

# Pilot Driven Rock Auger

## PILOT DRIVEN ROCK AUGER:

Lewis Civil Engineering Ltd have recently trialled an innovative new Pilot Driven Rock Auger on their project at Downend Road, Bristol. The Pilot Driven Rock Auger operates in Rock strengths of up to 140Mpa. The steering and guidance system allows the accuracy of standard Guided Auger to be maintained and tolerances of +/- 25mm can easily be achieved, making this method suitable for gravity installations.

- Accuracy – As guided auger bore +/- 25mm (Suitable for gravity)
- Capable of 65m Shot lengths



## DIAMETER RANGE:

- Following pilot installation augers can be installed through the following diameter range:-
- 225/300/450 & 600mm ID
- Denlock Clay being used for diameters up to 300mm and concrete for the 450 & 600mm diameter range.
- Concrete for 450 & 600mm dia.
- Sleeve or product pipe

## RESULT:

- Finally allows trenchless accurate installation in rock
- Unrivalled accuracy
- Cheaper than micro-tunnelling – Open cut
- Successful Case Study



# LEWIS

Lewis Civil Engineering Ltd, Mwyndy Cross Industries, Cardiff Road, Pontyclun, Rhondda Cynon Taff. CF72 8PN

Telephone: 01443 449 200 Fax: 01443 449 201

Website: [www.lewis-ltd.co.uk](http://www.lewis-ltd.co.uk) E-mail: [enquiries@lewis-ltd.co.uk](mailto:enquiries@lewis-ltd.co.uk)

# Pilot Driven Rock Auger

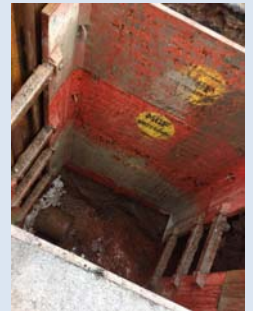
## DOWNEND RD: (CASE STUDY)

Downend Road in Bristol involved the installation of 1.200km deep gravity drainage in Highway with associated segmental shafts for storage, 2Nr CSO installations and a Storm Return Pumping Station. Key strategic access roads caused the potential for traffic delays.

- Slow/difficult dig
- Specialist rock cutting TCU required
- Significant impact on residents
- Noise/dust/access/duration issues

Sections of the gravity pipework on this scheme reached 6m in heavily congested commuted routes. The Scheme TH's and BH's identified Rock Strength Circa 100MPa and traditional excavation was both difficult, noisy and disruptive for residents.

- Using Pilot driven Rock Auger the deepest sections of the pipeline were drilled—60m shots of 450mm Concrete pipe were installed to tolerances of within 10mm—Minimal disruption to residents and a very satisfied client in Wessex Water demonstrated the success of the method.
- Previous knowledge of WECS Scheme identified low output risk
- Gravity pipeline depths of 6m in urban area
- 2 Shots Carried out (60m long depth 4-6m)
- Concrete pipe installed 600mm Dia
- Accuracy of +10mm achieved
- Reviewing opportunities for additional works



Lewis Civil Engineering Ltd, Mwyndy Cross Industries, Cardiff Road, Pontyclun, Rhondda Cynon Taff. CF72 8PN

Telephone: 01443 449 200 Fax: 01443 449 201

Website: [www.lewis-ltd.co.uk](http://www.lewis-ltd.co.uk) E-mail: [enquiries@lewis-ltd.co.uk](mailto:enquiries@lewis-ltd.co.uk)