15A Bloxham Mill, Barford Road, Bloxham, Banbury, OX15 4FF
t +44(0)20 7235 7938 e hqsec@pipeguild.com www.pipeguild.com

2024 TECHNICAL AWARDS ENTRY FORM

Entry Deadline: Friday 19th April 2024

Please tick which categories you are entering (entries may be submitted in multiple categories using the same entry form)

Large Diameter Pipeline Project Award	Y
Large Diameter Pipeline Technology Award	Y
Utility Pipeline Project Award	Y
Utility Pipeline Technology Award	Y
Subsea Pipeline Award	Y
iICE Award	
Health & Safety Award	
Net Zero Carbon Award	

1. **Brief title of entry:** **McCormack Drilling, Largest UK Pipe Push**
2. **Company name:** **Peter McCormack & Sons Ltd.** .....
3. **Signed:**  .....
4. **Date:** **26th April 2024**.....
5. **Company contact name:** **Caroline McCormack or Lisa McCusker**.....
6. **Telephone:** **07818032739 or 07525668074** .....
7. **Email:** **caroline@mccormackdrilling.com** .....

8. **Precis of your entry (50 words):** **A** Design & Build HDD that required a Drilling Rig not seen in the UK to attempt a forward reaming operation never completed in the UK.
804m of 900mm PE Gravity Sea Outfall
American Augers DD 1100 RS, the biggest and most powerful rig in the UK.
Forward ream to 48".
Pipe Push from Sandy Bay

15A Bloxham Mill, Barford Road, Bloxham, Banbury, OX15 4FF
t +44(0)20 7235 7938 e hqsec@pipeguild.com www.pipeguild.com

9. Summary of entry:

Project title:	Exmouth Outfall
Client:	South West Water/Galliford Try
Company name:	Peter McCormack & Sons
Project total value:	£10.35m
Construction start date:	November 2023
Construction end date:	February 2024

This project required the installation of a 900mm diameter gravity sea outfall, 804m in length. The works were in Sandy Bay Devon Cliff Holiday Park (Exmouth), one of the UK's largest caravan sites, with over 2200 units and 10,000 visitors per week. Works were located only 4 meters from a Blue Flag beach.

Construction was only permitted during the Sandy Bay winter maintenance period. To meet this challenging programme Peter McCormack & Sons mobilised one of the largest and most powerful drilling rigs in the UK, to complete the largest forward reaming (48") operation ever attempted in the UK. Two HDD teams working 24hrs, 7 days per week, were needed to hit a challenging programme.

The works required 18 months of planning and our challenging programme included expediting the specialist reamers, 1.2m in diameter and manufactured in America, to be imported to our precise programme requirements. Our methodology minimised programme risk by minimising the use of marine spread. This relied on forward reaming methodology and a pipe push from land, an unconventional method for the length of pipe and diameter of this scale. This significantly reduced the reliance on marine support in winter sea conditions reducing weather risk on the project. Put simply, a conventional shore approach would not have delivered the programme given the weather conditions expected and subsequently realised. Early marine trenching support was mobilised to clear boulders at the exit point over two days. A survey marine vessel continued throughout the project to confirm HDD exit point and pipe push operations.

818m of HDPE pipe was welded on land, stretching in a single length at strategically high ground to the west of the site. It was left in position until the day of the pipe push with over 25 people involved in the operation to move the pipe. This PE was fully pressure tested in situ to give complete confidence in the weld quality. Our team considered both the safety of the public accessing the coastal footpath adjacent to the works and maintenance operations within the holiday park. In addition to this, we worked closely with landowners to agree a route for the welded pipeline to be positioned, in readiness for the pipe push. The works naturally attracted attention, and allowed the team the opportunity to explain the work they were undertaking and the long-term benefits South West Water outfall would provide.

To protect the Blue Flagged beach the entire working area was surrounded by flood barrier to prevent drilling fluids from escaping the site. This was checked daily by the site team and Environmental Manager to ensure zero environmental incidents. 100% of drilling fluids were recycled by using a recycling and centrifuge system. This sustainable initiative minimised water use and mitigated 364 lorry movements through Exmouth and saved 92T eCO_2. It also allowed the drilling arisings to be fully dewatered, allowing transportation of the inert material without the risk of silt on the road network, causing unnecessary nuisance to the travelling public.

The project compressed 15,000 working hours within 13 weeks. This could only be achieved by running a continuous drilling operation over a 24/7 operating pattern. Despite the intensive nature of this challenge, the team completed the HDD works ahead of programme, on budget with zero harm to the team and minimal impact to the Holiday Park.

The £10.35m scheme was delivered around Sandy Bay Park's winter maintenance window of only 13 weeks. Overrunning the programme would have directly impacted on their tourist season, with significant revenue loss to the Holiday Park. In planning the works, the team developed a well-established relationship with the Holiday Park management team, to gain complete confidence in their ability to deliver this challenging scheme.

The works were coordinated to allow unhindered routine maintenance within the park, completely segregating construction activities. This relied on a collaborative planning approach involving all parties including the Holiday Park and the plan was monitored on each of the three daily shifts.
South West Water showcased this project through the media and LinkedIn, focusing on the engineering challenges the team faced and promoting both construction and the wider environmental benefits of this SWW scheme. McCormack's produced a HS&E presentation delivered to over 250 employees nationally to share the best practice and learnings from this project across their entire business.
South West Water were extremely pleased with progress of these works to meet their commitments with the Environment Agency. Relationships with the Holiday Park management were extremely good, and the owners were grateful for the efforts the McCormack & Galliford teams made to complete these works with minimal disruption to their business.

- UK first, longest forward ream at this size and one of the longest completed in the world.
- Exceptional programming, with collaborative planning involving all stakeholder's ensuring progress was monitored almost to the hour.
- High pollution risk, next to a blue flag beach, mitigated through exemplar environmental protection and control. Zero pollution.
- Saved 92T eCO_2.
- 100% drilling fluids recycled, sustainable innovation which minimised impact to the Holiday Park and Exmouth residents.
- Compressed programme 15,000 working hours within 13 weeks.
- Injury free 15,000 working hours in 13 weeks.
- Project completed ahead of programme.
- On budget.

Testimonials

"PMC work culture, dedication, commitment, communication and skill level are outstanding".
Rajan Sharma South West Water Project Manager

"I am now writing to you directly as I believe it was McCormack Drilling that were the driving force in achieving the successful outcome of this project, and I wished to thank you for your work and skills throughout the programme. I also wish to thank personally Scott and Kingsley for their dedication and knowledge which enabled the outfall pipe to be installed".
Alastair Tindle Senior Engineer Haven Holiday Park

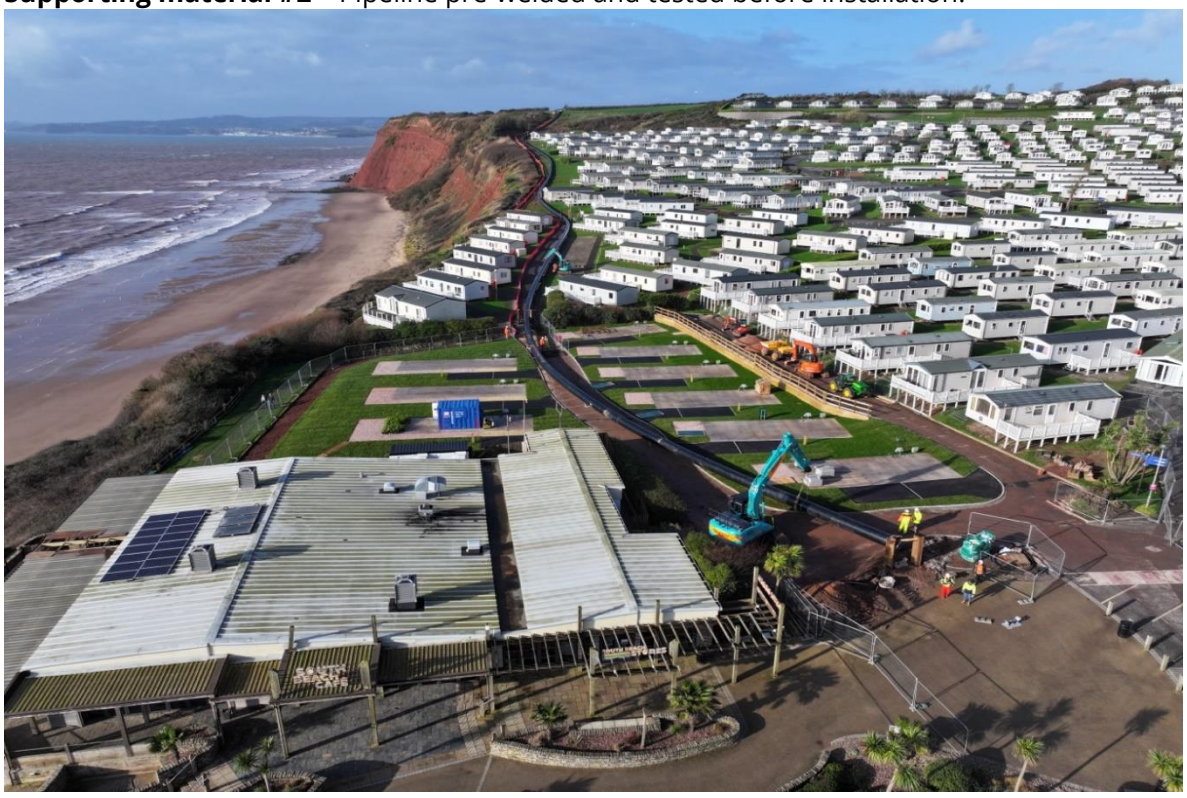
Ancillary Entry Information

(Entry is restricted to normal type face and font size on this form plus no more than 5 pages of A4 drawings or photographs)
Links to external videos or demonstrations are allowed.

15A Bloxham Mill, Barford Road, Bloxham, Banbury, OX15 4FF
t +44(0)20 7235 7938 e hqsec@pipeguild.com www.pipeguild.com

Supporting material #1 – Drilling launch pit

Supporting material #2 – Pipeline pre-welded and tested before installation.

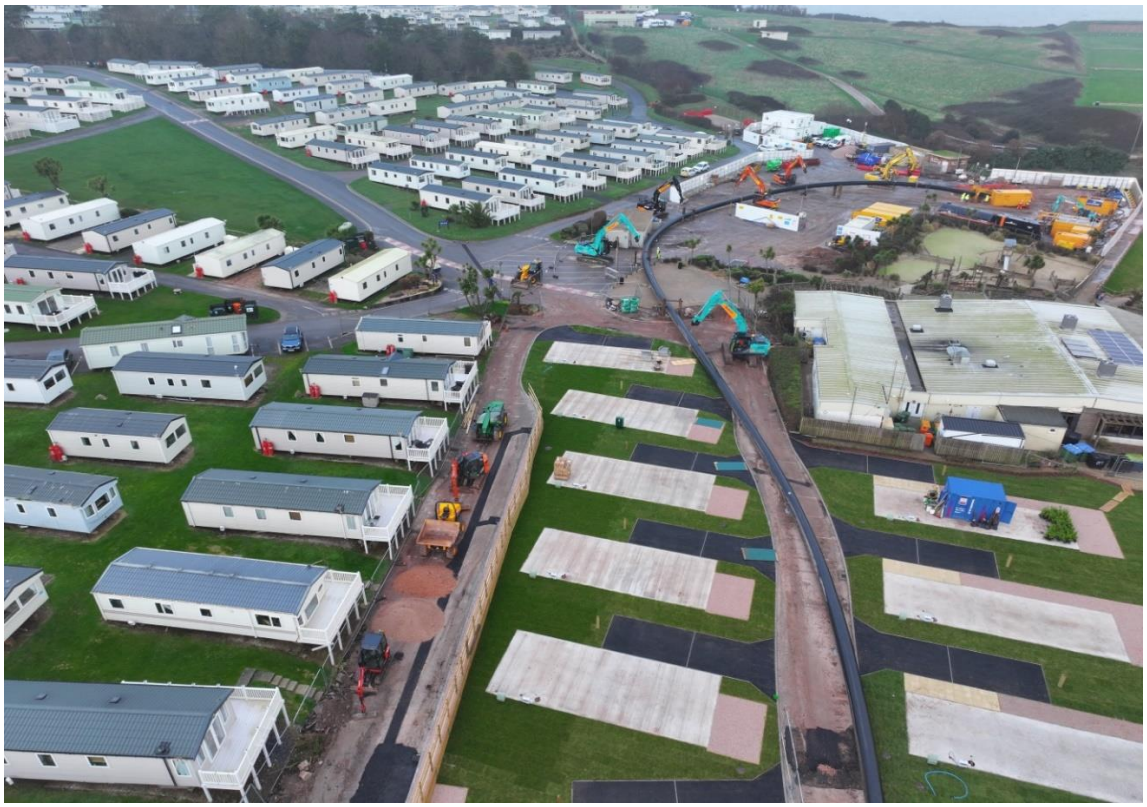


15A Bloxham Mill, Barford Road, Bloxham, Banbury, OX15 4FF
t +44(0)20 7235 7938 e hqsec@pipeguild.com www.pipeguild.com

Supporting material #3 – Pipe push Equipment.

Supporting material #4 – Pipe pushing equipment

Supporting material #5 – Pipe bend into pusher



Supporting material #6 – HDD Drilling Phases