements. The TfL Internal Audit team maintains safety and technical audit programmes in order to provide assurance that LU health and safety risks are being controlled, that LU complies with the relevant aspects of the HSE Management System and that safety and technical assurance arrangements are working effectively.

TfL Internal Audit (IA) plans and undertakes internal audits and audits of external suppliers to TfL.

The main activities within the audit process are set out in the TfL Internal Audit Manual and a supporting Work Instruction: *W0085 HSE & Technical audit process*, specific to the work of the HSE & Technical Audit Team. This Manual and Work Instruction include identification of auditing requirements and the planning of audits, through to the structured collection of evidence and information on the efficiency, effectiveness and reliability of systems for managing health and safety, and agreement and monitoring of corrective action.

## 12.2 Arrangements for auditing

The Internal Audit processes have been designed to ensure the principle of independence is maintained for all activities and in accordance with the principles of the TfL Integrated Assurance Framework (IAF). The purpose of the IAF is to provide a regime within TfL for the efficient and effective generation and provision of assurance over all of its activities and is built around a common set of assurance principles:

**Proportionality:** the volume of assurance work carried out should be proportionate to the risk associated with the area under review, having regard, as appropriate, to financial impact, health and safety, operational continuity, reputation, and legal and regulatory compliance.

**Risk based planning:** assurance work should be planned so as to focus attention on areas of highest risk to the organisation.

**Independence:** all assurance engagements should include an adequate element of independence from the management responsible for the area under review.

**Competence:** assurance engagements should be carried out by staff with appropriate qualifications, knowledge, skills and experience commensurate with the nature of the engagement.

**Engagement planning:** assurance engagements should be properly planned, including defining the engagement's objective, scope, timing and resource allocation.

**Documentation of evidence:** there should be sufficient documented evidence to support the findings from assurance engagements. Documentation will include notes of meetings, details of key documents reviewed, details of items tested and explanations of the rationale for all matters of judgement.

**Reporting:** the results of assurance engagements should be communicated to members of management responsible for the area under review, and to others as appropriate, and a management response obtained.

**Action:** all remedial actions arising out of assurance engagements should be defined

by the accountable manager, and have a defined owner and agreed timescale for completion.

**Follow up:** there should be a process of follow up to confirm that all significant agreed actions are implemented.

**Spreading good practice:** areas of good practice identified through assurance activity should be communicated to other areas of the business as appropriate with the aim of improving control across the organisation.

**Quality control:** all assurance providers should have in place appropriate procedures to review the quality of their work to ensure that appropriate standards are maintained. At appropriate intervals this should include a process of external or peer review.

### 12.2.1 HSE and technical audit planning

The TfL annual Integrated Assurance Plan (IAP) is produced in accordance with the Internal Audit Manual which complies with the internationally recognised framework for internal auditing provided by the Chartered Institute of Internal Auditors (IIA). The annual planning process is assisted by workshops with senior management and other assurance providers to identify key risks in specific business areas.

The Director of Internal Audit (DIA) and the Senior Audit Managers are responsible for producing the risk based audit plan. For health and safety risks this is the responsibility of the Senior Audit Manager (HSE & Technical and Crossrail). In developing the plan consideration is given to certain key factors, in particular:

- business risk registers, including health, safety and environment
- major procurement exercises
- the main business processes
- major IT processes and development projects
- areas of concern identified by management.

Other factors considered include the degree of management or process change, the date of the last relevant audit and coverage by other assurance providers.

IA adopt a flexible approach to planning and review the IAP on an ongoing basis.

### 12.2.2 External inspection and review of LU

LU is subject to inspection by the ORR and other regulatory authorities. LU is committed to full co-operation with the requirements of such bodies. This is facilitated through the relevant senior manager in the area concerned.

## 12.3 Improvement from audit findings

Audit reports are issued following the completion of all safety and technical audits carried out. This report includes the agreed management response to the audit findings. Agreed management actions are required to be in the form of an action plan detailing:

- action to be taken in respect of each audit finding
- manager accountable for implementing the action
- agreed completion date for the action.

Assurance Partners are stakeholders within TfL who normally have an assurance role and are independent of the delivery areas being audited. They contribute to the HSE & Technical audit process regarding scoping audits and agreeing findings and actions.

Agreed actions are tracked by Internal Audit. Actions are not closed unless both the



Assurance Partner (where used) and Internal Auditor are satisfied suitable assurance has been provided.

Internal Audit provides periodic updates to LU senior management on progress with audit actions including the escalation of overdue actions. Internal Audit reports progress to both the TfL Audit & Assurance Committee and the London Underground Board.

## 12.4 Review of Health, Safety and Environment arrangements

London Underground's Management System review arrangements enable monitoring and decision-making about compliance with, and the adequacy and effectiveness of, health, safety and environmental management arrangements and allow decisions about the nature and timing of necessary actions to remedy deficiencies and effect improvements. The highest level of review takes place at the London Underground Board.

In order to ensure that the London Underground arrangements for health, safety and environment management remain adequate and effective over time, London Underground complies with the intranet-based Management System section: *Reviewing health, safety and environment arrangements*. This establishes the scope of such review and how the results of reviews are utilised in order to achieve improvements. In broad terms, and subject to risk based priorities, all components of London Underground's Health, Safety and Environment Management System are reviewed on a rolling 3 yearly basis.

London Underground has identified the key elements of arrangements that need to be the subject of thorough review and these are set out below. These arrangements ensure that the review has visibility at Board level.

### 12.4.1 Key elements of review

LU uses the ORR's Rail Management Maturity Model to assess the capability of its HSEMS. This includes the following:

- compliance with and the suitability of the Health, Safety and Environmental Policy
- the validity of risk assessments and control measures
- performance against targets and objectives including the London Underground Health, Safety and Environment Improvement Plan
- the effectiveness of the Management System in respect of Health, Safety and Environmental arrangements
- the effectiveness of the communication of health, safety and environmental information
- the implications of new or changed legislation and how requirements will be complied with
- on-going compliance with legislation and best practice
- the suitability of competency and training arrangements
- the effectiveness of previous corrective actions.

### 12.4.2 Means of review

Section 2 described the governance and management arrangements for Health, Safety and Environment within London Underground, including roles and responsibilities for review activities. In addition to the periodic review described above, London Underground undertakes review activities when the need is identified as the result of:



- audit findings
- achievement of safety performance targets/objectives
- changes to internal or external standards
- developments in best practice and technology
- changes in policy
- organisational change
- changes to legislation
- risk assessments
- incidents/incident investigations.

### **12.4.3 Actions as the result of HSE review activities**

The results of significant Health, Safety and Environment review activities are recorded and the actions required determined accordingly. This may include actions being incorporated in the London Underground Health, Safety and Environment Improvement Plan/the London Underground Plan for the most significant items or else included in lower level action plans as part of local improvement monitoring. Sections 2 and 14 set out more fully London Underground's Health, Safety and Environment monitoring and assurance arrangements.



## **Section 13: Co-operation**

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## 13.1 Introduction

As part of the overall transport system for Greater London, LU has physical interfaces with other infrastructure managers, train operating companies (TOCs) and freight operating companies.

LU is committed to effective co-operation and the pro-active handling of interface risks with other infrastructure managers and train operating companies. This approach ensures that LU and other train/freight operating companies are able to fulfil their respective obligations to provide services safely and reliably. These arrangements are underpinned by regular operational liaison meetings between LU operational managers and their counterparts in other transport undertakings where day-to-day health and safety management matters are addressed, along with arrangements for responding to incidents and ad-hoc requirements. At an operational level, this also facilitates the local sharing of information and plans.

The key areas where LU's HSE management arrangements set requirements for co-operation are:

- interface risk assessment and control
- emergency planning and incident response
- incident reporting and investigation
- change management
- health and safety communications.

A list of stations where LU interfaces with other infrastructure managers is included in Annex 13A.

## 13.2 Liaison and co-operation arrangements

LU's interfaces with other railway operators are managed through LU's National Rail Agreements team at a corporate level. Local interface management is the responsibility of the relevant Area Manager.

Where changes to LU assets are instigated by LU, which may export risk to Network Rail or TOCs, these changes are communicated to the relevant party via LU's Infrastructure Protection Team and, where contractual obligations are impacted, the National Rail Agreements team. These teams also act as the first point of contact for Network Rail or TOCs when their changes are likely to impact on LU's activities. Agreements made in certain instances with other operators are also managed by the National Rail Agreements team.

The National Rail Agreements team operates by:

- developing and maintaining contracts with all national network parties for which there is a commercial and / or operational relationship
- supporting the day-to-day performance of the safety, commercial and operational interfaces between LU and the national rail companies
- addressing performance issues or impacts which arise at the network boundaries
- managing the processes of generating, reviewing, renewing and updating agreements and arrangements with national network parties
- working with other TfL bodies, such as DLR and London Overground, to provide similar contractual relationships as those to national network parties.



## **13.3 Documentation of co-operation arrangements**

### **13.3.1 Managing National Rail Agreements**

The National Rail Agreements framework has the following elements:

- statutory and legal vesting provisions that impose duties on LU and other railway operators
- track and station agreements that provide access for LU over Network Rail infrastructure or other rail operators access over LU infrastructure. These include provisions for:
  - safe operation
  - compliance with LU or Railway Group Standards
  - changes to legislation
  - a performance regime with incentives (where applicable).
- the London Transport / British Rail Works Access Agreement 1964 which provides for access to and maintenance of infrastructure at the national network interfaces to applicable safety and engineering standards
- site specific engineering arrangements that describe the boundaries between LU and Network Rail in terms of ownership of property and fixed assets and state the maintenance and safety obligations arising for each asset
- the LU protocol for works that reaffirms both parties' commitment to work safely, to minimise the risk of loss to the other party as a consequence of works and to maximise business and customer benefits through co-operation
- the LU/Department for Transport (DfT) Memorandum of Understanding that provides for the DfT to consult with LU whenever there is a change to a train operating company franchise so that the safety, commercial and operational implications for LU can be reviewed and commented on.

All stations subject to regulated access have a Station Access Conditions document which sets out the arrangements between London Underground/Network Rail and TOCs. Each regulated Station has its own Station Access Agreement which makes reference to the Stations Access Conditions and is registered with the ORR.

Each agreement between national rail network parties and LU is specific as to the infrastructure involved, the services provided and the contracts used for authority to manage processes arising. Track agreements include a map of the route and definitions of routes, crossovers, sidings and reversing points, which may be used. At station interfaces, the exclusive and shared facilities and services are detailed in the schedules to the station agreements. This enables risks to be quantified and understood. Accountabilities for providing specified services and for maintaining the infrastructure are identified.

Station dispute resolution is managed in line with the conditions set out in the National Station Access Conditions (Condition H: Litigation and Disputes). Where there is unregulated station access then disputes are either referred to independent conciliation or to the court.

All of these interfaces have an impact on LU operations and could pose risk. Therefore, LU liaises with relevant operators when conducting risk assessments. Further details on LU's risk assessment process are set out in Section 4. LU's process for managing the impact of proposed changes is set out in Section 7.



The two track agreements (detailed in Section 13.3.3) set out the terms upon which LU should conduct its operations over the NR tracks, as well setting out the terms upon which NR is to provide access. The agreements oblige the parties to ensure that they each conduct their operations using suitably qualified, trained and experienced personnel, and that alcohol and drugs policies are in place prohibiting the same. Under the agreements LU and NR are to work together to reduce trespass,

The parties are to make available to each other relevant engineering and technical data when requested. There are also obligations to comply with Railway Group Standards.

The parties are to comply with their own safety obligations, which cover health and safety obligations and any relevant statutes or mandatory codes of practice, and not to act to put each other in breach of those obligations. Breach of a safety obligation which affects safe operation is an event of default under the agreements. The agreements allow NR to perform joint emergency exercises.

In the event of any disputes arising under the agreements, the Track Agreement sets out a process by which the issues are escalated internally to a senior level, and if that fails to achieve resolution the parties can apply to court or to independent conciliation.

All of these interfaces have an impact on LU operations and could pose risk. Therefore, LU liaises with relevant operators when conducting risk assessments. Further details on LU's risk assessment process are set out in Section 4. LU's process for managing the impact of proposed changes is set out in Section 7.

For the operation of LU train services on the railway infrastructure which is owned, controlled and operated by Network Rail, modules have been extracted from the Network Rail Rule book and are developed into four RSSB Rules books (RSSB Rules Books 1-4) which underpin Network Rail rules and regulations for LU trains running on Network Rail lines. These instructions are maintained and kept by LU Operational Standards and are included in the training schedule for Train Operators that work on the Bakerloo and District Line Network Rail Interfaces for familiarisation.

There are clear reporting lines within the Network Rail operational environment and Control (LU and Network Rail Operational Teams) to Control Protocols which are adhered to by LU staff when operating on or around the Network Rail track and stations infrastructure.

Regular four weekly meeting take place with the Train Operating Companies, London Underground and Network Rail which refers to continuous improvement through regular reviews of previous period performance and discussions take place to highlight associated risks with compliance for safe operations and contractual performance measures to be met. This covers all the operational and engineering environmental impacts for services provided to our mutual served customers on the shared railway interface, these meetings are commonly known as Joint Delivery Group meetings.

There are also quarterly meetings attended to by Network Rail and London Underground Operational / Infrastructure General Managers and Directors in which the is commonly known as the Joint Executive meeting in which escalation of risks can be driven and tracked.

### 13.3.2 Use of LU infrastructure by other operators

Chiltern Railways (north of Amersham to south of Harrow-on-the-Hill) and South Western Railway (between Wimbledon and East Putney) operate trains over LU infrastructure in accordance with:



- the relevant Track Agreement between London Underground and the TOC
- LU Rule Books
- TOC's Safety Certification,
- relevant LU engineering standards
- Metropolitan line supplement to the LU Rule Books.
- the agreement between London Underground and South Western Railway
- the RSSB GE/RT8000 rulebook
- LU Wimbledon to East Putney Local Operational Arrangement dated August 2003.

The following train operating company ~~ies~~ operates engineering trains over the LU network:

- DB Cargo (UK) Ltd: operates the water jetting train between Amersham and Harrow on the Hill

Before these can operate on LU infrastructure, LU reviews their applications for Certification/Authorisation (as appropriate) and makes representations to the ORR where required. LU also ensures that vehicle approvals are undertaken in accordance with LU standards. This approvals process assesses the third party operators train protection systems. Operations are carried out in accordance with the arrangements outlined above.

Any organisation wishing to access the LU network applies to the Infrastructure Protection Team who will manage the request. The Access Team operates the access booking system and is responsible for publishing station and track access requests.

### 13.3.3 LU operations over Network Rail infrastructure

LU operates over Network Rail infrastructure in a number of locations: operations from Gunnersbury to Richmond and Queen's Park to Harrow and Wealdstone, which take place over Network Rail infrastructure, are undertaken in accordance with:

- the Track Agreements between LU and Network Rail entitled: Track Agreement T03 (un-regulated) between Network Rail Infrastructure Ltd and London Underground relating to the provision of track access and operations on the LU Bakerloo line between Queen's Park and Harrow & Wealdstone stations, and Track Agreement T04 (un-regulated) between Network Rail Infrastructure Limited and London Underground relating to the provision of track access and operations on the LU District line between Gunnersbury and Richmond stations)
- the Network Code
- a valid LU Safety Authorisation / Safety Certificate
- relevant Network Rail and, where appropriate, LU standards.

Engineering acceptance of LU's vehicles over Network Rail Infrastructure is in accordance with Railway Group Standards. LU station staff do not have safety critical track responsibilities in respect of Network Rail infrastructure. Where activities require access to third party infrastructure, appropriate licences must be held, e.g. Personal Track Safety certificate for Network Rail.

There are a number of interfaces where LU trains run parallel with Network Rail infrastructure. LU also has further interfaces with Network Rail where LU is the infrastructure manager. These are between East Putney and Wimbledon on the District line, where Network Rail operate the signals and provide the power supply, and on the Waterloo & City line where Network Rail provides the power supply. These interfaces are managed by contracts between Network Rail and LU.





### 13.3.4 LU's use of other operators' stations

LU services call at a number of stations where the infrastructure is managed by others. These include:

- Arriva Rail London: manages Willesden Junction and Kilburn High Road (LU uses the latter for non-passenger moves only) on the Bakerloo line and Kensington (Olympia) on the District line
- c2c: manages Barking and Upminster stations on the District line
- South Western Railway which operate Wimbledon and Richmond stations on the District line
- Heathrow Express Operations Company Ltd: manages Heathrow Terminal 5.

LU has a number of management arrangements with other operators in place for stations, including:

- Stratford station: LU is Infrastructure Manager for platforms used by the Jubilee line. Two of LU's Central line platforms are situated on part of the station operated by MTR Crossrail (where MTR Crossrail is the Infrastructure Manager). A Local Agreement is in place which outlines the arrangements in place.
- Ealing Broadway: LU owns the platforms which service the District and Central lines and pays First Great Western for the gating facilities and the staffing of shared areas.
- Network Rail stations: LU is the Station Facility Owner (SFO) at 14 stations in a regulated leased agreement with Network Rail. This involves operation and light maintenance at the following stations: Harrow & Wealdstone, Kenton, South Kenton, North Wembley, Wembley Central, Stonebridge Park, Harlesden, Kensal Green, Queens Park, Kew Gardens, Gunnersbury and the parts of the station served by Arriva Rail London at Highbury & Islington, Blackhorse Road and West Brompton. At these last 3 stations, LU owns or has leases for the remainder of the station.
- Train Operating Companies have access agreements with LU to use these stations and, currently in the case of Wembley Central & Highbury and Islington, provide additional staff to assist their own customers for at least part of the day.

LU has established arrangements to manage the risks where stations:

- contain another infrastructure manager's infrastructure
- are linked to another station operator's station
- share access with another station operator's station
- share a common site with another station operator.

At sites where other operators have responsibilities to ensure the safety of LU services, information about how these interfaces are managed is contained in their HSE arrangements.

Where LU assets are located on Network Rail's or another operator's station, LU maintenance responsibilities are shown on their station plans.





### **13.3.5 Other operational interfaces**

London Underground has operational interfaces with London Rail services in the following locations:

- with Rail for London Limited as the Infrastructure Manager for the East London Line and Arriva Rail London as the Train Operator at Whitechapel and Canada Water stations
- the Docklands Light Railway (DLR) at Bank, Canning Town, Stratford and West Ham stations. DLR is the railway and the infrastructure manager. KeolisAmey Docklands is the train operator for DLR. At these stations, KeolisAmey Docklands staff operate the part of the station that serves its infrastructure. However, LU has responsibility for some maintenance of the DLR platforms (e.g. lighting and power).

There are operational interfaces with Govia Thameslink Railway at Blackfriars, Farringdon, Kentish Town, Highbury & Islington, Finsbury Park, Moorgate and Old Street.

**Annex 13A: Infrastructure Manager Interfaces**

Station	Train Services	Infrastructure Managers <sup>#</sup>
Bank/ Monument	Circle District Northern Central Waterloo & City DLR	LUL
Barbican	Circle H & C Metropolitan	LUL
Barking	District H & C c2c London Overground	LUL Network Rail c2c
Blackfriars	Circle District Thameslink (GTR) South Eastern	LUL GTR Network Rail
Blackhorse Road*	Victoria London Overground	LUL Network Rail
Canada Water	Jubilee London Overground	LUL Rail for London
Canning Town	DLR Jubilee	DLR LUL
Cannon Street	Circle District South Eastern	LUL Network Rail
Charing Cross	Bakerloo Jubilee (emergency and special workings) Northern South Eastern	LUL Network Rail
Ealing Broadway	Central District First Great Western	LUL First Great Western Network Rail
Elephant & Castle	Northern Bakerloo Thameslink (GTR)	LUL Network Rail GTR
Euston	Northern Victoria London Overground London Midland Virgin West Coast Caledonian Sleeper	LUL Network Rail
Farringdon	Circle Metropolitan H & C Thameslink (GTR)	LUL Network Rail
Finsbury Park	Piccadilly Victoria Great Northern (GTR)	LUL GTR Network Rail



Station	Train Services	Infrastructure Managers*
Greenford	Central First Great Western	LUL First Great Western Network Rail
Gunnersbury*	District London Overground	LUL Network Rail
Harlesden*	Bakerloo London Overground	LUL Network Rail
Harrow and Wealdstone*	Bakerloo London Overground London Midland Southern	LUL Network Rail
Heathrow Terminal 5	Piccadilly line	LUL Heathrow Express
Highbury and Islington*	Victoria Great Northern (GTR) London Overground	LUL Network Rail
Kensal Green*	Bakerloo London Overground	LUL Network Rail
Kensington (Olympia)	District London Overground Southern	LUL Network Rail
Kentish Town	Northern Thameslink (GTR)	LUL GTR Network Rail
Kenton*	Bakerloo London Overground	LUL Network Rail
Kew Gardens*	District London Overground	LUL Network Rail
King's Cross St Pancras	Circle Metropolitan Northern H & C Victoria Piccadilly Thameslink (GTR) Eurostar Virgin Trains East Coast East Midlands Hull Trains Grand Central South Eastern	LUL Network Rail
Liverpool Street	Circle Metropolitan H & C Central London Overground Greater Anglia MTR Crossrail (TfL Rail)	LUL Network Rail
London Bridge	Northern Jubilee Thameslink (GTR) South Eastern Southern (GTR)	LUL Network Rail