

Water Sensitive Farming at the Southrepps Estate

Southrepps Estate

Size: Farmland around Southrepps and Thorpe Market

Catchment Location:

The River Ant (Figure 1), which flows through Southrepps Common SSSI and eventually feeds into the River Bure and Broads National Park

Soils: Free draining, light sandy loam soil

Topography: Slopes of varying lengths and angles

Main crops: Sugar beet, potatoes, cereals and onions

Managing soil and water on the Estate

Land management significantly affects how vulnerable it is to environmental damage. For example, compacted soil is prone to surface water run-off, and this water can contain soil particles, nutrients and pesticides, which pollute streams and rivers if allowed to reach them.



Figure 3. Silt trap at bottom of track (following drought conditions)



Figure 4. Corner buffer

Acknowledgements

This work was supported by NRT's 'Water Sensitive Farming' Initiative, with funding from the Coca-Cola and WWF Freshwater Partnership. The Initiative aims to improve soil health, and water quality and quantity.

With thanks to the Southrepps Estate for enabling this work to take place.



Figure 1. The River Ant



Figure 2a. Farm track before works



Figure 2b. Farm track after works



Figure 2c. Track cross drain into adjacent wooded area

Taking action at the Southrepps Estate

Various 'good practice' measures have been employed by the Estate, in partnership with Norfolk Rivers Trust (NRT), to positively impact the River Ant's water quality. These include:

- **500m track upgrade:** Slopes have been reduced to "slow the flow" of run-off; cross drains direct flow to newly created mini silt traps; the track camber has been adjusted to encourage flow to the adjacent wooded area; and a new permeable track surface has been laid (Figures 2a, 2b and 2c).
- **Silt traps:** Two silt traps have been installed alongside the farmyard to capture any remaining water that travels down the track in heavy rainfall events (Figure 3).
- **Buffer strips:** Grass buffer strips and corners have been sown to intercept run-off and increase water infiltration (Figure 4).
- **Gateway relocation:** Farm gateways at the bottom of slopes have been blocked and moved to more appropriate locations.
- **Tramline disruption:** Innovative machinery has been used to break up compacted soil within crops.
- **Soil health improvements:** Livestock - including outdoor pigs, cattle and sheep - have been introduced to the farm rotation, along with cover crops.

Not just for soil and water

These measures provide a wide range of additional benefits:

- Improved habitat areas for biodiversity, including pollinators
- Increased farm efficiency and resilience through retaining topsoil and nutrients, along with improving water retention and infiltration
- Improved soil carbon sequestration

