SCHOTTEL
Marine Technologies

SMT SHOW & TELL 2024

DÖRTH • 23RD, 24TH, 25TH JULY 2024

confidential

WELCOME TO DÖRTH & SCHOTTEL MARINE TECHNOLOGIES

A DAY TO LEARN, ASK QUESTIONS AND ENJOY THE SCHOTTEL GROUP HOSPITALITY

SCHOTTEL Marine Technologies

Welcome

The Day is Yours!

- Appreciate the time and effort made to join us in Germany
- Fire alarms, exits and toilets
  - On test site – Behind Canteen
  - In building – Outside road to front of building
- Tea, coffee, water & snacks available all day
- Storage available for personal possessions
- Photographs – feel free and tag away! @SCHOTTEL Marine Technologies
- Presentation – Will be shared
- Lunch – Please let us know what you would like from options
- SAFETY FIRST – We want you to be safe on the test site
  - Morning – Up close and personal
  - Afternoon – Safe distance
  - Wear your allotted PPE
- QUESTIONS, QUESTIONS, QUESTIONS – Ask away! That’s what we are here for!
- Access to workspace available from 1500 – 1700 if you want time to check email
- Enjoy the day and for those staying in Boppard, we are around if you want to meet up tonight

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Agenda

Time: 1000 – 1500 Central European Time (CET)

Activity	Responsible	Timing	Location
Welcome	Michael Hook & Ralf Starzmann	1000 – 1020	Reception & PAZ Conference Room
Introductions	All	1020 – 1030	PAZ Conference Room
Overview of Test Programme & Q&A	Nick Cresswell	1030 – 1115	PAZ Conference Room
Site Induction & PPE Issuance	Jason Clarkson	1115 – 1130	PAZ Conference Room & SMT Test Site
Test Site (1): Tour, Up-Close Asset, Swift Anchor/cores and Load Frame Visit & Q&A	Nick Cresswell	1130 – 1230	SMT Test Site
Lunch & Free Time	All	1230 – 1315	SCHOTTEL Canteen
Test Site (2): Test Anchor Installation Witness	Jason Clarkson	1315 – 1345	SMT Test Site
SCHOTTEL GmbH Production Facility Tour	Ralf Starzmann	1345 – 1445	SCHOTTEL Production Facility
Commercial Steps	Michael Hook	1445 – 1500	PAZ Conference Room
Q&A, Coffee and Networking	All	1500	PAZ Conference Room (space available for working until 1700)

Success Story

1921
Josef Becker (1897–1973) establishes his craftman's workshop in an old farmhouse in Spay/Germany.

1950 – today
Development and construction of the first SCHOTTEL RudderPropeller that becomes a worldwide synonym for 360-degree manoeuvring. Today SCHOTTEL offers 9 different types of propulsion systems for various applications.

1958 – today
First international subsidiary is founded in the Netherlands; 14 more to follow.

1967
First harbour tug with SCHOTTEL propulsion

1980
Introduction of CAD/CAM

1998 & 1999
Start of production in Suzhou/China and Wismar/Germany

2007
Acquisition of a 15.4 % share in SCHOTTEL by Frydenbø Industri AS/Norway; 84.6 % still held by family members.

2008
Expansion of production capacity in all plants

2013
SCHOTTEL Industries GmbH

2015
Opening of production site in Dörth/Germany

2018
Expansion of the portfolio with digital products and services

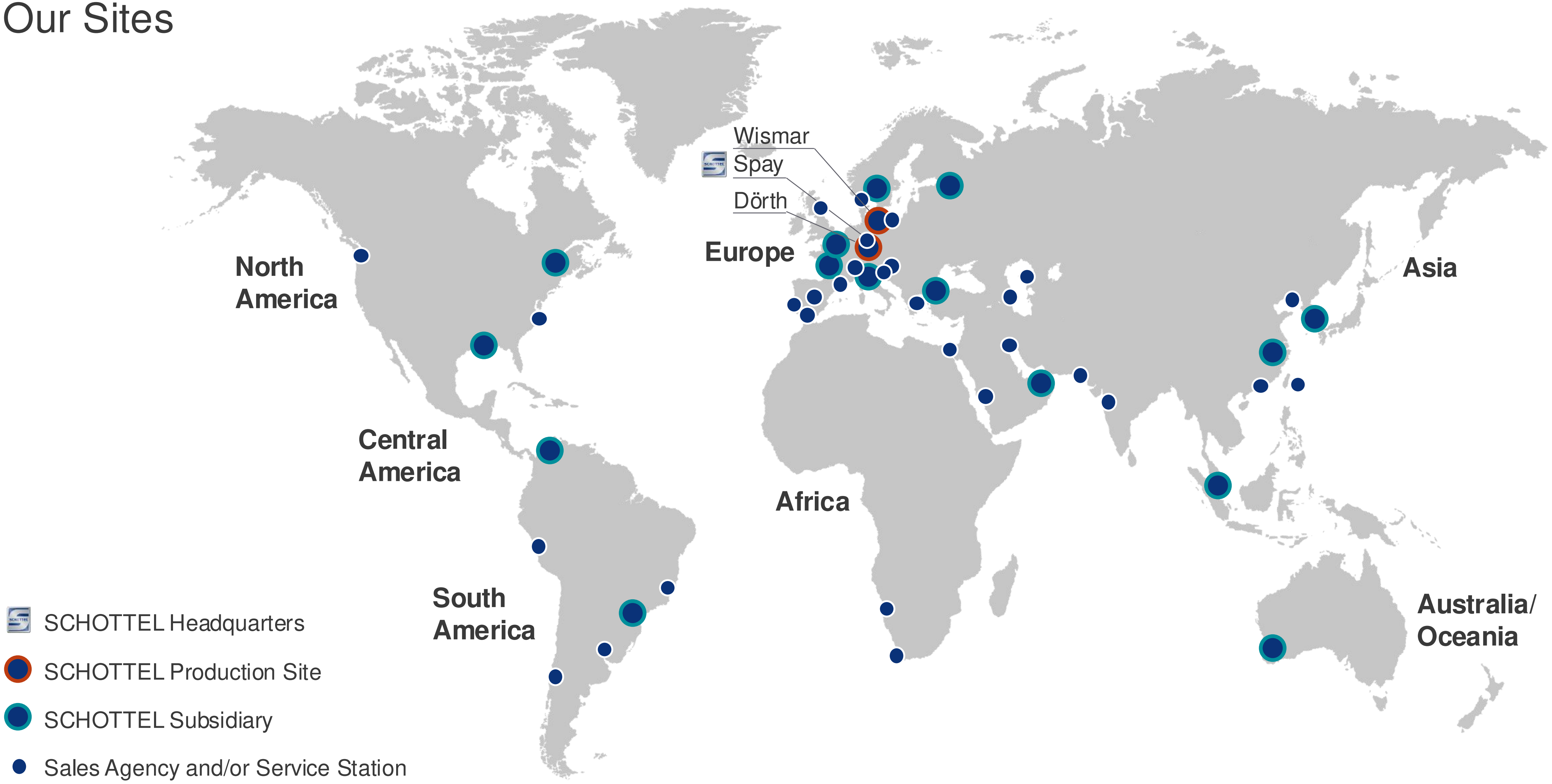
2021
100 years of SCHOTTEL

SCHOTTEL Group Structure

SCHOTTEL GmbH	HW Elektrotechnik GmbH	Wolfgang Preinfalk GmbH	SCHOTTEL HYDRO GmbH	Elkon Elektrik San. ve Tic. A.Ş.	SCHOTTEL Marine Technologies GmbH
Marine propulsion systems	Automation technology	Gearing and gearboxes	Hydrokinetic and tidal energy	Electric system integration	Marine technologies

SCHOTTEL Worldwide

Our Sites



SCHOTTEL Group

In a nutshell

1600
Employees worldwide

Family-owned with long-term, future-orientated strategies

#1
Solid market position in azimuthing propulsion

Global network with 15 subsidiaries

Broad scope of job profiles

International knowledge transfer

SCHOTTEL Marine Technologies

Who's Who Today?

The Team Looking after you – Feel free to ask them questions!

Name	Field	Good Person to Ask About?
Michael Hook	Business Development	General, Business Development & Commercial
Ralf Starzmann	Commercial	General, Business Development, Commercial & SCHOTTEL Group
Catrin Wickert	Marketing	Event planning, Marketing & Communications, SCHOTTEL Group
Nick Cresswell	Engineering	Engineering – Assets and Swift Anchor
Jason Clarkson	Operations	Operations – Marine & Health and Safety


WE ARE GONNA NEED A BIGGER
ANCHOR
OR ARE YOU??

REFRESHER OF WHAT A SWIFT ANCHOR IS & HOW DO THEY WORK?

A DECADE OF DEVELOPMENT TO DEVELOP A TRANSFERABLE SOLUTION TO FOW

Anchoring Track Record

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2012
First quarry trials

AROV1 operational

2014 - 2016
AROV1 modification and Swift Anchor quarry trials

2016
DNV Statement of Fit for Purpose


DNV·GL
STATEMENT OF FIT FOR PURPOSE

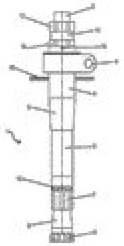
4x 1st generation Swift Anchors installed subsea at EMEC (SCO)

2017
4x 2nd Generation Swift Anchors installed subsea in Connel (SCO)

25x screw piles installed Subsea in Cromarty (SCO)

2018
Drag embedment anchors in Grand Passage Canada

2019
3rd generation Swift Anchor patents granted



2020
3rd generation Swift Anchor quarry trials

2021
First batch of 3rd generation Swift Anchors manufactured

Swift Anchor brand introduced

SWIFT ANCHORS

2022
New AROV2 and RIT commissioned

SCHOTTEL Marine Technologies acquires Swift Anchors

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2023
AROV2 wet trials in Nova Scotia (CAN)

DNV Statement of Feasibility issued


DNV
STATEMENT OF FEASIBILITY
Technology Qualification
Rock Anchors

DNV

2024
Swift Anchor identified by **ORE Catapult** as 1 of 10 technologies to reduce LCoE of tidal energy

Swift Anchor identified by **ORE Catapult** as an innovative anchor solution for FLOW applications

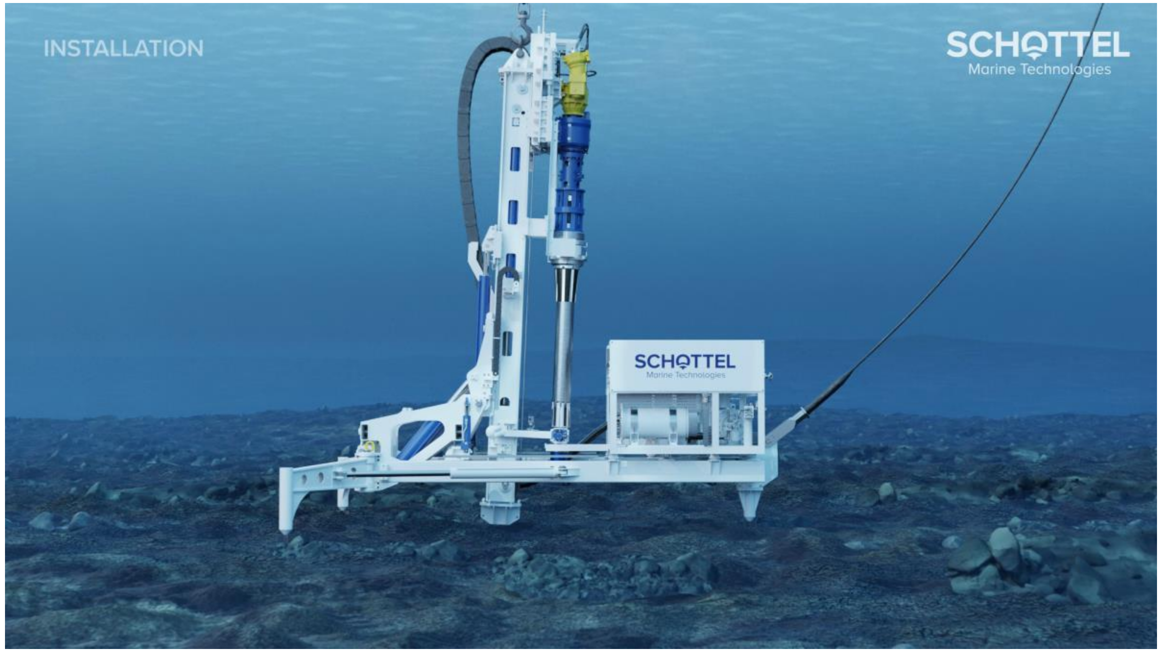
AROV2 coring and Swift Anchor installation trials at **SCHOTTEL** facilities, Dorth Germany

Anchor Installation & Decommissioning Overview

The Swift Anchor, a Self-Drilling, Groutless, Removeable Rock Anchor

DRILLING CONFIGURATION

Ready to drill into the rock seabed



DEPLOYED CONFIGURATION

Drilled and tensioned into rock seabed

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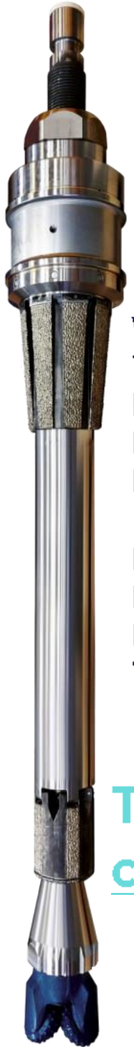
3rd Generation Swift Anchor Configuration



Representative scale of Swift Anchor Used in a Marine Energy:

Weight:	1t
Total Length:	~3m
Embedded Length in rock:	~2m
Mooring Line Load Holding:	**~200t**
Mooring Connection:	Pad-eye on rotating interface
Material:	Super Duplex Steel
Life:	20 – 25 years
Mooring:	Semi-Taut ~30deg
Typical Installation time on seabed:	**25mins**

This single Swift Anchor could displace a concrete gravity base of 500t – 600t

Representative Swift Anchor Scaled for Catenary FOW Device:

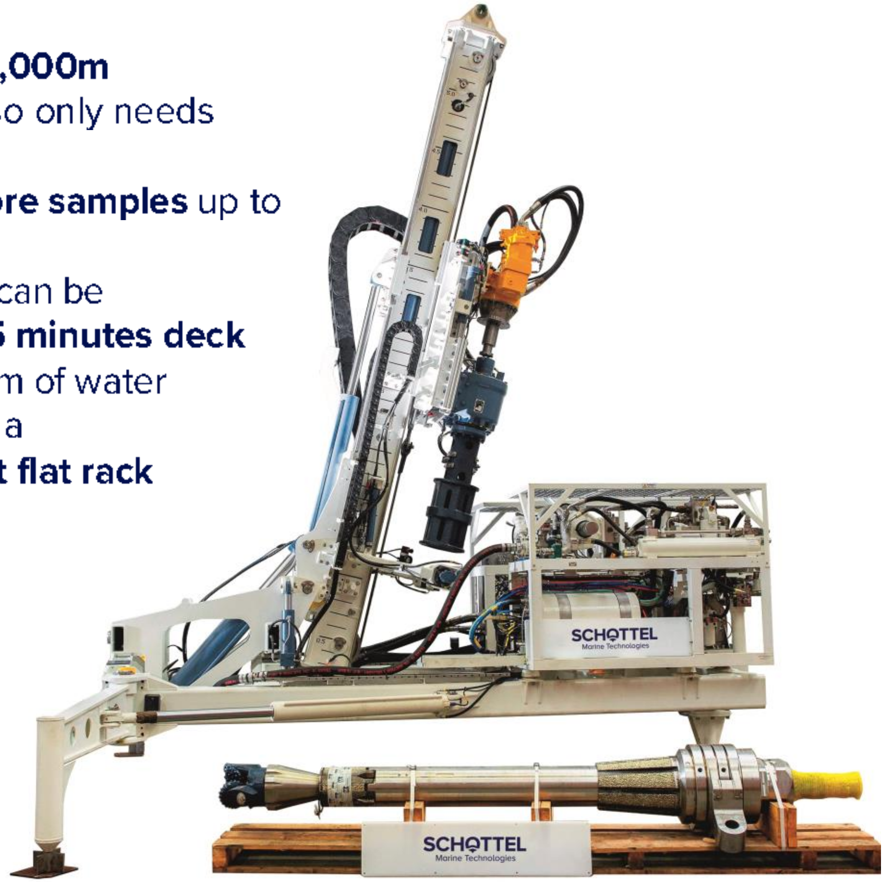
Weight:	3t – 15t
Total Length:	~4m – 8m
Embedded Length in rock:	~3m – 6m
Catenary Mooring Line Load:	**~700 to >1,200t**
Mooring Connection:	Various options
Indicative rock strength (UCS):	25MPa - 100MPa
Material:	Super Duplex Steel
Life:	20 - 25years
Typical Installation time on seabed:	**~2-3hrs**

This single Swift Anchor could displace a drilled and grouted pile that takes days to install

Installation, Operation & Decommissioning Tools

AROV2 – Anchoring Remotely Operated Vehicle

- Installs rock anchors in **single operation**
- Operable to **1,000m**
- Weighs 10te so only needs **small cranes**
- Can obtain **core samples** up to 4m in length
- A 3m anchor can be installed in **45 minutes deck to deck** in 35m of water
- Shippable on a **standard 20ft flat rack container**



AROV2 – CORING & INSTALLATION TOOL

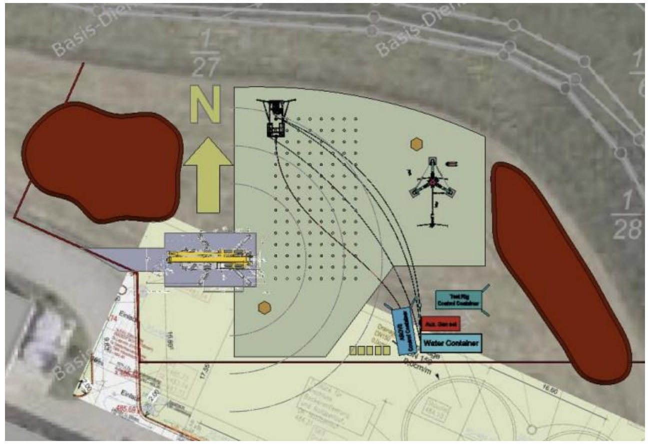
SWIFT ANCHOR LAND TRIALS

PROGRESS & UPDATE, INITIAL OUTCOMES AND DNV CERTIFICATION

Land (Quarry) Testing at Dörth

Site and Plan Overview

- Testing is being conducted at the **SCHOTTEL Group's main production facility** for core business in Dörth – azimuth propulsion and manoeuvring systems as well as complete propulsion systems for vessels
- **Facility is built on rock** – Overburden cleared to expose rock
- Equipment mobilised for trials:
  - AROV2
  - Control Container
  - Generator
  - Water storge facility (required for cooling and flushing)
  - Mobile Crane



Land (Quarry) Testing at Dörth

Objectives

- Complete all **acceptance testing** of Anchoring Remote Operating Vehicle ("AROV2") post modifications
- Complete a **ground truthing exercise across test site** to validate geotechnical properties. Undertaken with AROV2 in coring configuration
- Complete **sequence tests of Swift Anchor installation** to validate AROV2 operation and **installation process** of 3rd generation Swift Anchor
- **DNV witness** of full installation sequence "blind"
- Full **installation of two Swift Anchors** to facilitate load trials
- Complete **load trials to meet DNV pre-agreed test plan**
- **Decommission two Swift Anchors** using Remote Intervention Tool ("RIT")
- Submit final **document pack to DNV to support issuance of Prototype Certification** to DNV-SE-0163 and DNV-ST-0164 (tidal – with reference to floating wind DNV-ST-0119)

Land (Quarry) Testing at Dörth

Progress and Outcomes to Date

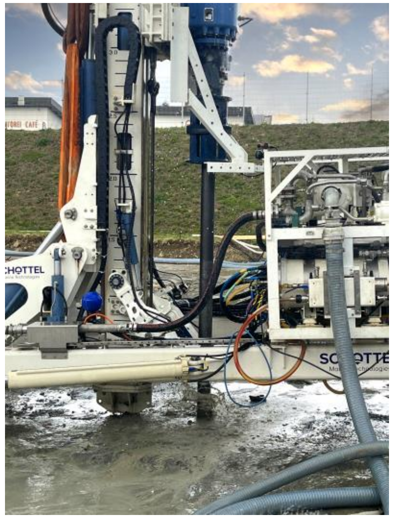
Item No.	Description	Status	Notes	Target Date
1.	AROV2 Acceptance Tests	Complete		
2.	Ground Truthing Across Test Site	Complete		
3.	Swift Anchor Installation Sequence Trials	Complete		
4.	DNV Witness of "Blind" Swift Anchor Installation	Complete	No visual references allowed. GUI interaction only. Test passed	
5.	Load Trials	WiP	Load frame ready – Load trials post event	End July
6.	Decommission Swift Anchors at end of Load Trials	Not Started	Swift Anchor successfully removed during trials x 5 times	Early August
7.	Final Document Pack Issued	WiP		Early August

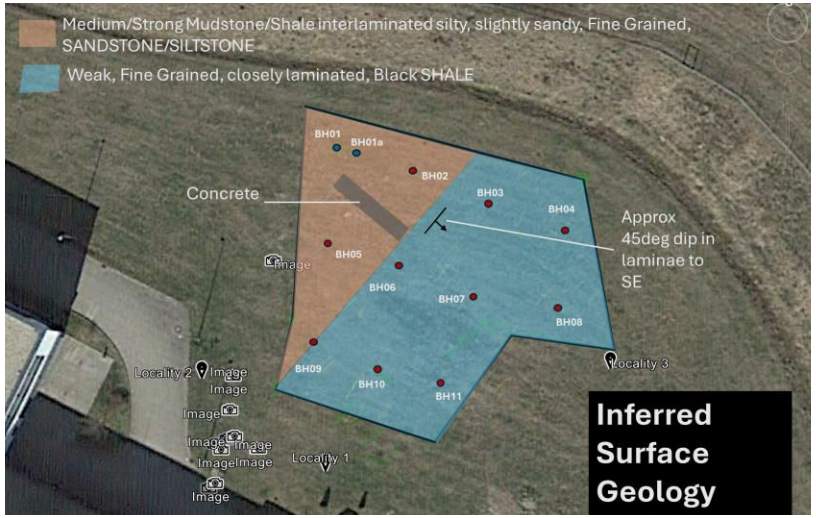
Activity Outcome	No. of Times
Core Samples	9
Trial "Dummy Anchor" Installed	31
Swift Anchor Installed	6
Swift Anchor Removed	5

Site Investigation – Nature of Rock at Test Site

What are we drilling into?

- Site investigation conducted using **coring capability of AROV2** with a 3m, T6-116 ⌀116mm core barrel, which retrieves a ⌀93mm core
- Spread of samples taken across site and logged by **SMT Senior Geotechnical Engineer**
- Samples sent to **Aachen University** for laboratory testing to build ground model
- **Relatively complex site** for a small area with mix of:
  - Sandstone/siltstone to West
  - Shale to East
- Geotechnical assessment is ongoing to validate information to use for **load test design**
- Preliminary assessment indicates **a UCS ~15-20 MPa and a GSI of 30-40**





SMT's Rock Anchor Geotechnical Model (RAGM)

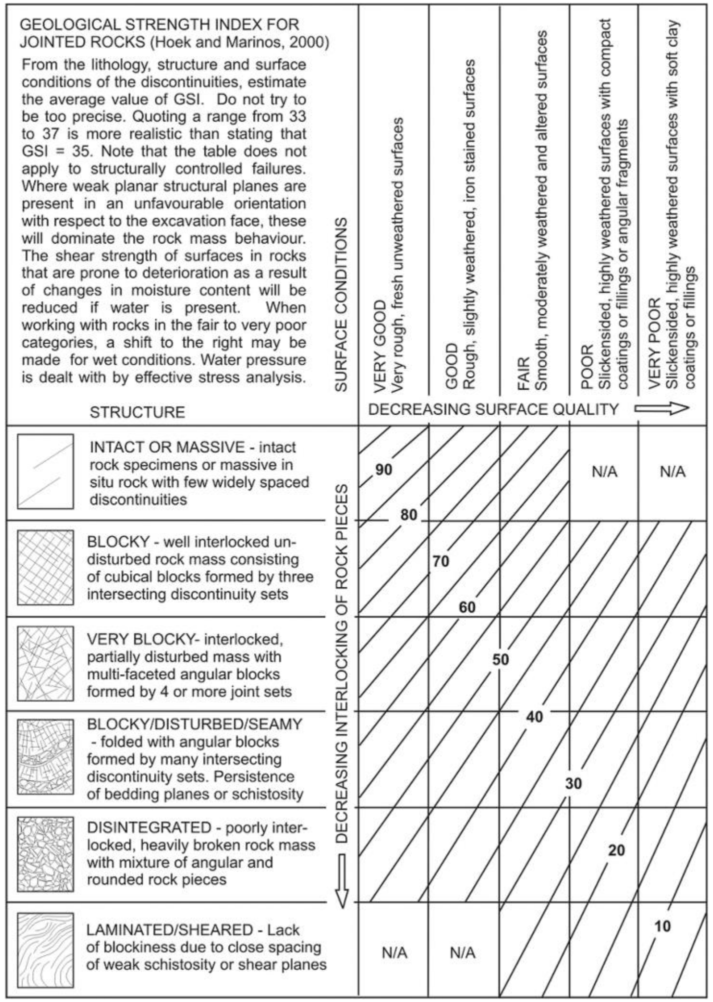
How do we Derive Rock Strength and Apply Factors of Safety?

Scaling of a Swift Anchor

- Sizing of Swift Anchor driven by **geotechnical properties of rock** (UCS & GSI, using Hoek-Brown), **mooring load** and **mooring geometry**
- Scaling undertaken based on SMT's own **Rock Anchor Geotechnical Model**

Beyond scaling undertaken to meet the mooring and geotechnical properties, the following **safety factors** are used:

- **Loads factored to DNV standards** from mooring analyses used in the design loads
- **Lower bound geotechnical characteristics** taken from site investigation and assessment
- Material factors for both rock and steel applied from relevant **DNV standards**
- Geotechnical parameters reduced according to the **relevant strata type for fatigue effects**
- Tension capacity limit applied to rock mass in line with literature



SMT's Rock Anchor Geotechnical Model (RAGM)

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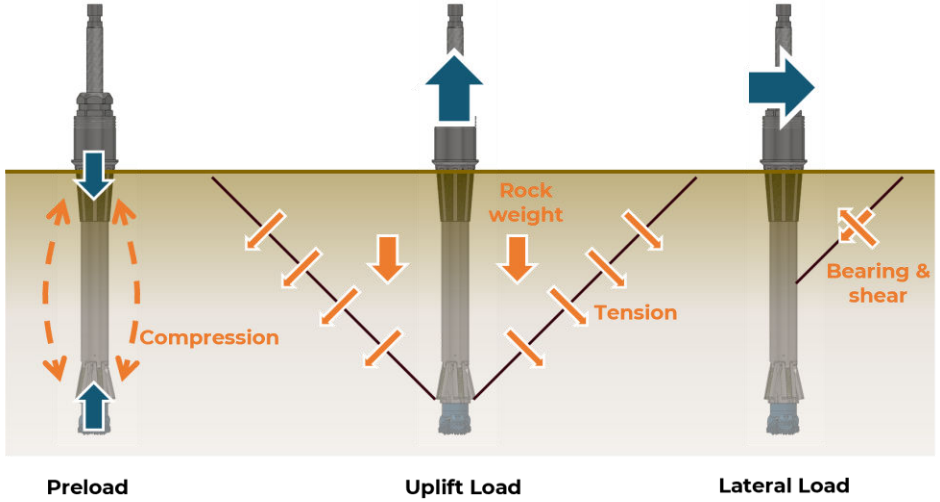
How do we Analyse the Swift Anchor?



Anchor loads and **Geological Load Path**

Item	Description	Key Reference
Derivation of Geotechnical Parameters	Geotechnical model as detailed in Hoek and Brown. This produces material constants based on the type of rock, rock quality and rock strength.	E. Hoek and E.T. Brown (1997), Practical estimates of rock mass strength [7]
Uplift Capacity Analysis	Method used has been adapted from literature on calculating the uplift capacity of grouted anchors (most similar available industry verified method). This assumes a rock mass cone forms at the anchor's lower taper. Tensile capacity of the rock limited to account for fracturing and quality of the rock mass.	G.S. Littlejohn & D.A. Bruce (1975), Rock Anchors – State of the Art Part 1: Design
Lateral Capacity Analysis	Validated method for calculating the lateral capacity of socket piles installed into rock used.	K. Yang (2006), Analysis of laterally loaded drilled shafts in rock
Rock Fatigue	Rock fatigue accounted for by applying a global reduction in rock strength from a study undertaken on the fatigue behaviour of a range of rock types.	B. Cerfontaine, F. Collin (2017), Cyclic and Fatigue Behaviour of Rock Materials: Review, Interpretation and Research Perspectives

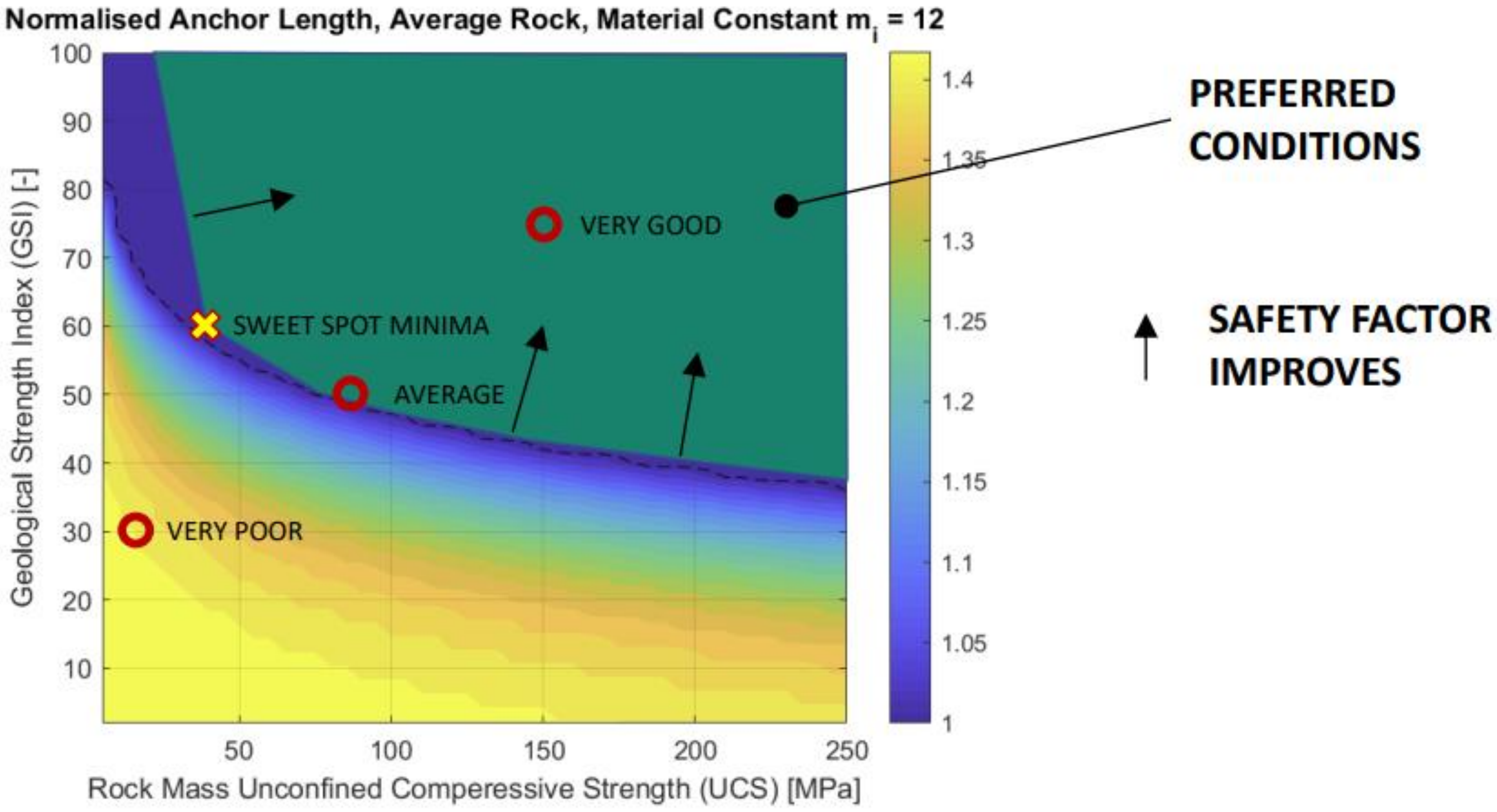
Key reference documents:-

- Hoek & Brown, Practical estimates of rock mass strength, International Journal of Rock Mechanics and Mining Sciences, Vol 34, No 8, 1997, pp 1165-1186
- DNV–ST–0437 Loads and Site Conditions for Wind Turbines
- DNV-ST-0119 Floating Wind Turbine Structures

Study - Swift Anchor Sizing Sensitivity in Uplift

Swift Anchor Size Sensitivity to UCS and GSI

- Swift Anchor size **sensitive to geotechnical conditions** as a direct result of strength (UCS) **and** quality (GSI).
- The relationship between a **low strength and poor-quality rock** can be seen with the increase in normalised Swift Anchor length
- Example shows that a geotechnical conditions above the dotted line have **no negative influence in the normalised length** of the Swift Anchor versus below which has an impact up to x1.4
- The dotted line also represents the cut-off which is applied to **the rock mass tensile capacity** within the RAGM



Note however, the Swift Anchor can work across a range of geotechnical properties and SCHOTTEL Marine Technologies has scaled anchors across a wide selection of rock properties.

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Technical Learning Point

Cutting Finger Geometry Scaling

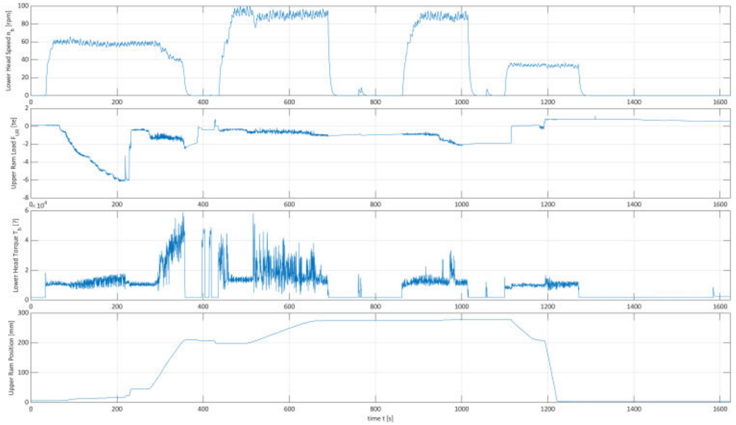
- Third generation anchor has much **larger cutting fingers** than previous generations (for strength)
- First time a Swift Anchor has been installed in "soft" rock, which **broke up** at surface under weight on bit
- Debris from surface breakup became lodged between lower taper and fingers
- Piece of debris wedged against side of hole and forced into gap underneath fingers, failing retention
- Fingers prematurely splayed down hole jamming anchor and causing failed install
- Temporary solution trialed with 3D printed inserts and minor modifications to existing fingers – partially successful but helped validate issue
- Final solution was to **chamfer and re-face leading edge of fingers** → 100% success rate since

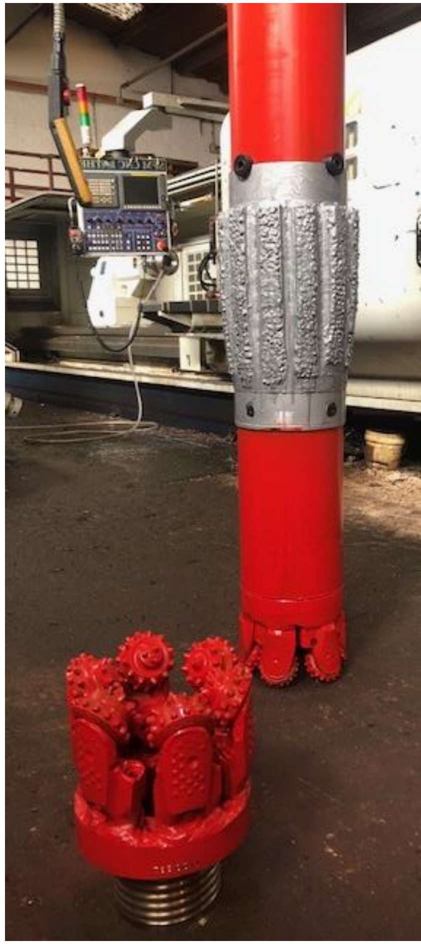
No other technical issues have been experienced throughout the trial process.

Drilling Performance Testing

Validating Predictions

- Extensive test program to prove performance of AROV2, build **drilling response model** and **prove Swift Anchor installation sequence**
- 9 **core samples** taken, 31 **"dummy" drills** and 6 **real Swift Anchor drills** to date
- **Full Swift Anchor installation sequence tested** with staged approach adopted to mitigate risks as complexity increased
- **All data logged** from AROV2,
  >200 sensor inputs logged at high frequency
- Generate all data points from load trials for **DNV prototype certification**
- Allows proof load testing of Swift Anchors to be performed by AROV2 on installation **in accordance with DNV-ST-0119/PTI DC 35.1**





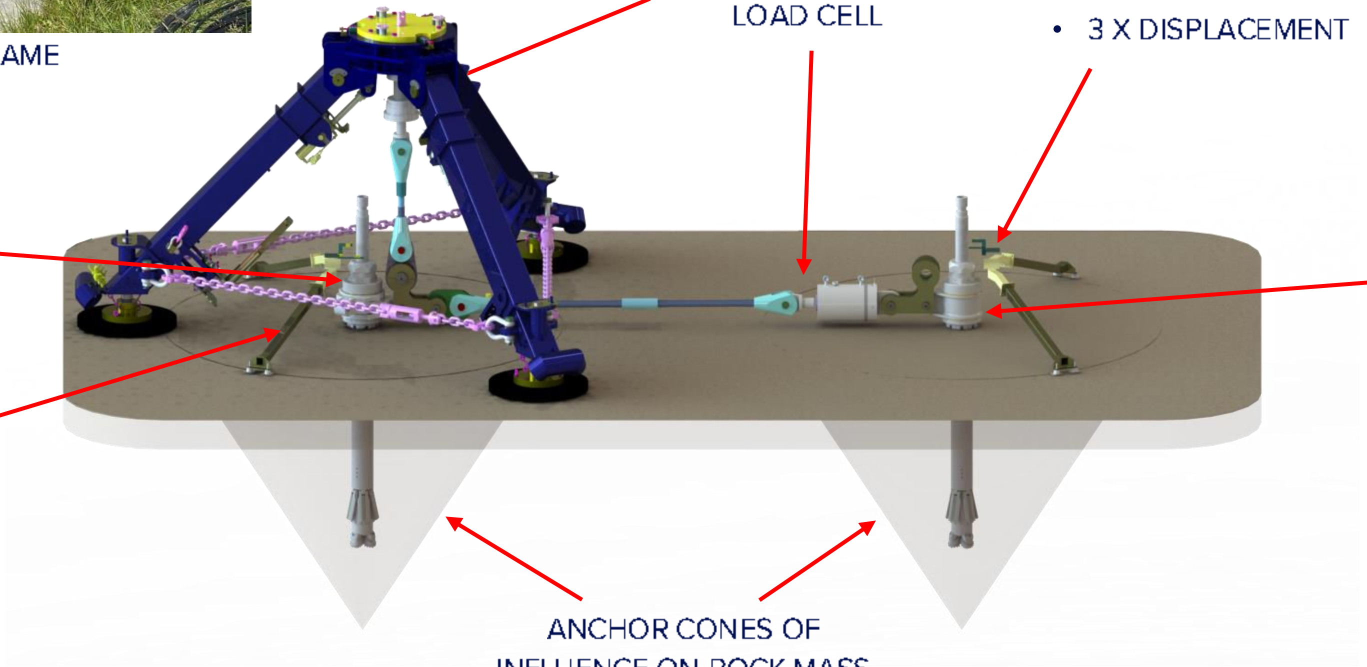
Swift Anchor Load Trials – Setup

Proving Load Holding Capacity

150 TE ANCHOR LOAD FRAME

Final stage of land-based trials is to **verify the load holding capability** of the Swift Anchor and subject to an **accelerated life testing regime**

- Load frame and hydraulic system enables static and **time varying loads up to 150 te**
- Load angle can be varied continuously from **0° to 90° from horizontal**
- Monitors Swift Anchor **pre-tension, displacements** and **rotations** with applied loads
- All data fed into **SCADA system at high frequency**



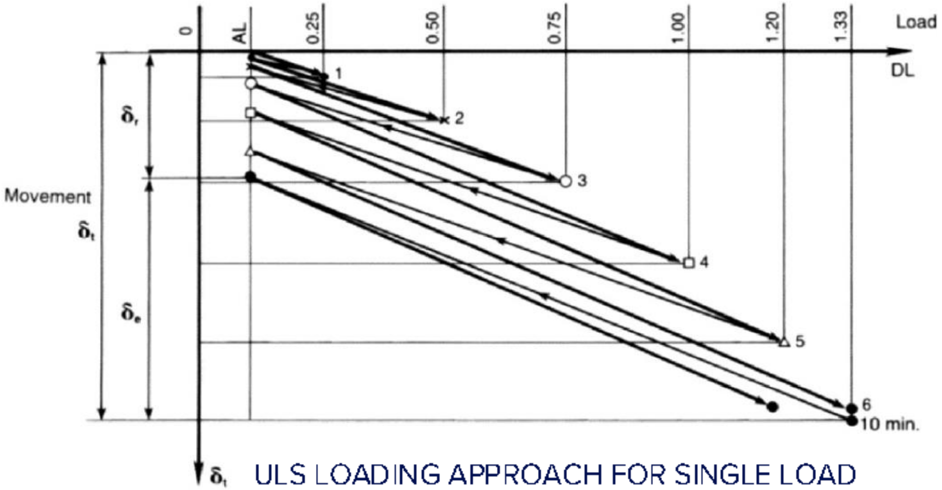
REACTION ANCHOR

Swift Anchor Load Trials – Test Plan

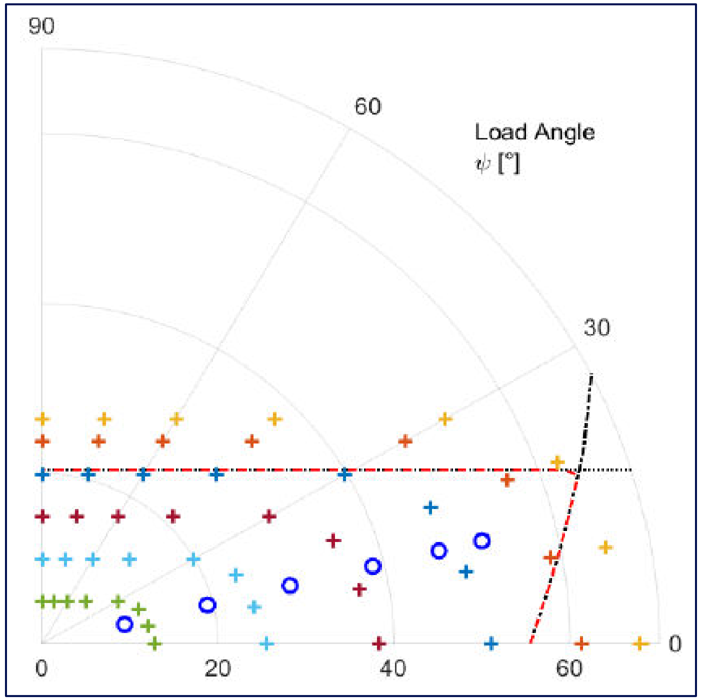
Proving Load Holding Capacity

Load trials have been specified in accordance with **DNV & PTI standards** and the **test philosophy** agreed with **DNV**. These will include:

- ULS loading at **15° increments from 0° to 90°**, taking a staged approach to 133% of the design load
- FLS loading following a **Damage Equivalent Loading (DEL) approach for 25 years** of the design fatigue
- A final **test to failure in uplift** to verify the residual capacity in the Swift Anchor



ULS LOADING APPROACH FOR SINGLE LOAD ANGLE (PTI DC 35.1)



ULS LOADING MAP SHOWING LOADING POINTS AND SWIFT ANCHOR DESIGN CAPACITY CURVES

The DNV Certification Process

Stage Gates to Certification

- 1st Generation of anchors achieved a DNV statement of fit for purpose
- 3rd Generation of rock anchors being certified against DNVGL-ST-0119 “Floating Wind Turbine Structures”
- **Provides assurance at key lifecycle stages: Design, Manufacture, Installation, Operation and Decommissioning**

Technology Qualification

- Assurance that the approach underlying the qualifying technology is sound
- DNV review of design
- Detailed FMEA review to identify failure modes and that there is planned mitigation in place
- Concludes with generation of Certification Basis and issuance of **Statement of Feasibility**

COMPLETED

DNV Statement of Feasibility Issued

Prototype Certification

- Certification of prototype for single design condition
- Detailed examination of design documents
- Proving that failure modes are mitigated through test plan
- Assessment of testing conducted against Certification Basis
- Manufacturing and commissioning surveys
- In service monitoring
- Finalises with issue of Prototype Certificate

Present Stage – Complete summer ‘24

Type Certification

- Certification of the family of products for multiple design conditions within a defined bounding box
- Validates the design approach across the range of conditions which could be experienced within the chosen bounds
- Allows certification to be applied to new products within range with limited oversight from DNV

SWIFT ANCHOR WET TESTS

NEXT STEP SUBSEA TRIALS

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Subsea Deployment

Project Location and Objectives

- Site shortlisting undertaken and **proposed** location is Strangford Lough, Northern Ireland
  - **Well known tidal test site** as the location (MCTs SeaGen, Minesto, ORPC)
  - Site known to experience **tidal flows up to 5 kts**
  - **Queens University** have a dedicated pre-consented test location in the Lough
- Proposed wet test/subsea deployment will comprise of:
- **Geotechnical site assessment** using existing data and site visit (completed)
- Mobilisation of SMT assets including:
  - AROV2
  - Control Container
  - Load Frame
  - Swift Anchors x2
  - RIT
- Prior to wet installation, a **dry load test in a representative rock** form to the Lough will be undertaken (expected in local quarry)
- **Installation of Swift Anchors at depth**
- Installed Swift Anchors **connected to a load generating device**, e.g. a barge with drag plates and load monitoring devices to register load information
- RIT deployed to **decommission** Swift Anchor at end of load trial

Outcome: A proven Swift Anchor for rock which can be used for tidal scale projects and is scalable for FLOW, reducing costs in areas of rock and even reduce pressure on wider supply chain

SITE INDUCTION & PPE

WE WANT TO KEEP YOU SAFE!

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Marine Technologies

Site Induction

Health, Safety & Environment in the workplace

SCHOTTEL Marine Technologies is committed to providing a **safe & healthy work environment**

While on the premises “Everyone” must:

- **Take reasonable care** of yourself & others who may be affected by your actions in the workplace
- **Co-operate** with SCHOTTEL Marine Technologies on H&S matters
- **Not to interfere** with/misuse anything provided for H&S purposes
- If you want to touch, please ask.
- **Report any hazards** noted on the premises to **Site Manager (Jason Clarkson)**
- **Report all incidents** regardless of seriousness to the SCHOTTEL Marine Technologies Site Manager immediately
- **Act respectively and appropriately** to others
- **Wear your PPE at all times**

SCHOTTEL Marine Technologies will exercise diligence in adhering to and complying with all relevant regulations and requirements in the region it is operating in.

Site Induction

General Site Rules

1. **Wear all required PPE while onsite** – (visitors require hard hats, safety glasses, safety shoes and hi-vis vest)
2. **Never tamper with any safety equipment.**
3. **Smoking is prohibited in the building and on the test site.** Smoking is only allowed at the **external designated smoking area only.**
4. Consumption of **drugs or alcohol is prohibited.**
5. Visitors are required to stay in **designated areas** and **remain with their SCHOTTEL Marine Technologies representatives** at all times. Do not wander around facility or test site on your own.
6. **The use of mobile phones while on test site is not permitted** unless being used for photographs.

Site Induction

Site Hazards

Hazards are present in all workplaces and identifying them is an ongoing process. SCHOTTEL Marine Technologies has identified hazards associated with this test site by **conducting a HIRA** (Hazard Identification and Risk Assessment).

Some of the general hazards associated with this site that a visitor could encounter are the following:

- **Uneven ground** – Ruts and crevices from mud and equipment are present all over the site. It is important that you mind your footing.
- **Moving equipment** – A mobile elevated work platform is present onsite as well as a crane. Movements are normally planned but as always equipment can move at any time.
- **Rotating equipment** – The AROV2 has rotating heads. Never wear loose clothing when in the vicinity of the AROV2.
- **Slips, trips, and Falls** – Uneven and potentially slippery (mud) ground, cables and waters lines can cause these events. Stay in your designated area when onsite as guided by SCHOTTEL Marine Technologies' representatives.
- **High Voltage** – The AROV2 and its support equipment are powered by high voltage electricity. Always stay clear of high voltage areas and NEVER open cabinet doors containing high voltage equipment. All high voltage is clearly marked with the appropriate warnings (HIGH VOLTAGE)

While onsite please feel free to ask any questions you may have regarding health and safety. Knowing what can affect you in the workplace is our obligation.

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Site Induction

Overview of Test Site

COMMERCIAL AND COST MODEL

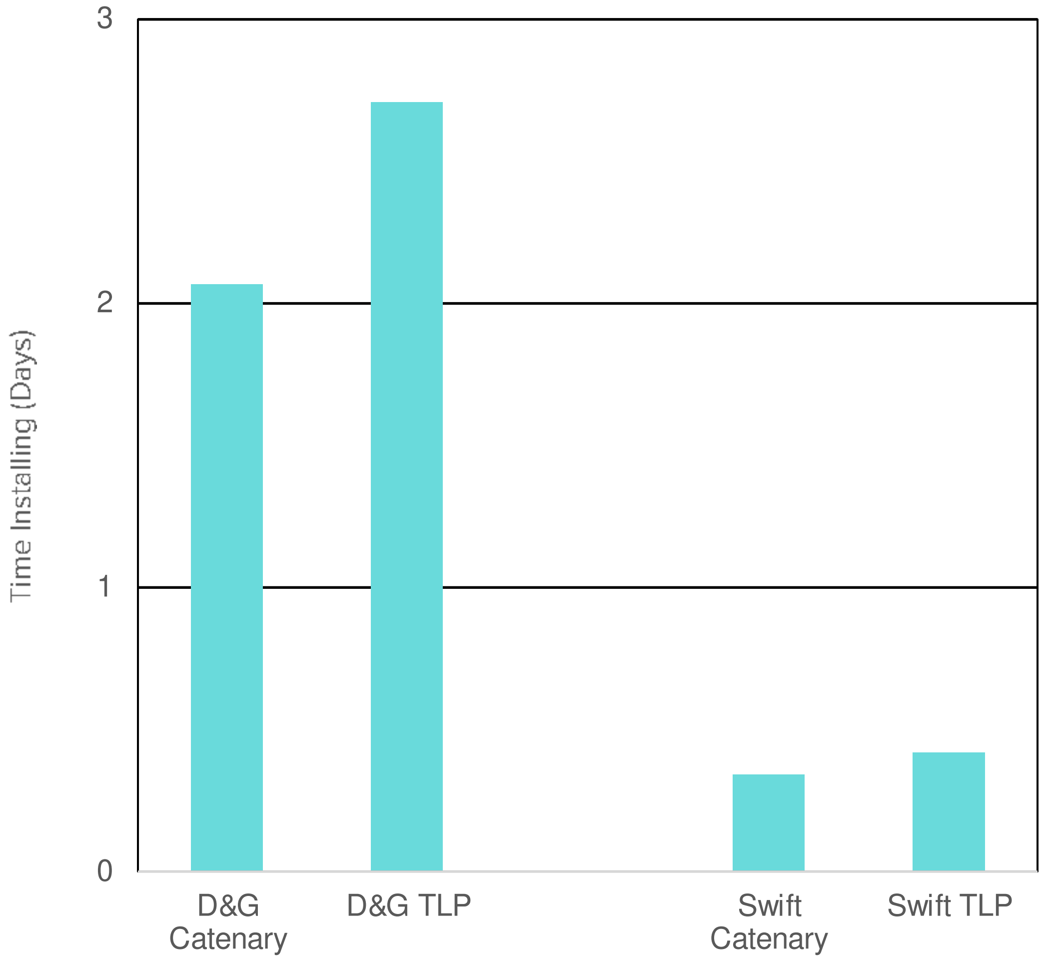
HOW WILL WE EVIDENCE OUR FINDINGS AND WHAT DOES IT POTENTIALLY MEAN?

Installation Comparison – Time is your Friend

Drilled & Grouted Pile vs. Swift Anchor

- Preliminary analysis – to be backed up by **independent third party**
- Equivalent drilled and grouted piles sized for **same conditions**
- Drilling time per pile computed **based on drilling rates**
- Additional time allowed for **grouting** of D&G piles
- Drilled and Grouted Piles can take **up to 300-400% longer to install**

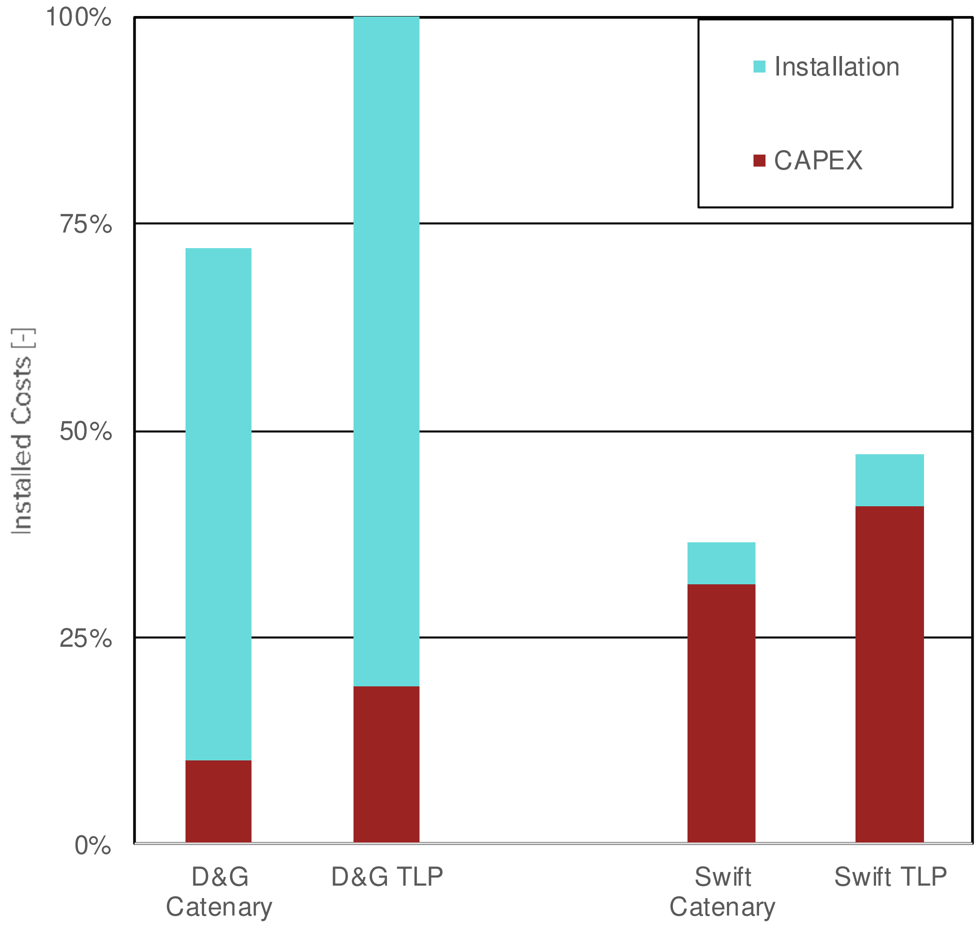
	Catenary Example		Tension Leg Example	
	D&G	Swift Anchor	D&G	Swift Anchor
Uplift [te]	10		1000	
Lateral [te]	1000		10	
GSI [%]	60			
UCS [MPa]	50			
Length [m]	8	**3**	15	**8**
Diameter [m]	2	**0.8**	2	**0.4**
Drilling rate [m/h]	0.5	**2.7**	0.5	**2.7**



A Comprehensive Comparison to Come

Drilled & Grouted Pile vs. Swift Anchor – An Independent Assessment

- Swift Anchor installations likely cheaper like for like as:
  - Significantly **shorter times**
  - Requires a **smaller installation vessel**
  - **Lower craneage** requirements due to lower system mass
  - **Smaller offshore deck spread**, including scale of drill rig and no grouting assets required
- Ability to further derisk installation as a result of:
  - **Reduced effect of weather** as reduced operable windows required
  - Shorter install times and high wave state operability
- The **harder the rock, the more efficient a Swift Anchor becomes** as it relies on the inherrent strength of the rock
- There are significant opportunities to reduce installed costs by moving away from drilled and grouted piles to Swift Anchors in suitable rock seabeds
- This is just our word!



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Installed Anchor Cost Comparison – Overall Savings

Drilled & Grouted Pile vs. Swift Anchor

- Assessment of Swift Anchors vs. Drilled and Grouted across a range of scenarios to understand:
  - **CAPEX**
  - **Operational costs** to install both solutions
    - Outcome: A combined **"as installed"** cost
    - **Mooring** savings
    - **LCoE** assessment
    - First pass **CO_2 assessment**
- All to be validated as part of **OWGP project** using independant, market leading companies
  - **London Marine Consultants** – Scope: Scaling, CAPEX and installation time and cost for drilled and grouted piles
  - **BVG Associates** – Scope: Completing assessment of costs, LCoE and CO_2 outputs
- Objective: **Understand the value proposition and areas where Swift Anchors can be cost advantegeous**

Mooring	Load (te)	Load Angle to horizontal (º)	Depth (m)	Rock Strength
Catenary	1,000	0	100, 250 & 500	Poor, Medium and Good
Semi-taut	2,000	35	100, 250, 500	Poor, Medium and Good
TLP	4,000	90	250, 500	Poor, Medium and Good
TLP	5,000	90	250, 500	Poor, Medium and Good

Notes:-

1. *Distance from construction port – 60kms*
2. *CoD – 2028*
3. *Turbine Rating – 15MW*
4. *No. of mooring legs – 3*
5. *Rock Strength:-*
   1. *Poor (UCS 20MPa / GSI 30)*
   2. *Medium (UCS 80MPa / GSI 50)*
   3. *Good (UCS 150MPa / GSI 75)*

BVG Associates

LMC LONDON MARINE CONSULTANTS

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THANK YOU.

GET IN TOUCH AND WE LOOK FORWARD TO ANSWERING YOUR QUESTIONS

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