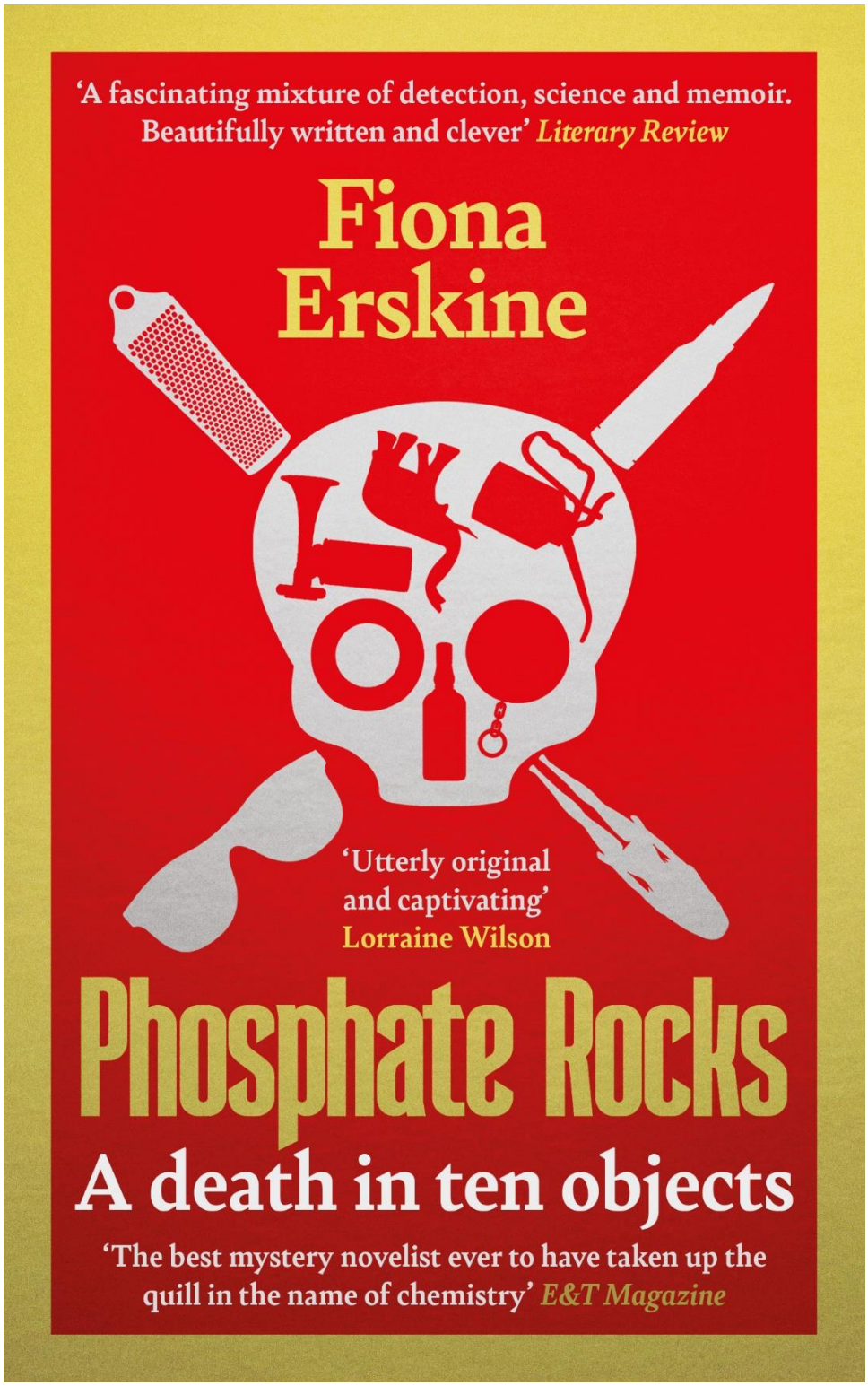
Extract from Phosphate Rocks



One

Demolition

The demolition crew found the body.

A gale blew across Leith docks, drowning the rumble of bulldozers, squeal of hydraulic scissors, juddering percussion of jackhammers and crash of falling masonry. Gusts of wind whipped the concrete dust into weird shapes: mini tornadoes with tentacles and claws, ephemeral and monstrous.

The abandoned SAI fertiliser factory occupied a promontory of land reclaimed from the Firth of Forth, a fenced site that stretched two miles east–west and half a mile north–south on the edge of the Port of Leith, Edinburgh's dockland. Little remained above ground. The offices and stores, tanks and reactors, towers and chimneys had been reduced to shards of broken brick, jagged concrete wedges, spaghetti junctions of metal pipe and beam. The demolition forces, a phalanx of specialised destruction machines, trundled towards the last remaining structures above the deep-water dock. The mechanised locusts munched through the factory, flattening everything in their wake, leaving behind a wind-blown desert: order to chaos, symmetry to entropy, meaning to insignificance.

Kelly was driving the grapple, a hydraulic excavator with an articulated jaw in place of a digging bucket. Steel teeth chomped through the covered aerial conveyors which had once transported powdered phosphate rock on huge rubber belts to the heart of the factory. The grapple left a trail of carnage to be sorted and shifted.

From inside the 'hoose', a cab on a rotating platform above the moving undercarriage, Kelly manoeuvred the grapple gingerly towards the edge of the quay, alert to the sharp smell of seaweed. One false move and the bright yellow juggernaut with its crawler feet and long giraffe neck would topple into the North Sea. Even if he escaped from the hoose, the freezing water would kill him before they could fish him out of the shipping channel. Journey's end.

Kelly attacked the final structure, an elevator tower designed to raise the ship's cargo from quay to conveyor. Rat-a-tat-a-tat-rat-a-whoofffFFFF. The walls of the intake elevator collapsed under Kelly's assault and a cloud of rose- gold confetti mushroomed and shimmered above the ruin. As the dust cleared, he edged forward, peering through the grimy glass of the cab at the exposed elevator shaft, grapple poised, one hand on the joystick, ready to rip its guts out.

Something stayed his hand. He couldn't say exactly what. A lull in the wind? A break in the clouds? The plaintive cry of a gull that sounded almost human? A shaft of sunlight illuminated shapes beneath the metal structure. Scratching his head, Kelly flicked the windscreen wipers to nashing and matched the stroke with a squealing rag on the inside of the glass. He peered through, swallowed hard, and stopped the machine.

Angry Pat responded to the radio call, stomping over the rubble, bellowing obscenities. The demolition crew foreman followed the new yodelling school of management. What started out as a quiet transaction in a warm office, a contract signed with just the scratch of a biro on

smooth paper, was amplified over time into a series of increasingly strident shouting matches. Angry Pat was the last in the line of yodellers. Having received his instructions over mountains

of obstacles, across gulleys of incomprehension, he passed them on by haranguing with ever-increasing ferocity and volume, berating men who valued their jobs too much to shout back.

Kelly ignored the tirade, as he ignored most of the invective that spewed from Angry Pat and nodded at the ruined tower. Crumbs of concrete dangled on threads of steel reinforcement bars. The elevator, a tangle of buckets and chains, was listing to one side, the flimsy floor had been torn apart to reveal the machine room below. A metal ladder led down past a huge pulley wheel into a deep basement. Directly underneath the wheel, a conical mound of powdered rock had formed, undisturbed for years, most likely, but now slowly collapsing, like a sandcastle at high tide. With a grimy finger, Kelly pointed to the unmistakable shape of a human head which had emerged from the settling pile.

'Jesus Christ!' Angry Pat backed away, eyes wide.

The job had a tight schedule. The old fertiliser factory on the docks had to be razed to the ground before the area could be redeveloped as a shopping and entertainment centre. It was a fixed-price demolition contract and they were already over budget. Angry Pat hesitated, looking sideways at Kelly with an unspoken request. Kelly turned away and spat into the sea.

The foreman's shoulders slumped. 'Virgin Mary's bollocks.'

He phoned his boss before he called the police.

It took days to sift through the rubble. The police impounded the demolition equipment, machines too crude for delicate excavation. The crew were laid off; no other jobs would take lone men who were only as useful as the snippers and dozers and grapples they operated. Kelly remained on half wages to hang around and guard the kit.

New machines arrived: tiny grabbers and sifters, with hoses and sniffer snouts, followed by men and women in white overalls with brushes and bags who took care not to disturb the body, hand-digging to preserve as much evidence as possible.

Kelly made it a rule to stay well clear of the police, but the woman in uniform tracked him down to the store where he took naps between security shifts.

'Detective Inspector Rose Irvine.' She announced herself with a rap on the door of the windowless lock-up. 'Can I have a word?'

He rubbed the sleep from his eyes and ran fingers though tousled hair, catching an unpleasant whiff of his own oxters.

She waited for him to emerge and lock the door before she marched back to the crime scene. He stopped to take a leak behind one of the huge rubber tyres, zipped himself up and followed.

'You the lad that found… this?' She nodded towards the vault where a police photographer was fiddling with his camera.

‘Aye.’

He paused at the lip of the crater. A vacuum truck had sucked away the last of the powdered rock, and Kelly let out a gasp as he took in the scene below.

Everything in the basement under the elevator pulley was encased by a thin shell of hardened phosphate rock, creating a macabre tableau. The human figure could be seen clearly now, seated on a chair, the body upright, hands resting on a rude desk, fingers splayed as if pointing to several objects on the flat surface. The head, the body, the furniture and the objects, perfectly preserved.

‘Tell me exactly what happened.’ ‘I already told the polis—’

‘Tell me.’

He reappraised her. Not one to mess with, for all she looked like a wee clootie dumpling. But there was little enough to tell. He translated the technical terms of demolition into lassie-speak as best he could.

‘Looks almost staged,’ she said.

He shook his head. ‘Whoever it was, they lived there.’ ‘How do you know?’

Kelly pointed to the braziers. On either side of the seated figure stood two perforated 50-gallon drums, the tops hacked off to leave jagged steel edges, multiple saucer-sized holes punched through the sides. The sort of luxury item working men rely on for heat during winter jobs.

‘Who is it? How did this happen? Any ideas?’

Kelly shook his head. He had no clue, but he knew one person who might. A man who knew everything that ever went on in the old factory.

‘You’d best talk to John.’

Two

John

John has a face like a well-kept grave.

He arrives early one morning at Torphichen Street Police Station: a tall, thin man with cropped grey hair and the demeanour of a professional undertaker. He is neatly dressed in polished leather shoes, grey trousers with stay-press seam, an ironed white shirt, blue tie and burgundy V-neck jumper under a padded anorak. Despite the layers, he shivers in the slanting winter light and blinks repeatedly as he states his business at the counter.

'I've come about the ess-eh-eye.'

A short, plump woman emerges from a side room with outstretched hand. She wears a black serge uniform with silver buttons and epaulettes, fair hair scraped back from a round face.

'Mr. Gibson?'

She smells of flowers and reminds him of summer. 'Aye.'

'Detective Inspector Rose Irvine.' Her handshake is warm and surprisingly firm. 'Thanks for coming in.'

He follows her up a flight of steps and waits while she recovers her breath. Outside Interview Room Number Two she gestures for him to enter, but he holds the door open so she can go in first.

The room is furnished with a wooden table and four metal chairs, the furniture marooned on a sea of blue linoleum, adrift between plain grey walls under a high barred window and a ticking clock. On the table is a manila folder.

'You worked at the SAI?' she asks. 'Scottish Agricultural Industries?'

'Aye.'

'We found a body in the old Leith works.'

John places his hands flat against the table, leaning onto it for support.

'Sit,' she says. 'Please.'

His complexion has paled from ivory to ash, his breathing is fast and ragged. She observes him closely as he sinks onto the chair.

When he raises his eyes again, they are wide with shock. 'Who is it?'

'We don't know yet,' she says. 'Poor beggar.'

She leans forward. 'Any idea why there might be a dead body in your old factory?'

'No.' He shakes his head.

'Until I get the autopsy results, I don't know the date of death, the cause of death, whether the victim was male or female, young or old, tall or short, fat or thin.' She sits back and

stretches her hands out, palms upwards. She has nice hands, capable hands. ‘Can you help me?’

‘I can try.’

She opens the folder and shows John the photographs. ‘What can you tell me?’

His shiver turns to a shudder. ‘Poor beggar died before 1997.’

‘Why do you say that?’

John wrinkles his brow. ‘Production stopped.’

‘I see.’

‘And after 1955,’ he adds.

‘When production started?’ She frowns. ‘A forty-two-year window?’

He nods.

His working life.

Three

The Ebony Elephant

Inside the interview room of Torphichen Street Police Station, Rose is the first to break the silence.

'Can you identify the items found beside the body, the things on the desk?' She extracts a photograph from the manila folder and hands it to John. 'Here's a close-up.'

He takes off his glasses and brings the print to the end of his nose.

'We cleaned the objects up,' she says. 'Do you want to see them?'

'Aye.'

She picks up the phone and punches a number. 'Bring in the SAI evidence.'

Please, he thinks to himself.

'To Interview Room Two,' she says. 'Right away.'

Thanks, he adds silently as she puts down the phone. After all, it doesn't cost anything.

At a knock on the door, he is first on his feet, opening the door for a young constable who carries a metal tray.

Rose nods at the table, and the constable rests the tray carefully on the near edge.

John moves the stack of photographs to one side so she can slide it into the centre.

'Thank you,' she smiles. 'You're welcome,' he says. Rose waves the constable away.

John sits again. He stares at each of the objects for exactly ninety seconds, one after the other, then closes his eyes.

Rose waits. The clock ticks.

Rose waits some more.

When he opens his eyes, she leans forward. 'Any ideas?' 'Can I touch them?'

She nods.

John picks up a little ebony elephant, about the size of his fist, tail curved, trunk down, ears alert, expertly carved. He strokes the smooth wood. One sharp white tusk is loose. John pulls it out, brings first the matchstick-sized shard, and then the empty socket, to his nose. He sniffs. Once. Twice. He pulls away and licks his lips, wrinkles his nose then bends forward and inhales again. Thrice.

Yes, there it is. No doubt about it. Just a trace, a whiff, but unmistakable.

Sulphur.

Four

Sulphur

Sulphur formed deep in massive stars when helium and silicon reacted at temperatures of two and a half billion degrees centigrade before flying through space in dust, asteroids and planetesimals, to become the fifth most abundant element on earth.

Take a hair from your head. Poke it into the flame of a candle. Sniff the singed end. That smell comes from sulphur, an essential part of the protein that makes up our muscles. An adult human body contains over two hundred grams of sulphur.

Pure sulphur melts just above the boiling point of water. The yellow solid turns dark red as it liquefies, burning with a blue flame as it spews out of volcanoes.

Much of the sulphur on planet earth is chemically bound to other elements in stable compounds.

The metal sulphides form colourful crystals: with iron to form golden pyrite, the fools' gold that tricked many a hapless miner; with mercury to give vermillion cinnabar – a toxic Roman rouge; with lead to give galena, with antimony to give stibnite – the original kohl eyeliner and mascara, and with zinc to give sphalerite gems shining with a dark, adamantine lustre.

The sulphate minerals include gypsum, the original plaster of Paris; alunite, a flocculant used to clarify turbid liquids; and barite, used in oil and gas exploration as a heavy drilling mud.

'Free' elemental sulphur is also found in nature. It forms the crust around hot springs, lurks under salt domes and skulks under mountains, sinuous crystalline tendrils stretching across the island of Sicily.

For as long as written records exist, sulphur has been used for medicine and fumigation, to bleach cloth and wage war. It may have been a component of the ancient liquid weapon called Greek fire, and it is certainly a component in gunpowder, invented in ninth-century China.

Sulphur was first recognised as a chemical element by Antoine Lavoisier in 1777, but his brilliance as a scientist didn't save him from the French revolution. Seventeen years later he lost his head to the guillotine.

A different upheaval, the industrial revolution, led to an increase in demand for sulphur, leading to a rapid expansion of the mines in Sicily, opening one of the most barbaric chapters of modern times.

Life must have been hard indeed for a Sicilian family to consider sending a child to the sulphur mines. In return for a payment, the *soccorso morto,* a father handed over his six- year-old son to live and work in a distant mine, indentured to a stranger for the next ten years. If the child survived that long.

Did they know what they were selling their children into? The sulphur miners worked underground, stripped bare. While a man, a *picconiero*, hacked at the sulphur with a pickaxe, the job of his boy, a *caruso*, was to crawl through narrow tunnels, barefoot, in total darkness, and haul the material to the surface. The loads varied between twenty kilograms for the

youngest and seventy kilograms for the older boys. The smaller the load, the more frequent the hellish journey. Temperatures underground reached forty- five degrees centigrade with humidity at 100 per cent, the air thick with rock dust and choking, noxious gases. The fatality rate was high. Mine workers were incinerated in underground fires and explosions, buried alive by rock falls and collapsing tunnels, drowned when the manual mine pumps failed to keep up with the rising water, or simply suffocated in the foul miasma of unventilated tunnels.

The boys were beaten and burnt to encourage compliance. Their growth was stunted, their little bodies deformed by the punishing work, and the hell continued above ground.

The sulphur had to be freed from the rock it clung to. In fuel- and water-poor Sicily, the sulphur itself became the fuel. Ore was piled into an inclined ditch and set alight. As the sulphur burned, the temperature inside the pile increased, and molten sulphur flowed out. In this primitive *calcarella* (and later *calcaroni*) method, over half the sulphur was lost, much of it as choking, toxic sulphur dioxide gas which polluted the air and blackened vegetation for miles around.

In this infernal landscape, the boys slept with their masters in primitive huts or in the open air; even at night, there was no escape. Those *carusi* who survived to the age of sixteen became miners themselves and repeated the cycle of enslave-ment and abuse10.

Brutality breeds brutality. After a terrible drought in 1893, men organised themselves to fight for better working conditions through a new socialist movement, the *Fasci Siciliani dei Lavoratori*. The Italian government refused to send troops to repress the workers, so the wealthy Sicilian landowners turned elsewhere for protection: to a new private army – the Mafia.