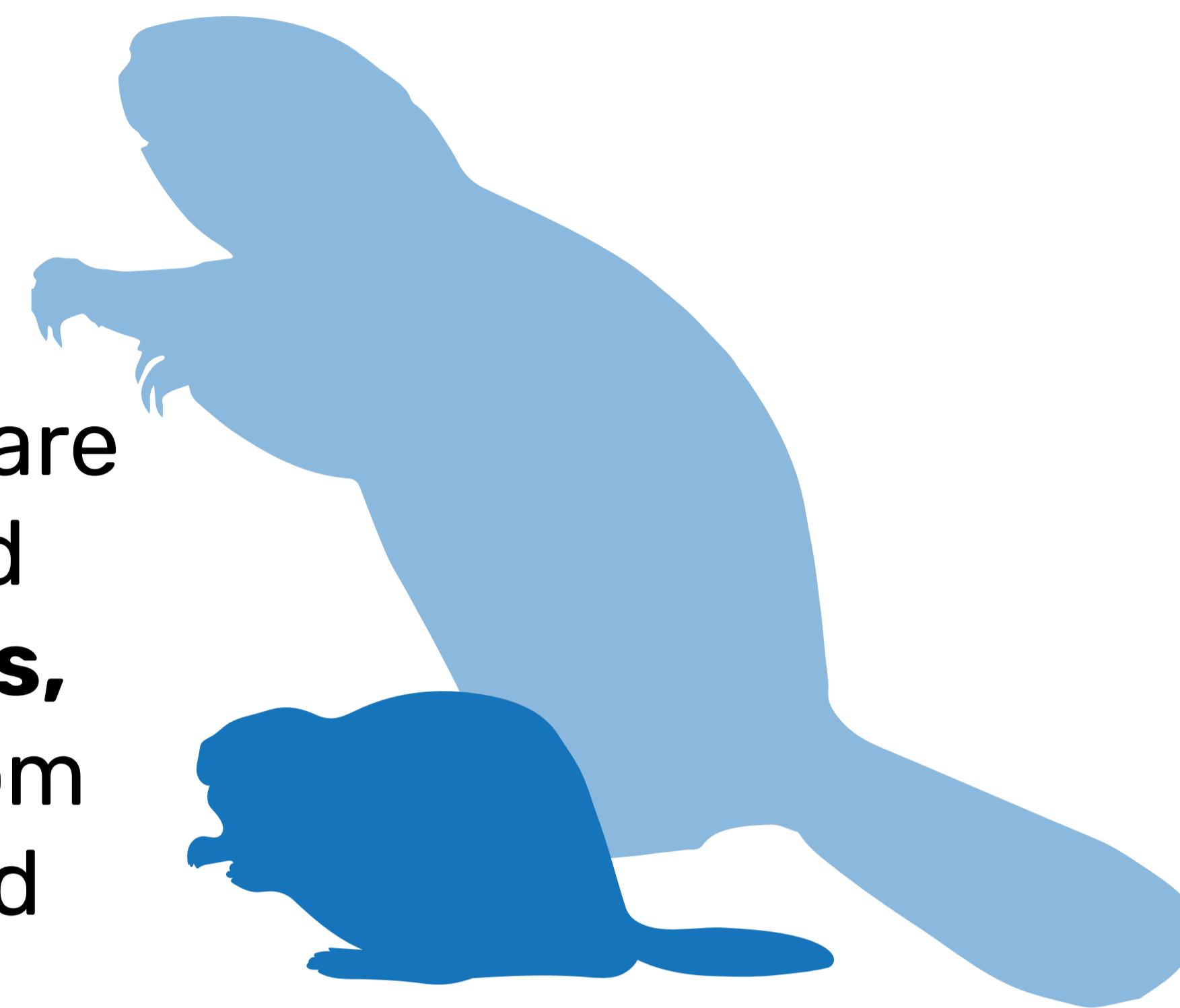
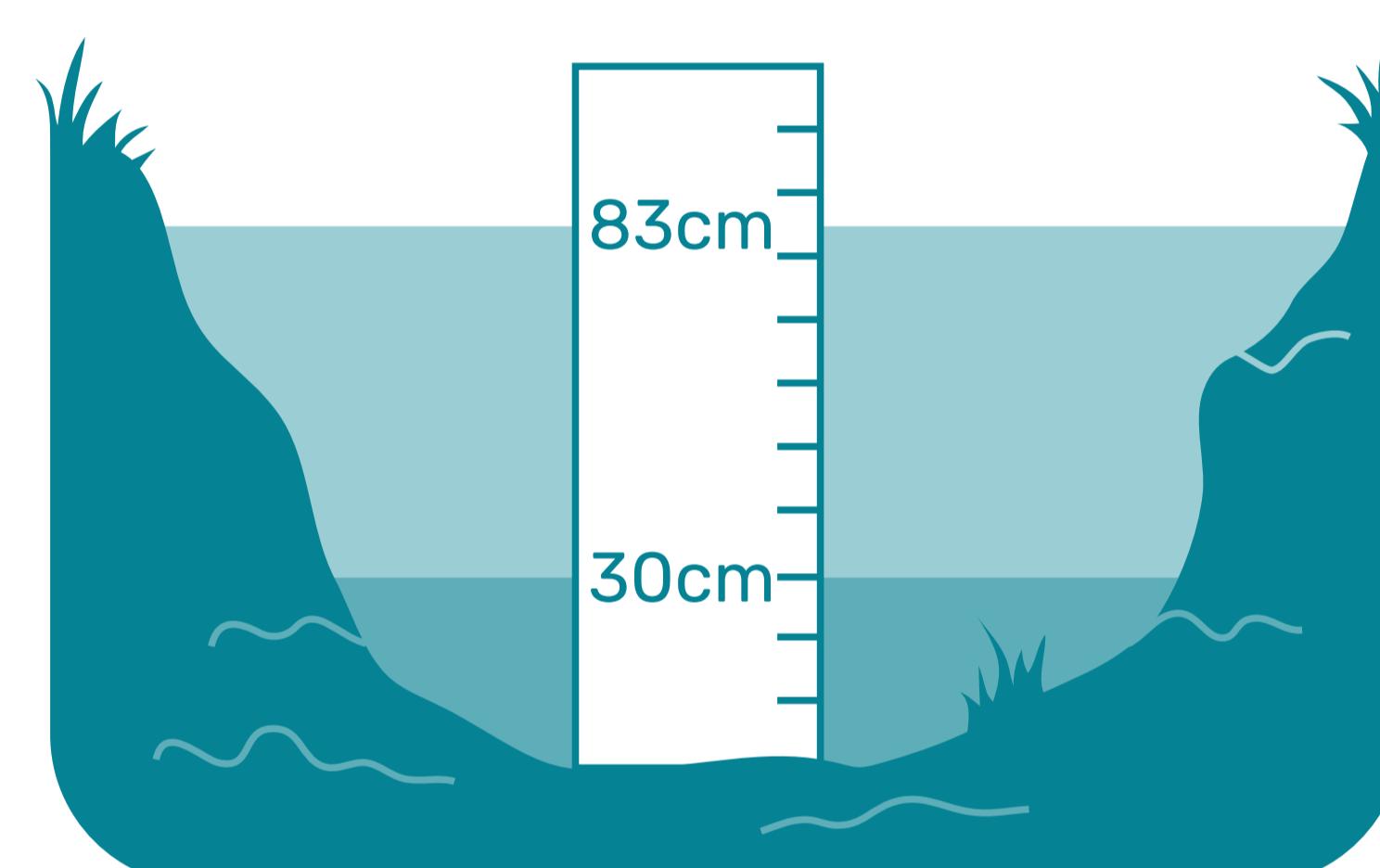
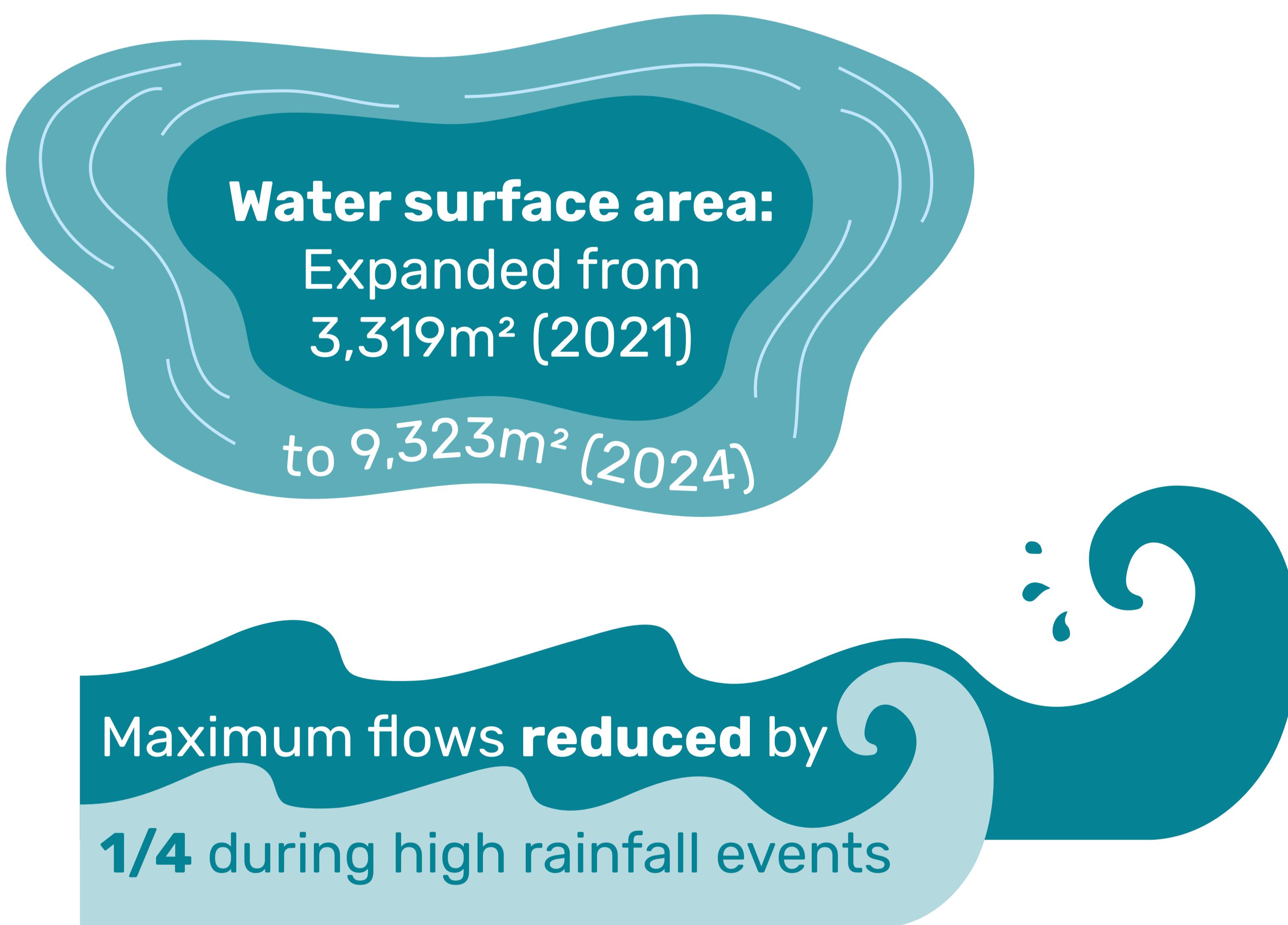


Key Findings from the Dorset Wildlife Trust Enclosed Beaver Project

On 8 February 2021, a pair of Eurasian beavers (*Castor fiber*) were relocated from Scotland to a licensed enclosed site in Dorset. Beavers are a **keystone species** and **ecosystem engineers**, creating wetlands and modifying habitats. Within **four years**, the pair have **built several dams, created a lodge and bred successfully**. These are the key findings from research by Dorset Wildlife Trust, University of Exeter, Wessex Water and other project partners between 2019 and 2025.



Hydrology: Impact on Water Flow and Storage



Drought resilience:
Water depth in lodge pond increased



Increased delay between peak rainfall and peak river flow

Maximum flows **reduced by 1/4** during high rainfall events

Hydrology: Impact on Water Quality

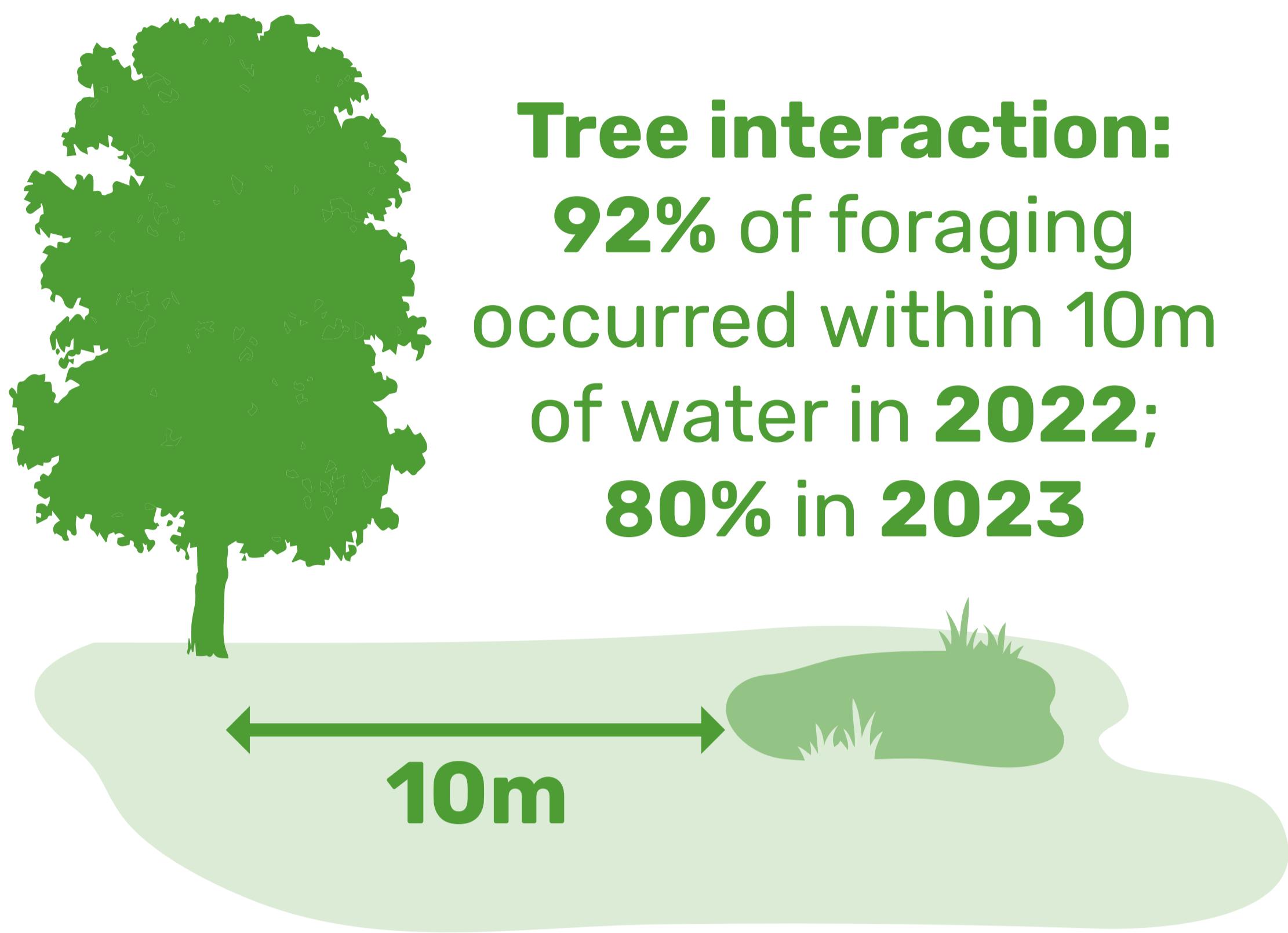
Nitrogen cycling:
Evidence of nitrogen reduction and denitrification in beaver ponds

Sediment:
Total suspended solids **reduced by 0.1mg/l** and turbidity reduced during high flow periods indicating a **filtering effect** through the beaver wetlands

Dissolved organic carbon:
Slight increase (0.7 mg/litre) at outflow

Key Findings from the Dorset Wildlife Trust Enclosed Beaver Project

Ecology: Impact on Trees and Vegetation



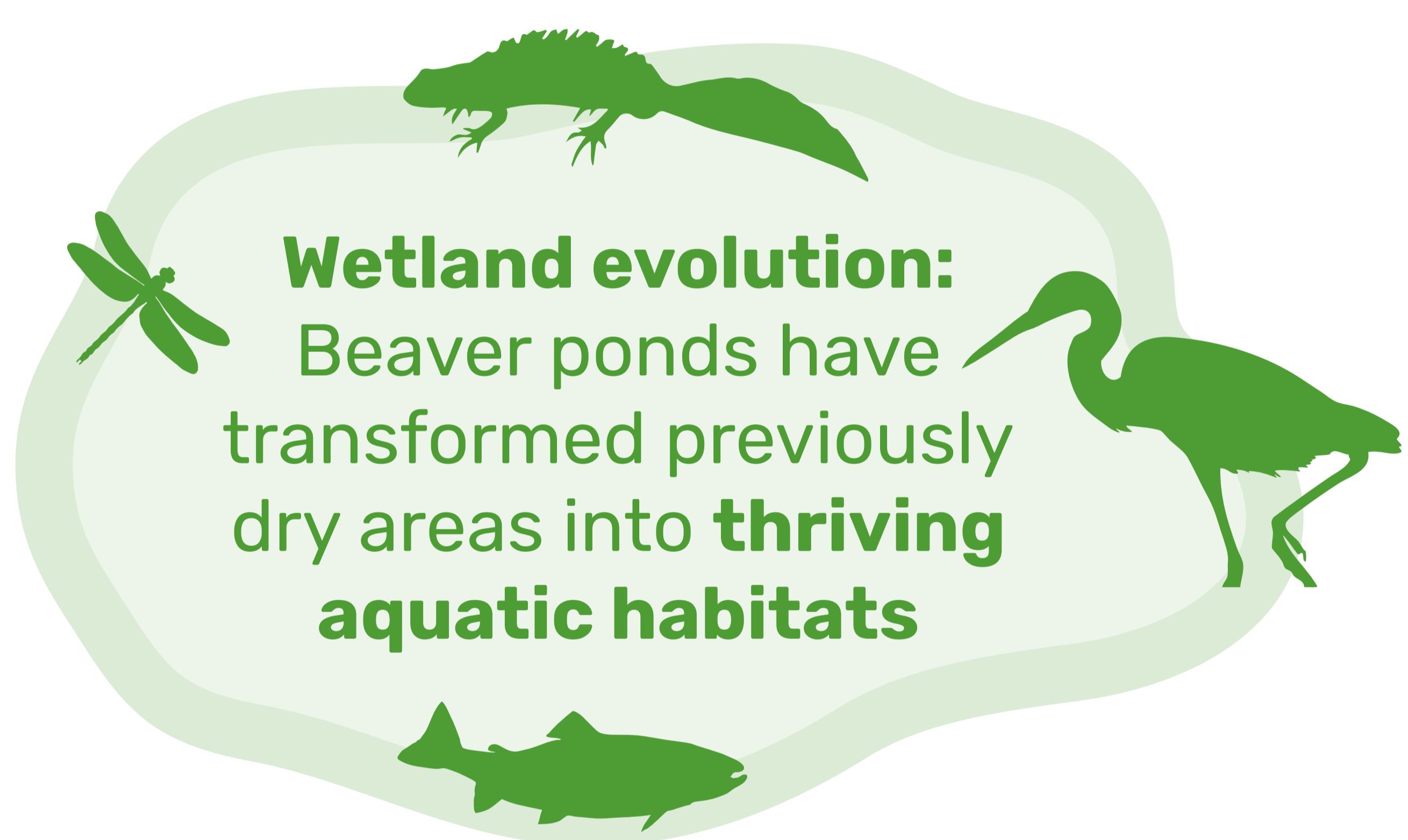
Preferred species:
Willow (*Salix sp.*) accounted for **59%** of trees affected



Structural diversity:
Increased diversity in tree growth stages, promoting woodland regeneration



Aquatic vegetation:
Significant increase in species like **broad-leaved pondweed** (*Potamogeton natans*)

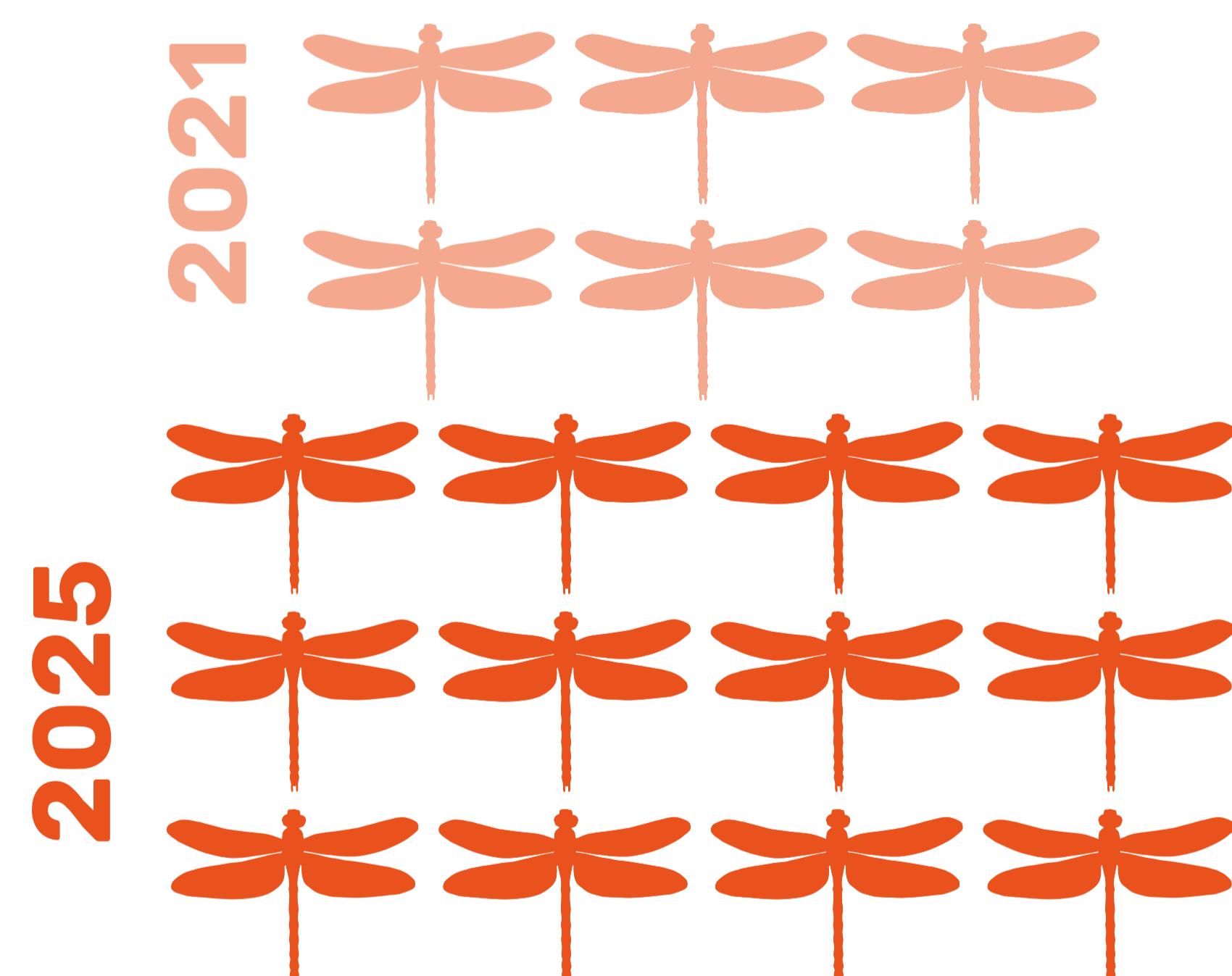


Wetland evolution:
Beaver ponds have transformed previously dry areas into **thriving aquatic habitats**



Newts:
Breeding distribution **expanded** across the site due to increased shallow marginal habitats

Ecology: Impact on Fauna



Dragonflies and damselflies:

Species diversity has doubled and overall abundance has increased, including **azure damselfly** and **emperor dragonfly**



Fish:
Species recorded include **brown trout, eel, roach, bullhead** with beaver ponds providing shelter for young fish and spawning areas for roach



Bats:
1,100% rise in bat passes per night (2019 vs. 2024). Key species include **soprano** and **common pipistrelle**. Enhanced foraging habitat due to increased surface water and vegetation edges



40+
bird species
recorded, including **kingfisher** and **water rail**. Increased nesting sites, food sources, and safer habitats for waterfowl