

Site Planning Manual

WH Bence

RELOCATABLE MRI



List of revisions

Revisions

0 Initial Release

December 2023

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Notice

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General

As this medical unit requires specific site preparations. This document provides the necessary information for the subsequent planning and instalment of the medical trailer such that it functions as intended. For specific information not contained in this document please contact WH Bence Coachworks.

Safety

Certain inherent risks are associated with heavy units due to the nature of their use. Personnel working on and around these trailers are subject to specific hazards not met by mechanical means but by exercising intelligence, common sense and care. Therefore, the personnel involved in the use and operation of these trailers must be competent, careful, physically and mentally qualified, and trained in the safe operation of this equipment.

Dimensions & footprint

GA

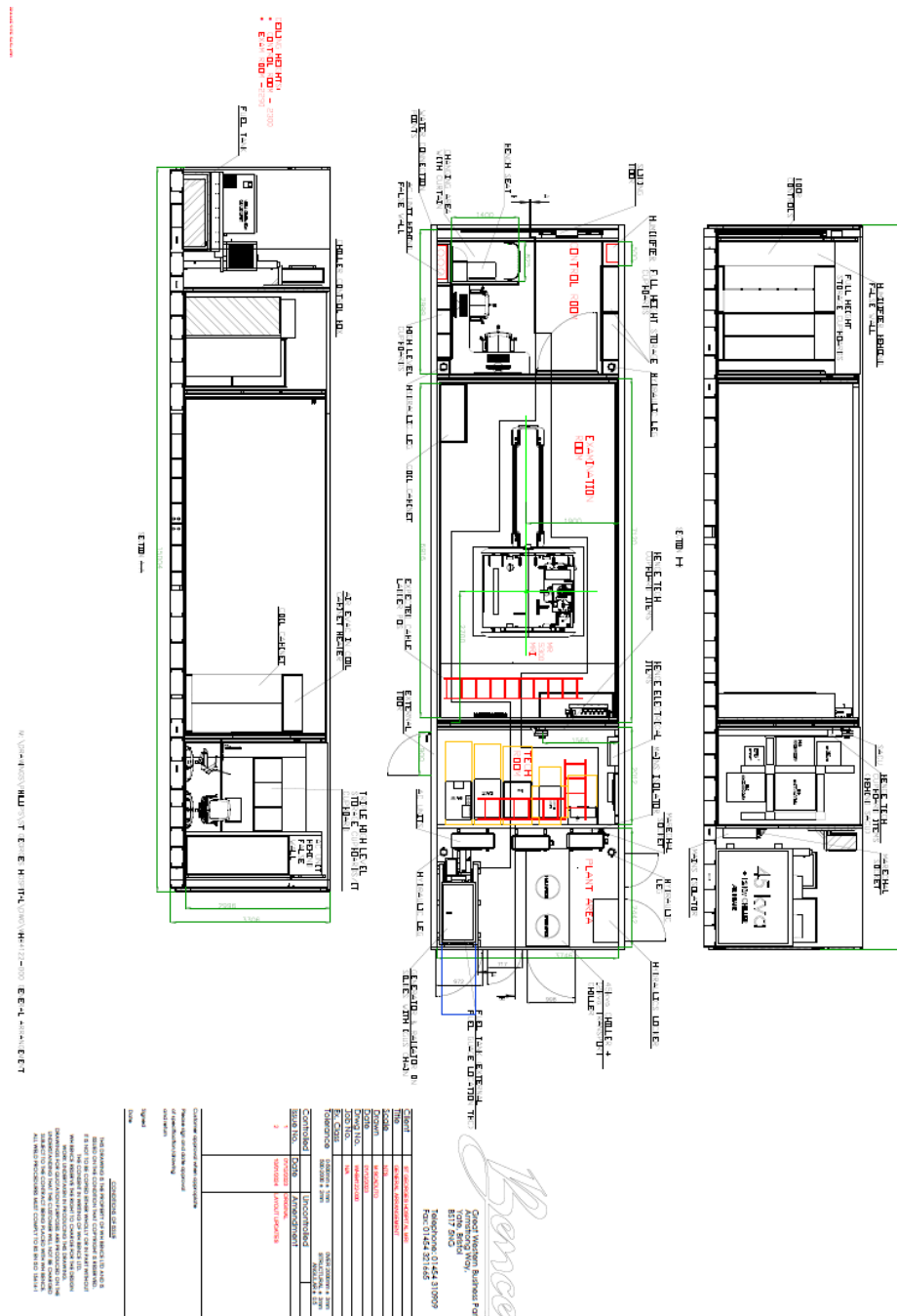


Figure 1 – General Arrangement

NOTE: The internal configuration may differ from the general arrangement shown above. This will not affect the site planning information in this guide.

Deployed

Length:	15004
Width:	4000mm
Height:	3306mm (6122mm for units with quench pipe)

Stowed

Length:	15004mm
Width:	4000mm
Height:	3306mm

Trailer Dimensions etc:

Ground requirements

Total unit weight:

Max gross relocatable weight deployment location must be capable of handling:

30,500 Kg

Please consult the grounds person on the suitability of the ground of the intended deployment location before installation. The ground and entrance must be paved with the deployment location level so the stabilising system can function as intended.

Accessibility

Due to the nature of the medical unit the patient entrance must be always easily accessible, with the generator/ac condensers etc. accessible for maintenance and repairs, it is recommended that there is at least two meters of clear area beyond the front of the unit footprint and three meters of clear area beyond the rear of the unit footprint.

Support pad requirements

When the unit is deployed, each of the hydraulic legs should be supported by a concrete pad of at least 1m^3 with a load capacity of at least 8500kg.

A separation barrier between the unit frame and the concrete is required to protect the frame from corrosion.

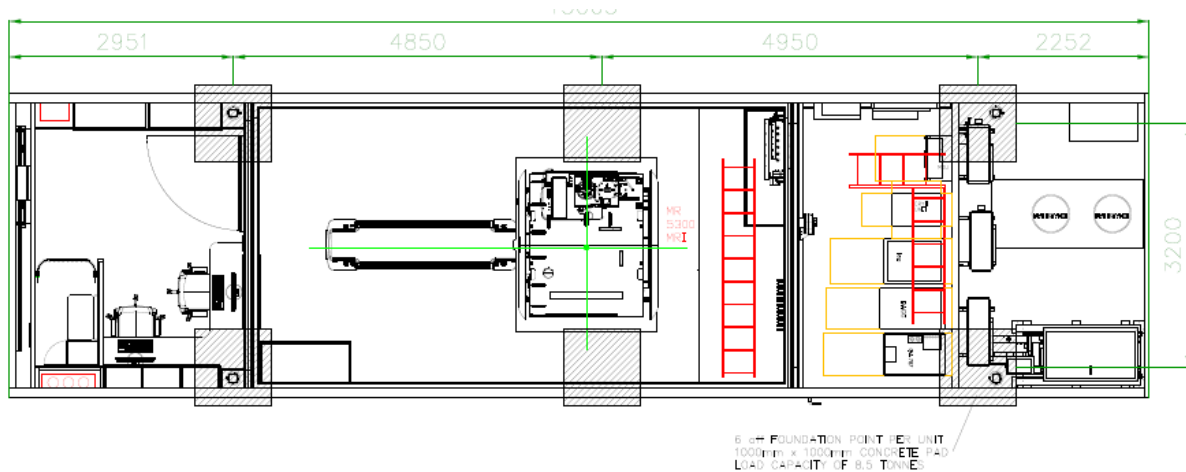


Figure 2 – Foundation Requirements

The 1m^2 concrete pads should be spaced as shown above. With the outermost corners of the arrangement filling a 10800 x 4200mm rectangle.

Access route and turning radius.

Access way minimum requirements: 4.3m clear entrance

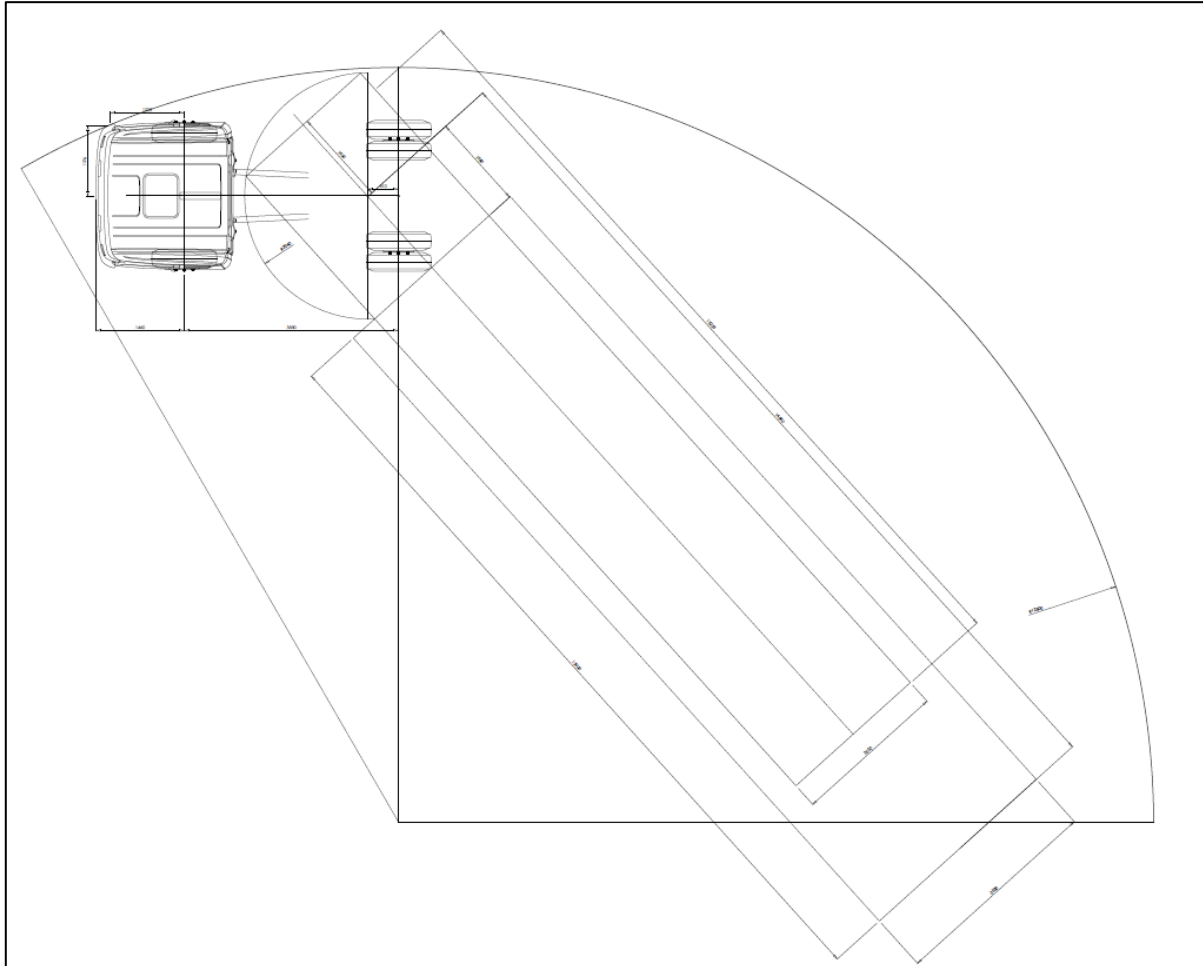


Figure 3 - Turning Circle

Magnetic field containment



The trailer is fitted with a faraday cage surrounding the MRI machine and has been tested such that the ambient static magnetic field around the unit does not exceed 5 Gauss (10^{-4} Tesla) peak. But for safety precautions, place the trailer in an area that will minimise exposure to people in the near vicinity of the trailer, sensitive devices and the environment.

Connections

Fire & Data

The unit is equipped with 4 CAT-6E data connections within the comms box within the plant/tech area. These are connected to a patch panel found in a high-level cupboard above the control desk or in the tech area.

In the same comms box, 3 fire alarm connections are located.

Water & drain system

If the unit contains any water facilities, such as a sink or a humidifier, freshwater inlet connection(s) and wastewater drain connection(s) (Figure 4) can be found in a pan on the site of the unit.

The water inlet is a 1" BH8-61-BSPP (ISO B compatible) connection.

The wastewater outlet is a 1½" BH8-61-BSPP (ISO B compatible) connection.



Figure 4 –Drain Connection

Electrical

A 5-pin Marachel® mains connector can be found in the mains incomer locker on the front of the unit.



Figure 5 – Mains Incomer Locker

The inlet requires a **3-phase, 250A, 415V** connection.

Airflow considerations

The trailer is fitted with AC condensers, found in the plant area, at the front of the vehicle. For these to function efficiently, sufficient airflow is required.

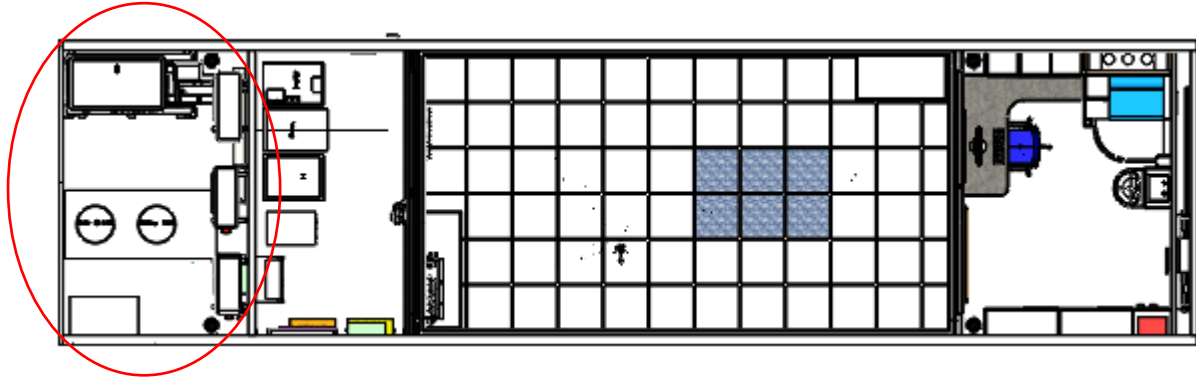


Figure 6 - location of ventilation grills/cut outs

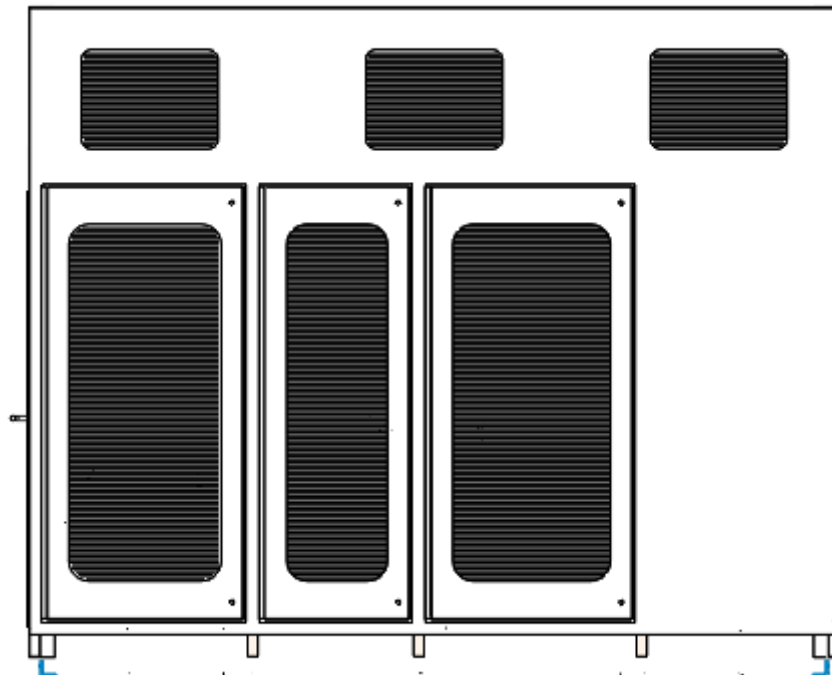


Figure 7 – ventilation grills/cut outs.

Transport

Crane

The unit is designed to be transported via roads and deployed by using either its hydraulic legs to raise it above the flatbed trailer and lowering it to the ground, or by use of its crane lifting brackets.

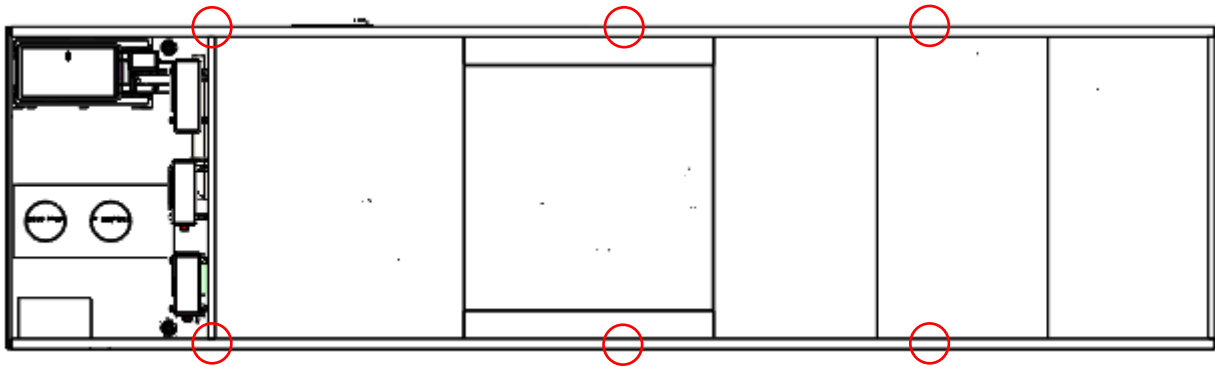


Figure 6 - Crane lifting points.

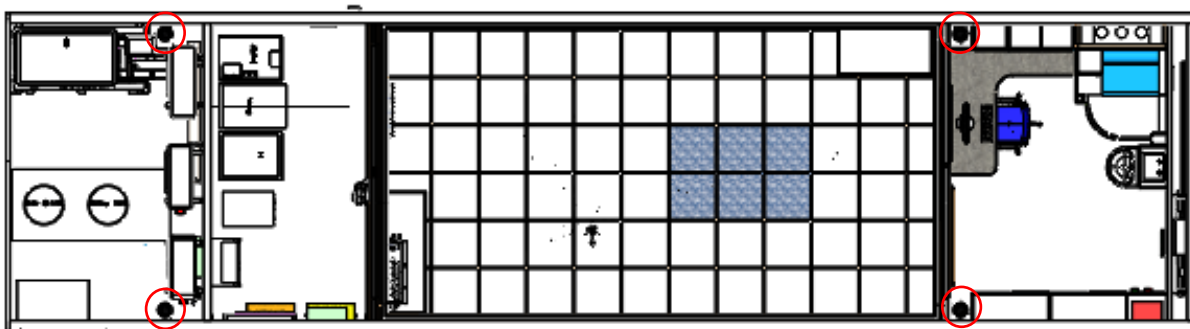


Figure 7 - Hydraulic legs



Figure 8 - Crane lifting bracket.