

David J. Nock

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Messrs Crowe and Green

The H.M.S. Birnbeck Years
1942-1945

David J. Nock

An account of the work undertaken by this local engineering firm in conjunction with the naval personnel of HMS Birnbeck during World War 2, derived from the diaries of John Smith.

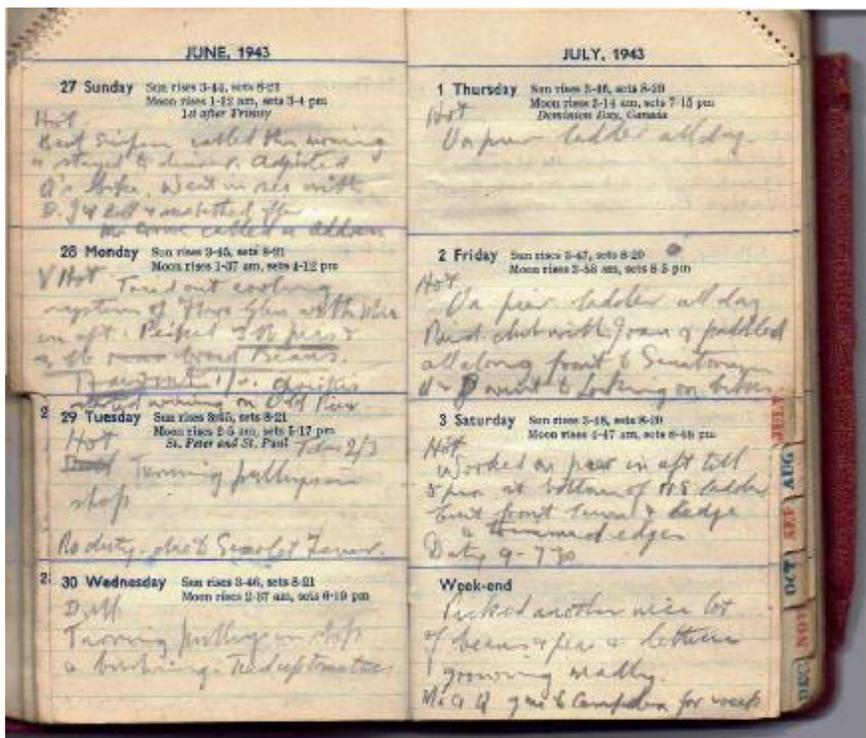
David J. Nock

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Above: An extract from John Smith's diary for 1943. What a treasure it turned out to be.

Introduction

This story is about the contributions and back-up provided by a local engineering company, *Messrs Crowe and Green, Heating and General Engineers*. The owner, Mr. Dick Crowe, ran this company, which was located on the corner of Alfred Street and Baker Street in Weston-super-Mare.

He and his employees maintained the small fleet of vessels connected with H.M.S. Birnbeck, and also assisted with some of the larger engineering projects connected with the development of various weapons and associated works. The work was carried out under arduous and sometimes dangerous conditions, with no doubt constant pressure to meet deadlines. That they achieved most of their goals is a lasting, and proud tribute to them all.

This account is not intended to be a definitive work on the Armed Services' activities on Birnbeck Pier during World War 2. This has already been well documented in the book, *'The Secret War, 1939 - 1945'*, by Gerald Pawle. That excellent and entertaining book gives a blow by blow account of the trials and tribulations of the

development of various weapons and equipment by the Department of Miscellaneous Weapons Development, (D.M.W.D.), more commonly known as The Department of Wheezes and Dodges. It gives the reader a superb overview of all this department's operations.

If this narrative can be read in conjunction with Pawle's *'The Secret War'*, I think the reader will gain a much clearer view of the contribution to the final outcome of the 1939- 1945 war made by the local people of Weston, and also Birnbeck pier's valuable part in the conflict.

Most of the local information in this account was due to the very valuable help of Miss Joan Smith of Weston who very kindly loaned me her Father's diaries for the period 1942-1945. Mr. J. Smith worked for Messrs Crowe and Green for many years.

Chapter One: 1942

It was during February 1942 that Messrs. Crowe and Green became involved in work at H.M.S. Birnbeck. The Royal Navy had been there since early 1941, but the steady increase in their workload made it imperative that a local engineering firm was found to help out with some of the development work. At this time Dick Crowe owned The Royal Pier Hotel, which overlooked Birnbeck Island, and it seems likely that he became involved with the activities of *Department of Miscellaneous Weapons Development* through talking with some of its officers in the hotel bar in the evenings. This is pure guesswork on my part, but knowing the Navy's love of a pint in the evening, it seems most likely.

However the involvement of Crowe and Green came about, the input of the firm was quite important. John Smith's diary entry for Feb 20th 1942 records that he was involved in the manufacture of a winch for "*the people at the old pier*". The winch was tested by the Admiralty Overseer and must have been passed for use, as it is recorded as being fitted in a boat on the 6th March 1942. The name of the boat is not recorded, but it seems possible that it was the *Flora Glen*, as

she was launched from Knightstone Road on the 16th March in a rough, south-west wind, and taken for a trial run, lasting one hour, around Sand Bay on the 17th March.

The *Flora Glen* was a 3 ton motor launch, owned at that time by a J. E. Tancock of Weston. It was requisitioned for 'Miscellaneous Naval Service' on the 27th March 1942 at the rate of £4 per month. She was then compulsorily acquired on 1st July 1942. From March 1942 until September 1942 Crowe and Green were employed on various small jobs on the Pier itself, fitting electric sockets and lights, and making Lorry Skids [ramps] for loading and unloading equipment.

On 1st September, 1942 John Smith's diary tells us that he went to the Old Pier to look at "Y-Not". This was a Motor boat, owned by a J. Rich, compulsorily purchased for miscellaneous Naval Service on 13th May, 1942. The vessel had already been performing this role since 26th March, 1942. She seems to have been used in a general runabout role while at Birnbeck, and considering the hard use she must have had, performed well.

The first big job that Crowe and Green were called upon to carry out on Birnbeck was the

installation of a Catapult Track on the Pier. This was started on the 23rd September 1942.

There was evidently some urgency for this installation, as at least two men were employed on the work until the 3rd October, and after this date John Smith records that he was employed at various times until the 16th March 1943. In all, this must have been quite a large job for a small local firm.

In parallel with this job John Smith also fitted a 'Spigot Shoe' to a jetty pole on the pier; this was presumably to do with firing 'Hedgehog' anti-submarine projectiles for test purposes. The 'Hedgehog' was arguably one of the most famous devices developed by D.M.W.D. in the whole wartime period, and is described in much detail in the book *'The Secret War'*.

On the 16th October 1942, the 'Princess Ida' arrived at Birnbeck, and was taken by Dick Crowe up the River Axe to a mooring. This vessel was employed as a Car Ferry at Aust before being taken over as a Mine Recovery vessel by the Admiralty. She was of wooden construction and quite large for the D.M.W.D at this period. John Smith carried out some small jobs on her, including the fixing of a

Deck Roller. She was originally employed by H.M.S. Vernon (Torpedo Development) at Milford Haven, but was sent over to H.M.S. Birnbeck to continue mine development and research there. As she had been painted service grey and carried no identification marks she was simply known as "Birnbeck ", although she was also known as "Princess Ida" by Crowe and Green.

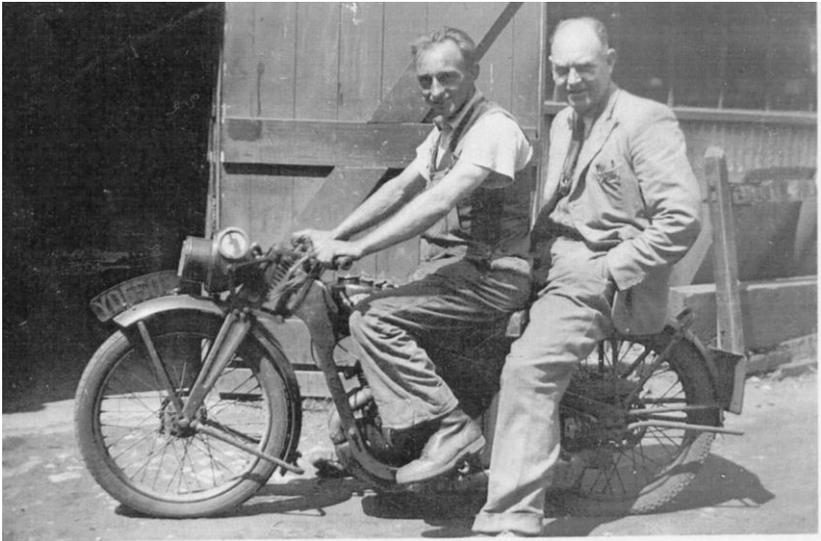
As an added point of interest, she normally carried eight or nine mines, weighing 3,000 lbs each, and it was decided that she would benefit from some strengthening of the deck supports. Accordingly, she was sent to P. Harris and Sons yard at Appledore for the work to be carried out, and then she returned to the River Axe. The next day the Skipper was horrified to see a distorted deck and daylight showing between it and the hull. Apparently, as the tide receded and she settled on the mud, the natural flexibility in her timbers was interrupted by the new deck supports, and something had to give, which happened to be the deck. She was returned to Appledore promptly for complete strengthening!!

In a further catalogue of disasters she was brought into the Axe on the top of a spring tide, anchored, and the crew went home. The following

day they returned to find her in the middle of a field surrounded by cows. This was a major disaster as the tides were falling and the next tide came nowhere near her. Luckily, Dick Crowe was a member of the Auxiliary Fire Service, and borrowing a Fire Pump, he blasted away the River Bank and the surrounding Earth with Hose jets, and she eventually refloated. Sadly, by this time she had so many leaks she had to have a fire pump mounted on deck, running continually, to keep her afloat. But she finished the war still afloat!!!

On the 27th November 1942 *Crowe and Green* also started work on Brean Down levelling a site for a Catapult. The firm obviously had quite a bit of levelling to do as compressors were in use there from the time that work commenced until the 15th December, when the Catapult sections were starting to be installed. Dick Crowe was involved in this job from the start, and no doubt his engineering experience was called on to the full by D.M.W.D. at this time.

So Ended 1942.



Above: Messrs Dowden and Shepstone,
on their bike.

Below: Five Crowe & Green lads display
their winning 1935 football.

Both taken in Crowe & Green's yard



Chapter Two: 1943

Crowe and Green were fully occupied with Birnbeck's catapults on the Pier and Brean Down until March 1943. The catapult tracks on Brean Down were installed to give a wider field of fire than was possible at the Pier. Also, it provided a greater degree of secrecy for any new weapons. Most of the work was carried out by John Smith and Cyril Mackay (Mac), overseen by Mr. Crowe and Lt. Wiley. Some of the site levelling and excavation work was carried out by Messrs. Dyers, a well known local building firm.

In addition to the tracks on the Pier and Brean Down a further two tracks were installed at Middle Hope Cove on Sand Point. These were intended for carrying out trials on weapons at Sea Level. With these three tracks installed, the D.M.W.D. could now carry out simultaneous tests.

The first weapon to be tested on the new tracks was an offshoot of Barnes Wallis's bouncing bomb that was being developed elsewhere to breach the Rhur dams in Germany. Lt. Comm. Lane visited Barnes Wallis to discuss the possibility of laying Smoke Screens from a small radio controlled plane, but was soon more interested in

a smaller version of Wallis's bouncing bomb to be used for attacking enemy vessels from Motor Torpedo Boats. Small scale trials, in the National Physical Laboratory tank at Teddington, were promising, and further testing at Woolwich was carried out.

Early results, using a cordite propellant, were not so encouraging, however, as the projectile could only manage a mere 50 yards. When trials were transferred to Birnbeck a different method of propulsion was suggested. The explosive ball was to be mounted on a trolley driven by rockets; the trolley would run on rails along the catapult track; when the trolley reached the end of the track it would be stopped by two tapered steel rams, mounted on the front of the trolley, entering two hydraulic cylinders acting as buffers. The trolley would stop dead and the ball would hurtle on its way.

It was proposed that the track used would be the one on Birnbeck, running along the passenger jetty. When this was explained to the staff, Dick Crowe was extremely sceptical. He pointed out that the trolley alone weighed six hundredweight, without including the weight of the ball (some 70 lbs.), and even in the short

space of the jetty it was expected to reach 200 m.p.h. when it hit the buffers. There was a good chance that the whole jetty would be carried forward! It was suggested, therefore, that the jetty be anchored back to the rock of the island, and John Smith manufactured and fitted an anchorage at the pier. The jetty was then held back to the anchorage with heavy hawsers.

Before the theory could be tested however, *Higher Authority* decided that the Pier was a little too public for secrecy, and the whole project was moved to Brean Down. The site at the Down was not ideal, either for testing or recovering the missile, but a little more could be learned of its behaviour and the functioning of the rocket trolley. The track ran roughly N.E. to S.W. across the end of the Down, and was exposed to the elements; the hydraulic buffers were reinforced with sand bags filled with concrete to assist with the stopping of the trolley. The testing could now begin, and a small party gathered to witness the first firing.

Lt. Wiley pressed the firing key and the trolley, driven by twelve 2 inch rockets, roared down the track.

With a mighty roar it drove straight through the buffers and the wall of sandbags, and accompanied by debris, its rockets still belching flame, it vanished over the edge of the cliff and into the sea.

Dick Crowe's comments are not recorded, but I should imagine that, "I told you so" was the least of them.

Despondency followed this trial. They could not afford to cut the speed of the trolley, but it promised to be expensive in trolleys. Also, no sort of buffers would stand the shock. John Smith recorded in his diary for the 27th Feb 1943, "Brean catapult bust up": a rueful comment after all his hard work.

The trials were then transferred to Middle Hope Cove as the tracks were at sea level, and also they faced west along the Point so the missiles could be recovered relatively easily. Commander Richardson suggested that the trolleys should be allowed to run into a wall of loose sand to stop them, and this worked perfectly.

There now followed some concentrated effort at Middle Hope to get the tracks ready for

serious testing of the missile. John Smith, Mac, and various other employees of Crowe and Green set up a hut to house the complex electrical timing system. Also they had to set up marker posts in the mud so the high speed cine cameras on shore could record each run. Work on Middle Hope tracks and timing gear went on till the end of December 1943.

The final jobs on Bearing Dials and various electrical work came to an end on 11th December, thus ending *Crowe and Green's* involvement.

The trials had continued while this work was being carried out, and the results were encouraging, the terrific speed across the surface of the water were spectacular to watch, and the skipping of the missile would have made it very difficult to devise any countermeasures. After it had been put through its paces in front of Admiralty Observers, the go ahead was given to start trials at sea.

To carry this out D.M.W.D. used an old barge called "Mary", anchored off Middle Hope, and fitted with a special firing tube. The propulsion was by an explosive charge. *Crowe and Green* were once more given the task of helping

on this stage of the development, and made up the firing tube. This was carried out in July and August 1944.

I have got slightly in front of myself with this account, but I wanted to keep all the relevant facts together for ease of reading. After this stage was reached the development of the weapon slowed down as other more important projects, related to "D-Day", were undertaken.

One final note on this weapon is necessary: in an attempt to increase the velocity of the weapon, the explosive charge was stepped up far beyond the safe limits of the tube and the results were as spectacular as the first rocket trolley trial on Brean Down. The missile screamed past the marker posts at the end of the range, then for some reason swerved inland, jumped a low wall and continued across Sand Point, scattering a herd of cows and heading out towards the Atlantic, never to be seen again. A fitting footnote!!

Returning to 1943, as well as all the construction work that Crowe and Green carried out for A.M.W.D. they also had to maintain the civilian vessels which the Admiralty had commandeered. These were quite old and

required almost constant attention as they were being used daily by naval personnel who were not used to their particular needs. *Princess Ida*, *Flora Glen*, *Y-Not* and *Persil* were all worked on during the year, *Princess Ida* and *Flora Glen* being the most troublesome. *Princess Ida*'s troubles had not been helped by her being stranded at Uphill in 1942. The engine had been flooded many times, as the fire pump was not run at night, and as the tide came in she filled with water.

It is worth mentioning here that *Persil* had previously been employed by D.M.W.D. on trials to attempt to camouflage rivers to prevent them being used as navigation aids by German Bomber crews. A mixture of coal dust and oil had been pumped onto the surface of the water in an attempt to stop reflection. Unfortunately this did not work because, if there was a breeze blowing, the mixture tended to either sink or pile up on one bank. The work was not popular with the scientists or crew as they were regularly coated with the mixture, and resembled particularly dirty stokers, bringing caustic comments from Senior Officers on more than one occasion. The crew also thought her name, *Persil*, was particularly inappropriate,

John Smith notes in his diary on the 21st May, that he saw a plane on a sandbank in Woodspring Bay while "Mudlarking" at Middle Hope: a term which needs a little explanation.

The plane he saw on the sandbank could have been either one of two Dornier 217e-4s which crashed in the Bay on the early morning of 18th May, 1943, but the term "Mudlarking" is maybe the most interesting in the context of this account. The term was used to describe any activity in the mud surrounding the Pier or Middle Hope Cove. It usually meant recovering weapons fired from the catapult tracks or mortars mounted on the Pier, but John Smith used it to describe erecting marker poles at Middle Hope, and anyone who has waded through the mud around Weston will know that this must have been a nasty experience when doing it for the first time. Everyone connected with Birnbeck was initiated into "Mudlarking" at some point, and the only person who seemed to have taken it in his stride was an R.N.V.R Lt. Donald Lamb, who was tall and had the strength of an ox. He could carry two Hedgehog projectiles (each weighing 60 lbs) at once through the mud and wet sand: a feat which much impressed the Ratings.

On the 27th September John Smith started work on a concrete base for mounting a Squid Mortar on the Pier. This was to be used to trial a new weapon called an Expendable Noise Maker, which was designed to foil acoustic torpedoes, and was fired from a Squid Mortar. As it sank it created a series of explosions and hopefully attracted the attentions of the torpedo. He also made up a hoist for loading the weapons into the Mortar; this was not finished until 27th November, and more will be heard of this in the next chapter. In between all the other work Mr. Smith states that he, "Put up scaffolding on pier for canvas shutes", on the 8th November. This does come into the scope of this chapter and the explanation follows.

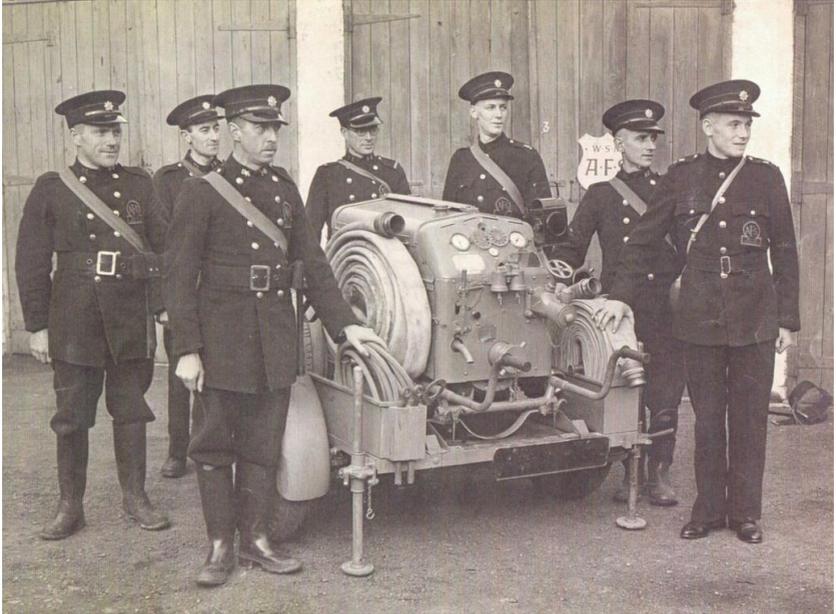
In the early preparations for D-Day the Army asked for a quicker method of transferring troops and their equipment from the decks of troopships to the landing craft, as scrambling nets were far too slow. D.M.W.D. designed a tube, from which stretched a long rubberised canvas shute, the bottom of this shute was held by two men, and all the troops had to do was climb into the tube feet first and hurtle to the bottom. This device was appropriately called the "Helter Skelter".

The device was first tested at a factory in South London, where a number of workmen were successfully transferred from the fourth floor to the ground without injury. It was then taken to Birnbeck for further trials. There it was found that some modifications were required, as when it was used by some Soldiers with full kit it was found that the rifles' foresight, carried over the shoulder, tore a strip from top to bottom of the chute, and the rest of the platoon following close behind fell straight into the sea. This was soon solved by putting a bonded canvas lining inside the main chute.

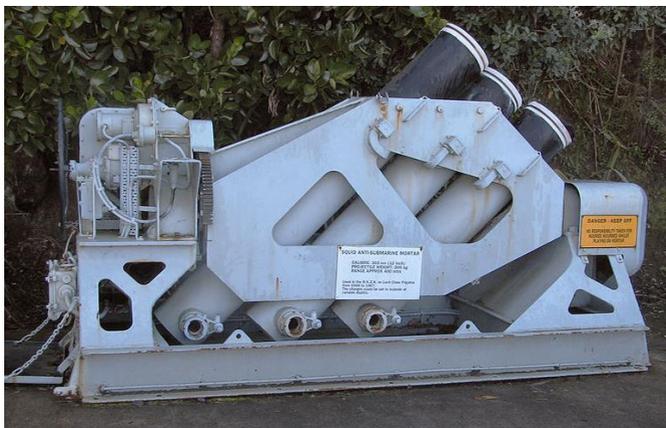
A.M.W.D. now felt confident enough to invite some American troops stationed nearby to try it out, and fifty troops, under the charge of a Sergeant, duly turned up. When it was explained what they were needed for the Sergeant took one look over the side of the pier at the boat bobbing about under the end of the chute and declined with considerable emphasis, so Lt. Comm. Boswell and Lt. Wide gave a demonstration and after that there was no holding the Americans who happily spent the rest of the day "Helter Skelting".

The final entry in Mr. Smith's diary for 1943 was on the 14th December. He was putting a stove

in the Mines' Shed on Birnbeck. This was the result of some deception by the naval section. It was very cold at the end of the Pier, and when a stove was asked for, the Admiralty stated that none were available. Undeterred, the D.M.W.D. then asked for a stove for melting pitch for projectiles, and behold a brand new stove was delivered, to be installed by John Smith in time for a warmer Christmas!!



Above: Weston-super-Mare Auxiliary Fire Service men show off their fire fighting equipment. John Smith is on the far left.
Below: A Squid ante-submarine mortar, Chapter 2.

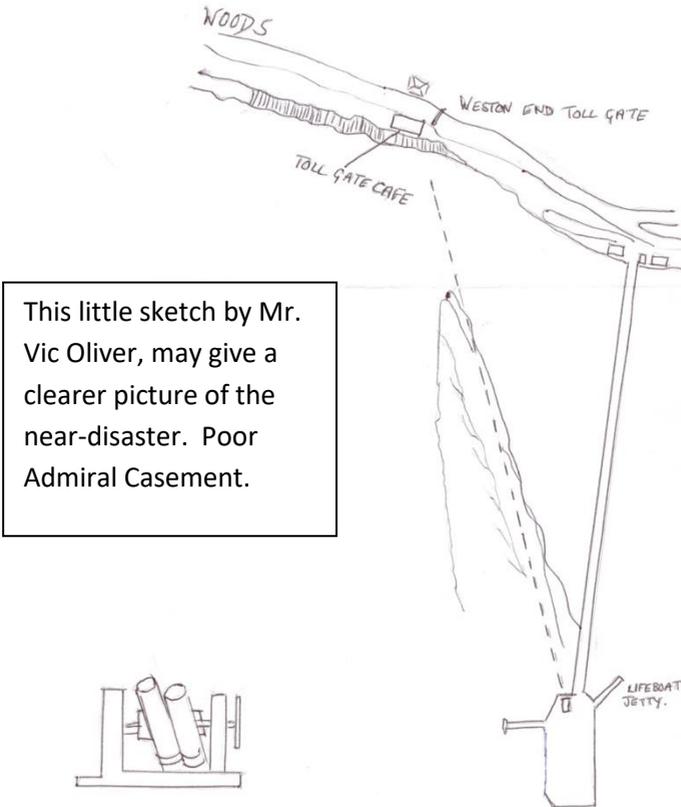


Chapter Three: 1944

John Smith's diary starts on 3rd Jan 1944 by stating that Admiral Casement was now in charge on the Pier. Admiral Casement was Birnbeck's immediate superior and was Resident Naval Officer, Watchet, but after a while he decided to move his office to Weston to keep a closer eye on what was being done on the pier. He set up his office near a tea room at the start of the Toll Road and he soon had reason to regret this decision.

In the previous chapter I mentioned the Expendable Noise Maker, and trials of this weapon now commenced, and for some reason the first trial was entrusted to the Army. It was to be fired from the Squid Mortar which was now in position on a wing of the Pier, facing towards the shore to enable the recovery of the weapon after firing. With great care the soldiers measured the range, entirely forgetting that the Mortar was 40ft. above the surface of the water as it was mounted on the Pier. They fired the first round and to their utter amazement it sailed clean over the water and exploded in mid air outside a small cafe, which rapidly emptied. They made some slight adjustments to the elevation, and dropped the

second round a yard from Admiral Casement's office. The Admiral was justifiably annoyed, and this led Lt. Boswell to look for fresh fields for further trials when a more advanced model came up for testing.



This was a much larger weapon, which was rocket propelled, and it burst open, ejecting

various exploding objects. Lts. Boswell and Wyllie noticed that this large device had not been fitted with any fins to stabilise its flight, and decided to test it on Brean Down, well away from the Admiral.

The first trial of this weapon led to an outcome which became legend in D.M.W.D. history. The first weapon was fired out to sea, as without any stabilising fins it was thought to be safer, but it flew quite straight, so the second weapon was fired towards the shore to make recovery much easier. This one behaved quite differently and, after flying straight for several hundred yards, it suddenly shot off at right angles to its original course, and disappeared inland at a rate of knots. They heard it explode in the distance quite near a farm and they set off to investigate.

They soon came upon a rather annoyed man carrying a lump of blackened and tangled metal and innocently asked,

"Where did it land?"

The man replied, "In my chicken run".

"What a lucky thing," said Wyllie, trying to cool the situation a little.

"Where were you at the time?"

"Where was I?" roared the Farmer "In the bloody chicken run".

After this all further experiments were carried out even further from Weston.

I have strayed a little from the original idea of this chapter, but this story really deserved re-telling.

Princess Ida continued to give trouble, and on 16th February John Smith records in his diary that he spent most of the day dismantling the gearbox. He also states that a new Stoker was with him. We shall hear more of this Stoker in January 1945. On 17th February, 1944, John Smith was on Princess Ida all morning with Mac, removing pins and gearwheels from the gearbox, so it must have been a major job. The gearbox rebuilding started on 29th February and both John Smith and Mac spent all morning refitting gearwheels. On 1st March the two of them spent all day getting the vessel ready for trials on 2nd. This day was spent testing out the gears in the Bay. On the 3rd a fault developed with the fuel system and this took until the 8th to clear up. It involved removing the injectors and fuel pump, cleaning, inspecting and refitting.

On the 10th John Smith was out again in Princess Ida with Lt. Wide laying moorings in the river (at Uphill) from 07.45 until 10.30 a.m. Then, in the afternoon, after clearing seaweed from the pump inlet seacock, they went to Sand Bay in the Princess Ida and picked up four mines. These mines would appear to have been trial ones from H.M.S. Vernon, the Royal Navy's mine and torpedo establishment based in Portsmouth. They also had a detachment in Weston, and this continued for many years. Their base was at Weston airport and the remains of some of their buildings are still visible to the left of Laneys Drove on the South side of the Airport. In later years Vernon's name was changed for the Weston detachment to the Aerial Torpedo Development Unit. Princess Ida was shared between them and A.M.W.D., and it would appear that some personnel were also shared, as John Smith was out in her again on the 11th, re-pinning the oil feeder drive, doing a trial to Langford Grounds, and picking up seven mines in Sand Bay.

Princess Ida continued to give trouble for most of March, and caused John Smith to concentrate mainly on keeping her running. The indications in John's diary are that she was fitted with a twin cylinder diesel engine. This must have

been a retro-fit, as she was fitted with single cylinder engine when built. Possibly this was not powerful enough in a ferry situation on a tidal river. Whatever the reason, this engine gave a lot of trouble. Mud and Seaweed in the cooling pump inlets were a constant problem, and eventually the engine had to be stripped down and the mud removed from the cylinder blocks and cylinder heads. This had evidently caused some overheating in the rear cylinder and warped the cylinder head so John had to make and fit a new cylinder head gasket to overcome the problem. These days, with plenty of time, the block and head would be removed and machined flat, but time was obviously not available for this. The engine was reassembled and tested and seemed to be O.K.

It must be mentioned here that the obvious route of fitting new engines was not an option as nothing was available at this time as the build up to D-day was gathering pace and all new equipment was diverted to this end. So it was a case of bodge it up and keep it going which involved a good deal of time.

John's diary records that on 27th March, bombs fell on Weston, for the first time since

1942. They were mostly incendiaries, but some high explosives fell near the *Princess Ida*. There was no damage to the vessel, but on the 28th he records "U.X.B. by *Princess Ida*", (U.X.B. = unexploded bomb). On the 31st march Mr. Crowe, Lt. Wide and others went to Mevagissey to pick up another vessel, the *Catherine Jean*, another addition to the growing fleet. On the 8th April John was working on *Vernon 2*, trying to sort out trouble with gear selection. This job continued until 15th April and involved both John and Mac (Cyril McKay) who worked at Uphill Wharf, during which time John that " Saw 18 Lightnings go over " (American Aircraft).

On the 18th April, John was back at the yard as there was a rush job on some American Army trucks which had to have some racks fitted to hold tins. The whole work force was on this job, and worked until 9.30 p.m. They were given an American tea, Steak, Grapefruit and 200 cigarettes each. Work continued on the 19th, when they worked until 10.30 p.m. The job was finished on the afternoon of the 20th. John remarks:

"Town full of Americans and Vehicles ".

I remember very well the Americans in

Weston prior to D-Day, The woods were full of troops and vehicles. One vehicle sticks in my memory, it was a Half-Track ambulance, and painted on the side under the Red Cross were the words "Blood and Guts ", guaranteed to stick in a young lad's memory.

On the 22nd John went to Uphill to check the '*stern tube*' on *Southern Maid*, and commented in his diary:

"Lots of Americans here with Anti Aircraft Guns".

Between the 22nd April and the 10th of June a new staging was built at Uphill for landing. Piles were sunk in the river bank, connected with joists, and decked over. Quite an engineering job. The only reference that John made about the invasion on the 6th June was:

"Invasion of Normandy" - quite terse really.

There were no entries then until 22nd June, so maybe he got a holiday after all his hard work. On the 22nd he notes:

"*Persil* finished at Barge".

The "Mary " was the Barge of 160 tons dead weight, also compulsorily acquired, which was used at Woodspring for testing the Baseball weapon. She was anchored in Woodspring Bay and used as a platform for the Torpedo Tube which was used to fire the weapon.

From the 22nd June to the 8th July John's diary mainly mentions work on the fleet of boats, but on the 11th July, John reports that he went to Bristol with Mr. and Mrs. Crowe to get sheet steel for the manufacture of a special tube to launch the Baseball weapon. On the 12th he notes that Michael Crowe (Dick Crowe's nephew) started at the yard bending the steel for the tube. Michael Crowe only worked for his uncle for a short time whilst waiting for his call-up papers; he was responsible for the manufacture of the whole tube assembly to be mounted on the barge *Mary*.

I was lucky enough to have a short conversation with Michael before his death, and he recalled that the tube (which he called the Gun Barrel) was of 12 inches diameter, and was 24 feet long. It had a wall thickness of 1/2 inches and was in three sections. There was an artillery type breech block in the rear door of the tube which fired the propelling charge. The joints in the tube

were bolted together with flanges welded on the ends of the tube. Unfortunately, the tube distorted slightly during welding and when the first ball was fired it jammed in the bore. Michael told me that the joints withstood the pressure and the tube stayed in one piece - lucky for all concerned. This was rectified and the tube was used successfully for the rest of the trials.

From the 12th July until the 1st August the small boat fleet again occupied John's time, but on the 12th he went to Woodspring with Mr. Crowe and Michael to measure the Barge, *Mary*, for tube fixing, then back to the fleet again until the 28th when he returned to the Barge and removed the torpedo tube which had been used for trials up to then for firing the ball. On the 29th he went back to the Barge and started to assemble the new tube.

John notes in his diary that he:

"Saw crashed Typhoon on St. Thomas's Head".

I can find no record of any crashes on this date, but have no reason to doubt him.

John, Mr. Crowe, Michael, Mac and Ralph worked on the Barge on the 30th and 31st until 7

p.m. to get it ready for firing trials, and must have finished it as no more mention is made in the diary. For more information, see chapter 2.

On the 11th September Crowe and Green were asked to construct a slipway up to the small boathouse on the east side of the Pier. Mr. Crowe did a few calculations on a cigarette packet and came to the conclusion that they could use part of the Catapult track off the pier which was now surplus to requirements. They worked on this job off and on all the rest of September, and had it in place by 29th. On the 24th October Michael Crowe had his calling up papers and finished working for his uncle, an eventful 3 months for him.

The 25th saw John starting work on the manufacture of a carriage for the newly erected slipway on the pier, in between other jobs. He completed the carriage on the 15th November and went to the pier at 6 p.m. to see the first vessel (Flora Glen) up the slipway into the boathouse, quite an achievement really, as the Admiralty inspector who came to look at the finished job pronounced it quite unworkable. He was not impressed when he asked to see the plans, and was handed a rather crumpled cigarette packet, which Mr. Crowe fumbled around for in his pocket.

The carriage lasted until well after the war!! John also notes that: "Admiral Casement finished on Pier ". So he obviously moved on to greater things.

On the 13th November, John started work on a new project for the Admiralty - the assembly of A.G.E.S. units. Now try as I may I cannot find any information on this equipment and it is really frustrating as Crowe and Green assembled over 40 of these units and dispatched them all over England. So if anyone who reads this account can throw any light on them, I would be most grateful for information.

This took John up to the end of 1944, with only a break to look at the Catherine Jean on the 23rd December. John just says: "Engine bust up" and she was taken to the wharf for engine removal on the 27th December - a sad end to 1944.



Above: A.M.W.D. staff at Woodspring, waiting for the tide to ebb.
Below: D.M.W.D. Officers at St. Thomas' Head. L to r: Dr. Hatfield,
Mr. Crowe, Lt. Wyllie, St. Poncia, Lt. Roberson, Lt. Bruce, Sub Lt.
Lamb, and crouching, Lt. Boswell, Lt. Wide. Note the mixture of
uniform, battle dress and civvies



Chapter Four: 1945

On the 1st Jan, John records in his diary that he went to Princess Ida first thing to start up:

“no air, (it was an air start engine), compressor engine troublesome, plugs and points, off at 12.30. Lifted engine out of Catherine Jean ready for replacement”.

He obviously repaired the compressor engine, as he records on 2nd January.

“Princess Ida 08.30- 12.30, trip to pier and back ”.

On the 8th of January, he was back at Princess Ida for most of the morning. Finding four feet of water in the engine room, he emptied the water out of the gearbox, crankcase and governor drive, and took out the compressor engine.

This was obviously going to be a long job, and in fact it took until the 19th February to put right all the problems caused by the engine room flooding. This, it appears, had been caused by hull damage, as John records that on the 16th

January:

" Birnbeck (A.K.A. Princess Ida) on sands for hull repair".

Also on 15th he states that:

"Mac. drained water out of Princess Ida gearbox at sands ".

When I was first looking at John's Diaries it took me some time to work out that Princess Ida and Birnbeck where in fact the same vessel.

On the 18th and 19th of January, the gearbox was being checked, and on the afternoon of 19th John went to see the gearbox with Mr. Crowe and Lt. Wide.

On the 20th January John records:

"Stoker on Princess Ida, Baylis, found dead in his bunk (Lodgings).

This was the Stoker whom I mentioned in chapter three. He had been in Weston less than a year. I checked with the copies of Weston Mercury in the library and found the records of the inquest on Leading Stoker Harry Baylis, and it

appears he died of a fractured skull, sustained in a brawl outside the Cosy Cafe in Regent Street, so his death, sad though was, had nothing to do with H.M.S. Birnbeck.

In between all the work on Princess Ida, John had overseen the fitting of a new engine to the Catherine Jean. This was completed on the 14th of January and John records that she had gone from the staging in the river.

The gearbox was removed from Princess Ida on the 22nd, and taken to the workshop for repair. John worked on the "Beresford Pump" at the river staging: this was the fire pump that was required to keep her afloat after her earlier stranding. This was on the 23rd, and he had nothing else to do with her repair until the 7th of February, when he records:

"On Princess Ida with new stoker all afternoon".

He then worked on her repair through till 13th of February. He states that he refitted the compressor and its engine, got ready for the gearbox return and cleaned up the engine room. On the 9th he and Mac got the gearbox on board

and lowered into place, and started reassembly. On the 10th they were both on board again, refitting the gearbox, and getting the engine running again. The 13th was occupied with engine adjustments, and concreting in the hull. This was a temporary repair to the hole in the hull, and on the 17th she was moved to her moorings. The 18th was to be test run day, but it was too foggy, so on the 19th they took her on a test run to the pier, and got the batteries and lighting set on board.

Princess Ida left Weston on the 21st bound for the shipyard at Appledore with Mr. Crowe on board. Appledore Shipyard was used for larger and more permanent repairs to the A.M.W.D. vessels. She arrived safely and Mr. Crowe returned to Weston by road on the 22nd.

The A.G.E.S. units then occupied John's time until the 6th of April, by which time he had got up to number 15. Once again it is most annoying not knowing what these units were for, but they were certainly being assembled quickly. John worked on the Catherine Jean on the 6th, 9th and 11th of April, fitting and testing a Bilge Pump, assisted by Mac. On the 16th he worked on Lt. Ritchie's rocket job all day, and this continued until 21st.

From the 21st April until the 20th June his time was divided almost equally between the assembly of A.G.E.S. units and Lt. Ritchie's rocket job. I can find no record of what exactly this Rocket job was, but it involved quite a lot of people. On the 26th June John went to Middle Hope (Sand Point), with Mr. Crowe, Boswell and Robeson. Presumably this was a trip to inspect the site for the Rocketing job, as on 2nd July, he was at Middle Hope all day with Mac, moving the Catapult track for Rocketing. They were there until the 6th when they went to Middle Hope with:

"Robeson and two others (Austrian and a Lt. Comm.)"

On the 7th July, John records that Mr. Crowe and Wide had gone to Appledore to pick up Princess Ida after her repairs, which must have been extensive as she had been there for almost 5 months. On the 12th, however, John records:

" On wharf all day with Mac taking out No. 1 piston and con-rod "

This engine trouble continued on and off until the 4th of September. First the Big-Ends

overheated and had to be removed, hand scraped and refitted several times, then the small-end bushes started overheating. They tried different oil and stripped the oil pump and checked it, all to no avail. The engine overheated as soon as it was run under load. Finally, on the 4th September, they got it as near right as they could, and on the 6th they set sail from Weston, with Lt. Wide in charge at 7a.m., taking her back to Appledore. They arrived in Barnstaple (Bideford) Bay at 3.30 p.m. and had to wait for a Pilot to take them up to Appledore. He arrived at 5.30 p.m. and they dropped anchor at Appledore at 6.30. They returned to Weston by road and arrived back at 10.45 p.m.

On the 12th Mr. Crowe and Lt. Wide took the Flora Glen to Tewkesbury. This was the start of the disbanding of the fleet of vessels in Weston. Others were sent off to various destinations as they became surplus to requirements.

From the 17th to the 21st John and Mac were busy at Middle Hope with preparations for Lt. Ritchie's rocket job. On the 20th they went to Middle Hope with Lt. Robeson and Clemantaski (Photographer) and fired four shots at a 6Ft. plate from 50Ft. and this ended Crowe and Greens

involvement with the job. Really annoying not knowing what it was.

Meanwhile, the mysterious A.G.E.S. units were being completed and sent off regularly, by this time 33 units had been built and tested which seems to have been a good effort by John, who had done all these units himself, this in addition to his other jobs.

On the 5th of October Mr. Crowe and Lt. Wide went to Appledore to fetch Princess Ida. John records that they left at 3.30 a.m. On the 13th the Catherine Jean started giving trouble, and on the 6th of November John records that her *"engine was full of water"*, so, on the 8th Shep and Dowden started taking the engine out. The job took them until the 14th and the engine was then sent away for repair. Princess Ida was back in Weston and giving trouble again on the 19th and John records that he *"was on Princess Ida all day, working on the compressor engine Magneto"*, and on the 27th she had trouble with the governor (Speed Control), which John removed, repaired and refitted on the 29th.

The new engine for the Catherine Jean was delivered to Crowe and Greens yard on 10th of December but the Southern Maid was giving

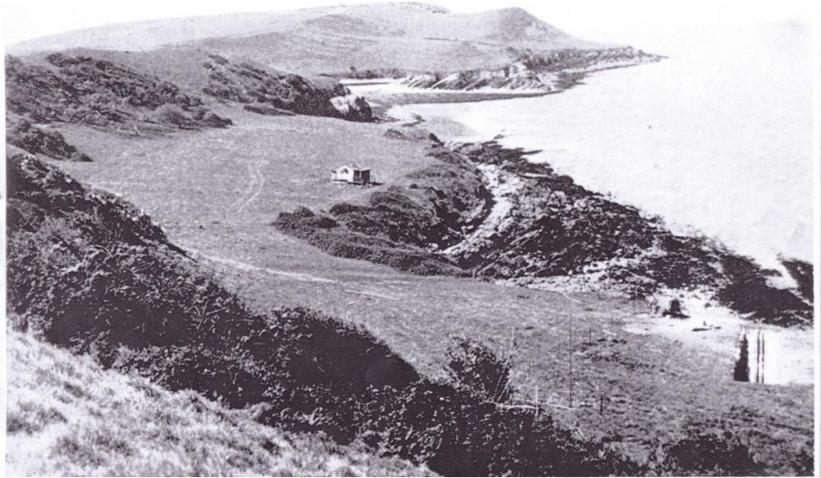
trouble, and this was obviously a more urgent job, so on the 11th and 12th John was occupied with her on the pier as he states:

"New plugs fitted in boathouse after dinner, also check over",

On the 12th he ran the engine in the boathouse, then took her for a run to the river to get the water circulation right. On the 13th he records that:

"Southern Maid and Poppet gone to Boat Pool" presumably for disposal.

He was then occupied with finishing off more A.G.E.S. units until the 22nd of December: the end of a busy Year.



Above: The lonely setting of the D.M.W.D.'s Trial Ground at Middle Hope. The small hut was used for the timing gear used in testing. It was previously a cricket pavilion. Anyone lost one?
Below: The author, far right, during the Cold War.



The Final Chapter: 1946

On the 1st of January, John was on Princess Ida again, working on the compressor engine. He adjusted the carburettor and points, then charged up the air bottle to 300p.s.i. On January the 4th he was working on the Catherine Jean, removing the engine at Uphill, and getting it across the mud with the help of Shep. On the 5th the engine was got onto the staging with the help of Shep and Dowden. On the 7th and 8th they got the engine back on board and bolted down, also A.G.E.S. units 38 and 39 were despatched.

By the 10th Dowden had dismantled Princess Ida's compressor engine and air bottle in the workshop. John also records a momentous moment:

"Bought a 1lb. of bananas for 1/1d",

This must have been the first since the beginning of the war.

On the 30th John records "A.G.E.S. no. 40 away". This was the last one built by Crowe and Green to my knowledge. On the 1st Feb. John was working on the pier, moving the Squid mortar and a friction hoist, this took until the 5th. The rest of February was taken up with Princess Ida and

Catherine Jean on various jobs, and on the 9th of March the final entry in John's diary records

"Avonmouth all day with Shep in Catherine Jean renewing two cylinder head joints."

Thus ended Crowe and Greens collaboration with the A.M.W.D., which in no small way helped to win the war.

Two more entries in John's diary deserve a mention I think. On the 8th June he writes:

"Saw Campbell's boat off the Old Pier, the first time since 1939".

On the 22nd November he records a more sombre event:

"Bus accident by airport, 8 killed".

This was when a double decker bus was taking R.A.F. personnel to the Railway Station to catch trains to take them on weekend leave, and was struck by a Boston aircraft which was landing at Weston. After this tragedy, all traffic was stopped when large aircraft were landing. I was 11 at the time, and remember, being a typical

blood thirsty boy, cycling out to the airport after school to see the crash site, and being told to "Bugger off" by the Police on duty there.

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Thanks must also go to my wife Eileen, for putting up with long hours of copying and computer work by me, and also her conviction that I could get it down on paper, thanks love. Also to my publisher, Raye Green, for her invaluable help and encouragement. Thank you all for getting this project of mine on the road.

Appendix A

Known civilians who were associated with H.M.S. Birnbeck

Dick Crowe:	Owner of Crowe and Green Engineers, Hotelier
John Smith:	Foreman and Manager, Crowe and Green
Charlie Dowden:	Employee
Cyril Mackay (Mac):	Employee
Ralph Hatchkiss:	Employee
Harold Shepstone (known as Shep)	
Joe Baker	
Michael Crowe	Dick Crowe's Nephew
Dr. H.S. Hatfield:	physicist, inventor, mathematician.
Dr. E.A. Guggenheim:	mathematician.
Mr. Bentley:	admiralty inspector.
Mr. Davis:	admiralty accountant.
Mr. Orchard:	admiralty inspector.

Appendix B

Naval Personnel Involved with H.M.S. Birnbeck

- Vice Admiral John Casement, Resident Naval Officer, Watchet. Immediate superior to D.M.W.D.
- Commander Sir Charles Goodeve, O.B.E., F.R.S., R.N.V.R. Founder of D.M.W.D.
- Commander F.D. Richardson, R.N.V.R. Succeeded Goodeve in scientific control of D.M.W.D
- Lt Commander C.N. Boswell, R.N.V.R.
- Lt Commander A.C. Brinsmead
- Lt Commander L.H.M. Lane, R.N.V.R.
- Lt. John Wide: former Birnbeck pier master
- Lt. E.C. Roberson, Research Scientist
- Sub. Lt. J.R.D. Francis, R.N.V.R: first user of Birnbeck for trials of "Hedgehog" rounds.
- Lt. M.R.J. Wyllie, R.N.V.R. Explosives expert
- Lt. J.D. Ritchie
- Lt. Louis Klementaski, High Speed Photographer.

Appendix "C"
Vessels associated with H.M.S. Birnbeck"

"Flora Glen": 3 Ton Motor Launch, previously owned by J.E. Tancock.

"Princess Ida": Former Aust Ferry, acquired by the Navy in 1941 and used at Birnbeck for retrieval of mines and weapons. As she had no identification marks, having been repainted grey, she became known as "Birnbeck ". Finally taken to Milford Haven" After the war she gradually fell apart, a sad end

"Persil": Motor Boat, acquired for misc. Naval Service on 12th June 1942. Previously owned by J. Polkingham.

"Y-Not": Motor Boat, Acquired for Misc. Naval Service on 13th May 1942, served until December 1945 when laid up. Sold in April 1946

" Mary": Dumb Barge, 160 Tons D.W. Previously owned by Mrs. Grace Lambert, requisitioned for Naval Service 28th November 1940. Used for firing trials of "Highball" weapon by D.M.W.D. at Woodspring.

"Southern Maid": No further information

"Vernon 2": No further information

"Vernon 5": No further information

"Heron": No further information

"Catherine Jean": No further information

"4313": No further information