I

ON A SATURDAY MORNING IN late November 1944, in a railway shed in the Dutch seaside resort of Scheveningen, three ballistic missiles, each nearly fifteen metres long, lay in their steel cradles like cosseted patients in a private clinic, their inspection covers open, hooked up to monitors and tended by technicians in the shapeless grey denim overalls of the German army.

That winter — the war's sixth — was notoriously hard. The cold seemed to emanate from the concrete floor — to rise through the soles of even the heaviest boots and penetrate the flesh to the bone. One of the men stepped back from his workbench and stamped his feet to try to keep his blood flowing. He was the only one not in uniform. His pre-war dark blue suit with its row of pens in the breast pocket, along with his worn plaid tie, proclaimed him a civilian — a maths teacher, you might have said if you had been asked to

guess his profession, or a young university lecturer in one of the sciences. Only if you noticed the oil beneath his bitten fingernails might you have thought: ah yes—an engineer.

He could hear the North Sea barely a hundred metres away, the continuous rolling crash of the waves somersaulting onto the beach, the cries of the gulls as they were flung around by the wind. His mind was filled with memories — too many memories, in truth; he was tempted to put on his ear defenders to shut them out. But that would have made him look even more conspicuous, and besides, he would only have had to take them off every five minutes, for he was constantly being asked questions about something or other — the propulsion unit or the pressurisation in the alcohol tank or the electrical wiring that switched the rocket from ground to internal power.

He went back to work.

It was just before half past ten that one of the big steel doors at the far end of the shed rattled back on its rollers and the soldiers nearest to it stiffened to attention. Colonel Walter Huber, commander of the artillery regiment, stepped inside amid a blast of cold rain. There was another man at his shoulder wearing a black leather greatcoat with the silver insignia of the SS on the lapel.

'Graf!' shouted the colonel.

Turn away, was Graf's immediate instinct. Pick up your soldering iron, bend over your workbench, look busy.

But there was no escaping Huber. His voice rang out as if he were on a parade ground. 'So this is where you're hiding! I have someone here who wishes to meet you.' His high leather boots creaked as he marched across the repair shop. 'This is Sturmscharführer Biwack of the National Socialist Leadership Office. Biwack,' he said, ushering the stranger forward, 'this is Dr Rudi Graf from the Army Research Centre at Peenemünde. He's our technical liaison officer.'

Biwack gave a Hitler salute to which Graf made a wary return. He had heard about these 'NSFOs' but had never actually met one — Nazi Party commissars, recently embedded in the military on the Führer's orders to kindle a fighting spirit. Real die-in-a-ditch fanatics. The worse things got, the more there were.

The SS man looked Graf up and down. He was about forty, not unfriendly. He even smiled. 'So you are one of the geniuses who are going to win us the war?'

'I doubt it.'

Huber said quickly, 'Graf knows all there is to know about the rocket. He can fill you in.' He turned to Graf. 'Sturmscharführer Biwack will be joining my staff. He has full security clearance. You can tell him everything.' He checked his watch. Graf could tell he was in a hurry to get away. He was an old-school Prussian, an artillery officer in the Great War – exactly the

type who had come under suspicion after the army's attempt to assassinate Hitler. The last thing he would want was a Nazi spy listening at his keyhole. 'One of Seidel's platoons is scheduled to launch in thirty minutes. Why don't you take him over to observe?' A quick nod of encouragement — 'Very good!' — and he was gone.

Biwack shrugged and made a face at Graf. *These old-timers*, *eh? What can you do?* He nodded at the workbench. 'So what's that you're working on?'

'A transformer, from the control unit. They don't much care for this cold weather.'

'Who does?' Biwack put his hands on his hips and surveyed the shed. His gaze came to rest on one of the rockets. *Vergeltungswaffe Zwei* was their official designation. Vengeance Weapon Two. The V2. 'My God, she's a beauty. I've heard all about them, of course, but I've never actually seen one. I'd very much like to watch this launch. Do you mind?'

'Of course not.' Graf retrieved his hat, scarf and raincoat from the row of pegs by the door.

Rain was gusting off the sea, funnelled down the side streets between the abandoned hotels. The pier had burned down the previous year. Its blackened iron spars protruded above the running white-capped waves like the masts of a shipwreck. The beach was sown with barbed wire and tank traps. Outside the railway station a few tattered tourist posters from

before the war showed a pair of elegant women in striped bathing costumes and cloche hats tossing a ball to one another. The local population had been expelled. Nobody was about apart from soldiers, no vehicles could be seen except for army lorries and a couple of the tractors they used to move the rockets.

As they walked, Graf explained the set-up. The V2s arrived by rail from their factory in Germany, shipped under cover of darkness to avoid enemy aircraft. Twenty missiles per shipment, two or three shipments per week, all destined for the campaign against London. The same number were being fired at Antwerp, but they were launched from Germany. The SS had their own operation going in Hellendoorn. The batteries in The Hague were under orders to fire the rockets within five days of arrival.

'Why the rush?'

'Because the longer they are exposed to the wet and the cold, the more faults they develop.'

'There are a lot of faults?' Biwack was writing down Graf's answers in a notebook.

'Yes, many. Too many!'

'Why is that?'

'The technology is revolutionary, which means we're having to refine it all the time. We've already made more than sixty thousand modifications to the prototype.' He wanted to add that the real wonder wasn't that so many missiles misfired; it was that so

many took off at all. But he decided against it. He didn't like the look of that notebook. 'Why are you writing so much down, may I ask? Are you making a report?'

'Not at all. I just want to be sure I understand. You have worked for a long time on rockets?'

'Sixteen years.'

'Sixteen years! Looking at you, it doesn't seem possible. How old are you now?'

'Thirty-two.'

'The same age as Professor von Braun. You were at the military proving ground at Kummersdorf together, I believe?'

Graf gave him a sideways glance. So he had been checking on von Braun as well as him. He felt a twinge of unease. 'That's right.'

Biwack laughed. 'You're all so young, you rocket fellows!'

They had left the built-up streets of the town and entered the forested suburbs. Scheveningen was ringed by woods and lakes. It must have been pretty before the war, Graf thought. Behind them a driver hammered on his horn, forcing them to scramble to the side of the road. Moments later, a transporter roared past carrying a V2 in its hydraulic cradle – the fins first, closest to the cab, then the long body and finally, protruding over the end of the trailer, the nose cone with its one-ton warhead. Camouflaged tankers followed

close behind. Graf cupped his hands and shouted in Biwack's ear as each one passed: 'That's the methyl alcohol... the liquid oxygen... the hydrogen peroxide... It all comes in on the same trains as the missiles. We fuel at the launch site.'

After the last of the support vehicles had disappeared around the corner, the two men resumed their walk. Biwack said, 'You're not worried about enemy bombers?'

'Of course, night and day. Luckily they haven't found us yet.' Graf scanned the sky. According to the Wehrmacht's meteorologists, there was a weather front passing over northern Europe that weekend. The clouds were grey, heavy, oozing rain. The RAF would not be flying in this.

Further inside the treeline, they were halted by a checkpoint. A barrier lay across the road, a sentry post beside it. Graf glanced into the woods. A dog handler with a big Alsatian on a leash was moving through the dripping vegetation. The dog cocked its leg and stared at him. One of the SS guards shouldered his machine gun and held out his hand.

No matter how many times Graf attended a launch, it seemed to amuse the sentries to act as if they had never seen him before. He reached into his inside pocket for his wallet, opened it and pulled out his identity card. A small photograph slipped out with it and fluttered across the road. Before he could move,

Biwack had stooped to retrieve it. He glanced at it and smiled. 'Is this your wife?'

'No.' Graf didn't like seeing it in the SS man's hands. 'She was my girlfriend.'

'Was?' Biwack put on the professionally sympathetic face of an undertaker. 'I'm sorry.' He handed it back. Carefully Graf returned it to his wallet. He could tell Biwack was expecting a fuller explanation, but he did not want to provide one. The barrier lifted.

The road with its ornamental street lamps stretched ahead, crowded on either side by trees, once a place for a stroll or a bicycle ride, now shrouded overhead by camouflage netting. At first it looked empty. But as they penetrated deeper, it became apparent that along the tracks running off to right and left, the woods concealed the main business of the regiment - tents for storage, tents for testing, scores of vehicles, a dozen missiles wrapped in tarpaulins and hidden beneath the trees. Shouts and the throb of generators and of engines revving carried on the damp air. Biwack had stopped asking questions and was striding ahead in his eagerness. The land to their left fell away. Through the branches a lake glinted, dull as pewter, with an island and an ornamental boathouse. As they rounded the sweep of a bend, Graf raised his hand to signal they should stop.

Two hundred metres further on, in the centre of the lane, hard to distinguish at first because of its

ragged green-and-brown camouflage, a V2 stood erect on its launch table, solitary apart from a steel mast to which it was attached by an electrical cable. Nothing moved around it. A thin stream of vapour vented silently from above the liquid oxygen tank, condensing in the misty air like breath. It was as if they had come upon some huge and magnificent animal in the wild.

Biwack instinctively dropped his voice and said quietly, 'Can't we go closer?'

'This is as far as it's safe.' Graf pointed. 'Do you see the support vehicles have withdrawn? That means the firing crew are already in their trenches.' From his raincoat pocket he pulled out his ear defenders. 'You should wear these.'

'What about you?'

'I'll be all right.'

Biwack waved them away. 'Then so shall I.'

A klaxon sounded. A startled game bird—it must be a real survivor, Graf thought, as the soldiers liked to shoot them to supplement their rations—struggled out of the undergrowth and took clumsy flight. Its hoarse panicked cry as it flapped noisily down the road echoed the note of the klaxon.

Graf said, 'She weighs four tons empty, twelve and a half fuelled. On ignition, the fuel is gravity-fed. That yields eight tons of thrust — still lighter than the rocket.'

A voice carried over a loudspeaker: 'Ten . . . nine . . . eight . . .'

Sparks, vivid as fireflies in the gloom, had begun cascading from the rocket's base. Suddenly they coalesced into a jet of bright orange flame. Leaves, branches, debris, dirt whipped into the air and flew across the clearing. Graf turned and shouted at Biwack, 'Now the turbo pump kicks in, thrust goes to twenty-five—'

"... three ... two ... one!"

His last few words were lost in a sharp-edged cracking roar. He clamped his hands to his ears. The umbilical cable fell away. A mixture of alcohol and liquid oxygen, forced by the turbo pump into the combustion chamber and burned at a rate of a ton every seven seconds, produced — so they claimed at Peenemünde — the loudest sound ever made by man on earth. His whole body seemed to tremble with the vibrations. Hot air buffeted his face. The surrounding trees were brilliant in the glare.

Like a sprinter poised on her starting block a split second after the pistol was fired, the V2 at first appeared stalled, then abruptly she shot straight upwards, riding a fifteen-metre jet of fire. A thunderous boom rolled from the sky across the wood. Graf craned his neck to follow her, counting in his head, praying she would not explode. One second . . . two seconds . . . three seconds . . . At exactly four seconds into the flight, a time switch was activated in one of the

control compartments and the V2, already two thousand metres high, began to tilt towards an angle of forty-seven degrees. He always regretted the necessity for that manoeuvre. In his dreams, she rose vertically towards the stars. He had a last glimpse of her red exhaust before she vanished into the low cloud towards London.

He let his hands drop. The wood was quiet again. The only residue of the V2 was a distant drone, and very soon even that stopped. Then there was only birdsong and the patter of rain on the trees. The firing platoon had started to emerge from their trenches and were walking towards the firing table. Two men wearing asbestos suits moved stiffly like deep-sea divers.

Slowly Biwack took his hands from his ears. His face was flushed, his eyes unnaturally bright. For the first time that morning, the National Socialist Leadership Officer seemed incapable of speech.

2

SIXTY-FIVE SECONDS AFTER TAKE-OFF, AT an altitude of twenty-three miles and a velocity of 2,500 miles per hour, an onboard accelerometer simultaneously cut off the fuel supply to the V2's engine and activated a switch that armed the warhead fuse. The unpowered rocket was now ballistic, following the same parabolic curve as a stone flung from a catapult. Its speed was still increasing. Its course was set on a compass bearing of 260 degrees west-south-west. Its aiming point was Charing Cross station, the notional dead centre of London; hitting anything within a five-mile radius of that would be considered on target.

At roughly the same moment, a twenty-four-yearold woman named Kay Caton-Walsh — her first name was Angelica, but everyone called her Kay, after Caton — emerged from the bathroom of a flat in Warwick Court, a quiet narrow street just off Chancery Lane in Holborn, about a mile from Charing Cross. She was wrapped in the short pink towel she had brought with her from the country and was carrying a sponge bag containing soap, toothbrush, toothpaste and her favourite perfume, Guerlain's L'Heure Bleue, which she had dabbed generously just beneath her ears and on the insides of her wrists.

She savoured the feel of the carpet beneath her bare feet — she couldn't remember the last time she had known that small luxury — and walked down the passage into the bedroom. A moustachioed man smoking a cigarette watched her from the bed through half-closed eyes. She put the sponge bag in her valise and let the towel drop.

'My God, what a vision!' The man smiled, eased himself further up on his pillow and threw back the eiderdown and blankets beside him. 'Come over here.'

For a moment she was tempted, until she remembered how rough his black stubble was before he shaved, and how he always tasted of tobacco and stale alcohol first thing in the morning. Besides, she preferred to anticipate her pleasure—sex, in her experience, being at least as much a matter of the mind as the body. They still had the afternoon to look forward to, and the evening, and the night, and perhaps—as it might be the last time for a while—the following morning. She returned his smile and shook her head—'I need to find us some milk'—and as he flopped backwards in

frustration, she retrieved her underwear from the carpet: peach-coloured, brand new, bought specially in anticipation of what the English, in their peculiar way, called 'a dirty weekend'. Why do we use that phrase? she wondered. What an odd lot we are. She glanced out of the window. Warwick Court, midway between Lincoln's Inn and Gray's Inn, was mostly full of lawyers' chambers — an odd place to live, it seemed to her. It was quiet on a Saturday morning. The rain had stopped. A weak winter sun was shining. She could hear the traffic in Chancery Lane. She remembered a grocery shop on the corner opposite. She would go there. She started to dress.

A hundred miles to the east, the V2 had reached its maximum altitude of fifty-eight miles — the edge of the earth's atmosphere — and was hurtling at a velocity of 3,500 miles per hour beneath a hemisphere of stars when gravity at last began to reclaim it. Its nose slowly tilted and it started to fall towards the North Sea. Despite the buffeting of cross-winds and air turbulence during re-entry, a pair of gyroscopes mounted on a platform immediately below the warhead detected any deviations in its course or trajectory and corrected them by sending electrical messages to the four rudders in its tail fins. Just as Kay was fastening the second of her stockings, it crossed the English coast three miles north of Southend-on-Sea, and as she pulled her dress over her head, it flashed above

Basildon and Dagenham. At 11.12 a.m., four minutes and fifty-one seconds after launching, travelling at nearly three times the speed of sound, too fast to be seen by anyone on the ground, the rocket plunged onto Warwick Court.

An object moving at supersonic speed compresses the atmosphere. In the infinitesimal fraction of a second before the tip of the nose cone touched the roof of the Victorian mansion block, and before the fourton projectile crashed through all five floors, Kay registered – beyond thought, and far beyond any capacity to articulate it – some change in the air pressure, some presentiment of threat. Then the two metal contacts of the missile's fuse, protected by a silica cap, were smashed together by the force of the impact, completing an electrical circuit that detonated a ton of amatol high explosive. The bedroom seemed to evaporate into darkness. She heard the noise of the explosion and the rending of steel and masonry as the fuselage and fragments of the nose cone descended floor by floor, a crash as parts of the plaster ceiling landed around her, and then an instant later the sonic boom of the sound barrier being broken followed by the rushing noise of the incoming rocket.

The shock wave lifted her off her feet and flung her against the bedroom wall. She lay on her side, more or less conscious, winded, but weirdly calm. She understood exactly what had hit them. So this is what it's like,

she thought. The blast wave underground would be the problem now, if it had shaken the foundations sufficiently to bring the building down. The room was dark with dust. After a while, she became aware of a breeze and something flapping in the gloom beside her. She put out her hand and touched the carpet. She felt glass beneath her fingers and quickly withdrew them. The window had been blown in. The curtains were stirring. Somewhere outside, a woman was screaming. Every few seconds came the crash of falling masonry. She could smell the deadly sweet odour of gas.

'Mike?' There was no response. She tried again, louder. 'Mike?'

She struggled to sit up. The room was in a kind of twilight. Particles of pulverised brick and plaster swirled in the pale grey shaft of light from the gaping window. Unfamiliar shapes — dressing table, chairs, pictures — were shadowed and askew. A jagged crack ran from floor to ceiling above the wooden bedhead. She took a deep breath to gather her strength, and sucked in dust. Coughing, she grabbed one of the curtains, hauled herself to her feet and stumbled through the debris towards the bed. A steel beam had come down and lay over the bottom part of the mattress. Large chunks of plaster, lath and horsehair were scattered across the eiderdown. She had to use both hands to throw them aside to uncover the shape of his upper body. His head was turned away from her.

The eiderdown was drenched in something bright red that she thought at first was blood but when she touched it turned out to be brick dust.

'Mike?' She felt his neck for a pulse, and at once, as if he had been playing dumb, he turned to look at her, his face unnaturally white, his dark eyes wide. She kissed him, stroked his cheek. 'Are you hurt? Can you move?'

'I don't think so. Are you all right?'

'I'm fine. Can you try, darling? There's a gas leak. We ought to get out.'

She put her hands under his arm, gripped his hard muscled flesh and pulled. He twisted his shoulders back and forth in an effort to escape. His face contorted in pain. 'There's something on my legs.'

She went to the beam at the end of the bed and wrapped her arms around it. Each time she shifted it slightly, he groaned through clenched teeth. 'Leave it, for Christ's sake!'

'Sorry.' She felt helpless.

'Get out, Kay. Please. Just tell them there's gas.'

She could hear the edge of panic in his voice. He had told her once that his worst moment as a pilot wasn't combat; it was seeing a man burned alive in a plane crash after a botched landing — his legs had been trapped and they couldn't get close enough to pull him out: 'I wish to God I could have shot him.'

The clanging bell of a fire engine sounded nearby.

'I'll fetch help. But I'm not leaving, I promise.'

She pulled on her shoes and picked her way out of the bedroom and into the passage. The thick carpet was buried under plaster. The gas smell was worse here – the leak must be in the kitchen – and the floor seemed to be tilting. Daylight filtered through a crack that was as wide as her hand and ran all the way up to the ceiling. She unlocked the front door, turned the handle, pulled. At first it wouldn't open. She had to drag it free from its twisted frame, and then let out a cry as she found herself swaying on the edge of a twenty-foot drop. The second-floor landing and the exterior wall of the mansion block had gone. There was nothing between her and the shell of the tall building across the street, its windows gaping, its roof collapsed. In the road immediately beneath her feet, a landslide of rubble tumbled into the road – bricks, pipes, fragments of furniture, a child's doll. Smoke was rising from a dozen small fires.

A fire tender had pulled up, the crew unloading its ladders, unrolling hoses in the middle of what looked like the aftermath of a battle — bloodied, dust-covered victims lying full-length; others sitting dazed, heads bowed; civil defence workers in helmets moving among them; two bodies already set apart and shrouded; spectators gawping. Kay gripped the door frame, leaned out as far as she dared and shouted for help.

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According to the records of the London County Council, six people were killed by what became known as 'the Warwick Court rocket' and another 292 were injured, most of them caught in Chancery Lane by flying debris. The dead included Vicki Fraser, a nurse aged thirty; Irene Berti, a nineteen-year-old secretary in a barrister's office; and Frank Burroughs, sixty-five, a heating engineer. The few photographs passed for publication by the censors show firemen's ladders stretching up into a wrecked building, the top floors of which have entirely collapsed, and a strange, short, gaunt man in his fifties, wearing a black overcoat and homburg, squeezing between the heaps of wreckage. He was a doctor who had happened to be passing and who volunteered to climb up into the unstable ruin, and he was the man who, after five minutes of her frantic appeals, came up the ladder and followed Kay and the rescue workers into the flat.

As they entered the bedroom, the doctor politely removed his hat as if he were making a routine house call, and asked quietly, in a Scottish accent, 'What's his name?'

'Mike,' she said. 'Mike Templeton.' And then she added, because she wanted them to treat him with respect, 'Air Commodore Templeton.'

The doctor went over to the bed. 'Right, sir, can you feel your legs?'

One of the firemen said, 'You should get out now, missus. We'll take it from here.'

'What about the gas?'

'We've shut off the main.'

'I'd rather stay.'

'No chance, sorry. You've done your bit.'

Another fireman took her by the arm. 'Come on, love. Don't argue. This place could collapse.'

Mike called out, 'It's fine, Kay. Do as they say.'

The doctor turned round. 'I'll see he's all right, Mrs Templeton.'

*Mrs Templeton!* She had forgotten that she wasn't supposed to be here.

'Of course. I'm sorry. I understand.'

She was halfway to the door when Mike called to her again. 'You'd better take your case.'

She had forgotten all about it. It was still on the ottoman at the foot of the bed, covered in dust and plaster, mute evidence of their infidelity. He must have been lying there worrying about it. She brushed off the debris, fastened the catches and followed the fireman out to the front door. He stepped onto the first rung of the ladder, took the valise and threw it down to someone below; then he descended another couple of rungs, held out his hands and beckoned her to follow. She had to shut her eyes as the ladder bent and swayed beneath their combined weight. His hands were hard around her waist. 'Come on, love, you can do it.' Slowly, pausing on each step, they descended. Just as they reached the bottom rung, she fainted.

She came round to find a nurse kneeling in front of her, holding her chin and dabbing iodine on her temple. She moaned and tried to pull away. The grip tightened slightly. 'It's all right, sweetheart. Keep still. Nearly done.' Something sharp was digging into her back, and when the nurse was finished and she was able to turn her head, she found she was propped up against the rear wheel of the fire engine. Two more ladders had been run up against the bombed-out building, and three men in steel helmets were standing in a row at the top, steadying a stretcher that was being lowered down to them by half a dozen firemen. The nurse followed her gaze. 'Is that one yours?'

'I think so.'

'Come on then.'

She held out her hand and pulled Kay to her feet. She put her arm round her shoulder as they stood at the foot of the ladder.

The stretcher came down slowly, the men shouting to one another to keep it steady. She recognised him by the curliness of his black hair. They had wrapped him in a blanket. As he reached the ground, he turned and saw her. His face was drawn with pain, but somehow he managed to pull his hand out from under the blanket and give her a weak thumbs-up. She took his hand in both of hers.

He said, 'Was it a V2?'

She nodded.

He smiled faintly. 'That's bloody funny.'

Kay turned to the nurse. 'Where are they taking him?'

'Barts. You can go with him if you want.'

'I'd like that.'

He pulled his hand away. His expression was suddenly remote, as if she were a stranger. He stared up at the sky. 'Better not,' he said.

3

THEY STOOD UNDER A DRIPPING fir tree, Graf smoking a cigarette, Biwack with his notebook open. Graf had wanted to return to Scheveningen straight after the launch, but Biwack had insisted on seeing how the regiment worked. They watched as half a dozen members of the firing crew cleared the launch site, rolling up the electrical cables and collapsing the mast. The firing platform itself was a round, squat, stout metal frame not much bigger than a coffee table, the same circumference as the V2, mounted on hydraulic legs, with a pyramid-shaped blast deflector in the centre.

'How heavy is that?'

'About a ton and a half.'

The crew dragged over a two-wheel trailer and manoeuvred it underneath the platform. They worked quickly, without talking much, to minimise the time

they risked being exposed to enemy aircraft. Somewhere in the wood a tank engine cracked into life, coughing up pulses of dirty brown exhaust smoke, and slowly a half-track armoured car struggled up out of the ground.

'What's that?'

'The firing control vehicle. It's dug in during the launch.'

The half-track lumbered through the undergrowth towards them, and stopped with its engine idling while the firing platform was hitched to its tow plate. Then the men climbed up onto the mudguards and clung to the armoured shell. The engine revved and they moved off. Within a minute they had gone. Apart from the faint lingering smell of burned fuel and the odd scorch mark on the surrounding trees, there was nothing to show that a missile had ever been launched.

Biwack seemed as impressed by this as he had been by the rocket itself. 'That's all there is to it? My God, you really can fire this thing from anywhere!'

'Yes, as long as the ground is flat and firm enough. The corner of a parking lot or a school playground would do.' A year ago, Graf had never imagined they might be able to fire the rocket so easily. But then he hadn't thought they might be able to mass-manufacture the V2s in their thousands either. The appalling ingenuity of it all was a constant surprise.

'It must be wonderful for you,' said Biwack, 'to see

something you have worked on since you were sixteen finally turned into a weapon to protect the Fatherland.'

It seemed such an oddly loaded remark that Graf darted a look at him, but Biwack's face was expressionless. 'Naturally.' He finished his cigarette, dropped it onto the forest floor and crushed it out with his shoe. 'Now we should get back.'

They had barely gone fifty metres along the road when they heard the rumble of the half-track returning, its engine whining as if in panic. It reversed around the curve at speed, without its clinging passengers, and braked hard. The side door was flung open and the sergeant in charge of the firing platoon — Schenk, a veteran from the Eastern Front, who had lost both ears to frostbite — stuck his head out. 'Dr Graf, there's an emergency at site seventy-three. Lieutenant Seidel wants you right away.'

He extended his hand to help Graf clamber aboard, but hesitated when he saw Biwack. Graf said, 'It's fine, he's with me.' Schenk hauled the SS man up and slammed the door after them.

Biwack said, 'Aren't you forgetting something, Sergeant?'

Schenk looked him up and down, puzzled and then amused. He slowly raised his arm. 'Heil Hitler.'

The half-track suddenly reversed off the road, then lurched forwards, knocking them off balance. Graf

grabbed one of the two fixed swivel seats. Schenk caught the other. With a mocking display of courtesy, like a maître d' in a smart restaurant, he offered it to Biwack. They bounced over the undergrowth and rejoined the road.

The seats were arranged for the firing control officer and his second in command to observe the launch. Above the panel of instruments, through the narrow slits at the back of the half-track, the road receded behind them. Biwack was examining the dials and switches. He seemed to want another tutorial, but Graf's mind was too full of misgivings to answer any more questions. *There's an emergency*. How many times in the last month had he heard those words?

Jolting around in the stuffy compartment, he started to feel sick. He clung to the sides of the seat. After a couple of minutes, they slowed to pass a column of tankers parked at the side of the road. The soldiers stood sheltering under the trees with their hands in their pockets, forbidden to smoke so close to the fuel. The armoured car stopped and the sergeant opened the door. With relief, Graf jumped out into the cool wet air.

Lieutenant Seidel was waiting for him. There were three batteries in the regiment, each with three launching platoons of thirty-two men. Seidel commanded the second battery. He was about Graf's age, a fellow Berliner. Sometimes in the evenings, in the mess, if they weren't too exhausted, they played chess. They never talked politics. Seidel looked grim. 'We've got a fire in the control compartment.'

'A fire? You've shut off the power?'

'Completely. Come and look.'

They walked around to the front of the armoured car. Two hundred metres down the road, the rocket stood alone and unsupported, ready to launch. Seidel handed him a pair of binoculars. Graf trained them on the V2. Smoke was issuing silently from just beneath the warhead and was being whipped away by the wind.

'Is she fuelled?'

'Fully. That's why we've evacuated the site. Apparently they only noticed it a minute before launch.'

Graf lowered the field glasses. He stroked his chin and tugged at his nose with his thumb and forefinger. There was no alternative. 'I suppose I'd better take a look.'

'Are you sure?'

'I'm the one who built the damned thing.' He tried to make a joke of it. 'Frankly, it's not the thought of an explosion that scares me - it's climbing that damned Magirus ladder.' It was not far off the truth. He detested heights.

Seidel clapped him on the arm. 'Right, I need two volunteers.' He winked at Graf and glanced around. He pointed to a pair of soldiers standing nearby. 'You and you. Take the ladder over to the missile.'

They came to attention, faces suddenly grey. 'Yes, Lieutenant!'

Graf called after them, 'I'll need a pair of gloves, and tools for the compartment.' For the first time, he was aware of Biwack, listening to their conversation. He turned back to Seidel. 'By the way, this is Sturmscharführer Biwack. He's joining the regiment as our new National Socialist Leadership Officer.'

Seidel laughed again, as if this were a continuation of their joke, but then Biwack clicked his heels and saluted – 'Heil Hitler!' – and his smile shrank. He returned the salute. 'And what exactly will your role be in the regiment, Sturmscharführer?'

'To raise morale. To remind the men what we're fighting for.'

Seidel's mouth turned down. He nodded. 'Useful.'

Graf had gone back to studying the rocket through the binoculars. Was it his imagination, or had the smoke got thicker? It wasn't the proximity of the heat to the warhead that worried him — until the fuses were armed, the amatol was no more dangerous than a one-ton lump of yellow clay. But the closeness of the fuel was a different matter. He had witnessed fuel tanks explode before. He had once seen three men blown to pieces directly in front of him. And that was by a small experimental tank, whereas the V2 contained eight and a half tons of alcohol and liquid oxygen. He tried to put the images out of his mind.

'We're wasting time,' he said. 'Tell them to hurry up with that ladder.'

He set off towards the rocket. There were footsteps behind him, and he turned to find Biwack catching him up. 'No, no,' he said, 'there's nothing you can do. You need to keep well back.'

'I'd prefer to come with you.' Biwack fell in beside him. 'The lieutenant seems to believe I'm just some pen-pusher from the Brown House, whereas actually I fought in the East for two years. I am making a point to the men – you understand?'

'As you wish.' Graf lengthened his stride.

The V2 was a monster more than seven times his height, although at this moment it seemed even taller. As he walked, he took off his hat and squinted up at it. The transformer would be the problem, he was sure. At Peenemünde they had discovered that the rocket had a tendency to airburst at the end of its flight due to the heat of re-entry, so they had added a metal sleeve to protect the upper section. But somehow in the winter weather that seemed to increase condensation, which in turn shorted the electrics. You solved one problem and created another.

The ladder was on its way, towed on a trailer behind a small truck. The driver parked at the base of the rocket, jumped out and immediately began uncoupling it – the type of ladder that firemen used: three sections, extendable. The other soldier handed