

BLACKBURN WwTW:

CIRCULAR ECONOMY IN ACTION

Transforming demolition waste into high-quality resources for the future



Blackburn Wastewater Treatment Works treats over 168 million litres of sewage each year. We're working for United Utilities to remove outdated equipment in preparation for new technology infrastructure to convert treated sewage bi-products into renewable green energy.

THE STARTING POINT

-  **31** filter media tanks removed
-  **5 ha** WwTW site
-  Site heavily affected by Himalayan balsam

MATERIALS ARISING FROM DEMOLITION

-  Filter media **59,657 m³**
-  Concrete (tank walls) **20,684 m³**
-  Masonry (structures) **480 m³**
-  Backfill (ducting & pipework removal) **17,797 m³**

TOTAL MATERIAL ARISING

80,821 m³

(~194,000 TONNES)

THE IMPACT



Waste wagons avoided
~10,000



Virgin aggregate deliveries avoided
~10,000



Total wagon movements removed
~20,000

CARBON SAVING



~1,700 tCO₂e

Associated with avoiding off-site recycling and import of virgin materials.

SUPPORTING BENEFITS

- Reduces carbon emissions
- Minimises disruption to local stakeholders
- Removes strain from the local road network
- Avoids landfill disposal
- Eliminates need for virgin aggregate
- Prevents off-site disposal of Himalayan balsam contaminated materials



MATERIALS TO RESOURCES: HOW WE DO IT (IN PRACTICE)

1 DEMOLITION

31 filter media tanks removed.

2 WASHING

Contaminated filter media washed in line with RPS 322.

3 CRUSHING

Concrete and masonry crushed in accordance with the Quality Protocol.

4 TRACKING

Material movements recorded using traditional methods and drone footage.

5 REUSE

Engineered fill and piling mats used for new foundations.

EARLY TRIALS

Demonstrate that through washing and crushing, materials can be processed into suitable engineered products – ideal for use in piling mats and construction areas.

MAXIMISING VALUE. MINIMISING WASTE. DELIVERING A SUSTAINABLE FUTURE.

By reusing materials on site, the Blackburn project transforms demolition waste into high-quality resources – delivering environmental, social and logistical benefits for all.