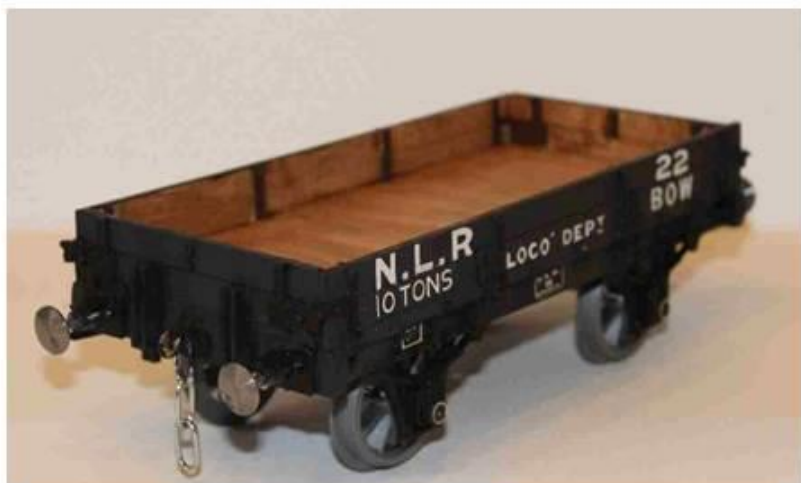




**North London Railway (NLR)
Ballast Wagon
13.5mm scale ("G3")**



Era 1-2
Pre-grouping

**13.5mm Scale
Laser Cut & 3D
printed parts**



NLRG301

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Contents

Chassis Parts

This kit contains the parts as detailed below. The actual contents may differ in composition from the images which are given in this document for illustrative purposes and may change without notice.

Chassis

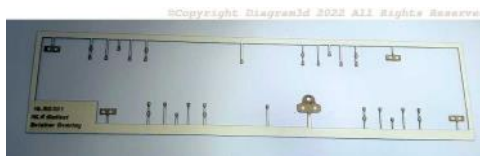
3D printed chassis



MDF solebars



Card overlays for solebars



brake gear and brake lever & 3D printed axleboxes





*Contents
(continued)*

*Strapping and iron-
work detail*

Strapping and Ironwork

Outer strapping (sides)



Inner strapping (sides)



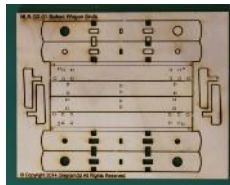
2 x inner, outer strapping (ends) and miscellaneous parts



*Contents
(continued)*

*Sides, ends, buffer
beams and end
stanchions*

Birch Ply or MDF frets
Ends, buffer beams and end stanchions, Floor



Wagon sides





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Contents (continued)

Fret for Number plate, tare and axle covers

Number
plates, tare
plate and
axle covers



Not included
in this kit

The following items are not included but are required in order to complete this kit.

Adhesive to attach the parts. PVA is recommended for the MDF parts.

Craft knife, Clamps, weights or other tools

Paint, filler, varnish etc.

Wheels, bearings, buffers, couplings etc. This kit is designed to accept Slater's wheels which include bearings.

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Hints on assembly

During assembly:

Do not detach individual components from strapping frets before it is time to use them.

When separating components from the frets, *turn the part over and cut through the rear face where possible.*

Do not detach individual components before it is time to use them as the frets supplied may include positioning to save time in assembly and to ensure consistent alignment.

Pre-assemble and check the fit of parts at each stage.

At each stage, once the required components have been separated from the frets, test the assembly without adhesive to ensure that the parts are trimmed correctly and fit properly before final assembly with adhesive.

Seal components.

General:

It is strongly advised that porous components are sealed before assembly.

Allow as much time as needed for adhesive to set.

Pre-paint components. Fill small gaps and smooth surfaces after assembly for optimal results.

The assembly steps below are recommendations and should not be taken as definitive or prescriptive. The timings given are estimates and do not include waiting time.



Chassis

Total preparation and assembly time about 30 minutes.

Allow sufficient time for the adhesive to set thoroughly before continuing

(Hint: To save effort, the chassis components surfaces can be painted before separating them from the frets however care should be taken to avoid gluing the parts to the fret with the paint.)

Carefully separate all the chassis components using a craft knife.

Note: The inner section of the chassis is now supplied as a 3D printed item.



Attach the inner "W" irons and outer side frames and clamp until set. *(Hint: The plastic axleboxes can be inserted temporarily in order to ensure good alignment.)*

When set, attach the striker plates to the chassis side frames matching the pre-set positions etched onto the solebars.



Finally, the etched card overlays can be attached to the solebars. Attach with glue (PVA glue is recommended), detach the membrane when set and lift off the connecting pieces carefully.



Ends, sides and floor

Total preparation and assembly time about 20 minutes.

Allow the adhesive to set thoroughly.

*Caution:
Align striker plate outlines on the sides to the chassis (see next section)*

Carefully separate all the components using a craft knife.

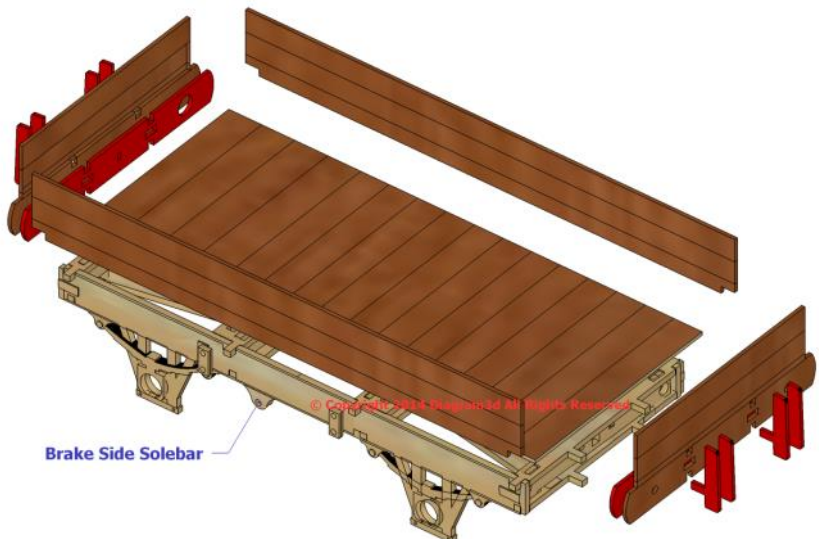
(Hint: The exterior of the sides and ends may be painted with the base colour at this time.)

Attach a buffer beam to the inner end of each end and clamp. When set, attach the ends to the chassis using the rectangular spigots on the chassis.

Glue the end stanchions together in pairs and insert in the ends, ensuring that they are vertical. Clamp until set.

When set, position the floor between the ends and attach to the underframe. Weigh or clamp to ensure good contact and wait until set.

Before attaching the sides, *ensure that the sides are positioned so that the striker plates marked on the sides match the chassis (see next section)*. Clamp to ensure good contact.





Strapping.

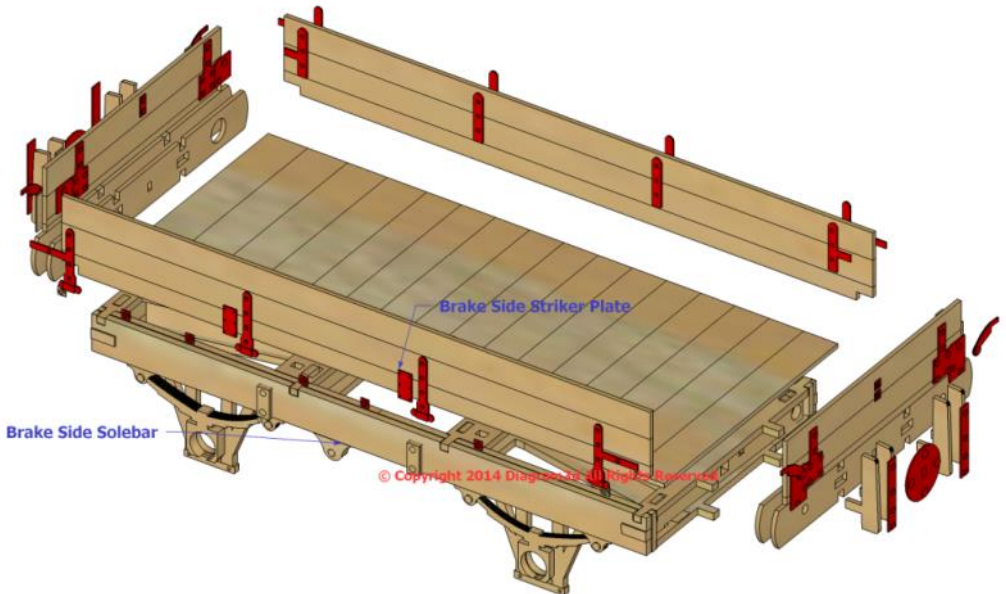
Total preparation and assembly time about 20 minutes.

Allow sufficient time for the adhesive to dry thoroughly

The supplied strapping is pre-positioned on the fret and matches identifying marks on the vehicle sides and ends. Attach the outer strapping to the sides first. When set, remove the fret from the strapping detail. Now attach the outer strapping to the ends of the vehicle, aligning with the side strapping and identifying marks on the ends.

When set, the inner strapping is attached in a similar manner except that the inner end strapping is attached before the inner side strapping.

Finally the end plates for the stanchions are attached as well as the draw hook plates. These parts are applied freehand using the drawing for reference.





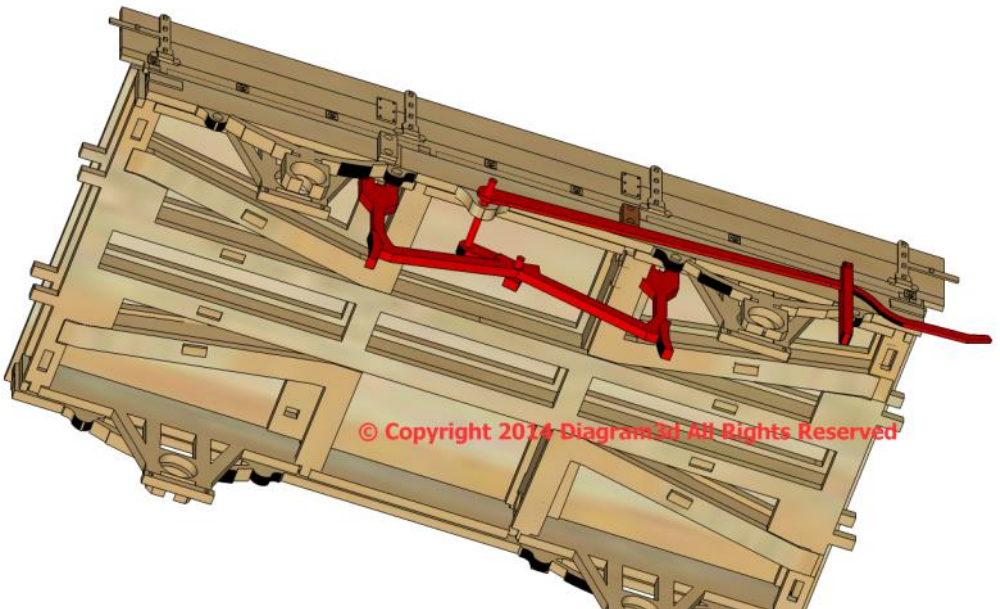
Brake gear and lever

Carefully detach the brake gear and crank arm from its fret. The brake gear acted on one side only, the same side as the brake lever.

Attach the brake gear to the underside of the wagon, matching the slots. The crank arm is located behind the brake gear and attached with a short length of dowel at both ends of the crank. The dowel at the lever end should be long enough to mate with the brake lever. It will be trimmed to length later.

The brake lever supplied is the long arm version. To assemble, detach the ratchet at the right hand side of the fret and attach to the brake lever which is still in the fret. When set, attach the spacer behind the ratchet and brake arm leaving space at the top of the brake arm so that the brake lever fits snugly against the underframe with the ratchet overlapping the side of the wagon.

Attach the brake lever as shown below so that it mates with the dowel inserted through the crank arm. When dry, trim the dowel to size at the end of the lever and also at both ends of the crank arm.





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Ballast Wagon
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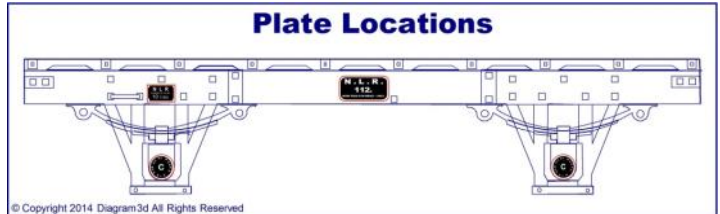
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*Number Plates,
Tare and axle box
covers*

Carefully detach the number plates, tare plate and axle covers and attach these to the positions indicated below on each side of the wagon.

*Total preparation
and assembly time
about 20 minutes.*

*Allow sufficient time
for the adhesive to
dry thoroughly*



Historical Notes

This kit is based on information received from many sources including The National Archives, existing photographs of the vehicles and information from historical societies, in particular the North London Railway Historical Society. The NLR periodically published specifications and technical drawings for private owner wagons on its network which contain relevant information.

The NLR maintained approximately 24 ballast wagons. These wagons were built at Bow works until the LNWR took over operations circa 1909. The model depicts a typical design which would have been in use around the end of the 19th century. A minute dated 1895 authorises the replacement of 24 ballast wagons which had reached the end of their useful life and were to be scrapped.

Similar wagons can be found by examining the plates in the book "North London Railway A Pictorial Record" published by the National Railway Museum, York, ISBN 0 11 2902731. Wagon 216 appears in the background of plate 45. The photograph is dated June 1898. The wagon is loaded with ballast and has canvas covers to protect its axleguards and springs. This wagon design was also used for conveying ash. Some example vehicles are visible in the book.



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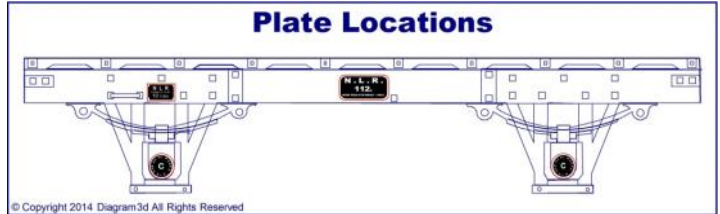
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*Number Plates, Tare
and axle box covers*

*Total preparation and
assembly time about
20 minutes.*

*Allow sufficient time
for the adhesive to
dry thoroughly*

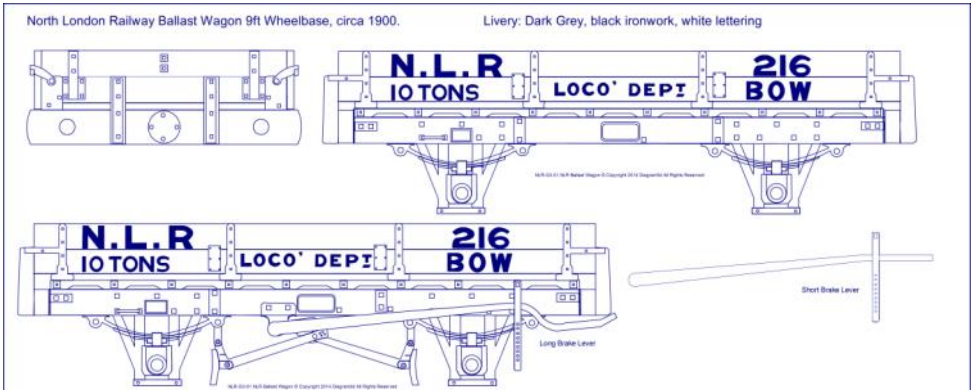
Carefully detach the number plates, tare plate and axle covers and attach these to the positions indicated below on each side of the wagon.



Livery

NLR wagon livery was very dark grey bodywork, almost black, with white lettering and black ironwork. It was described in "Moore's Monthly Magazine" Volume 1 page 36.

The drawing below is representative of the style and positioning of lettering.



On the... figures

This Company's carriages are of varnished teak, with letters in gold, edged round with varnished teak, and red on 2nd and 3rd class, and black, white, and blue on 1st class, but not shaded. The rear ends of the guards' vans are painted vermilion. The rear Underframes are varnished wood, with ironwork painted bronzed brown. The wagon stock of the N. L. R. is very limited, but all of it is painted a very dark grey, almost black, and lettered in white.

Formerly the engines of the...

Finally

Congratulations on completing this kit! We hope you enjoyed making it as much as we did. Please take time to visit our website www.Diagram3D.com for further information on this and other products. Email us at: info@Diagram3D.com

E&OE, Document updated January 2023