



Solid Waste Transfer Station exactly describes the function of this building on the banks of the River Thames adjacent to Wandsworth Bridge. Non hazardous solid waste of all kinds is delivered to the station by local borough collection vehicles and traders for transfer into bulk containers, completely enclosed, for transportation by river barges to a landfill site in Essex.

The station was commissioned by the Greater London Council Public Health Engineering Department and it serves a number of London Boroughs, south and north of the river. The site also provides a facility for members of the public to deposit special deliveries of refuse which are not collected under the normal service provided by the Boroughs. Since the demise of the G.L.C. the station has been administered by the Western Riverside Waste Authority which undertakes the waste disposal function of the London Boroughs of Wandsworth, Hammersmith & Fulham and Kensington & Chelsea.

The Western Riverside Station is designed as a compactor station whereby waste is compacted directly into standard sized containers. In order to permit delivery vehicles to discharge directly into the feed hoppers of the compactors, the tipping floor is elevated at some 7 metres above ground level and approached by a ramp. The waste is fed by gravity from the hoppers into the compactors at ground level where a hydraulic ram compresses the waste into the containers, thereby reducing its bulk and allowing a greater quantity of waste to be carried in each container.

When a container is fully loaded it is released from the compactor and rolled forward on rails to allow its loading doors to be closed before being lifted by gantry crane onto the quayside storage area. The normal transport for the containers from this station is by river barge to a landfill site at Mucking Flats in Essex. However, the use of standard containers means that they can equally well be transported by road container vehicle as an alternative standby method. All loading and unloading operations are carried out by the two gantry cranes which cantilever out over the river to service the barges.

The process described above involves a series of linked activities commencing with the arrival of a refuse vehicle at the weighbridge and finishing with the departure of the vehicle when empty, and again weighed. During the series of activities between weighing in and weighing out rigid monitoring and control is exercised by the station staff and vehicle operatives to ensure complete safety. Safety and environmental control is further emphasised by the fact that the waste is completely enclosed from when it enters the hoppers until it is discharged at the landfill site.

The pitched form of roof was selected for the building in order to help minimise its bulk. At the same time the steel columns stand forward of the reinforced concrete structure to allow for an interplay of light and shade on the facade to give scale to the bulk of the building. It was a requirement of the Borough of Wandsworth that the riverside walk should be continued across the site. Early studies

## Western Riverside Solid Waste Transfer Station

For Western Riverside Waste Authority



of this showed that such a walk would seriously conflict with the operational requirements of the station and it was subsequently decided to accept the design Team's proposal which incorporates a high level walkway across the face of the buildings, at a position which does not conflict with the operation of the station and which also provides excellent views of the quayside activities.

To reach this upper level riverside walk, which will be open to the public, one will walk up gradual ramps which link with the riverside walk to the east and a walkway along the adjacent creek to the west. Considerable attention has been paid to the landscaping of the site which at the present time is in its early days and it will be some time before the planting has matured. The public amenity area – which is an area to which the public is allowed access to deposit refuse – is located on the East side.

There are two main levels to the building. The ground floor houses the compactors, workshops and offices and gives direct access for the containers on to the quayside where barge loading operations are carried out. The first floor contains the tipping bays and dust control equipment. This floor is designed as a high daylight space and the daylighting is provided from a high lantern so that the operation of tipping into the hoppers can be seen clearly by the operatives. The control cabin overlooks the tipping floor, the weighbridge and the approach ramp so that the controller may visually assess the situation over the whole of the route. His control panel indicates the status of all aspects of the system on the packing side of the operation. The building is designed for easy cleaning throughout so that the highest standards of hygiene can be maintained.

The height of the tipping hall is carefully proportioned for the largest vehicles expected to tip in this area and similarly the entrances to this space also allow maximum headroom. The roof over the main tipping hall is constructed in rolled steel sections with lightweight cladding. The steel structure forming this space is strongly expressed on the exterior of the building; the cross sectional members of the roof profile being a powerful element of the design. The quayside operation is carefully planned to permit the maximum flexibility in loading the barges and two cranes are available for this operation. The gantries, cranes, high level public walkways, access ramps and stairs at each end of the operational quay are all constructed in steel, the structural elements of which are also strongly expressed. The approximate cost of the complete project was of the order of £12 million.

### JUDGES COMMENTS:

Speed of construction of this model industrial building was aided by the boldly expressed steel frame which imparts a surprising dignity to a complex with such a utilitarian purpose.



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