

## Product

# Subsea Drill Centre Templates

## Product Application

- Protection of well control equipment, such as trees and wellheads

## Key features

- Complete design, fabrication, and installation service
- Designed for rig installation
- Designed specifically for optimising tiebacks
- Designed to withstand environmental, installation and jacket docking loads
- Enables the accurate space-out of wells during pre-drilling prior to platform installation
- Field proven running tools and centre slot locking mechanisms
- Bottom founded or casing supported depending on seabed conditions and operational requirements

## A Complete End-to-End Solution

Aquaterra Energy are specialists in developing innovative solutions and delivering subsea structures to suit a wide range of operational requirements. Our exemplary reputation is supported by a robust track record of service delivery for customers worldwide.

Drill Centre Templates are important to subsea developments:

- Offshore platforms can be very expensive to install and maintain throughout the lifetime of a well. Placing the well control equipment on the seabed within a Drill Centre Template support with reduce project costs and faster installation time, allowing drilling to start earlier.
- Subsea safety components such as trees and wellheads need adequate protection when in operation. A Drill Centre Template offers the highest levels of protection when installed and can be designed to be fully overtrawlable and/or fishing gear friendly.

With an emphasis on providing a complete solution, our team of experienced engineers have the correct skill sets required to complete the whole scope of work including:

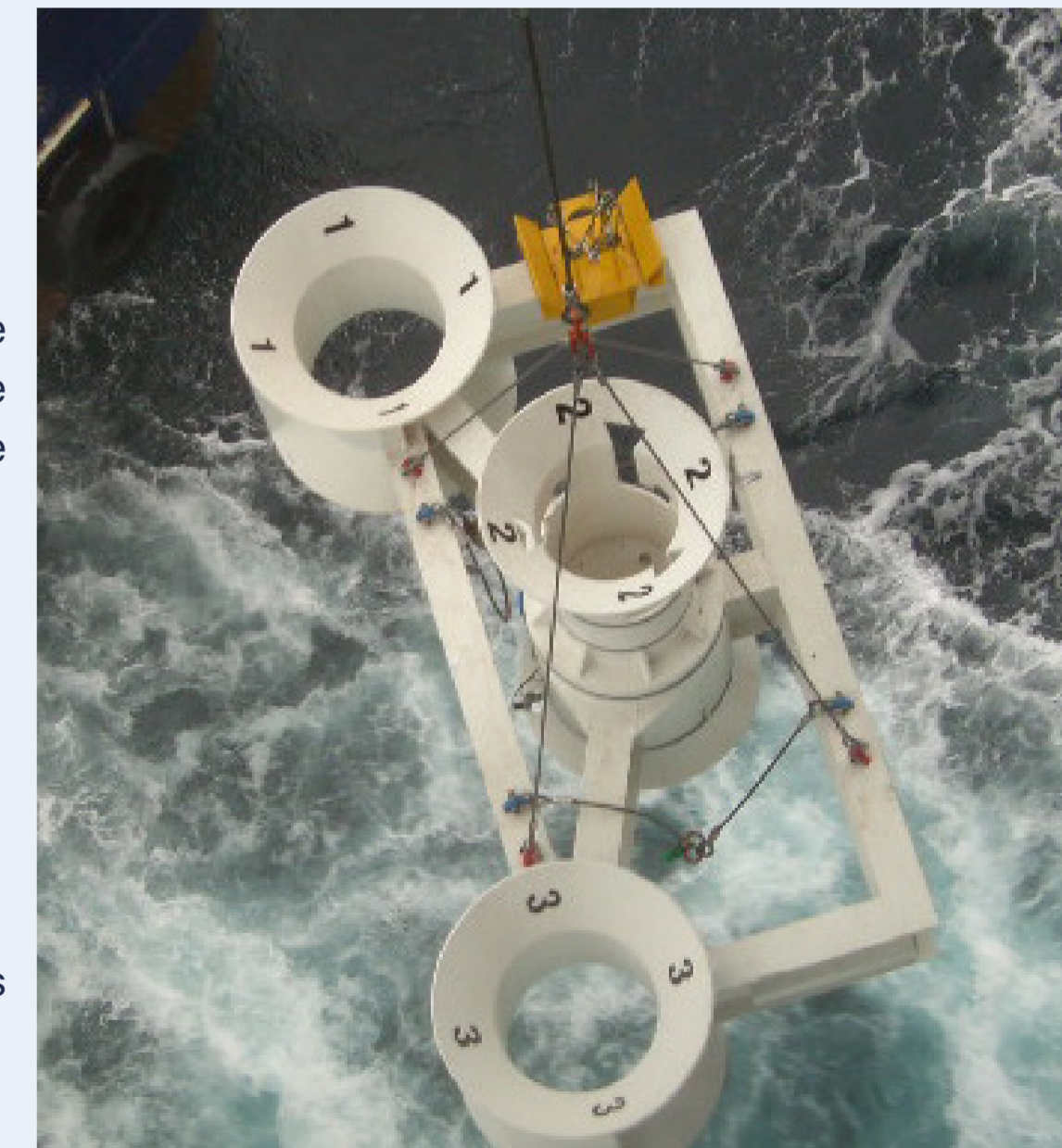
- Complete end-to-end solution from initial concept to complex technical clarifications
- Total understanding of project management with APM qualified Project Managers/Engineers
- Comprehensive and detailed structural analysis and design of the DCT, pipework, piles and installation equipment offering a total solution to the client's requirements.

All templates are optimally designed for rig or vessel installation using field proven equipment and methodologies, depending on the exacting circumstances of the Basis of Design (BOD).

Secondary and contingency systems are used when required for installation and operations, this is based on our invaluable experience in the supply and installation of these DCT's.

We can supply expertly engineered template installation packages to suit all applications, from casing to seabed supported, for a variety of well spacing configurations and conductor sizes (typically 30" casing is used within a DCT).

Emphasis is placed on the consideration of installation and operations from the very start of structural analysis and design to greatly improve overall solutions.



# Subsea Drill Centre Templates

## Flexible sizing

Various sizes are available to suit client requirements with the largest to date, fabricated to the following dimensions for the North Sea:

- Overall - 11.4m x 13m x 9.6m (height)
- Well centres – 7.2m x 5.6m 4 slot arrangement
- Size is dependent on the client’s requirements and subsea safety equipment dimensions

## Subsea protection

Protection from above is covered by roof panels which can be individual or cover the whole structure. Hinges can be incorporated where required and the panels can be completely removable to allow maintenance/unplanned operations by dwelling rigs or intervention vessels.

## Piping and spools

Piping and spools between the subsea safety equipment and the seabed manifold/tow head or FPSO can be incorporated within the Drill Centre Template design including supports and anchors where needed.

## Ease of access

Subsea operations can be completed either via hydraulic surface-controlled panels, via ROV or in certain circumstances, by Divers. Drill Centre Templates normally contain diver/ROV suitable installation aids/footings and are designed to be diver and ROV safe.

## Installation options

There are several different options for installation, such as:

- Bottom founded on the seabed using a mudmat to ensure a secure and even spread of the load
- Pile driven for extra stability to various depths analysed by Aquaterra Energy, typically 20m (North Sea)
- Drilled and cemented in place using a central locking pile to ensure uneven seabed conditions do not affect drilling. This can incorporate a J slot type connection or other locking devices such as Spring-Loks



# Related Products and Services

## Riser Systems

Our work across riser systems, riser analysis and efficient well initiation is underpinned by our deep engineering expertise ensuring that whatever solution we design, develop and install meets the needs of each client and each application.

At Aquaterra Energy – as an oil and gas OEM – we offer a range of integrated system packages to enhance operations, save rig time and accelerate time to first oil.

We offer:

- Surface riser systems
- Subsea high-pressure riser systems
- Completion and workover riser systems

## Offshore Analysis

Our highly qualified and experienced team provides in-depth analysis, highlighting specific project needs and building bespoke models to replicate situations in offshore environments.

We specialise in a range of riser and conductor analysis services, including but not limited to, jack-up high-pressure riser analysis, platform well conductor analysis, tieback analysis as well as fixed and floating offshore wind analysis.

## Tieback Engineering & Tooling

At Aquaterra Energy, our staff have been engineering tiebacks since 1981. Our primary focus when assisting in the pre-planning of well tieback operations is to maximise efficiency and cost effectiveness. We do this without compromising attention to detail, while minimising rig time and reducing risk.

We are also able to provide the specified specialist tieback tooling equipment required for customers’ operations via our rental equipment service, Aquaterra Express.

## Offshore Platforms

Our unrivalled life of field and brownfield modification experience means we’re perfectly placed to support in upgrading existing infrastructure to store CO<sub>2</sub> in depleted reserves.

From compressor considerations to wellheads and pipe engineering, our team can support with all platform simplification and modification requirements and can support all project stages through to design, fabrication, project management and offshore installation.



Supporting the full offshore energy ecosystem