CHAPTER 11
ONLINE CASE
STUDY

Newport Wetlands, South Wales

As noted in Case Study 5.1, when Cardiff Bay, an internationally important wetland site, was impounded to create a freshwater lake, it was deemed necessary to create a compensation site as recompense. The site chosen was, in the mid-1990s, relatively poor-quality agricultural land that had low ecological value. The plan was to create a multi-habitat wetland landscape at this 750 ha site, and those working on the site faced a rare situation—designing a completely new reserve with, very nearly, a blank canvas.

The key issues that needed to be considered were:

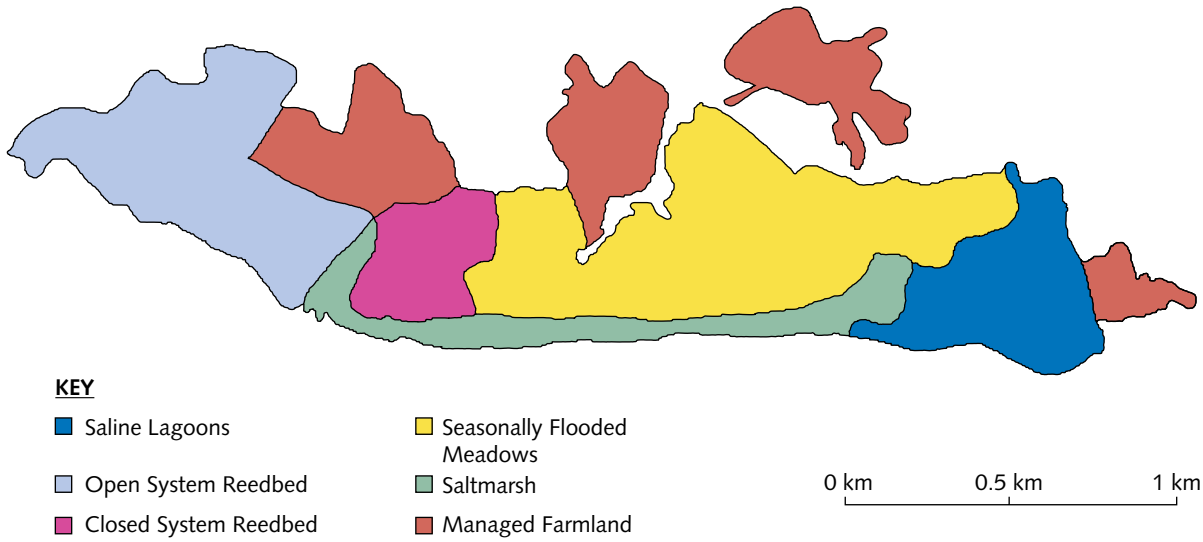
- **What habitats should be created:** this would fundamentally affect what species the reserve could support.
- **How many habitats should be created in the finite space allowed:** more habitats would probably mean higher species richness but a lower carrying capacity for each species.
- Whether there would be single or multiple patches of each, and how multiple patches would be arranged spatially (SLOSS debate; Section 11.5.1).

The final design saw the reserve comprising five different habitats (Figure A). The saltmarsh habitat was already present along the edge of the Severn estuary and was retained. The rest of the reserve was farmland, and four patches were retained through a combination of those areas being of higher value (due to pollarded trees, existing hedgerow, existing ditches), known to support wintering or breeding waders, or logistical issues in terms of acquiring land. This meant the 'several small' approach was followed here. Two different types of reed bed were created—open system reed bed with open water, and closed system reed bed with no open water. Single large habitat patches were created for these to maximize the amount of interior in order to attract shy species such as bittern *Botaurus stellaris*. The final habitat was saline lagoons, which had to be placed on an existing tidal creek to allow (controlled) flow of saline water from the neighbouring Severn estuary. The overall design was thus a combination of ideal planning and some site-specific constraints and opportunities.

FURTHER READING

The importance of the Newport Wetlands Reserve for birds: Austin, G.E., Burton, N.H.K., & Rehfisch, M.M. (2007) Newport Wetlands Reserve: assessment of the SPA potential of a newly established wetland 2000/01 to 2005/06. *BTO Research Report*, 451.

Overview of the compensation-site origins of Newport Wetlands Reserve: Cowell, R. (2000) Environmental compensation and the mediation of environmental change: making capital out of Cardiff Bay. *Journal of Environmental Planning and Management*, Volume 43, 689–710.



Online Case Study 11 Figure A Habitat at Newport Wetlands Reserve, South Wales.

Source: Authors' own artwork.