

## Moving materials on escalators

When moving materials on escalators, attention must be paid to:

- loading and unloading the escalator with minimum dynamic loading of the step;
- the stability of the material on the escalator steps and the effect on the position of centre of gravity of the material when it is moved on to the incline, where, because of the overlap of steps, the effective depth of each step is reduced (for scaffolding in lifts or on escalators, refer to the **Static loading in lifts and on escalators** section in this leaflet);
- the support of the material must be in a manner that will prevent it from toppling if the escalator brakes are applied while they are on the incline.



Consideration must be given to the use of strapping or additional persons to support the load. Staff must have one hand on the handrail for support during the movement of materials.



There must be no persons below any material carried on a moving escalator.



A person must be positioned by the emergency stop button at the landing where the load will approach.

The following constraints apply to London Underground escalators:

- maximum usable step width - approx. 900mm
- maximum usable step depth - approx. 350mm
- step rise - approx. 200mm
- angle of inclination 27 or 30 degrees
- maximum (uniformly distributed) step loading must be taken as 150kg.



The person/s responsible for approving the Materials Movement Application form can give advice on safe methods of material movement, if required.



Materials should be grouped into types of similar size and weight. The size and weight of each material must be visible and clearly stated.

## Moving materials in lifts

Station lifts are not specifically designed to carry heavy loads. Any materials or equipment to be moved must be restricted to 25% of the rated passenger loading for the lift (as shown on the lift car load plate). Most lifts (except the step free access lifts) are of 30 or 50 person's capacity and can carry loads up to 560kg or 935kg respectively.

The load must be uniformly distributed over the floor of the lift.

The restricted load limit includes the weight of any means provided for transporting the load into or out of the lift.



It is not permitted to use forklift trucks or other mechanical handling equipment to move materials in to or out of lifts where the combined weight of the handling equipment and the material exceeds the restricted load limit of the lift.

Suitable protection must be agreed with the person/s responsible for approving the Materials Movement Application form to prevent damage to all surfaces within the car lift, with particular attention to sills, door tracks and floors.

Lift sills often have a lower load-carrying ability than the lift itself. When materials are to be placed over a sill, the load must be spread uniformly over it to protect the sill from damage.

## Special movements



In exceptional circumstances, if there is insufficient time to undertake machine room awareness training, arrangements must be made for an approved and certificated person to act as a standby to operate the lift or escalator and as the Site Person in Charge (non-track).

## Static loading in lifts and on escalators

If it is proposed to erect a structure such as scaffolding, on an escalator or within the lift and escalator environment, a request must be submitted using the Materials Movement Application form, together with any relevant drawings. Before authority is given for a structure to be erected, the person/s responsible for approving the Materials Movement Application form must be satisfied that the:

- escalator will be isolated, and, if necessary, anchored;
- balustrade and decking panels will not be used for supports;

- steps and floor trays will be protected from point loading by the use of load spreading plates;
- escalator must be protected from dust, debris, liquids and loose articles from the works;
- safe entry and exit must be maintained at all times within the lift and escalator environment.



Supervision must be maintained at all times when scaffolding is being erected and/or dismantled.

## Damage to lifts and escalators

If the escalator or lift is damaged or contaminated with loose material, the Site Person in Charge (non-track) must immediately:

- stop the escalator or lift;
- make safe the load on the escalator, if necessary;
- tell the Station Supervisor;
- isolate the escalator or lift;
- tell the Fault Reporting Centre;
- make sure the escalator or lift remains out of service until approval to restart is given by a trained lift or escalator engineer.

## Audit

The person/s responsible for approving the Materials Movement Application form must audit the movement of materials in lifts and on escalators.



Non-compliance with the approved methods of working will result in the withdrawal of the authorisation.



Records of material movements must be kept for 12 months by the applicant and 3 years by the person/s responsible for approving the Materials Movement Application form.



Most materials used for station work can damage lifts and escalators if not transported correctly. This damage might not be immediately apparent. Components, over-strained or distorted, by this damage can fail at a later date through fatigue or accelerated wear.

## General

Maintenance companies/departments must appoint a suitably qualified Site Person in Charge (non-track) to manage possession and use of lifts or escalators for movement of materials.

The Site Person in Charge (non-track) must:

- identify all materials to be moved;
- have agreed safe methods of working with the person/s responsible for approving the Materials Movement Application form;
- undertake a manual handling risk assessment before the work is carried out;
- be trained on how to safely move materials;
- be in possession of a Movement of Materials Licence and have filled in a Permit to Work form.



All accidents must be reported using the LU Incident Reporting Forms (IRFs).



For further information, refer to LU standard I-092 Escalators and passenger conveyors.

### Hand held items carried in lifts or on escalators

Small, easily handled items can be carried in lifts or on escalators at any time, provided that the items:

- are held in the hands and can be safely managed by one person. The person must be able to move freely, see where they are going and can, in the case of an escalator, steady themselves with one hand on the handrail, if necessary;
- do not exceed 1.8 metres in length or 25kg in weight and are shorter or lighter, if the capability of the person undertaking the task deems this necessary;
- are securely packaged, with liquids in sealed robust containers and loose items and granular materials double or triple bagged;
- do not present a risk to passengers or staff (for example, items with sharp edges and/or corners must be properly protected);
- are clean and there is no risk of soiling or snagging passengers' clothing;
- are handled so as not to damage the lift or escalator or to cause risk or inconvenience to passengers;
- are not slid down the decking panels or rested on the handrails or steps of the escalator.



If the load is unsafe to passengers, it should not be carried during passenger service. However, if it is an emergency, the Station Supervisor must stop the passenger flow before allowing the item to be moved in the lift or on the escalator.

### Loads that cannot be hand held and require moving using lifts or escalators

If the loads that cannot be hand held:

- a Materials Movement Application form must be completed and sent to the the person/s responsible for approving the Materials Movement Application form at least five working days in advance;
- a proof, that all alternative routes to move the material have been examined, and that no other reasonably practicable option exists, must be provided e.g. engineer's train;
- the movement of materials, wherever practicable, must be incorporated in the station possession plan.



A generic authorisation is issued to some contractors for ad-hoc movements.



Movement of loads that cannot be hand held must only be carried out while the station is closed to passengers. A permit will be required under the permit to enter system to take possession of the lift or escalator.



Approved barrows must be used to move materials on a moving escalator or the load must be lifted over the combs. Step tread protection must be provided, if necessary.

### Materials Movement Application forms

These forms can either be obtained by contacting the appropriate Lifts and Escalators department or downloaded directly from:

**L&E.MOM@Metronetrail.com** OR

**Movementof.Materials@tubelines.com**



Whom you contact will depend on where the work is taking place.

# Movement of materials in lifts and on escalators



## Best practice for staff moving loads in lifts and on escalators (including static loading)

Operational Standards  
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