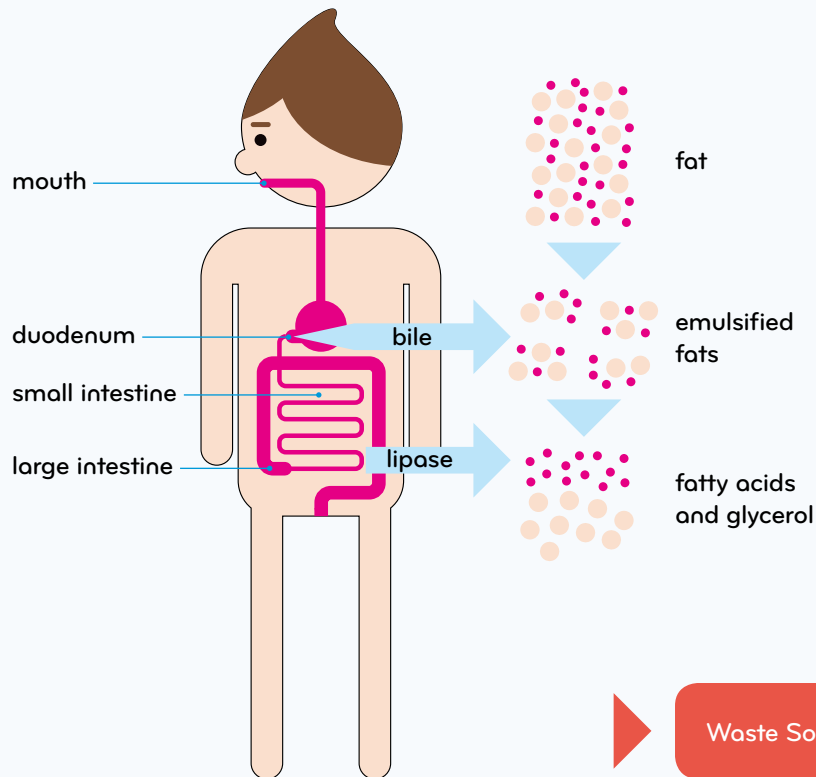


Understanding Advanced Anaerobic Digestion

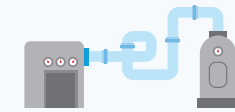
Food is broken down in our bodies by **Enzymatic Hydrolysis**. This breaks the bonds holding the molecular 'building blocks' within the food together. It is the same process used in the production of biogas in the **Anaerobic Digesters** at our waste water treatment works.



Advanced Anaerobic Digestion (AAD)

This is the pre-digestion stage. Just like your mouth breaks up the food into smaller pieces ready for digestion, **Thermal Hydrolysis** makes the waste (sludge) more biodegradable.

Waste (Sludge) In



Hydrolysis – breaks down large molecules to improve digestion

Anaerobic Digestion (AD)

Hydrolytic Bacteria:
Break down fats into polymers and then monomers.

Acidogenic Bacteria:
Break monomers into fatty acids.

Acetogenic Bacteria:
Break fatty acids into acetic acid, carbon dioxide and hydrogen.

Methanogenic Bacteria:
Change acetates into methane and carbon dioxide.

Anaerobic Digester

