

Tom Wadsworth

Design Engineer

Online Portfolio
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Sparkwell, Plymouth, Devon

Profile

As a highly skilled Design Engineer, I bring extensive experience in delivering innovative, high-quality solutions for a diverse range of clients across local and international markets. My expertise spans multiple software platforms and disciplines, enabling me to adapt seamlessly to various project demands.

Throughout my career, I have excelled as a bespoke designer, visualizer, and conceptual 3D artist, with additional experience as a team manager. I am recognized for my strong communication and visualization skills, which allow me to collaborate effectively with clients, teams, and stakeholders to achieve exceptional results.

My educational background includes a GNVQ in 3D Design (1998) and a degree in Multimedia Design (2008), forming the foundation for my multidisciplinary approach to design and problem-solving. Based in Plymouth, I thrive on the dynamic and challenging nature of my work and am always eager to travel for exciting projects and client collaborations.

Skills/Experience

Designer Engineer
3D Visualiser
CNC, 3D print and Laser
UAV Drone Pilot
Marine Mechanic
ROV pilot
Volunteer
Divemaster

Freelance, BBC, Netflix, Merlin, Disney, Silverback Productions, Plymouth University
Freelance, Various Architects, KCF Tech, Mammoet, Videoray, HLM Architects
Freelance, Inhouse Visuals, NMA, BBC
Aerobotix, RoarFilms, SkyFlicks, BBC, HoverCam
Fort Bovisand (diver training college), Blue Water divers Bermuda
Freelance, Atlantis Marine, Momentum Engineering, Titan Salvage, iRov (2000+Hrs)
The Bermuda Aquarium, BUEI & BIOS, Reef Doctor Madagascar, National Marine Aquarium
Fort Bovisand, ReefDoctor, BW Divers

IT Skills:
3D Studio Max
Autodesk Inventor
Easy EDA PCB Design
Vray
Agisoft (Photogrammetry)
Photoshop
Vcarve
Reality Capture
CorelDraw

Education

Plymouth College of Art and Design
Sept 2005- May 2008
BA (Hons) Multimedia Design Grade: 2:1,

Worcester Art College
Sept 1996- June 1998
GNVQ Advanced in 3D Design

King's School, Worcester
September 1993 – June 1996
7 GCSE's including English, Maths and Science

Other Certifications & Qualifications:

BNUC-S UAV pilot (expired)
Vocational Grade 3 in English Speaking
Welcome Host scheme (Customer Relations Course)
Level 1 Mig Welder
Divemaster (PADI) (Expired)
ROV Pilot (ongoing with 2000+ Hrs on the sticks)

Career

2010 – Present, Design & Invent Ltd

Design Engineer

I specialize in creating and developing bespoke designs for companies worldwide, guiding projects from initial concept through to completion. My work often involves on-site involvement during handover and installation phases.

While primarily self-employed, I collaborate with a collective of local professionals, forming a small business where I typically serve as project manager. In this role, I oversee the hiring of specialists, manage client relationships, and lead projects through all stages of development.

I specialize in the marine sector, particularly subsea, but also work within the industrial, tourism, and television industries. To bring my designs to life, I collaborate closely with local metal fabricators, machinists, and welders.

2004 - Present, Hydrabotix

ROV Pilot

I have worked intermittently as an ROV pilot for many years, accumulating thousands of hours at the controls of inspection-class remote subsea units. As a freelancer, I have worked with numerous companies worldwide, gaining diverse experience across various sectors, including television, oil and gas, salvage, and marine science.

2008 –2009, Cyclocean (partnership)

Cad Tech, Visualiser, Animator and Webmaster

My position at Cyclocean is to help with the design concepts of the subsurface hydrokinetic generation units. I created animated scenes and designed and look after the website.

2009 July-December, ReefDoctor, Madagascar (volunteer)

3D mapper, technician, ROV (remotely operated vehicle) pilot

My role at ReefDoctor was varied in many ways. I was initially brought in as an ROV pilot and technician/electrician. I also worked on the various conservation projects creating 3D maps to portray to the public the placement of the marine no-take zones within the bay.

2008 Jan-April, Custard Architecture (part time)

3D Visualiser

This was a part-time position where I worked to deadlines and concentrated on the hotel industry. I made high quality renditions for the clients to portray future developments in the build.

2007 Jan-Oct, National Marine Aquarium Plymouth (part time)

ROV Technician and General Technician

The role that I had at the National Marine Aquarium was to keep the ROVs serviced and in good working order for the public shows. I maintained various displays throughout the 'Explorocean' exhibit area, diving when necessary.

Career

2005 Jan-April BBC/Impossible Pictures/ Framestore (short term)

3D Modeller
My work for Impossible Pictures and the BBC was to create various models for their documentary on Sperm whales called 'Ocean Odyssey' which was screened in 2006. I created a total of 3 models for 3 different scenes.

2001 – 2004 Bermuda Biological Station for Research

Research/Computer Technician, Dive Technician
At the Biological Research Station I serviced the ROVs, electric cars, dive equipment, computers, underwater web cams, sampling equipment and ensured that all were in good working order for the students and scientists.

Personal info

- Date of Birth: 19th March 1980 I hold a full, clean driving licence, with towing.
- Nationality: British
- Marital Status: Married

Hobbies

3D printing, Laser Cutting, CNC, woodworking, photography, metalwork, wakeboarding, scuba diving, fishkeeping, water sports, electronics, mechanics, computing, Computer 3D modeling, gaming, UAV flight and inventing.

Some Examples of Design Work

More work shown on www.thomaswadsworth.co.uk



Pneumatic Roller Unit



Automatic Pallet Stacker



Retractable Roller System



Film Towfish



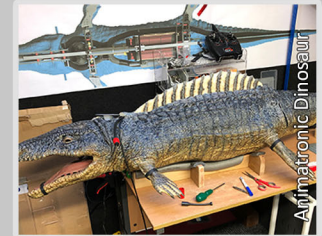
2 Axis Subsea Gimbal



Bonobo Film Case



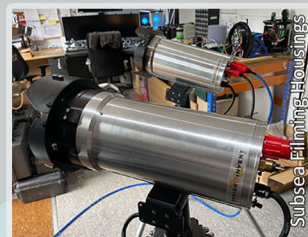
Remote Filming Boat



Anatomical Dinosaur



HD IP Cam Skid System



Subsea Filming Housing



Subsea Gimbal



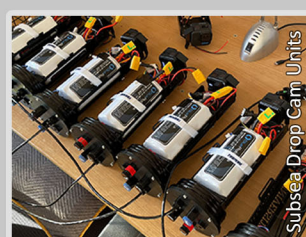
Subsea Motor Housing



PTZ Subsea Remote Cam



Hydraulic Control Case



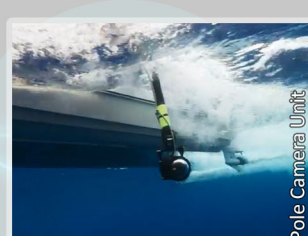
Subsea Drop Cam Units



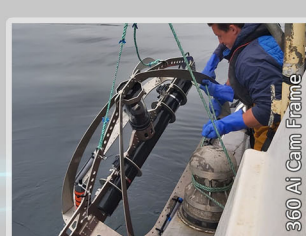
3-Axis Subsea Pole Cam



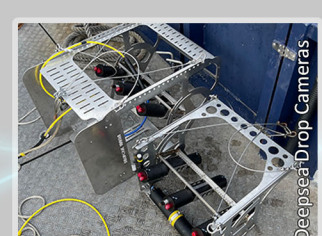
Pneumatic Lifter



Pole Camera Unit



360i Cam Frame



Deepsea Drop Cameras

-Contact me for up to date references-