

Table 4-1: Deployment: Depot Modifications – Challenges and Best Practice Solutions.

Challenges	Best Practice Solutions
<p>Parking:</p> <ul style="list-style-type: none"> • Determining how to configure FCB parking along with diesel parking and possible BEBs <p>Bus Maintenance Facility:</p> <ul style="list-style-type: none"> • Making a choice between a wide range of possibilities from basic retrofit to new customised facility, to contracting out maintenance to external offsite service provider • Lack of standards or “How to” Guide for hydrogen-ready retrofits and new facilities. • Permitting in this area is still developing and authorities still uncertain in this area causing delays <p>Refuelling:</p> <ul style="list-style-type: none"> • The footprint of HRSs can be large when the hydrogen is produced on the same premises and will take up depot space which some sites may not have. For this reason, and for the reason of cost-efficient production of green hydrogen (avoiding certain levies), a few sites located their HRS outside and at distance from the depot. Only during deployment and early operations has it become clear that the effort required for refuelling the FCBs remotely (time, staff) if the buses do not operate on lines passing by the HRS. As a result, some of the sites had to re-think their approach. 	<ul style="list-style-type: none"> • Today, some FCBs still require a cable connection for FC freeze protection. That is expected to be obsolete in the future, in moderate climates (western/central Europe) at least. • A “safe” parking area may be required for buses that are awaiting checks for (suspected) H2 leaks etc. • Cost can often determine the choice of maintenance facility upgrade that is made. However, if FCBs are to be the bus of choice into the future, this cost should be amortised over a sufficiently long period. • Costs varied widely in the CHIC project due to the differing contexts of the sites e.g., available financing, available footprint, pre-existing infrastructure, safety concerns etc. • There are safety specialists who have experience of FCB workshops and can assist with a safety audit that complies with local certification requirements • As has been the case for bus depots previously: Well-designed depots and well-trained staff = safe operations. • When deciding the location of the HRS, have regard for the time taken to take buses to refuel off-site and any additional resources required • There are good resources to help a site decide what is the best option for their context (see Resources Table 4-5)