

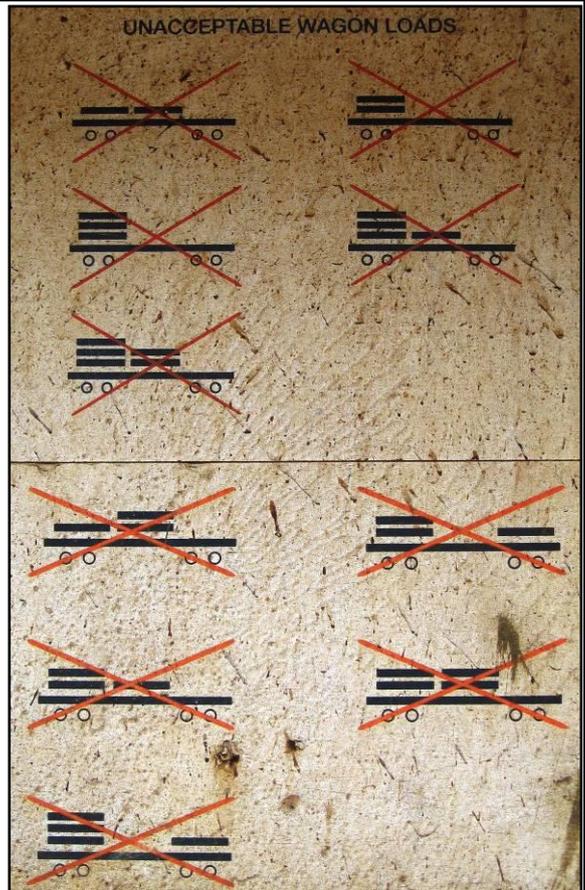
WAGON TYPE	COMMODITY	
KRA FEA (Balfour Beatty Rail - fitted with special load modules)	Concrete sleepers Steel sleepers Wooden sleepers with furniture attached.	
Carrying Capacity:	FEA	KRA
Gross Laden Weight	82 tonnes	78.9 tonnes
Carrying Capacity	61.3 tonnes	53.9 tonnes
Tare	20.7 tonnes	26.42 tonnes
<p>FEA wagons are fitted with three x 6.1 m (20') load modules; the weight of these load modules shall be included with the weight of the sleepers. Each load module weighs 3.3 t.</p> <p>These load modules replicate the KRA wagon tops and provide the loading area for the sleepers.</p> <p>For exact loading limits, see individual wagons on TOPS</p>		
<p>Concrete sleepers</p> <p>KRA & FEA wagons may be loaded with up to three tiers. The maximum amount of sleepers in a full tier shall be 54. Make up each tier of three packs of 18 sleepers. Part tiers are permitted if the load is evenly distributed on the wagon – see load distribution panel. Part loaded packs are not permitted.</p> <p>The maximum permitted amount of sleepers shall be 162.</p> <p>(If additional sleepers need to be loaded, obtain special authority from NDS Loading Standards.)</p>		
<p>Steel sleepers</p> <p>KRA wagons may be loaded with up to four tiers. The maximum amount of sleepers in a full tier shall be 39. Make up each tier as three packs of 13 sleepers. Part tiers are permitted providing the load is evenly distributed on the wagon – see load distribution panel. Part loaded packs are not permitted. The maximum amount of sleepers shall be 156.</p> <p>FEA wagons may be loaded with up to five tiers. The maximum amount of sleepers in a full tier shall be 39. Make up each tier as three packs of 13 sleepers. Part tiers are permitted providing the load is evenly distributed on the wagon – see load distribution panel. Part loaded packs are not permitted.</p> <p>The maximum permitted amount of sleepers shall be 195.</p>		
<p>Wooden sleepers</p> <p>KRA & FEA wagons can be loaded with up to three tiers. The maximum amount of sleepers in a full tier shall be 54. Make up each tier as three packs of 18 sleepers. Part tiers are permitted providing the load is evenly distributed on the wagon – see load distribution panel. Part loaded packs are not permitted.</p> <p>The maximum permitted amount of sleepers shall be 162.</p> <p>(If additional sleepers need to be loaded, obtain special authority from SCO Network Rail).</p>		

Load Positioning:

Load sleepers centrally across the width of the wagon and sit them on the two longitudinal bolster sections running the length of the wagon. The longitudinal timber bolsters shall be in good condition before loading is permitted.

Each wagon has three loading areas that are separated by stanchions. These areas have been specially designed to accommodate all plain line sleeper types: wood, steel or concrete.

The stanchions shall be present at the extreme ends of the wagon as they prevent longitudinal movement of the end sleepers. Part-loaded wagons are permitted if even weight distribution is maintained along the wagon. Only full packs of sleepers are permitted in each loading area. The weight shall be spread evenly across the wagon. Sleepers may never extend beyond the centre of the gantry rail that runs down each side of the wagon. This will become foul and prevent the safe movement of the gantry vehicle during the unloading process.



Stanchions: KRA has eight fixed stanchions. FEA has 12 fixed stanchions with four per load module

Bolsters: Two longitudinal bolsters divided into three loading areas by the stanchions.

Dunnage: Timber shall be 5.5 m (18') x 75 mm x 75 mm and in good condition. 2 x pieces of timber shall be positioned per pack of sleepers per tier with the timbers being positioned within the rail housing. For each full tier, a total of six pieces of timber shall be used.

Returned Timber

Position the timbers on the inside of the wagon winches along the wagon sides in a uniform fashion. Timbers shall not be higher than the side and end retaining plates. Secure the timbers by two throw-over straps positioned at each end of the timbers. If required, it is also possible to position timbers in between the longitudinal timber bolsters in the centre loading area of the wagon. Timbers shall not be higher than the longitudinal bolsters. Secure them with two throw-over straps positioned at each end of the timbers.



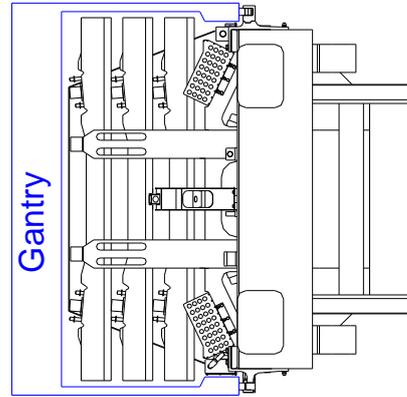
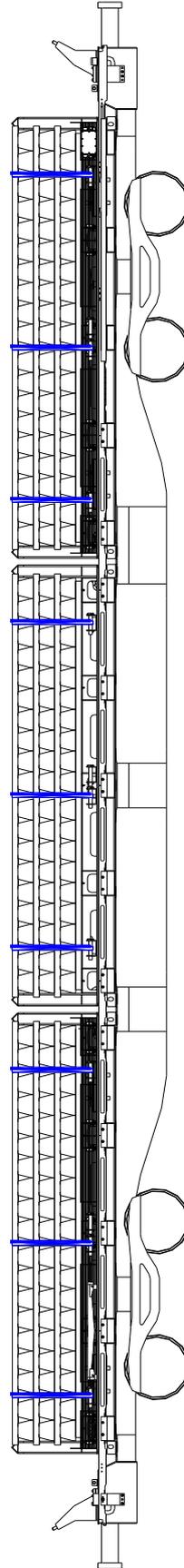
Position timber dunnage either along the outside of the wagon or between the longitudinal bolsters, secure with two throw-over straps.



Unsecured Loads: Not permitted.

<p>Securing Equipment: Each loading area has four winches (per side) of which three shall be used at any one time. This depends on the exact location of the centre gap of the sleeper pack being loaded. Use three throw-over straps for each pack of sleepers, with a maximum of nine throw over straps being used for a full complete tier.</p>
<p>Void: The nature of the machine means that each layer of sleepers can be controlled when accumulated, before being transported to the wagons by the gantries, i.e. gaps for strapping can be accurately positioned in between sleepers. This allows for gaps to be reliably placed in line with the wagon winch positions. The two outer gaps on each pack will be positioned two sleepers in, as was determined to be the most effective location. The centre gap will fall one or the other side of the centre sleeper. To allow for this and to keep the wagons symmetrical there will be two wagon winches next to each other in the centre position, as shown in the attached drawing.</p>
<p>Doors/Sides: N/A</p>
<p>Special Equipment: Correctly stowed and secured bridging rails in the running position. Do not leave jumper cables loose on the wagon ends. Wagons may be load examined as a block train providing the necessary requirements are met. FEA wagons are fitted with three semi-fixed load modules that are located on to twistlock/spigot type fastenings. Secure load modules by a minimum of four twistlock/spigots.</p>
<p>Loading Competency: LE NTC</p>
<p>Safety: Wear PPE at all times. Beware of reduced clearance for hand ratchets tensioners.</p>

FEA (Fitted with KRA tops)



KRA Loaded with Steel Sleepers

