

Guide to Rail Freight

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Selecting a rail haulage package

The easiest way to obtain rail haulage is to buy the package through a freight operating company (FOC), intermediate terminal operator or other third-party logistics company. They can offer you a range of options, from a stand alone rail haulage service which collects a train from one terminal and delivers it to another (known as 'hook and haul'), through to a complete package which may include haulage, wagons, terminal facilities and road collection and delivery.

Another option is to become a train operator, which may offer advantages but may be time-consuming and expensive to set up. Prospective rail freight customers are recommended to seek advice from the above parties.

Type and volume of traffic per train

The nature of the freight to be carried by rail will affect most aspects of the rail service, including the type of rail terminal(s), rail wagons (rolling stock) and haulage (traction). The textbook definition of ideal traffic for a rail service would be that involving high volume and/or long-distance flows. However, various combinations of payload and distance can produce viable flows, with grants available to cover start-up and/or operating costs if required.

For **bulk** commodities, such as coal, aggregates, minerals or petrochemicals, volumes of between 1,000 tonnes and 4,000 tonnes moved directly between rail-linked sites (e.g. quarry to processing plant, port to factory, factory to distribution centre) can be competitive with other modes over distances as short as 10 miles.

For **non-bulk** commodities, such as manufactured goods and foodstuffs, such high volumes might be difficult to achieve within a single train. However, competitive services may still be possible with payloads of 300 tonnes or more per train, over distances more than 150 miles between rail-linked sites, where there is little or no road haulage needed at either end.

Multi-user train services are available to handle individual wagon or container loads, but maximising the volume despatched per train should be the aim wherever possible.

Identifying terminals

Having determined the volume of traffic likely to be shipped by rail, the next step is to determine which rail terminal will be used at each end of the rail haul, between the ultimate origin and destination of the flow.

In an ideal world, the origin and destination would lie alongside the railway line, to avoid the need for additional road haulage and double-handling. Where this is not the case, the customer should seek guidance from the rail

freight industry contacts in the Directory, as to the location of the nearest rail terminal(s) and the facilities available on site. The options available for an end customer are as follows:

a) Use the nearest rail terminal(s) at each end. These may or may not have the right facilities on site to handle or store the traffic. If not the customer will need to explore with the terminal operator whether facilities can be provided within time or budget constraints. Grants may be available to offset the costs of installing these facilities.

b) Use the nearest rail terminal(s) with the right facilities. This may be more distant than option a) above. The additional road haulage costs at each end will need to be considered against any savings in investment in facilities which might be incurred in a).

c) Develop dedicated rail terminal(s) at either / both ends. If a direct rail link is possible at either the ultimate origin and/or destination for the rail service, this option should be explored to determine the likely investment and lead time, and potential grant availability. In some cases, there may be scope for relocating from an existing site to an alternative rail-linked site, to remove the road haulage which would otherwise be required.

Assessing the need for road haulage

The requirement for road haulage at each end of a rail haul can impact on the 'door to door' price of a road-rail-road service compared to the road-throughout price. The aim should be to minimise the length of road haul at each end of a rail haul, either by careful choice of rail terminals, or by bringing the origin and/or destination to the rail network (e.g. relocation or new rail links). Grants may also be available from the SRA to offset additional road costs

Identifying wagons and loads

There is a wide range of modern railway wagons available to suit most traffic requirements, which divides into two main groups:

- Conventional wagons: normally designed for a specific purpose / traffic, such as hopper wagons for coal or aggregates, tankers for petrochemicals, covered van wagons for palletised traffic.
- Intermodal wagons: designed to carry various intermodal units (e.g. containers, swap bodies or piggyback trailers) in combination on a flat deck carried above or between the railway wheel sets ('bogies').

There are various trade-offs between using conventional and intermodal wagons, in terms of the maximum payload tonnage and volume per train, against the ease of transshipment at each end to other modes, production or storage facilities. Conventional wagons tend to offer the best payload to

weight ratio, but handling arrangements at each end may be more involved. Intermodal wagons and the intermodal units placed thereon tend to offer the closest match on internal height and width to road trailers, and only one type of handling equipment is required.

Wagons and intermodal load units can be provided by the rail haulier and/or a third-party leasing company or manufacturer. The decision on the type of procurement option to be pursued will depend on the type of wagon required, the length of contract envisaged, and the relative costs. In some cases, a bespoke wagon design may be required for a specialised traffic where no existing wagon will suffice. Grants may be available to offset the cost of these wagons, but lead times can be significant for design, construction and technical approval.

Developing the timetable

The national rail timetable (NRT) is one of the most important and complex components of the railway system, co-ordinating thousands of train movements per day across the network. The timetable is revised twice a year, to take account of the aspirations of freight and passenger train operating companies.

For freight services, it is recognised that, unlike passenger services, some freight trains may not always operate to the same timetable every week. Depending on the volume and pattern of demand, freight trains may only operate 'as required', and/or may operate between different terminals.

Day to day operation

Haulers and their customers want reliability above all else. Roads are becoming more unreliable, due to the impact of increased congestion, and incidents on the highway network can cause major knock-on delays to all road users. Rail freight services can sometimes be similarly affected. Rail services are planned and a schedule is issued to show the times when the train should run. Sometimes this may not be possible. Over the last few years, the rail industry has invested heavily to improve service reliability, including train operators investing in new locomotives and rolling stock, and Network Rail / SRA investing in renewals to track and signalling equipment. In addition, Network Rail and the train operating companies have contingency plans to minimise delays to services should an incident occur. These include:

- Train drivers learning diversionary routes that they can operate over should there be delays on their planned route
- Standby locomotives positioned strategically around the rail network to assist any trains that break down

- Multi-skilled staff deployed around the clock, to enable a range of repairs to be carried out quickly, outside of planned maintenance schedules.

In addition, however, it is very important that trains depart their originating point on time. The rail network operates to a tightly timed pattern of intertwined train services and any train which misses a scheduled departure may have to wait some time for a spare path in the timetable and may delay other customers services in the process.

To ensure the reliability of the network, Network Rail undertakes a schedule of maintenance and improvement works on the network. As a result some services may be diverted or have extended journey times (train operating companies are normally given between 6 and 18 months notice of planned maintenance work in order that they can reschedule services accordingly).

Customers are advised to discuss contingency plans with their rail hauliers, both for scheduled maintenance and for dealing with incidents when trains may be unable to run. This may involve agreement to alter schedules on specific days to circumvent planned maintenance, or to provide stand-by road haulage via local call-off agreements, to keep the traffic moving should the rail service be unable to operate.