

HOVERMARINE

Published by Hellgate Press
(An imprint of L&R Publishing, LLC)

©2021 William Zebedee, et al. All rights reserved. No part of this publication may be reproduced or used in any form or by any means, graphic, electronic or mechanical, including photocopying, recording, taping, or information and retrieval systems without written permission of the publisher.

Hellgate Press
PO Box 3531
Ashland, OR 97520
email: sales@hellgatepress.com

Cover & Interior Design: L. Redding
ISBN: 978-1-954163-28-7

Printed and bound in the United States of America
First edition 10 9 8 7 6 5 4 3 2 1

HOVERMARINE

**The Rise and Fall of a Pioneer in the
High Speed Marine Market**

**William A. Zebedee • Michael R. Richards • Eاون W. Furnell
Roderick R. C. Wilkins • Graham A. Gifford • Peter White**

HELLGATE PRESS  ASHLAND, OREGON

HOVERMARINE

CONTENTS

<i>Introducing the Authors</i>	<i>ix</i>
--------------------------------------	-----------

BOOK ONE

Part One: The Formative Years

Chapter 1: Early Years	1
Chapter 2: Enter TTI	5

Part Two: The Dominant Years

Chapter 3: Beginning a New Beginning	11
Chapter 4: 1973: A Year of Transition	13
Chapter 5: Hongkong & Yaumati Ferry Company	17
Chapter 6: Techniques d'Avant-Garde (TAG) and the Côte d'Azur ...	23
Chapter 7: Nigeria	31
Chapter 8: Competition	39
Chapter 9: Other Ferry Operations	43
Chapter 10: Stroke of Good Fortune	61
Chapter 11: Non-Ferry Applications	69
Chapter 12: Enter Vosper	83

Part Three: The Vosper Years

Chapter 13: The Beginning of the End	91
Chapter 14: Awards	97
Chapter 15: The End of the End	99

Appendixes

<i>Appendix A: A Primer on Hovercraft</i>	107
<i>Appendix B: British Government Agencies That Supported Hovermarine</i>	111
<i>Appendix C: Build and Original Sale History</i>	113

BOOK TWO

(By Peter White)

<i>Introduction</i>	119
Chapter 1: Experiences	121
<i>The Philippines, Nigeria, Bolivia, France, Boston, Venezuela, Rotterdam, Tacoma, Singapore, Kuwait, Malaysia, San Francisco</i>	

HOVERMARINE

Chapter 2: Major Trips	169
<i>Nigeria: Lagos to Calabar</i>	
<i>USA: Cape Canaveral to Boston</i>	
<i>Europe: Southampton (UK) to Oslo (Norway)</i>	
<i>Acknowledgements</i>	197

INTRODUCING THE AUTHORS

This book is a joint effort by the authors, along with numerous other contributors who have reason to look back on their days with Hovermarine with a sense of pride; indeed a sense of belonging to something that was special. Even forty-plus years after the events we record here, we are still members of a fraternity that, for a period of our lives was the best of times.

We choose to start not with history or facts, but rather individual statements about what the Hovermarine story meant to us.



William A. Zebedee
Medford, Oregon, USA

What was so special about Hovermarine? In the end, the company failed and the technology did not survive, but for a moment in time, we soared.

When I invested in the company in 1970, the furthest thing from my mind was doing anything more than being an investor. However, the ink from my signature on the share-purchase check was barely dried when the company careened into its first disaster. Somebody had to do something! As I took a more active role, I started to realize that its employees were there for much more than a paycheck. They *believed* and they were survivors, in it for the long pull. Few people are afforded the privilege to lead such an organization.

HOVERMARINE

In 1976 I uprooted my family from their comfortable existence in Pittsburgh, Pennsylvania and we moved to England. Why? Because I realized that I was not doing a proper job from a distance of 3,000 miles; because the people of Hovermarine deserved better from their leader.

And I loved being there! I couldn't wait to get in each morning, usually arriving by 5:00 a.m. My first stop typically was the shop floor to spend a few minutes with the night shift. Their dedication was palpable. They gave me the enthusiasm that would propel my day. This is very much their story.



Michael R. Richards
Chilbolton, Hants, UK

Having joined Hovermarine in the spring of 1973 as Financial Director, a year later I took over as Managing Director. There followed the most exciting, challenging, entertaining (and sometimes frustrating) seven years of my business career.

Hovermarine was a small company, with limited resources, but we did work with the most talented, willing, dedicated, hard-working but also fun loving group of people.

Everybody was on first name terms; there was no hierarchy or trade unions; there were no allocated parking spaces and no tiered expense allowances. Instead everybody had a common goal—to make a go of this fledgling business. And by any measure we achieved this.

This happened more than forty years ago, so inevitably my memories are pretty much of the highs, the lows, but mostly the people.

INTRODUCING THE AUTHORS

The highs include deals in Nigeria, France, Uruguay, Bolivia, some of which were absolutely critical to the survival of the company. (These were typically followed by general celebrations!) We secured Government funding for manufacturing, and for the HM 5 programme. The acquisition of Solaris gave us a badly needed work force and a huge manufacturing space.

The lows, which frankly were not so rare, included an almost constant liquidity battle, extensive travel—thirty-six hours to get to Montevideo via London, Paris, Rio, Buenos Aires; twenty-four hours to go from La Paz to Caracas; and the seven intolerable trips to Lagos speak for themselves. It was not always plain sailing, and in the slack periods sometimes we had to release personnel—this was by some measure the most unpleasant of all my responsibilities.

There were also some scrapes, including piracy (alleged) in France, arrest (threatened) in Montevideo, personal guarantees to fund wages, and the wife of the Korean ambassador falling into the river Itchen!

But it is the people I remember most; it's almost impossible to describe the camaraderie. Eاون Furnell (Manufacturing Director) and I used to play for the company football team (when selected—there was no favouritism). If we made a mistake, we were subjected to terrible abuse, and daren't show our faces on the shop floor the following day!

So it was a very sad day for me when in early 1980, I was invited by Sir John Rix to resign. In retrospect, this was a relief, because there was no way I could ever have fitted into the Vosper ethos and culture. The parting was without rancor.



Eاون W. Furnell

Wickham Fareham, Hants, UK

I was lucky to be invited to join the original Hovermarine Ltd in its early days back in 1966 as production engineer. I had been working at Southampton University in structural engineering, and was asked to test components of the hull of the then newly invented sidewall hovercraft.

Luck was not on our side and the company fell into receivership a few short years later. Fortunately, the company was reborn under its new American ownership and renamed Hovermarine Transport Ltd. These would be the very best years, when the company experienced dizzying growth and great friendships were formed that would last a lifetime. I loved it with all of the ups, downs and in betweens. Along the way, I was named production director.

I well remember thinking this company was truly different when our luck was down and I had to make men redundant. I always made a point of telling every individual myself. The majority always asked me to let them know when things picked up they could come back. Several went and came back more than once. This alone tells you we had something special.

In late 1983 I was appointed Managing Director. By then the Company was in a downward spiral which would prove unstoppable. Three years later I had the sad and difficult job of helping to sell the remnants of what had once been a great enterprise.

The actual beating heart of the company always resided in the employees in Woolston. The pressure and enthusiasm; the will to win amongst the staff and factory workers was real.



Roderick R.C. Wilkins
Dallas, Texas, USA

I joined Hovermarine in the late summer of 1976. I was a young lawyer (Solicitor), working in the City.

Hovermarine was looking for an in-house lawyer. After an initial introductory phone call, I was invited to an interview. I drove down to Woolston and met Bill Zebedee and Mike Richards. Bill is given to rapid decisions and so a month or so later I reported for work with the title Company Secretary.

Hovermarine was flooded with new orders. I was set to work with these and—at the same time became acquainted with the other side of the coin, the Company’s portfolio of legal disputes and lawsuits. They ranged from major to minor—I believe there were more than fifteen—and in a dozen different countries. The following year we would purchase the assets of Solaris, but that came along with the yacht builder’s recent bankruptcy and several half completed contracts.

What a wonderful set of opportunities! For my first few months I commuted daily from London to Southampton, but I was still motivated enough to get to work before 0800 most days. I learned the leadership group were all early starters. Bill Zebedee seemed to be always there first, standing tall, pacing the room and smoking an early cigar. Mike Richards, the MD, and Eason Furnell were close behind him. The senior people had a sense of purpose and commitment. This had become obvious to the entire workforce and made the firm an unusual place to work in late 1970s England.

There was solidarity that was lacking in most of the rest of the country. Remember, this was a time of severe industrial and

social unrest; garbage, coal and steel strikes and weekly “brownouts.” The sense of overall purpose was very appealing.

A major feature of this was the lack of hierarchy. We all understood that Bill was our leader. As much as anything it was his talent and energy that made him that. However, the group of directors was strong willed—more a band of brothers than followers. The net result was that the board and senior managers were greater than the sum of their individual parts.



Graham A. Gifford
Maidenhead, Berkshire, UK

Back in the days when all young men in UK had to undergo two years’ National Service, I joined the Royal Air Force. Nine years later, having spent most of this time as a

Flight Lieutenant Navigator on Canberras (twin-engine fighter-bombers), I left the RAF for civvy street.

Firstly, I dabbled in early computers, but it soon became apparent that this was not my forte, so I applied to join British Hovercraft Corporation (BHC). BHC had made the world’s first hovercraft and had a production line of larger hovercraft. All these craft were based on aircraft technology (lightweight aluminum structures and gas turbine engines) and sold into a marine environment. This resulted in uncompetitive prices, and I found the company’s infrastructure and the means of conducting business archaic. So when I heard that Hovermarine Transport Ltd were looking for a Far East Sales Manager, I applied.

When I arrived at HTL, I liked the whole atmosphere of this small company far better than that of a large conglomerate

INTRODUCING THE AUTHORS

such as BHC, and encouragingly there were direct and harmonious relationships between all the various departments. I soon settled down and started to make sales and, to capitalize on these sales, my family and I were moved out to The Philippines in 1976 and on to Singapore in 1978.

We came home from the Far East in 1980 when Vosper took over HTL, and I was then made responsible for worldwide sales under a new Sales Director. In fact, an abiding memory of my thirteen years employment with Hovermarine is a constant change of Sales Directors. As the old joke goes, “I said to my secretary, if my boss phones, take a note of his name.” I remember nine bosses but I was happiest when reporting directly to Bill Zebedee during my period abroad—it was the only time I actually felt on the same wavelength as my boss!

I was made redundant in 1986, having just secured a sale of two HM221s for operation on the River Danube.



Peter White
Poway, California, USA

What other calling in the whole world could provide such diversity as running through the Sunda Straits between Java and Sumatra, under the shadow of the world renowned volcano Krakatoa, or skimming across the world's

highest navigable lake to the sacred Inca Island of the Sun, or forging through dense tropical West African rainforests, or skirting the foreboding sand dunes on the edge of the Arabian Desert, where they meet the turbid waters of the Persian Gulf?

HOVERMARINE

These and many more besides were amongst the daily thrills experienced whilst working with Hovermarine, the world's most significant builder of sidewall hovercraft.

Just eighteen days after being hired, and with a newly issued HM2 maintenance license in my pocket, I found myself outward bound on a seventeen-hour flight to the Philippines. Little did I know at that time that I was about to spend almost nine out of the next ten years outside of the UK.

BOOK ONE

Readers who are not familiar with the Hovermarine story may have noticed from the introductions of the authors that, for a number of years, four of the six authors constituted the top of the Company organization. Inevitably, our recounting of history has that perspective – the “Boardroom” for lack of a better term. However, prior to 1980, we were never a top-down organization.

With a total employment nearing 1,000 in 1979 and an operating reach that spanned thirty-six countries, we had relied on a team to build this enterprise. Book Two of this manuscript recounts the experiences of some of those team members who worked on the front lines.

Let’s start with Book One, our view from the Boardroom....

HOVERMARINE

PART ONE

1966 – 1972

The Formative Years

HOVERMARINE

CHAPTER ONE

EARLY YEARS

.....

IN 1965 TED TATTERSALL and a small group of associates formed Hovermarine Ltd. Their purpose was to produce high speed passenger ferries utilizing the technology known as sidewall hovercraft. The prototype structure was fabricated at Hal-matic at its factory near Portsmouth and then fitted out at Camper & Nicholson Yachts on the River Itchen, near a property called Hazel Wharf, where Hovermarine was building a 35,000 sq.ft. factory and separate office block. Construction funding was being provided by the London Merchant Bankers, Baring Brothers, pursuant to a long term lease agreement.

The new facility was completed in 1967 and construction was begun on a series of seven craft, designated HM2.

The prototype, along with two more craft, was purchased in 1968 by British Rail Hovercraft for trial ferry services on various routes on the Solent in the South of England, the body of water separating Southampton from the Isle of Wight. Over the following year, four additional craft were completed and sold or leased to other British operators.

Early on, Hovermarine attracted the support of the National Research Development Council, a Crown Corporation whose charter was to safeguard and support British technology. A subsidiary, Hovercraft Development Ltd., held a broad portfolio of

HOVERMARINE



The Woolston Works, Hovercraft World. July/August 1969

patents. In 1967, HDL granted Hovermarine a license plus some seed money to commercialize the concept.*

Even with HDL's support and early sales success, HM2s conversion from concept to reality was hardly encouraging. The original craft were plagued by mechanical issues and seaworthiness shortcomings, of which the latter would prove to be far more vexing. Once the HM2 achieved a speed sufficient to outrun its displacement, its structure (save the narrow catamaran-like sidewalls) was about thirty inches above water, theoretically allowing waves of less than thirty inches to pass under the hull. The problem was,

* Refer to Appendix B for a description of the relevant UK government agencies and their assistance to Hovermarine.

EARLY YEARS



From drawing board to reality. HM2-003 on trials prior to delivery to the Bahamas.

of course, that Mother Nature doesn't produce uniform waves. Any higher rogue wave slammed into the bow of the hull, not only creating a very unpleasant ride, but slowing the craft sufficiently to bring it back down to its displacement mode.

With a management short on business experience and overwhelmed by technical issues, Hovermarine was forced into liquidation in early 1969. Its assets were then purchased by an American company called Transportation Technology Inc.

HOVERMARINE

CHAPTER TWO

ENTER TTI

.....

TTI WAS INCORPORATED IN 1969 by a group of financial speculators from Dallas, Texas, expressly for the purpose of acquiring Hovermarine’s assets from the liquidator. Knowing nothing about hovercraft, TTI’s founders also hired four engineers who were researching surface effect technology at General Dynamics, a large U.S. defense contractor. The group had been given some small contracts by Defense Advanced Research Projects Agency (DARPA) to support their research.

TTI was looking for money to finance the operations. They sold the idea to the venture capital arm of A.G. Becker Inc., a Chicago brokerage house. Becker invited Bill Zebedee’s small investment fund, based in Pittsburgh, Pennsylvania, to participate. Together they invested \$500,000 in TTI. Zebedee was designated by the two investors to serve on TTI’s board.

Bill continues: “Shortly thereafter, I attended my first meeting at the TTI offices in Dallas, Texas. Meeting most of the board members for the first time, I could see that I was dealing with a group of stereotypical Texas wheeler-dealers. Several were wearing neon suits that looked as if they would glow in the dark!

“The meeting didn’t last long. I quickly learned that these self-styled ‘gunslingers’ had burned through our \$500,000 investment in ninety days and were looking to me to replenish

their bank account. I flew back to Pittsburgh and made the dreaded report to my Chicago partners, who confirmed what I expected. They had nothing more to contribute; neither money nor ideas about what to do. They were writing it off. I was on my own.

“A week later I was back in Dallas for a board meeting I had requested. Once convened, everyone looked at me, no doubt expecting a ‘bail out.’ Instead, I proposed that they elect me chairman and chief executive officer, and then they all resign effective immediately. ‘Or else what?’ one asked. ‘Or else I get up and walk out,’ I replied.

“There were murmurs of dissent, so I collected my papers and headed for the door. ‘Where are you going?’ ‘Back to Pittsburgh,’ I replied. A few minutes later, I was chairman and the sole director of TTI. On the flight back, I elected myself non-executive Chairman of Hovermarine Transport Ltd. It was the early spring of 1970. TTI’s headquarters moved from Dallas to the bottom left drawer of my office desk.

“My first challenge was to find some operating capital. I had met a young banker with Chase Manhattan Bank called Tom Herlihy in New York City, and I went to see him. When I say ‘young,’ I thought I was young at thirty-two years; Tom looked as if he couldn’t be much more than twelve! I was stunned to learn he had a \$5 million lending authority. After an hour, I literally walked out of the meeting with a credit line of \$200,000. I directed the funds to a fix for the HM2.”

For the ride problem, a small team of Hovermarine engineers led by a young naval architect named Nigel Gee provided a solution, the bulbous bow. Using the same flexible neoprene material as for the bow and stern skirts, they extended the forward air cushion up to the edge of the main deck, and thereby created a shock absorber that deflected rogue waves. Ride characteristics and seaworthiness were measurably improved.

At the same time, another team, led by Managing Director Ed



Bill Zebedee, Eon Furnell, and Ed Davison share some humor on the balcony in the Hazel Wharf plant

Davison and Eon Furnell, were slowly but surely running down and correcting the mechanical flaws. Davison had been the leader of the General Dynamics team, and Zebedee had asked him to move to the UK when he became TTI's chairman.

What emerged by the beginning of 1972 was a reasonably seaworthy and reliable vessel, designated the 216. Four were sold that year, including the first of three craft purchased by Sociedade do Adoxe in Portugal.