Soil based reed beds are very versatile and can be used to treat very different effluent types in a combined system.

In 2003, Oceans-ESU Ltd were asked to provide a water treatment system for a paper recycling facility. The client had two waste waters to treat: wheel wash water which was contaminated with a range of heavy metals; and effluent from a sewage package plant.

Oceans-ESU Ltd designed a combined system. The wheel wash water is passed through 4 containerised soil reed beds (RiBs, or Reeds in a Box), which contain a specific soil blend designed to entrap the metals. The water then passes to a standard two stage soil based reed bed where is it joined by the sewage effluent. This phase is designed to breakdown organics, reducing COD, BOD and ammonia to meet the relevant discharge criteria.

The 4 containerised reed beds are designed so that the media can be dug out and replenished periodically (in this case every 3-5 years) to remove the heavy metals from the system. This represents low operating cost for the client as the cost of waste disposal is reduced to a few tonnes of soil every few years eliminating the need to pay to dispose of the daily influx of metal contaminated water. The organic treatment reed beds do not need refurbishment and are still successfully treating the water 15 years on.