

Gemma Simpson



### What is LTS Futures?

1. Defining the role of LTS in a hydrogen system transformation.

**1.**Determine the suitability of the materials in the network for hydrogen.

1. Validate the operational strategy for operating a hydrogen network.

Develop the skills and competencies, and procedures, for managing, operating and maintaining assets in a hydrogen network.

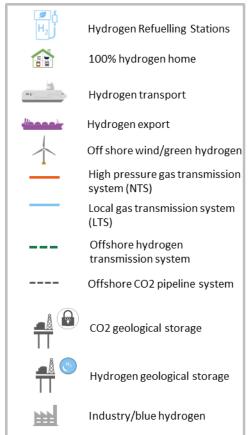
Understanding the suitability of wayleaves and communication with landowners.

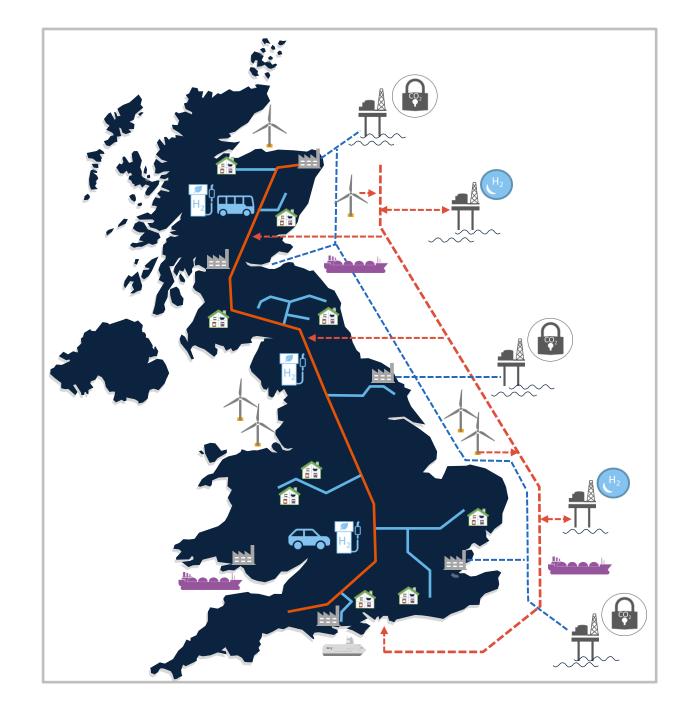






## **End States**

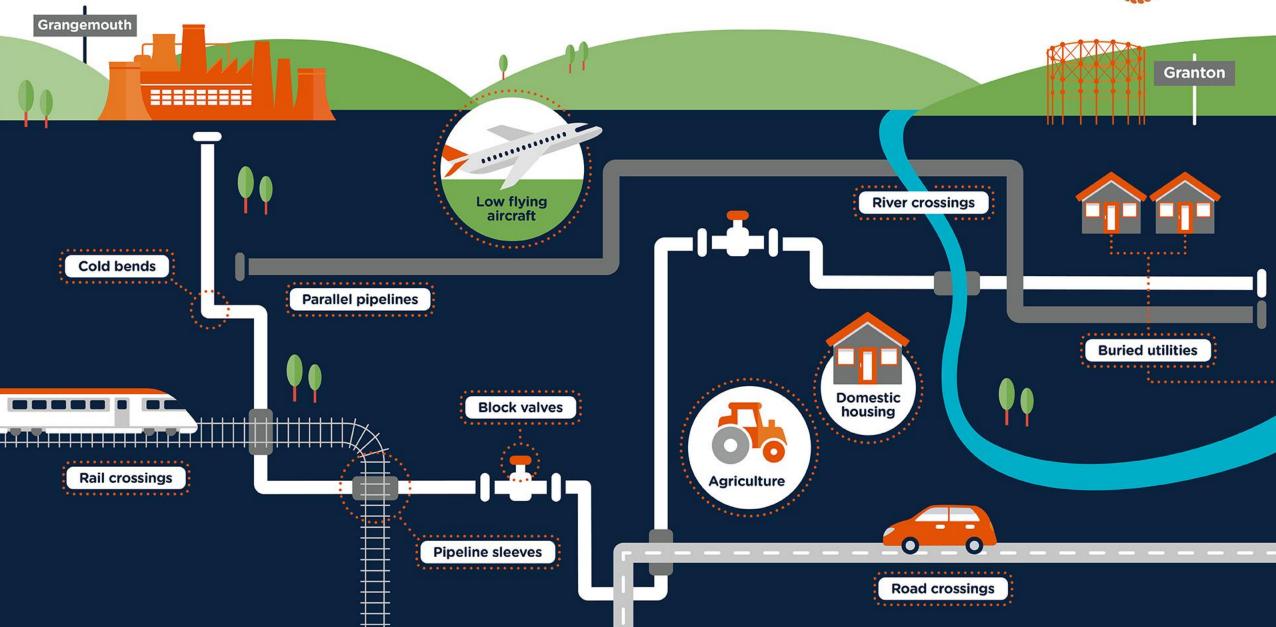






### Why Grangemouth to Granton?









#### **Element 4**

Live trial

#### **Element 2**

**Element 1** 

Live trial design and construction

Lab testing

#### **Element 5**

**QRA** and safety

#### **Element 3**

Offsite testing







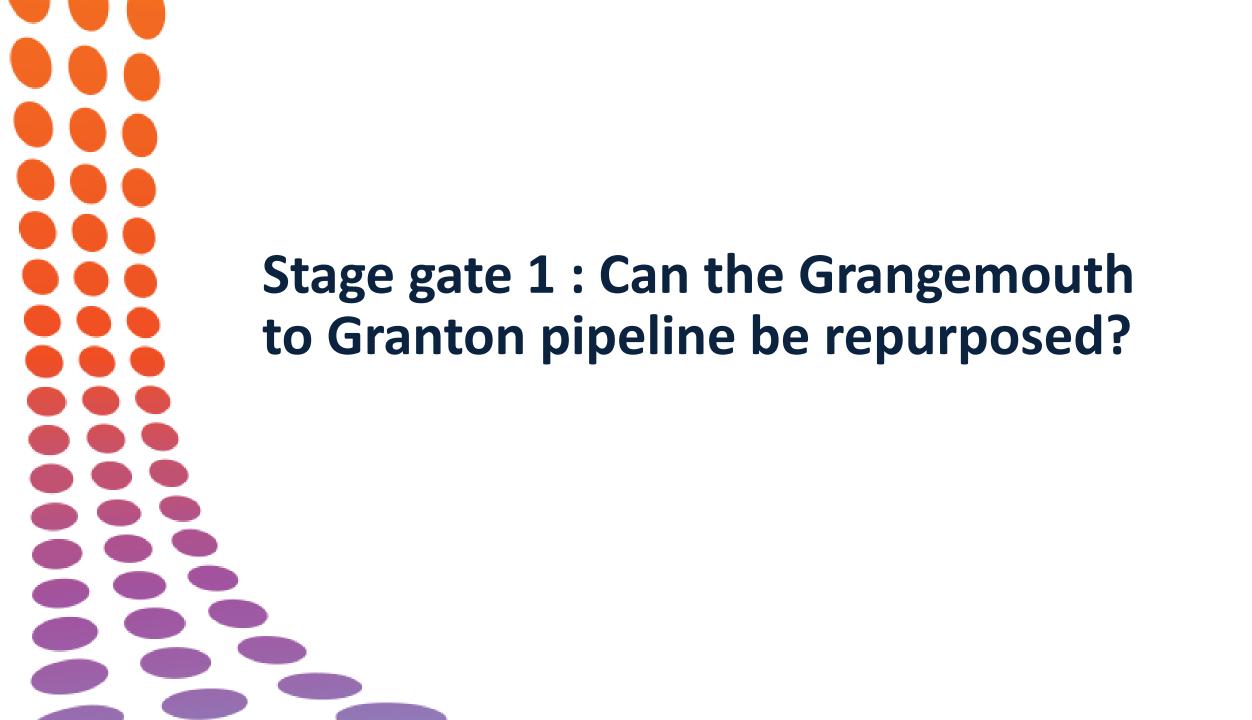
#### **Element 6**

**Knowledge dissemination** 

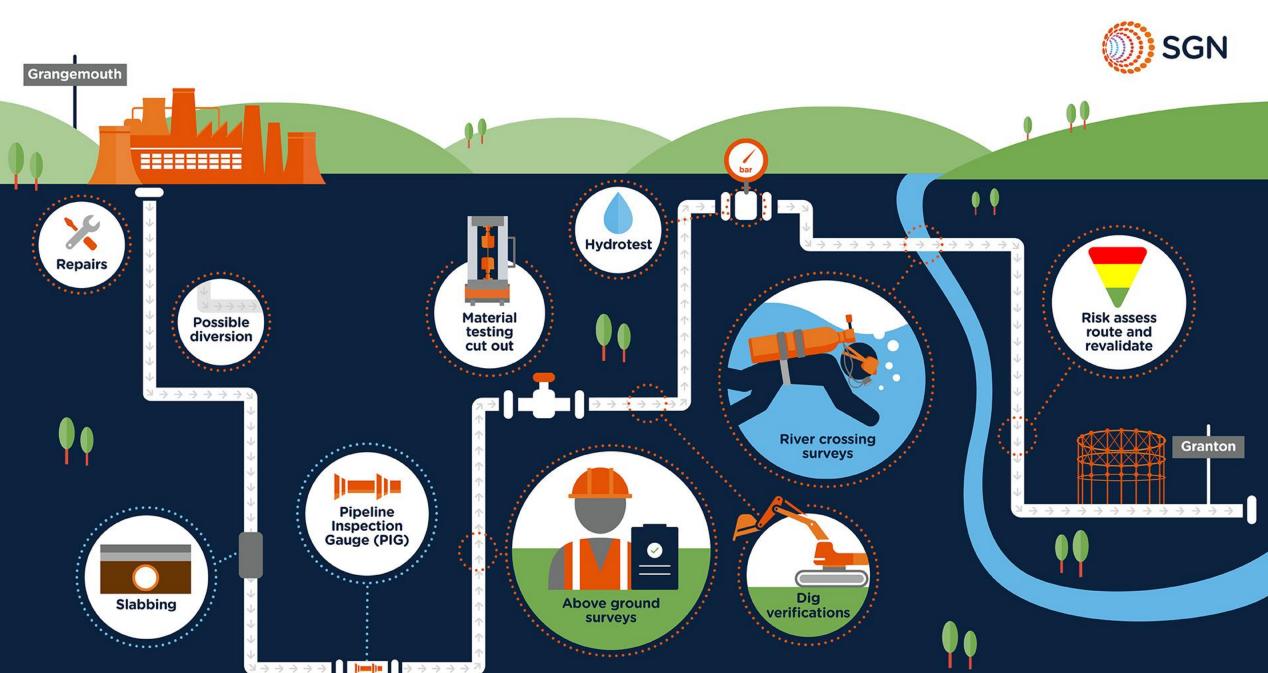


**Blueprint and** cost assessment











# Hydrogen supply pipeline





### Research

## Materials and full-scale testing





National Transmission Network

> X60 and above

HYNTS FutureGrid Local Transmission Network

















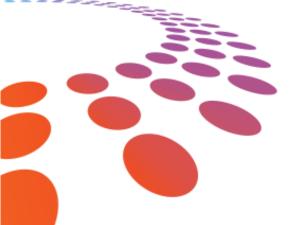










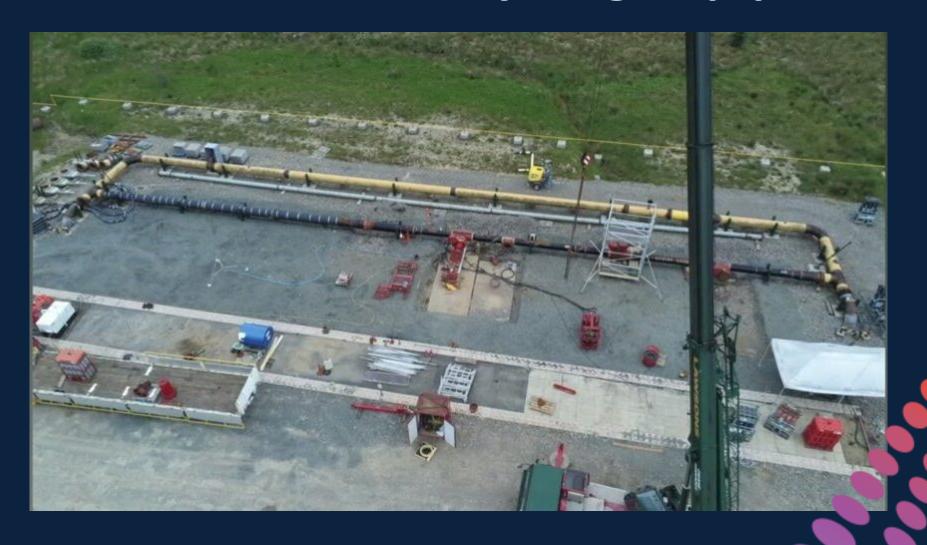


## **Burst Testing**





## New connections to hydrogen pipelines













### First of a kind live trial



