

Goods lifts and the Secret Life of Buildings



Goods lifts and the Secret Life of Buildings

Thinking about what makes buildings work:

- Mechanical services - Heating & ventilating
- Plumbing – Water and drainage
- Electrical services - Power and lighting
- Lifts – vertical transportation
- Security – Access and CCTV

Goods lifts and the Secret Life of Buildings

The everyday operation of the building is completely dependant on the management of logistics:

- Managing delivery schedules
- Goods in
- Waste out
- Couriers and postal services
- Fit out works
- Movement of back of house staff

Goods lifts and the Secret Life of Buildings

Building logistics management is back of house and unseen, but:

- Do we understand what is required?
- Do we design to accommodate the need?
- Is any design fully coordinated?
- Is the need appreciated by the design team?

What are the changes?

Trends driving change in office building design and use:

- Increased densities.
- Consolidation of business operations.
- The need for office buildings to ‘earn their keep’.
- Business need for high density accommodation (trading floors)
- Marketing of high density buildings by letting agents

What are the changes?

- The planners requirement for buildings to include the 'public realm'
- The growth in roof top, public access, restaurants
- Developers aspiration to provide roof top gardens and amenity spaces
- High level public viewing galleries with retail/catering facilities

What are the changes?

Manual handling regulations

This has seen the greater use of:

- Timber pallets



Used for delivery of heavy goods/materials

- Wheeled caged trollies



Used for goods distribution and movement

- Eurobins -



Used for waste collection & removal (240 to 1100 litres)

What are the changes?

Building operations:

- Segregated waste management (streaming)
- Postal decline and increase in courier deliveries
- Flexible delivery times
- Plant replacement strategy
- Refurbishment and fit out works

What provides the service?

The humble goods lift:

- Back of house
- Unseen
- Overworked
- Abused
- Unloved

But – the life blood of the building!



What provides the service?

Goods lift use:

- Early beneficial use during construction
 - Accommodating construction and fit out materials
 - Waste removal
 - Moving palletised materials
 - Heavy plant
- Servicing the building needs post completion
 - Goods
 - Waste
 - Servicing food outlets
 - Fit out materials
- 'Special' requirements; extra heavy loads, very large items (trees!)

Guidance to goods lift design

CIBSE Guide D 2015

Recommend that:

One dedicated goods lift be provided for useable floor areas up to 10,000m²

An additional goods lift be provided for each additional 'gross' 20,000m²

Minimum capacity 1600kg with consideration of a capacity of 2500kg

Guidance to goods lift design

Theoretical limits of current guidance related to population

Change in office densities from 1:14m² to modern day 1:8m²

- Minimum (assuming 80% utilisation) 571 people
- Maximum 3000 people

Looking at measures

BS 5906 (2005) Waste Management in Buildings - Code of Practice

Waste generation

Table 1 cites:

Offices - 50 litres of waste per person, per week.

Waste generation is detailed in volume as opposed to weight

Looking at measures

Waste generated per week/day based on a 5 day week

- Minimum 571 people $\times 50 = 28,550$ litres per week, 5710 litres per day
- Maximum 3000 people $\times 50 = 150,000$ litres per week, 30,000 litres per day

Use of goods lifts

Things to consider in goods lift design and service provision

- Beneficial use during construction
- Plant replacement, can include glazing panels
- Movement of hazardous materials
- Inwards movement of goods, including food
- Streamed waste removal, including food waste
- Building fit out materials and transportation of workers
- Movement of post and courier deliveries
- Access for back of house staff
- Use by the emergency services

The wider picture

Areas to be considered:

- Correlation between loading bay capacity, goods lift provision and the management of building logistics.
- Assessing the volume of arriving goods and means of transportation to final destination
- Better understanding of waste management streams and impact on goods lift usage
- A coordinated approach to assessing building management logistics and the part goods lifts play

Goods lifts and the Secret Life of Buildings

Goods lifts are an integral part of the secret life of buildings.

Their design should be seen as part of a coordinated approach encompassing the full scope of services required.

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Goods Lifts:

Their secret is out!

