

# ECHOES OF A LOST EARTH

*collapse | escape*

part one

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# **ECHOES OF A LOST EARTH PART ONE**

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**a novel**

**Author**

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**EIGHTEEN**

*For Susannah*  
*If you're gonna be critiqued,*  
*then better it be with kindness at its core*

## Völuspá

*“The Wise Woman’s Prophecy”*

45. *Brothers shall fight | and fell each other,  
And sisters’ sons | shall kinship stain;  
Hard is it on Earth, | with mighty whoredom;  
Axe-time, sword-time, | shields are sundered,  
Wind-time, wolf-time, | ere the world falls;  
Nor ever shall men | each other spare.*

46. *Fast move the sons | of Mim, and fate  
Is heard in the note | of the Gjallarhorn;  
Loud blows Heindall, | the horn is aloft,  
In fear quake all | who on Hel-roads are.*

47. *Yggdrasill shakes, | and shiver on high  
The ancient limbs, | and the giant is loose;  
To the head of Mim | does Odin give heed,  
But the kinsman of Surt | shall slay him soon.*

— - —

56. *In anger smites | Thor, the warder of Midgård  
Forth from their homes | must all men flee;-  
Nine paces fares | the son of Fjörgyn,  
And, slain by the serpent, | fearless he sinks.*

57. *The sun turns black, | Earth sinks in the sea,  
The hot stars down | from heaven are whirled;  
Fierce grows the steam | and the life-feeding flame,  
Till fire leaps high | about heaven itself.*

58. *Now Garm howls loud | before Gniphellir,  
The fetters will burst, | and the wolf run free;  
Much do I know, | and more can see  
Of the fate of the gods, | the mighty in fight.*

59. *Now do I see | the Earth anew  
Rise all green | from the waves again;  
The cataracts fall, | and the eagle flies,  
And fish he catches | beneath the cliffs.*

## BOOK I

### **DANCE SAID THE DEVIL**

| *collapse* |

*Another war | A shifting climate | A civilisation shedding its civility*

*“I know that an ash-tree stands called Yggdrasill,  
a high tree, soaked with shining loam;  
from there come the dews which fall in the valley,  
ever green, it stands over the well of fate.”*

Stanza 19, The Poetic Edda

# ONE

*Durham University, England – 2009.*

Like an avalanche, it poured forth. The starched '60's style auditorium gave up its quiet contemplation to the noise-front that preceded the freshet of bleary-eyed students, etched with the kind of finely honed lethargy that only they, that particular subset of human enterprise, can truly, and sincerely, manifest. Overhead, florescent lighting tubes flickered and buzzed like pipes of irascible wasps. Ben Charleston prepared his notes and flicked through the powerpoint slides as the students defiled the lecture theatre with their monotonous din and beery breath. Ben had been teaching broad-spectrum geography (as if it were penance for a past sin) at the university for over five years and the throughput of largely disinterested young people was beginning to blur into an endless march of grungy, politicised protestors, so that he could no longer distinguish between those showing a genuine glimmer of interest and those who'd chosen geography because they lacked the imagination to... well, use their imagination.

Laptops and coursework spilled onto benches. Ben knew that the headphones of the latest, coolest, MP3 players were also being surreptitiously fitted beneath mops of unwashed hair as the horseshoe theatre settled into a low mush of white noise. He sighed heavily, silently; he needed to reconnect with his audience before he became a little too close to allowing his jaded scepticism to write these young people off. But the real issue, the source of his malaise, he realised, wasn't the kids, it was that his own dead-ended doctoral research into the *environment* (said with the eye-rolling cynicism of a term both over-used and under-stood). It was humankind's myopic interest and forked-tongue approach to their only life support system that had led him to dig and keep digging until the outcomes had become inescapable: outcomes no one wanted to hear. Not the faculty and *definitely* not the powers that be. Overseas research assignments accompanied by long discussions far into the night, washed down with too much of young Robert D'Legrance's slivovitz, had cemented his worst fears. Yet here he was, in a classroom in middle England, with a room full of kids more interested in their cool, new touchscreen phones (check this out: pinch-to-zoom, wow!) than their future children's sunlight. Only during his heavily classified military debriefings had anyone shown even a suppressed glimmer of interest in his research, even though his Dim Beacon paper - describing an imminent shift in global weather patterns - had fallen on politically short-sighted ears. Ben tried to put the brewing torpidity of such thoughts out of his mind as he quietened down his mildly bored audience and started the lecture.

Fifty minutes later, the students poured out as if being released from captivity, Ben gathered his things and shut down the projector. As he loaded up his satchel, a young woman tentatively approached the podium.

Nervously she said, 'excuse me, Professor Charleston?'

‘Yeah,’ said Ben, as he turned around. ‘Oh, you’re... um, Hannah, right?’ He wasn’t good with names but he’d remembered hers because she was a striking brunette with deep, hazelnut eyes that seemed to portray a wide-eyed interest in the world around her.

‘That’s right, yes. Um, what you said... was it true?’

‘I should hope so.’ He paused, to shake off his own cynicism. ‘Sorry. Which part d’you mean, specifically?’

‘Well, the data you showed about the carbon tipping-point thing, really. Seemed a bit...’

‘Real? Yes, all true. All too true, I’m almost afraid to say.’ Ben sighed quietly and ran the numbers over his tongue, as if checking them for accuracy. ‘There were an estimated two hundred and eighty carbon parts per million in the Earth’s atmosphere before the first industrial revolution, okay? But by 2040 - three more revolutions later - that’ll have risen to around four hundred or so. And that, my dear Hannah - and bless your heart for your interest - is when the “experts” are predicting that a cascading climate event will kick in. And nothing we (or more importantly: *you*) do from that moment on can prevent it. Sobering stuff, huh, if you take the time to *really* consider the implications, the second-order effects... the *human* cost of it,’ Ben said, somewhat theatrically, his words trailing off as his mind meandered back to those long, cold nights.

‘So if we really want to change the path we’re on, we’ve thirty odd years to do it?’

‘Pretty much; less in actual fact. Far less.’ Ben’s eyes glazed for a moment, before he added, ‘or the World Tree will be unmade.’

‘Sorry?’

‘Oh... nothing, well, just something I’m remembering from a previous life. There was a time, you see, when we understood the power of nature and we respected it. Stood in awe of it. Sadly, our modern gadgets and easy lives have afforded us the luxury of forgetting. But *She* hasn’t: Mother Nature. You know, you sound refreshingly interested in climate theories and I’ve one or two that are off piste, as it were; why don’t we get together sometime and discuss them further.’ Ben knew it was a dangerous idea even as the words tripped unbidden off his tongue.

The young woman’s answer was coy, demure; ‘that would be lovely. Find me on MySpace.’ She turned to leave, a smile just forming on her lips.

*Al Muqatra (just south of Abu Dhabi), Kingdom of Gulf States (occupied zone) – 2039.*

The tactical vehicle move to the first report line went without a hitch and after five minutes of careful observation through the Boxer’s limited onboard surveillance sensors, Jack Kristensen issued the order to begin the second bound to the outskirts of the once glittering city. It was just after dawn and a dinner plate of the palest yellow was rising over the jagged cityscape ahead. The somnific heat from which was already beginning worm its way past the vehicle’s light armour, despite the best efforts of the cabin’s noisy and largely ineffective climate control (a term now laced with irony). Jack studied the outskirts of the slums that were leaning,

stacked against the old, iconic skyline - a line of ragged clay teeth - for signs of a normal day commencing, but it was quiet. Muslim societies rose early, which made the lack of the normal hustle and bustle usually seen at around this time, suspicious.

Jack felt uneasy.

After the Iranian incursion along the dead, salt-saturated Arabian/Persian Gulf coast, the region had once again become the focus of other people's wars and the ebb and flow of foreign troops, and so the presence of the British (almost as if the old colonial power just couldn't cut the cord) would be unlikely to solicit much of a reaction. US intelligence had stated that the Iranian Guard Corps - which had annexed and occupied the former Arab Emirates of the newly expanded Gulf Kingdom - had pulled out of Abu Dhabi, back across the eastern border with the former Qatar, having no actual desire to engage the West so directly. However, the Hezbollah militias had not.

Jack, even knowing that things didn't look quite right - *absence of the normal, presence of the abnormal the instructors always said, right, Jack?* - ordered the company in. After all, what choice was there? *Orders wuz orders*. The armoured personnel carriers rumbled on noisily into the shantied outskirts of the city. The buildings were as they had always been: a patchwork of flat roofed constructs with black cut-out, postage-stamp windows, encased in slabs of dusty tarps and baking corrugated iron and all the varying colours of the desert-scape, but in shaded gradations as if looking over a home store colour chart column titled, "sand". Satellite dishes and ageing digital antenna pickups created a skeletally metallic forest along the block-work skyline. The dusty alleys and narrow streets seemed almost afterthoughts as the shantytowns had taken route and become the latest tumorous city outgrowth. Shops and street cafés were shuttered and the few burqa-clad women or contorted old men abroad seemed tense, as if they were not keen to be caught out, but like Jack, lacked any choice. Or perhaps Jack was making something out of nothing; not hard in places like these. These cities that had tried so very hard to reinvent themselves but had remained stubbornly immune to the changing world beyond the heat-shimmered horizon. Cities that held their grievances close, never letting go, and never letting anyone forget.

Realising he'd tensed up, Jack took a deep breath and tried to relax. *We'll get through this day, Jack*, he said silently to himself, *just like we always do. Just keep calm; getting shot is what happens to other people, not to me*. It'd become a recurring thought of his, which had seen him through three tours of Pakistan. Border tours, too (no one was volunteering for those anymore). The superstitious mantra of the soldier, as old as war itself.

'Looks quiet this morning, you think they're expecting us, Major Kristensen, sir?' said Stokes, Jack's driver.

'Maybe. Still, nothing we can do about it now,' Jack said. Anyone with experience of irregular urban warfare would have picked up the telltale signs that something was very much amiss, but Jack resisted the urge to get on the radio net and point it out.

Without warning, the radio speaker (bolted onto the close-in roofline of the cockpit) crackled into life.

<Sabre-Zero-Alpha, this is Ugly-Sixty-Six. I've got visual on all your callsigns and you're looking good. Routes look clear all the way to the objective, over,> crackled the tinny voice of the captain of the pair of Arapaho helicopter gunships, providing intimate overhead support.

<Roger that, Ugly-Sixty-Six, good to have you with us, out,> said Jack, in response. Having two heavily armed helos providing overwatch made him feel a whole lot better as the company crawled further into the narrow, heavily shaded streets that were dominated by medieval battlement-like rooftops.

<CONTACT, CONTACT. Wait out!>

'Shit. Radd, I need an ID on that callsign, now!' Jack barked, as one of his platoon's became engaged by enemy fire.

'Looks like a Sabre-Four-Zero callsign, but I can't see which,' said Corporal Raddich, the company signaller, from the cramped rear compartment.

'Sir, I've got a flatliner in Sabre-Four-One.' Corporal 'Doc' Halliday's voice was tense but controlled, dispassionate.

'Roger that, Doc, keep me apprised.' *Fuck! So we've a person down. Damn. I need to get there, like now.*

<Ugly-Sixty-Six, I need eyes on the contact point and covering fire asap; out to you. Sabre-Four-Zero-Alpha, extract your callsign to ERV and reorg; out to you. Sabre-Five-Zero-Alpha, move to the wasteland east of your position, go firm and await my orders; out to you. Sabre-Six-Zero-Alpha, move to link up with Sabre-Four-Zero, I will follow you in, out.>

Then Jack switched to the battalion, battlegroup net.

<Hello, Hades-Zero, this is Hades-Two-Zero-Alpha, Contact, 0650 hours, casualties reported, enemy unknown, request Charger-One-One and MERT on stand by; wait out.>

<...lead vehicle disabled, getting wounded loaded up into... south to... RPG and HMG and fucking lots of it... shit...> came a garbled message from an unknown callsign, back on the company net. It was 4 Platoon, but who, Jack couldn't tell, and if Raddich had been able to work it out, he'd have shouted. It was dawning on Jack, as he tried to pivot his troops, that what was unfolding was more than the quick protest shoot-and-scoot, "welcome to Abu Dhabi" style attack, that the intel crew had promised. 'The militia won't take on an armoured column,' the green-behind-the-gills young intelligence corps second lieutenant had said, 'they'll wait and see first. Measure force posture.' *Fucking intel.*

'Sir, two more flatliners.'

Arapaho pilot again, <Sabre-Zero-Alpha, Ugly-Sixty-Six; am engaging enemy dismounts on the roofs in the vicinity of Sabre-Four-Zero. They've a significant quantify of anti-armour weapons, out.>

<Tanks... in the buildings... shit... T29's... abandoning vehicles... foot to ER...>

Jack tried to calm his breathing as he was overcome with a wave of claustrophobia, of fizzy-water panic, bubbling, rising, rising. *Stay calm, all in a day's work, remember, Jack.* <Sabre-Four-Zero callsign, roger that, am moving with all haste to ERV now, over.> There

was no reply. *Damn. Tanks, and not just any but T29 Black Eagles; Russian made and most definitely not Hezbollah issue. The intel said they'd all been withdrawn across the Gulf to Iran. Fucking desk-jockeys! Stay calm, Jack; Pakistan was worse than this.*

'Sir, just lost seven more, consistent with a vehicle kill,' said Corporal Halliday again, describing the destruction of one of 4 Platoon's Boxers and the instantaneous death of everyone aboard.

Jack's flexiscreen pinged and blipped with the company's blue-force tracker dispositions as they shifted on the screens like roaming gangs of ants. 5 Platoon was moving north to the area of the wasteland and were making good time. What was left of 4 Platoon was static, and the Company HQ packet was moving eastwards, line astern of 6 Platoon, about two clicks from the Emergency Rendezvous.

<Ugly-Sixty-Six, request you call in a fire mission to cover the withdrawal of Sabre-Four-Zero, over,> Jack offered, to the lead gunship pilot, trying desperately to do what he could to disengage 4 Platoon from the well planned enemy ambush.

<Sabre-Zero-Alpha, Ugly-Sixty-Six; roger that, will do. We have visual on enemy armour and are engaging with HellStorm, out.>

Stokes was gunning the old diesel engine for all it was worth as the little convoy of Company Headquarters vehicles hurtled though the warren of back streets and bounced across large, open highways, as they tried to keep up with the platoon in front. Military vehicles had proven unsuitable for conversion to hydrogen fuel cells, so as they barrelled through the labyrinthine streets Jack knew that they could be heard city blocks away.

As commander of the company, Jack's eyes was fixed on the blue-force tracker icons, whilst simultaneously watching the lead vehicle's vid-feed on his knee pad and intermittently checking the thermal image on the head-up display when - almost in slow motion - the colour drained out of the cabin, taking with it the blustorous, thrumming noise. The technicolour luminosity of the backlit switchgear and electronic icons leached away until his vision was bathed in an intense, burning candescent light. It was as if the Sun had fallen from the sky, to perch on the bonnet of the wagon and as Jack was idiotically wondering if Stokes was bringing the vehicle to a stop, a wave of pressure and noise slammed into him, concrete hard, like hitting water at speed. It seemed to last an age and yet was over almost before it could even fully register. His head was thrown back against the headrest, and the straps of his seat restraint dug painfully through the lightweight gel armour, into his buckled shoulders. A flexiscreen catapulted into Jack's face before peeling off and disappearing into the cavernous interior to the rear, where the doc and the signaller were working. As the vehicle bucked, Jack fell forward, into an exploding airbag that punched him in the face. A cheek hissed and Jack could smell burning flesh. Then silence - utter quietude - as colour seeped back into the world and the overwhelming stench of cordite returned Jack to his dazed senses.

Jack looked through the blue tinted plastiglass windows but could make nothing out; it was as if they were caught in a sandstorm - a dry, withering fog. Looking across at Stokes, Jack could see her bleeding from the nose and ears. The young woman was rigid, staring

straight ahead and gripping the wheel as if her life depended upon it. Jack put a gloved hand to his own face and pulled it away, revealing bloodstained, trembling fingers. His breathing was shallow and rapid as panic began to mount. *I should be doing something, but what?* Unclipping the seat restraints, Jack turned to look into the rear of the cabin. Corporal Halliday was unconscious, bloodied but breathing, as were the two close protection soldiers. Raddich was dead. The explosion had thrown the unsecured and un-helmeted signaller onto his buckled, sparking equipment.

‘We’ve got to get out. *Now*. Help me with the hatch,’ Jack shouted, even though no words seemed to utter forth. Stokes pushed against the heavy slab, while Jack leaned across her and added his weight. The door eased open and held on the heavy duty struts. Unclipping Stokes, Jack pushed her into the street, grabbed her rifle and clambered after his driver.

The wagon was half buried in a collapsed building on the right hand side of the narrow street. The front was raised as if someone had picked it up and swivelled the Boxer into the building with a flick of the wrist. Back the way they’d come, the second vehicle was on its side. It hadn’t fared as well against the hail of RPG strikes. *Why hadn’t the hard-kill defensive systems activated?*

Jack realised that lying in the street left him badly exposed, so he grabbed Stokes’ rifle and took in the scene, looking for movement, but nothing stirred. Dust and sand eddied and gusted across the street, making it hard to know anything much. Not wanting to push his luck Jack grabbed Stokes’s webbing harness and dragged her across the open ground, away from the Boxer and into the shadow of a doorway.

‘Stay here and shoot at anything that moves. Watch the rooftops,’ Jack shouted again, as he handed Stokes back her rifle.

Jack ran back to the rear of the Boxer and pulled at the heavy door handle. Nothing. He couldn’t make it budge. Then to his surprise it moved on its own, the door swinging outwards. Jack grabbed it and heaved it fully open, imagining the protesting noises it would have been making. Corporal Halliday fell out, landing in a cloud of dust on the compacted dirt road. She started to say something, then pointed at Corporal Raddich.

‘He’s dead,’ Jack yelled, gesticulating superfluously. ‘We need to get outta here, unclip these two and let’s get ’em to cover.’ Doc Halliday worked on one of the lads while Jack pulled at the other. Two minutes later, they’d recovered two serviceable weapons and a working datapad. Jack gave one weapon to Doc and told her to see to Stokes and the unconscious soldiers. With the other close combat assault rifle activated and slaved, and resting across one knee, Jack fitted the pad to his other knee and set it to pick up any feeds from the platoon up the road.

Nothing.

‘We need to move inside, we’re too exposed,’ Jack said, smashing in the door with the butt of the rifle. Stokes and Doc dragged the two still unconscious soldiers into the house while Jack provided fearful, deaf, cover. But his hearing was returning as he made his way into the dark room decorated with shattered glass, colourful rugs and scattered brass orna-

ments. Gunfire, dim, muffled, began to detach itself from the whining bead of tinnitus. A close battle raged further up the street.

‘Stokes, keep an eye out.’

‘Okay, Boss.’

‘Sabre-Four-Zero, Sabre-Zero-Alpha, sitrep, over.’ The personal radio was short range, but in a city no one was ever very far away. No reply. *Damn.*

‘Doc, stay here, I’m going up the road to find out what the fuck’s going on. 6 Platoon must be somewhere up there. Sit tight. Back shortly.’

Jack began to make his way up the street. Movement. Ahead he could see shadows moving against the wall on the same side as him. Then, in an explosive hail of dust and debris, the wall across from them burst apart as the low, rubble-strewn silhouette of a Russian-derived Black Eagle main battle tank burst onto the narrow street. The rumbling ground, the noise and dust spread down the narrow street and Jack took what cover he could.

Behind him, the thrumming, pulsating vibrations of rotor blades became discernible. Jack tried to raise the helo. Again, nothing. With no comms there was nothing Jack could do except hope they’d spotted an armoured unit of what could only be the Iranian Revolutionary Guard, and were free to engage. Above, an Arapaho fired three HellStorm missiles, the first slicing through the powder-blue sky to find its home through the top of the tank’s turret, two hundred and fifty metres ahead. The explosion blew Jack off his feet and rolled him down the road and out into the main thoroughfare. Again, his bleeding eardrums started ringing painfully. His back burned with ground-in spinal pain, even though the armoured vest was doing its job. The two other missiles detonated in quick succession, in noise-cancelling, world-splitting violence.

Unsteadily, Jack got back onto his feet and began to run erratically down a tunnel of dust and debris. Using doorways, he moved closer to where the small-arms fire and close-quarter combat continued to rage. Movement on the rooftops. As he half-ran, half-crawled Jack spotted a discarded assault rifle, picked it up - having lost his somewhere along the way - and shuffled into the nearest doorway. He put three rounds into the ground to check the weapon’s serviceability, then slaved it to his kitware. The rear entrance of the nearest building had been blown open, so Jack made his way onto the next street along, limp-running another fifty yards before breaking back into a house about where he assumed the remnants of 6 platoon were holding out.

‘Boss, that you?’

Jack, startled, recovered, couldn’t identify the soldier who’d made him. ‘Sitrep.’ He said, louder than was required, his ears still ringing.

‘Enemy armour’s been destroyed. All our wagons are blown to shit. Casualties everywhere. The enemy’s along that roofline laying down heavy fire.’ The young soldier’s voice was beginning to break.

‘Who’s in charge?’

‘Shane Thackary, I think, sir. Next room.’

‘Hold your position, lad, you’re doing fine.’ It wasn’t much, but it was all Jack had to offer. Across the room and through the doorway, was Sergeant Thackary, 6 Platoon’s Sergeant.

‘Sarn’t Thackary,’ Jack called out, as he came across five soldiers, three of whom were firing long bursts of automatic fire out the window.

‘Fuck me, boss, that you? Fucking glad to see you. Some fucking shit we’re in, eh?’ said Thackary, as he cautiously made his way over, rounds digging into the wall above his head.

‘You got comms with anyone?’

Sergeant Thackary shook his head. ‘Just one of my callsigns up the street.’

‘Shit, okay. Whadda we got?’

‘We’re pretty much holding our own now. My boss is dead. Lost about a third of the platoon by my reckoning. Hutch has about half what’s left further up the street where the lead vehicles were hit,’ the sergeant said, referring to Corporal Hutchins, one of his section commanders. ‘I’ve comms with him but no one else. The enemy armour was collapsing the houses before they got taken out, now it’s just the dismounts left. Irregulars. Looks like a hybrid op.’

Deniable out of the Russian playbook.

‘Roger that. Get a team together and have them move back down the street to collect what’s left of Company Headquarters. Once they’re back we’ll extract with Hutchins covering. We have to get to the ERV and link up with 4 Platoon. It’s our only chance of getting outta here. It’s where battalion’ll send the reserve to dig out of this turdfest, but they won’t hang about. I’ll head over to Hutchins’ position. Wait for my word.’

‘On it,’ said Sergeant Thackary, before moving away and up the stairs, shouting orders, instilling confidence and generally making his presence felt.

Jack left the rear of the house and continued on up the street to where the next exchange of fire was taking place. As he shuffled along he caught movement in the left of his peripheral vision. Two figures appeared in the alley next to a compound, shouting and raising their AK-47s as they ran forward. They seemed overjoyed, which struck Jack as an odd emotion in the middle of a firefight. Knowing that he couldn’t engage them from where he was, he dived for the cover offered by the nearest doorway. He missed, hitting his gel-helmeted head against the doorframe before falling hard into the street as rounds whizzed past, digging into the mortar where he’d just been standing. Rolling over, Jack fired a short automatic burst and sent a grenade down the length of his body, back between his legs. The two men were dressed in similarly black clothing, red and white schmags, ammunition bandoliers strapped across their torsos. The cliché was not lost on Jack despite him being preoccupied with staying alive. *This region just never changes*. Two rounds took the right-hand gunman in the shoulder, flipping him backwards against the pitted side of the alleyway. The grenade passed by, penetrating the wall behind them before detonating harmlessly within the compound beyond. *Damn, it was an armour piercing round*; loaded and ready for a fight he’d already lost. The remaining gunman opened up again filling the air with fire and noise. One round ripped the heel of Jack’s boot away.

Jack fired again, blind, rolling as he did so, staggering to his feet and diving for the relative cover of the doorway. The second gunman was almost upon him. Jack stepped back into the darkened room and put a long, wide, waist-high burst into the wall about where he assumed the other fighter to be. Stepping sideways, stumbling on the heel-less boot, he checked the street from deep within the gloom of the room. The militiaman lay on his back, unmoving. A deep sense of elation and joy welled up; Jack's lips trembled and tears began to well. He tried to suppress the feeling - a sort of horror-glee - but it was hard. *He's dead and I'm alive, because I'm better at killing than he was.*

After a few deep breaths to gather his wits and putting a round into the forehead of each militiaman, Jack limped to the opposite side of the street and continued to make his way towards Hutchins' position. Slowing as he reached an alleyway junction, he moved his head round to check that it was clear, and found himself eyeball-to-eyeball with an Iranian Revolutionary Guard.

Jack stumbled backwards, putting himself further into the street, more exposed. The guardsman stepped back, panicked, firing his raised pistol as he did so. Pain blossomed from Jack's right thigh, and he fell awkwardly. As he pirouetted away, he felt his electrically active impact armour hardening to the reaction of two more rounds fired at point blank range into his stomach and chest. Jack hit the ground with his right shoulder, his momentum throwing him backwards. As he rolled over, his rifle butt dug into the earth and with his hold on the pistol grip, the weapon raised naturally towards the Iranian. Jack depressed the trigger when he heard the audio confirmation of target lock, taking the other man in the stomach. The impact catapulting the other man down the alleyway. The guard rolled once and then lay in a tangled mass of bloodstained limbs. Jack's leg was hurting - really hurting - as he dragged himself to the relative cover of an open sewer channel at the base of the wall, the pain washing away all other concerns.

'Bugger me... what a day!' Jack exclaimed to no one, between gulps of air and waves of panic.

Reaching inside an ammo pouch, Jack pulled out a trauma pad, tugged on the tearaway tab and broke the topaz gauze apart. With his bayonet, he took hold of the flayed edge of his chameleoflage trouser leg and cut it away from the bullet wound. The blood oozed rather than pulsed, which was a good sign. Less good was that the bullet looked as if it'd ricocheted off the femur, partially shattering the bone and tearing away an elongated strip of muscle. Gently, Jack placed the trauma pad over the centre of the wound, very nearly blacking out with the pain. His breathing was rapid, shallow.

'This is getting... less... amusing, now.'

The pad formed an airtight seal around the wound as it knitted with the tissue and the localised anaesthesia helped to dull the pain. The application of a morphine syrette dulled it a whole lorry load more.

Jack's shallow breathing and thumping heart consumed his world, but gradually another noise broke in over his befuddled, overtaxed senses. He heard a set of footsteps closing in

from behind and turned sharply - too sharply - as echoes of pain fired through his thigh. He winced and gazed up quizzically at a man standing over him, the matt black outline of an AK resting across his chest. Jack raised his rifle, but the man stepped forward and kicked it away before he could bring it to bear. Pain clawed its way around the morphine, desperate to be known. The other man knew Jack was wounded, which was reflected in his relaxed, sardonic stance. Then, remembering the pistol strapped to his left thigh, Jack reached for it, but his hand closed over an empty holster, as the realisation that the sidearm must have been lost somewhere along the line washed over him. *Bollocks*. The other man lowered his rifle, spoke quietly in Arabic, and fixed Jack with an intense stare, hatred lighting his dark eyes, before firing a burst of seven rounds into Jack's chest.

Jack knew it was seven because they discharged so far apart that it was a doddle to count each one. Events were taking place in a sort of disconnected series of still-framed images. Jack felt the electrical activation of his impact armour, gel pads hardening in fractions of a moment, but knew that it was unlikely to cope with sustained fire at such short range. The scene around him slowed almost to a standstill. The gunman stared down the barrel of his weapon with a fixed, grim expression as he discharged each round, blinking with every recoil. Empty cases, glinting gold in the sun, spiralled away into the street, as each kickback of the Kalashnikov precipitated a momentary yellow-white flare as the round left the muzzle.

A rich, blue sky and washed-out sepia buildings stretched away behind the militiaman's silhouette, the colours growing in intensity, in vivacity, as the street turned a darker russet, in contrast to the vivid, flaxen-gold where sunlight struck the dwellings. The man was reduced to nothing more than sinister shadow chewing at the edges of an otherwise blindingly contrasting scene. The conflicting odours of tangy iron and steaming effluence fell away as the colours began to fuse and run together, turning a ruddy hue, darkening slowly, withdrawing, until eventually Jack's only sensory perception was the dull, thudding pain in his thigh; until even that faded away, and with it went the world.

*4<sup>th</sup> (UK) Urban Assault Brigade Headquarters, Haradh, Kingdom of Gulf States (free zone).*

'Brigadier, I've an update on developments if you have a moment?' Imani Tikriti spoke from the doorway of the commander's makeshift office.

Brigadier Freddie Roebuck, Commander, 4<sup>th</sup> Urban Assault Brigade, looked up from his paperwork. The current battle notwithstanding, annual reports and routine disciplinary matters continued to warrant his attention. Putting down his Mont Blanc (an anniversary gift from his wife), Freddie ushered his chief of staff in.

'The situation with 7<sup>th</sup> Infantry is largely unchanged,' began Imani, 'remnants of B Company are heavily engaged and conducting a fighting withdrawal against an enemy force of T29's. We're providing artillery and attack heli support. Unfortunately, the BrightStar private security squad we dispatched to locate B Company has just pulled out, saying they've

reached their contracted casualty rate. The overall scale of casualties will only become clear once we get the company back, but it's not looking great.'

Imani shifted uneasily before continuing, her face dropping slightly. 'However, sir, there's another incident which I think may be of greater concern. At 0805 hours we requested, via Strategic Command, a series of attack drone sorties to assist in the extraction of 7<sup>th</sup> Infantry from the Al Muqatra district. You're aware that we subsequently lost the drone vid-feed. It seems now that a swarm went rogue, attacking and destroying an air defence battery and elements of an armoured company of the US Third Heavy Cav, in the vicinity of Al Wathbah.'

'I see,' the brigadier said, quickly mulling over the implications. 'I take it the Americans are aware? That it was friendly fire, I mean.'

'Yessir, they are.'

'And the drone swarm?'

'We tried to abort but couldn't, then they aborted independently. Our techs are saying malfunction... or hack.'

'Okay, get me General Dana on the wire would you?'

Imani nodded and left. The chief of staff was right, Roebuck thought. A badly mis-judged foray into Abu Dhabi, with flawed intelligence, leading to significant casualties was bad, but a blue-on-blue, friendly fire, incident involving US forces could have disastrous repercussions politically, on both sides of the pond. Leaning back in his chair, he considered how these two incidents would play out. It seemed unlikely at this point British forces alone would be able to take even just their allotted sectors of the city. So they'd either have to hand the task over to the US, or at the very least request their support if another attempt seemed likely to succeed. And 7<sup>th</sup> Infantry's effective defeat would badly damage the British military's reputation with the American's, not to mention the no-win drone swarm debacle: a malfunction and the Brits would look incompetent; a hack and they'd look weak, second tier, compromised.

Roebuck's vone pinged and the image of Major General Dana MacAllistair's Military Assistant appeared on the extended flexiscreen. 'Good morning Brigadier; the general will be with you in a moment.' The view switched to General Dana, seated in a well-appointed office, in a Riyadh airbase.

'Morning Freddie, I take it that this is about the attack drone incident?' said the general, as she looked up from her desk. The expression she wore marked her as being in a foul, barely controlled mood.

'Good morning, General. Yes it is, primarily. I'm a touch concerned that an incident like this could undermine our ability to work in concert with our US friends, and particularly at this critical point in the campaign. We're dependent on them for so much. If they were to...' but he left the obvious implication unsaid. 'You're aware of 7<sup>th</sup> Infantry's current circumstances?'

‘Indeed, I am. I’ve already spoken with Northwood and the good news is that this information hasn’t been released yet. However, the Americans are now saying they won’t allow UK flagged attack drones to fly within the Joint Operating Area. Furthermore, they’re raising concerns about the efficacy of our land forces.’

‘I take it they’ve been made aware of the presence of heavy armour in the city and that it was their intelligence that stated no such threat existed?’

‘They’ve been told but I’m afraid, Freddie, they simply don’t see it that way. They’re moving a regimental combat team north as we speak. I’m to direct you to withdraw all UK forces from Abu Dhabi and stand by to carry out supporting tasks as they crop up,’ said the major general, in what sounded like a sympathetic tone. She sighed and added - pinching her nose below her rimless glasses - as if it were necessary to spell out the new arrangement, ‘we’re the second eleven now, Freddie. The grave diggers and stretcher bearers. Let the Americans do the heavy lifting from here on in.’

‘Very well, but General, if we back off now we’ll be in a very poor spot indeed when the news breaks. Reputationally, this’ll sink us. Now is precisely the time when we need to be seen taking some flak, hand-in-glove with the Americans, in the thick of it,’ said the brigadier, with a note of defiance, as if saying it out loud would make him feel better, even knowing the general’s hands were as tied as his own.

‘I know, Freddie, I know. But you must realise that the campaign planners made some pretty broad assumptions, which dictated our force posture and now we’ve been royally caught out. We could well be hung out to dry. This was always simply about standing shoulder to shoulder with the Americans, but not paying for our seat at the table. It looks now though, like the gamble didn’t pay off.’ She paused, stoney-faced. ‘You have your orders, Freddie, please withdraw our land forces from the vicinity of Abu Dhabi, back across the emirate boundary.’

‘Very well, ma’am. It looks like I’ll see you in a few days, then.’ The screen blacked out momentarily and returned to its default map view showing brigade dispositions.

It was what the general hadn’t said rather than what she had, that most concerned Roebuck. The US would sideline the Brits in preparation for the domestic backlash, where their press would salivate at the prospect of American soldiers’ lives being lost at the hands of a British military that had been found wanting when her oldest ally had come calling.

Summoning Imani back in, Freddie ordered a phased withdrawal once 7<sup>th</sup> Infantry were out of the city, then sat down to write commendations for those he deemed worthy, before beginning his letter of resignation. Freddie suspected that he would not be the only senior British officer to be doing similarly this day.

## TWO

*Yeshe Ma's tale. Yarlung Tsangpo Canyon, Tibet.*

Yeshe Ma pulls his fur-lined hat further down over his ears as the harsh wind bites into his exposed skin. It is nearing sunset and he knows that he will soon need to find a place to settle in for the night. His uncle will be angry that he has not made it back to the village, but his mind had wandered and he'd forgotten the time. The goats graze quietly on the rough and patchy scrub that clings to the rocky outcrops of the hillside. Yeshe whistles and gesticulates his herd further up the hill. He knows the area well and is planning to find some shelter on the in the lea of the ridgeline, out of the chill wind. It will also give him a view down the great valley through which the Yangluzangbu River flows. He likes the idea of seeing the lights come on in the town that straddles the mighty river as he prepares his meal. And sometimes, when the wind is blowing correctly, he can *just* make out the dusk chanting from the Buddhist temple buried deep in the high mountains. But not tonight, for the bitter wind is westerly so no soft chanting and probably little sleep too.

Yeshe Ma crests the ridgeline and pauses to take in the view. Down below, the valley sweeps away to his left into a steep-sided ravine where the water of the Yangluzangbu is white with rage, then further south the gorge opens out onto a vast plain where villages and the town lie, amongst the fertile fields that will soon be bountiful with ripened crops. The goats are settling down so Yeshe goes to peg them out while there is still some light. He counts them and ensures that they can come to no harm during the night then finds himself a crook in the rock to settle into. With a fire lit and his small pot of water beginning to simmer, the lights at the mighty dam come on. His uncle had told him that the dam creates power for the cities, but he didn't really understand. *Probably magic, but how would building a lake in the ice mountains make magic?* Who knew... but it was truly a magnificent sight; a huge wall spanning the valley, with the river cutting through the lush green open plains below it. Lights span the dam and soon the little town is showing tiny pinpricks of scattered illumination. *Wow.*

The water in the little pot comes to the boil and Yeshe Ma adds a pouch of dried yak meat and vegetables to make a broth. He will keep the cheese and bread for the morning. As he stares transfixed by the small fire in front of him, he hears a very faint noise, dancing on the very edge his perception. He has heard it before; it sounds like the angry white water. He has caught it a few times when he has ventured all the way down to the river. The noise builds, getting louder and louder still, and it's coming from the dam. *Maybe all the water there is getting angry,* thinks Yeshe, as he looks on curiously. And then all in a moment it happens. White, angry water comes crashing over the great wall that spans the valley. At first, it sweeps into the air like a waterfall gone wrong. Spuming funnels of white geysering froth. But then it starts flowing over the wall itself - wet and heavy. Not too much at first but then more and more water pours over the lip of the dam. Gradually, the wall starts to move, in then

out then in again, as if labouring to breathe whilst slowly drowning under the weight of the foaming fountain. Almost simultaneously the top of the bowed stonework begins to crumble and then the whole wall crashes down the gorge onto the ravine below and onwards to the plain beyond. As the water scours all before it, the lights in the town blink out one by one. Yeshe Ma thinks that the magic must have gone away and returns his attention to his simmering broth.

*212 Field Hospital, Shaybah, Kingdom of Gulf States (free zone).*

It was a beautifully warm spring April day that set the scene for an idyllic Sunday afternoon. St James's Park looked like it always did on such a day; couples enjoying a picnic, lounging or reading; children playing and feeding the ducks by the scattering of small lakes. Areena sat opposite Jack, luxuriously, in that way that only girls could, all bendy and effortless. Jack, by contrast, was laid out awkwardly, with one arm supporting his head as he considered his next move. Between them, a beautiful, hand-carved chess set. Areena particularly enjoyed playing, mainly because she knew she could beat Jack anytime she liked, which she often did, convincingly and with much delight. Other times she'd let him win and Jack knew it, but that was fine, an acceptance of the universe's will. Conversation revolved around the impending visit of her mother to London to oversee Areena's move from one rented flat to yet another. Rent: the scourge of the penniless London resident.

Jack was pouring them both another glass of particularly good '34 Monmouth Chablis, when a commotion caught his eye. Someone was running down the path along the lake nearest to the couple. The figure stopped, as if trying to gather their bearings or seek someone out. It was a young woman, vaguely familiar to Jack and shod in chameleoflage. She was breathless and caked in ground-in dust. *That isn't right.* The woman spotted Jack and started sprinting in his direction. Jack could finally make her out - it was Stokes. Blood was running from her ears and nose.

'Boss, we gotta move, now! Come on, they're just down the road. With tanks,' she gasped, as she started pulling at Jack's shoulder straps. *That isn't right, either.*

Jack started to protest, but then a piercing pain erupted in his thigh, only to be eclipsed by more in his chest. He tried to get up, to get away but he couldn't move. All of a sudden he was very tired; he looked for Areena but she wasn't there. He tried to call out her name, but found that he couldn't make a sound. Panic welled, filling him so that it was all he knew.

The park was gone, replaced by a heavy, bloated desert Sun and the overpowering smell of burning rubber. Jack tried to blink away stinging tears of fear. Fear that had overwhelmed him in an instant. Strip lights, shouting and the sound of receding helicopter rotor blades, but fading away as if it was all happening somewhere just beyond the very edge of his perception.

*10 Downing Street, London.*

General Sir Richard Rose-Templar sat uneasily in the back of the armoured Jaguar as the car hummed smoothly through the quiet, pre-dawn city streets. There'd be a COBR meeting later in the day, but evidentially *this* couldn't wait. The driver turned off into a small but highly secure side street where the car glided to an effortless halt. Sir Richard stepped out into the cool misty night air. With his assistant in tow he walked quickly up the short steps, past two police officers in public disorder protection gear, and into the open door of Ten Downing Street.

'The Prime Minister will be down shortly. He's asked that you wait for him in his private study, General. This way, please,' said the PM's principal private secretary. She looked as if she too hadn't slept this night. Rose-Templar made his way down the corridor and into an open door to the left. He'd come here a number of times since taking up the post of Chief of the Defence Staff, some five months prior, but with each visit he was reminded of the sheer volume of the interior. From the outside it looked like any other small terraced London home, but inside it had been hollowed out and extended to meet the needs of a once-and-great world-power government, the nexus point of a long dead empire.

Richard Rose-Templar came from a long line of soldiers. In his early fifties, a towering figure, with a mane of thick white hair and the gravitas to carry off the role of Britain's senior military officer with ease. He knew that he'd not been the politician's choice for the job, but the appointment rotated between the four services and currently it was the army's turn, so Richard was a right place, right time, man.

As Sir Richard waited, he idly reflected on the patchy chronology of events that had brought Alan Hardinge, the current prime minister, to power. An old image of a young Home Office minister attempting to clarify the cloudy events that led to his wife leaving him - an affair with his research assistant. Another of him standing in the rain on a Westminster street, struggling to explain away attempts by his office to intimidate a journo into ditching the story. Resignation. Years later Hardinge - returned from the wilderness - on stage behind a podium, with helicams hovering; the great orator launching his campaign for leadership of the party. Shaky, regional footage of Hardinge on the campaign trail, fist clenched as he once again questions Britain's need to remain an old world nuclear power. The cost, he chides, the hospitals, the vaccine programmes, that would buy. More, of Hardinge irritated as he argues that, in a world of anti-missile missile shields and experimental orbital laser platforms, that Britain doesn't need an ageing fleet of nuclear submarines, armed with expensive American-made (American-controlled?) warheads. He catches the mood of national self-interest during record lay-offs and climate-driven economic turmoil. Iconic imagery of the pomp of the newly appointed Prime Minister returning from Buckingham Palace to stand outside Number Ten, with his blue-eyed boy by his side. During his inaugural address he waves his fist in the air and announces Britain's withdrawal from the NATO directed-energy weapons research programme. Bridges burn.

'Good morning Sir Richard, do take a seat. I apologise for dragging you over here in the middle of the night, but thought we ought to discuss the situation in the Gulf States before all hell breaks loose across the wire. *And* in the House.' The Prime Minister was a short, rotund

man with wisps of silver hair and almost clear, piercingly pale blue eyes, sunk into hollow sockets. Richard had always felt that the PM owed much of his political success to his ability to reduce people to stammering wrecks with a single, demagogical stare. Hardinge was dressed casually in slacks and a navy jumper.

‘Of course, Prime Minister, I understand entirely. How can I help?’ the general said, as disarmingly as he could, trying to hide his distaste for the man.

‘General, please can you explain how you’ve come to find yourself in a position where one of the most professional military forces in the world is in rout from a local militia *and* how you managed to pick a deadly fight with the Americans?’

‘Certainly, sir. Before I begin however, I would point out that this is not the first time Hezbollah have used their own brand of urban guerrilla tactics to temporarily humble a superior conventional force. Although the situation in Abu Dhabi looks grim for the moment, it’s not the defeat that the wire will paint. Putting aside the issue of Iranian sub-threshold assistance and flawed US intelligence, you’ll be aware that I did strongly object to the amended campaign plan, which specified a lighter force. A force, I stated at the time, that would be incapable of meeting the full spectrum of operations that my planners envisaged. You’ll also be aware that you sided with the Chief of the Air Staff, against my advice, by deciding that attack drones should deploy, rather than retasking *HMS Queen Elizabeth* from Pakistan, with her three squadrons of Lightnings; which despite their age, are manned platforms.’

‘Sir Richard, you provided me with your assurance that we had the correct balance of forces in place to ensure the capture of the Abu Dhabi island, irrespective of... prior discussions,’ the PM said, in a calm but assertive manner.

‘And you’ll also recall, Prime Minister, that I made those assurances conditional upon the situation on the ground.’

‘Very well. I’ll have a statement prepared for the wire to be given at seven-thirty. I’m interested also to hear your thoughts regarding how we play the US angle.’

‘First, we need to re-engage tactically and in unison with US forces as quickly as possible. The longer we leave it the harder it’ll become. It was a mistake for the Secretary of State to allow the Americans to assume the lead for the capture of Abu Dhabi. I know the US Chairman of the Joint Chiefs pretty well and I think I can talk him round.’ Richard began to feel that there might be a way out of this mess, yet.

‘Hmm. I’ve a different proposal to make. We retain our forces in the Gulf States occupied zone but avoid high intensity operations and instead take on convoy escorts, support tasks and the like. This keeps us in the game and allows for an acceptable level of political and economic capital to be retained by our continued support. The Americans have demanded that they be allowed to carry out a full investigation into the attack drone incident before transferring the mission profilers, programmers and ground crew to the US for Court Martial, on dereliction of duty charges, that sort of thing. I’ve been assured that *if* found guilty they’ll be allowed to serve a minimal sentence in the UK,’ said Hardinge, his mind clearly made up.

Richard took a breath, intent to remain calm. ‘Prime Minister, that would be a complete abrogation of our duty of care to our personnel and I absolutely cannot support it. We’d open ourselves up to a domestic backlash and international accusations of American puppetry.’ Realising that he’d come forward in his chair with the emotion of the moment, the general leaned back and took a sip from a cup of coffee that had appeared on the table beside him. Even for *this* prime minister, it was a shocking display of political chicanery.

‘General, US public opinion will not sit back and simply take the killing of thirty-seven of their soldiers by British hands lying down. Something *must* be done.’

‘Then, sir, I suggest that you find something to do, but not at the expense of this nation’s service people who were doing their jobs in difficult circumstances and with under-funded equ-’

‘Yes, yes. But be careful now, Sir Richard... Hmm. So I take it then that you don’t feel able to support such a course of action? A course of action, may I add, that’s critical to our continued good relations with the United States? That being the case, I must reluctantly ask for your resignation.’ Alan Hardinge remained stony faced as he delivered his ultimatum.

‘I’m sorry, Prime Minister, but I’m afraid that if you wish to replace me, you’ll have to sack me, as is your prerogative. But I’m not sure that changing the head of the armed forces at this moment is in the nation’s best interests, do you? And, I wonder what the Americans would make of it? Now, if that’s all, sir, I’ll see you later in COBR, where I’ll have more detail on yesterday’s events in the occupied zone.’ Rose-Templar stood to leave, pausing to allow the PM the final word, by way of a dismissal.

Hardinge gazed across at his principal military adviser, his expression revealing a momentary look of political calculation. ‘Very well, General, you’ve made your case. You stay. But the US will get their trial, so I suggest you work to find a solution that’s palatable to your people. Conduct your own investigation if you have to but find a head to roll. I’ve given the President my word and she’s not in a particularly receptive mood right now.’ And with an act of finality, Alan Hardinge switched his attention to the flexiscreen rolled out on his mahogany desk. The door was opened by an aide, allowing the sound of a lone child at play to filter into the room.

As the car pulled out of Downing Street, Sir Richard turned to his Military Assistant, and said quietly, ‘get me a meeting with the Leader of the Opposition. Ensure total opsec, *no one*... in government is to know. Also, find a place out of the way and organise a meeting of the service chiefs. Off the books.’

‘Yes sir.’ The MA pulled out a scampad and busied himself with the arrangements.

Richard knew the Abu Dhabi fiasco, caused by budget cuts and equipment shortfalls, was yet another warning shot across the bow of Britain’s haemorrhaging strategic resilience. If it wasn’t stopped, successive governments looking for short-term wins would trade it away, without even grasping the consequences of what they were doing. Richard knew that he was one of the few in a position of national influence, who could perhaps prevent that from hap-

pening. Alan Hardinge was right about one thing though, something certainly needed to be done.

The general was struggling to decide if the timing of the Gulf States nightmare was in fact a blessing in a most unsettling disguise. Before the latest Middle Eastern diplomatic crisis had ballooned - again - into a military one, his focus had been on a threat of an entirely different nature. In fact, the threat *was* nature and it was something that the government was studiously choosing to ignore. Recently, Sir Richard had been made aware of a dusty, thirty year old Dim Beacon report predicting the possibility of a rapid climate pivot, written by some university professor. It was an old theory, and largely debunked by big-oil funded experts, but had recently been remodelled with the latest, highly classified climate data, using new recombinant algorithms. Richard believed every word of it however, and wondered how best to act on it, as well as the extent to which he could push a recalcitrant government into making the necessary preparations. The British military absolutely did not get involved in domestic politics; that was a given, an inviolable absolute. But... (and there was a *but*) preparing for sudden climate shifts would require bold, decisive action, which would not come naturally to a weak government still reeling from a collapsing foreign policy. What then was the role of the military in such dire domestic circumstances?

So, perhaps Abu Dhabi was the wake up call the defence chief needed to galvanise his peers into considering options conventionally considered as sitting outwith their remit. Richard made a note to dig out the report when he returned to Main Building. He'd need to come up with some options, and quick, if the study's updated summary of findings were anything to go by.

*Royal Centre for Defence Medicine, Edgbaston.*

It had been a difficult seventy-two hours for Areena; not knowing Jack's condition other than a vague description from the visiting officer. She hadn't even known that she was his nominated next of kin until that hard, knock on the door.

'Good morning. My name is Areena Charleston. I understand Major Kristensen's been admitted? From the occupied zone? I'm his next of kin.' Next of kin sounded better than girlfriend.

'Let me just check.' The nurse on reception, dressed in a smart grey and red uniform, as if belonging to a different era, consulted a hardscreen. Areena was offered a seat and a cup of tepid tea. An hour crawled by, as Areena's mind raced. She tried to calm her thoughts. All she knew was that Jack had received gunshot wounds during an action in the vicinity of Abu Dhabi. The visiting officer seemed to know no more himself, other than to reiterate that Jack was in the very best of care, blah, blah.

'Ms Charleston? Hello, my name is Captain Gale Knightley. If you would like to come through I can give you a progress report.' The nurse led Areena a short way down the corridor

and into a small room with three cheap looking easy chairs. Beige. The room, was pure beige. 'Please take a seat. Can I get you a cup of tea?'

'No, thank you. How's Jack?' There was a plead in that voice. Areena hadn't come for refreshments, she'd come to make Jack well. She wanted to see him and to know that he was going to be okay. She was sure that the whole sitting in a room thing was just procedure. The army did like its procedures after all, but it didn't bode well. A corner of her mind began running up flags. She closed it off. Locked it down.

'Jack is currently in intensive care,' said the nurse, in a calm voice. 'He was categorised as, "T1 VSI", when he arrived at the field hospital, in theatre. That's very seriously ill, category one, so not great, at least initially.' The nurse frowned, as if cross with herself. 'He suffered nine gunshot wounds to the chest and right leg as well as multiple blast injuries. He took a bit of a beating, basically. Luckily, his body armour took most of the ballistic shock and trauma. The good news is that much of the internal bleeding has now been arrested. Unfortunately, we believe that Major Kristensen may have suffered irreversible trauma to his chest cavity and internal organs.'

'Will he recover? Can I see him please?' said Areena, shocked but not surprised by what the nurse was saying. Words, mostly. Just words and she hadn't come for them. Didn't care for them either. She'd been preparing herself for the unthinkable for the past three days. Jack's parents would be here soon and that would help. Or not. Who knew? If nothing else, Areena wanted at least to tell Jack her news. She regretted not sitting him down and sharing it before he'd left. But... how could *that* have ever been the right time?

'Honestly, Ms Charleston, it's too early to tell. We just have to let the body heal now. He has a fighting spirit and that counts for a lot, but I'd suggest that you prepare for the worst. I'm sorry... let me take you to him.' The nurse opened the door and ushered Areena back into the starched corridor.

The ward was a grim place. All the beds were occupied by static figures hooked up to monitoring devices with hardscreens showing different vitals. But it was the silence that shocked her the most. The deathly somnolence.

Jack was laid flat, covered from the neck down in a light blue, oddly lumpy, blanket, with tubes running from the wrists and nose. His face and arms were badly bruised, and traces of dried blood and dirt were still identifiable around his ears and eyes. Areena couldn't interpret the information on the screens but they seemed to radiate an ominous irregularity. Pulling up a plastic chair next to Jack's bed, she took his tubed up hand in hers and settled down to wait. It was cold - the hand. A shudder ran through her.

Strip lights and distant, hushed voices. The lights seemed to swirl and then slowly gain some definition. The smell of disinfectant filled Jack's nostrils. He tried to move but couldn't. A strong feeling of lethargy swept over him and he settled back, waiting for unconsciousness to claim him once again, when he felt a warm, soft pressure on his left hand.

'Jack. Are you awake? It's me, Areena. Jack?'

‘Areena? How’d you get here?’ It was little more than a dry rasp. Jack felt confused and disorientated, but tried to keep the guttural panic from his voice. *How could she, but...* He coughed, but it was a token effort. Blobs of colour coalesced into blobby objects.

‘You’re in hospital, in England. You’re back from the Gulf. How d’you feel?’

‘Where? Oh... Bit groggy. But fit as a fiddle, otherwise,’ Jack croaked, just as a sharp scalpel-like pain shot through his chest. Areena saw it and terror spread across her features.

‘Try to relax, darling. Your parents are here. They’re getting a coffee. Giving us a moment, I think.’

‘Areena, I love you. I’m... sorry about this. Sorry to’ve worried you. I... I-’

‘Hey, Jack, it’s okay. You’re back now. It’s over. The doctors say you’re going to be just fine. You just need to rest up. You’ll be back on your feet and running about playing soldiers before you know it.’ Areena had long teased Jack about his profession; likening it to a job for boys who never grew up.

‘What about the others? My men - who made it out? It was bad, Areena, really bad. They ambushed us. We got separated. I tried to get the company together. To the rally point, but... I tried to get them out. But there were too many. I tried, Areena, I really did.’ Barely controlled waves of emotion began rising up and he felt his eyes well, as his body convulsed. It hurt, but that somehow felt right. Deserved. It also felt distant, detached.

‘I don’t know, Jack, but I’m sure they’ll tell you just as soon as you’re well enough. Try not to worry about it now. Concentrate on getting better, eh?’ Areena said, with a show of bravery and defiance that Jack didn’t know she possessed. She was right of course, so he changed the subject.

Jack coughed again, a dry rasping hack. ‘How are you, darling? How’ve things been back here?’

‘Oh, fine, Jack. I’ve a global dimming conference coming up in Oslo, and...’ Areena paused, seemingly to gather her thoughts. ‘Jack, there’s something I need to tell you. I’m pregnant, Jack. Five months. I should’ve told you before, but I thought it would make your job harder. I’m sorry, Jack.’ Tears began to swell her eyes and in that look Jack saw the truth.

Jack smiled, but it was forced, more grimace than glee. ‘That’s great, darling... really great. You’ll make a wonderful mother. Wonderful.’ Words were becoming harder to form, harder to turn into sound. His throat was sandpaper dry. The florescent lights, harsh. ‘My parents will... help too. I am so very pleased. Is everything... okay, with the baby, I mean? Do you know... the sex yet?’

‘Yes, everything’s fine and we’re going to have a boy. A beautiful baby boy. I’ve only got gene screening to go. And you will make an amazing dad, too. You just see if you don’t.’

The pain came again and the world receded down a dark tunnel with a reddish trim. Areena was at the end of it, but so very far away. A nurse appeared and administered something to dull it down. Jack watched Areena fall away.

The next time Jack woke she was there again, with his parents looking on worriedly from behind the younger woman’s chair. Jack’s mother’s fear was etched across her face like

an angry scar. Jack could see the whitened knuckles of her hand gripping the chair, as if holding on for dear life.

‘Areena. I played some chess when I could, you know. Much better now... Reckon I could probably beat you... Tell our baby about me. Love him for me.’ Then the pain took hold once again and the world slipped a little further from his ebbing grasp.

Areena broke down, sobbing into Jack’s hand as it lay limply on the bedspread, but Jack knew what she couldn’t, what she wouldn’t accept.

And that was fine. Really.

*‘Major Jack Kristensen, Officer Commanding B Company, 7<sup>th</sup> Battalion, The Royal Infantry Regiment, died from injuries sustained while on active service, after slipping into a coma from which he did not recover. He was buried in his hometown of Chippenham with full military honours and has been posthumously awarded the Conspicuous Gallantry Cross in the King’s Operational Awards List,’* read the London Gazette newswire bulletin.

Areena made a hardcopy for her unborn son.

## THREE

*Moscow – three months later.*

The Russian sat in his cluttered, cramped, functional office. He downed the remainder of the vodka with one gulp and placed the small glass down amongst the scattered hardcopy. As his mind cleared, he returned to the brief on the flexiscreen rolled out before him. He still found the idea that fossil fuels were expected to remain the principal source for energy and manufacturing production for the latter half of the 21<sup>st</sup> Century, and probably well into the next, a shocking indictment of humanity's fundamental resistance to change.

The American-led resource war for the Gulf States oil wasn't the first conflict of its type, but the ramifications of the British military defeat on the streets of Abu Dhabi were shaking the foundations of global alliances. If the British had been successful, and the attack drone's master targeting system hadn't been corrupted by a Russian designed carrier-wave software virus, then world events would be taking a very different course, the Russian reflected.

The brief predicted that the Gulf States conflict would rumble on with the Americans eventually achieving a form of limited, tactical superiority over a technologically inferior Hezbollah militia. The British would remain a troop contributing nation, but suffer the ignominy of being sidelined from combat operations. And America would re-secure the flow of oil from the Middle East, adding it to their near-total control of the southern Caucasus oil fields. *But then*, the Russian reflected, *that'd been the plan all along*. Long games were like that. *Long*.

His masters would be pleased.

*St Pancras International, London.*

Areena stopped, stepped out of the bustling crowds streaming up, out of the underground and stretched, placing both hands on the small of her back and arching as she did so. Her handbag slipped off her shoulder and hung awkwardly on her wrist. Eight months pregnant and she'd taken the tube. *Well Areena, there's a lesson learned*, she chided herself, silently. *Next time, a cab!* Stepping back into the fray, she moved awkwardly under the high, iron arches of St Pancras International, towards the SNCF ticket gates. Ten minutes later and she was settled, albeit uncomfortably, into the first class compartment.

'Can I get you anything, madam, a cushion perhaps?' said a steward.

'Oh, yeah, please, that'd be great. And a glass of water, if you don't mind.' The steward shuffled off, just as the train began to slip out of the station. He returned and helped Areena to get comfortable. Reaching into her handbag she rummaged around and pulled out her vone,

keen to catch up on the latest news. Accessing the GBN Wiresite, Areena began scanning the leader links.

After a quick flick through the latest on the Chinese glacial floods and the simmering Middle East hydro-wars, she paused on the big news of the moment, the ongoing US reaction to the British friendly-fire incident in the occupied zone of the Gulf States. Almost three months had passed, yet the American public were still coming to terms with what they considered to be one of the worst atrocities committed against their troops in recent memory. Leading US political figures were calling for an end to US-UK military cooperation and the President had publicly stated that she would review all military pacts with allied nations. Some pundits were even referencing NATO.

The UK government was trying to mend fences by offering up the attack drone programmers for trial, but the MOD was resisting. Leaks and off-the-record briefings were coming out of the MOD on a daily basis. Latest Whitehall reporting suggested that an internal inquiry had found one individual - a Flight Lieutenant - who'd breached some obscure operating procedure (presumably in place for scapegoating situations such as this) and was being handed over to US military authorities. The British media were having a field day. Wasn't this bending to US political pressure? Was Britain engaging once again in "poodle politics?" Was the MOD really prepared to sacrifice one of their own simply to save face and salvage a broken military alliance? According to the leaks it was all politically motivated, with the whole Abu Dhabi misadventure conducted on a shoestring budget, having been forced on the military by a weakened political leadership. The MOD had (apparently) long been saying in private that the attack drones' defensive systems had not received the investment needed and by slaving an entire swarm-squadron to a single command-and-control craft, their considerable firepower was left badly exposed to cyber attack.

Areena tried to remain objective and not link the political machinations back to Jack. But how could she not? The man who would have been her husband, and was the father of her unborn child, had died at the hands of those self-serving politicians and pompous senior officers that were not prepared to stand up for their people. Jack was dead while the elite picked over his carcass looking for a face-saving exit. It sickened her. She blinked back a tear. With uncanny prescience the baby kicked. Areena gave her stomach a quick, soothing rub, still surprised at just how much comfort she drew from knowing a little bit of Jack was growing inside her.

To take her mind off Jack, Areena skimmed over the latest climate bulletins. The equatorial oceanic algae farms had published record CO<sub>2</sub>-O<sub>2</sub> conversion rates. Atmospheric pollution figures were declining for the first time and the field trials of a new, automated cloud generation tech had been successfully completed, which in turn had reignited the debate on global dimming. UK polling for the upcoming US presidential elections suggested a surprise swing to the independent candidate.

Areena's mind turned to the conference. It was a three day event, hosted by the European Council and organised by the intergovernmental panel on climate change; a talking

shop with long tendrils back to the UN. It would attract climatologists and oceanographers from around the world, including a good friend, Helena Stadt, who worked for the Alfred Wegener Institute for Polar and Marine Research.

Forty minutes later, as Areena snapped closed her vone, she looked up to see the train easing into Brussels. Gathering her things, she waited for the other passengers to disembark, then eased her way out of the confining seat and left the carriage.

### *The White House, Washington DC.*

The President looked up from the eInk screens arrayed across the Oval Office desk, her mood remaining hidden behind an indeterminate expression that served to keep others on the hop. The private office door had swung inward as her chief of staff ushered in a group of desk jockeys. Ever since the incident with the Brits the polls had been precarious and whatever the Office of the President did seemed inadequate. The mid-west wanted revenge, immediate and total. The coasts wanted dialogue, inclusion; a sophisticated diplomatic solution to the impasse that would of course please no one. The President was caught in the middle. Did she cut the Brits loose for immediate political expediency, or keep open a dialogue? History had shown that presidents who tinkered hastily with the nation's oldest alliance lived to repent their alacritous actions at their leisure. Maybe these bureaucrats would provide some insight.

'Good morning, Madam President,' echoed the White House political advisers, as they filed in.

'Okay people, whadda the numbers say?'

'Your personal approval rating is up to sixty-nine percent, Madam President, after the Gulf States occupied zone action and the subsequent drop in the wholesale gas price.'

'Good, 'cos I've got a re-election campaign to kick in the rear. What about the British mess?'

'Well, ma'am, it seems that public opinion is firmly set against a close alliance with the British right now. Sixty-two percent polled expressed the opinion that Britain no longer added value to US foreign policy initiatives. And seventy-eight that Britain is holding America back. There is still a lot of anger out there over the friendly-fire incident, Madam President.'

'Okay, thank you, I will take these polls under advisement.' As the aides shuffled out, the White House chief of staff sat down heavily in the sofa opposite the president's desk.

'Louis, you've seen the polls?'

'Yes, Madam President, I have.'

'Whaddaya think?'

'Madam President, you've a re-election campaign to reenergise shortly. It's a no brainer. Ditch the Brits. We push for closer military ties with Australia as part of our foreign policy push toward the Pacific Rim. Europe is locked in an energy Cold War with Russia and it's simply not in our interests to stick our hand in the mangle. And the UK? Well they're nothing

more than a bit-part player, at best. On the sidelines looking in. Bottom line - we just don't need 'em.'

'Somehow, Louis, I kinda thought you'd say that. Okay... make it happen. But try not to burn too many bridges, eh? And work something up with the Aussies; more marines to Darwin, maybe. Naval exercises, stuff like that.' As her chief of staff slipped away, the President of the United States of America turned, glancing momentarily to where the bronze bust of Sir Winston Churchill used to sit, before turning her attention to the scene beyond the window. As the President looked out across DC she wondered what President James Madison had thought about the British when, in the summer of 1814, they'd burned down the very building she was sitting in. *Goddamn those goddamn Limeys.*

*Armoury House, London.*

Richard Rose-Templar stepped through the narrow double doors and looked around the formal dining room. The long, dark, oak table was set within a museum-like collection of individually lit portraits depicting Honourable Artillery alumni through the ages, framed against a deep burgundy backdrop. It was a dark and musty place. Medieval. As he took in the scene, Sir Richard made eye contact with each of other service and command chiefs sitting around the table. It was a risk summoning them all here, he knew, but it couldn't be helped. If preparations were to be made, the general would first need to win over his peer group.

Sink or swim time.

Rose-Templar settled nervously into his chair. Armoury House was the privately owned barracks of the Honourable Artillery Company and as such, an ideal venue for a no-questions-asked meeting, in the heart of Town. 'Ladies and gentlemen, good morning and thank you for coming at short notice. I realise this is all a little clandestine so I'll come straight to the point. By now you'll have read the Dim Beacon paper, which predicts that the northern hemisphere will undergo a sizeable and irreversible shift in climate. It's dated but recent re-examination of the hypothesis, coupled with fresh climatic data suggests that the author was on the nail. Set against this is the unfolding occupied zone debacle, which we'll park for another time. But it's the confluence of these and other socio-economic factors, coming quickly to a head, that we're here to discuss today. I now believe that events of some significant magnitude are converging to create a perfect storm and so I've asked Lieutenant Colonel Tam Hamilton here from the Global Strategic Trends desk of the Defence Concepts and Doctrine Centre to brief us on a hitherto "eyes only" analysis of the Dim Beacon. The content of this meeting is classified, *Cosmic.*' Sweat beaded on Richard's brow. The murky room, was close, cloying.

As the doors swung inwards with an agonised creak and the electronic countermeasures, isolating the room, activated, the analyst stepped forward from the shadows. After a quick salute the colonel began her briefing.

'DCDC have run a number of chaos-based simulations based on the theory put forward in this report. The results have been extrapolated into hypothetical scenarios, to predict future

decision-action cycles and threats to the UK. In sum; complex, predictive climate modelling are suggesting a sudden and sharp *drop* in northern hemisphere temperatures, which will become the single most significant global event of this century. It's likely that this strategic shock will act as a trigger, forcing other threats to become manifest. Wars, for example, over increasing scarcity of resources will become more prevalent. The hydro-wars of the near Middle East - an extant example of these - will quickly worsen and the future control of energy carriers such as uranium will almost certainly ignite further conflict. Failing state resilience will potentially lead to nuclear exchanges, as arsenals, once used (initially, for the first time), become ever easier to use subsequently (once the seal's been broken, as it were).' Pausing, the colonel turned to the flickering wallscreen as if to emphasis the apocalyptical images flashing by.

'Gentlemen, Ladies, our simulations predict the following: as carbon cleanup initiatives kick in and we swing from an abundance, to a shortage of CO<sub>2</sub>, we can expect a short-lived but significant temperature rise. This will lead to a temporary but accelerated melting of the Greenland ice sheet and whilst this will have a negligible effect on overall sea levels, it *will* dump enough freezing, and importantly, buoyant *fresh* water into the North Atlantic to disrupt oceanic thermals, most notably the thermohaline circulation, more commonly known as the Atlantic Gulf Stream. Superstorm activity will begin push north and a collapsing hydrological cycle will inevitably lead to a rapid cooling of the northern hemisphere, ultimately taking us into a Second "Younger Dryas" or prolonged winter. The regions worst affected will be Europe - particularly the more exposed British Isles - Northern Asia and the Americas.'

The seasoned and politically astute faces of the audience seemed to collectively undergo a subtle, almost unrecognisable, shift in expression. Richard couldn't be sure, but as he surreptitiously watched his colleagues, he thought he could see a vale of guarded apprehension fall over them. *Perfect*.

'Such a freezing event will cause the widespread collapse of transport infrastructure,' the colonel continued, 'a huge and unsustainable increase in energy demand, permafrosted farmland, a return to viral pandemic jolts and mass migrations into less resilient, industrially under-developed states. Geo-politically and economically this climate shift will remove the Western bloc from its current pre-eminent world position.'

'Colonel, when d'you expect this prolonged winter to kick in?' said Sir Richard.

'Within eight years is our best estimate, General,' said Hamilton, in a confident but carefully neutral tone.

As the analyst left, Richard took in the room once more. Gone were the expressions of vague, conspiratorial intrigue, replaced by looks of emergent shock. Richard realised that they were finally ready to begin joining the dots.

'So, bottom line is this: this *miniature* ice age is expected to last *at least* thirty years - *thirty* - and will be upon us before the end of *this* decade, just as our nation has been settling into a Mediterranean lifestyle resulting from previous greenhouse warming and new dimming initiatives. Modern society is a fragile thing. Just-in-time economics and over reliance on

complex, high maintenance infrastructure means that even a slight climatic disruption will bring the whole house of cards tumbling down.'

'But this is a Dim Beacon paper, Richard,' said the First Sea Lord, 'it's an unendorsed think-piece. How prepared are you to stake your reputation on it?' The admiral sat back, lines of scepticism wrinkled across her weathered features.

'That's true of the long range, horizon-scanning modelling, Terri, but the subsequent deep-dive analysis is based on data drawn from very well established, recent and reliable sources. Much of it naval. Honestly, I'd prefer to put this to one side and deal with other, seemingly more pressing problems. But suppose we did? And suppose there's even a *chance* that a rapid cooling event will take place? Wouldn't we then become just as culpable as the government? Which brings us to the why of my asking you here today. To pose this simple question: how should the MOD be preparing, and what can we do about an administration that is deliberately suppressing this knowledge?' Richard watched for reaction. The die was cast, the game in play. *Like it or not, I've just placed my future in the hands of these people; people who usually spend more time trying to undermine my directives and jostle for my job, than support me.* Sweat continued to bead.

'Well, we'll need to make significant changes to the equipment programme. All of our current platforms are optimised for a sub-tropical environment,' said the Vice Chief, to general agreement.

Larissa Nugent, Commander, Strategic Command, said, 'we're talking about a complete sea change in the military's role within society, if this theory's to be believed. No longer will we project power beyond our own borders. A collapsing economy and national infrastructure, for example, will mean we'll have to take on domestic tasks, like propping up the emergency services. We'll become the custodians of state level institutional resilience.'

'Precisely. And that's the point, right?' said Guy, Chief of the shadowy Defence Intelligence Staff. 'What Richard is saying is that if we're not very careful, we'll be caught with our pants down. The government is too fixed by short-term fire-fighting to care, and if *we* go down, we take the whole country with us. We *have* to prepare for this. This is about duty of care on national scale.'

As Guy spoke, Richard, let out a silent sigh of relief. Lobbying his old friend before the meeting had been time well spent. Slowly, comprehension appeared to dawn across other faces.

Finally, the First Sea Lord gained control of the debate. 'Okay, Richard, you've convinced me. We're the last line of national defence and so we can't afford to ignore this threat, even if it turns out to be nothing more than the mad ramblings of a three decade old Dim Beacon. So, exam question: how far are you prepared to take this?'

Richard knew exactly where Terri was going. She was testing the general's resolve. *Where's the line*, she was asking. And what if Number Ten found themselves on the wrong side of it? The wily old admiral had got straight to the heart of the issue.

‘There are no “points-of-no-return”. If we collectively elect to act, then we’re all in, all the way,’ Rose-Templar said, deliberately.

‘But surely there’s some other option. Can’t we pool resources with our allies? We won’t be the only country affected, so there’ll be an international response, which we’ll have to contribute to, right?’ said Larissa, cautiously.

‘Well, if we did want to find a partner, who would we choose?’ Richard said. ‘It’s not as if we’re spoiled for choice right now. The occupied zone has seriously damaged our capital with the Americans; so much so, in fact, that I’m not sure if the special relationship is even recoverable. Our fractious relationship with Europe speaks for itself. And, pulling out of the “Grandchild of Star Wars” programme for continental missile defence has put us on the periphery of NATO, at least for the next decade. So honestly, no, I don’t see a partner for us right now, so I think the UK will have to tread her own path in the years ahead. Hard years, too.’

‘Richard, you seem to be suggesting some sort of step away from the current order, the current mechanisms of government. If you are - and we agree - this will take us into the political realm. We’re talking the elected government, The King, the judiciary, etcetera. If... you’re talking about... what I think you are, that is.’ General Larissa spoke with a troubled look and an unconscious swipe at a stray lock of greying hair.

‘Larissa, I know it’s a big ask, so let me put it frankly. Cards on the table...’ Richard took a deep breath and wiped subconsciously at his forehead. ‘I don’t think that this government is capable, any longer, of making the hard choices that are needed to survive such a fundamental shift in climate. In national circumstance. The armed forces are at a point where our ability to act as the domestic stopgap in a civil emergency is fast slipping from our grasp. So bottom line? Our system of democracy is putting the nation in jeopardy. I believe our government needs to evolve and the armed forces *may* - *may*, mind you - be required to act as the catalyst to bring that about. Much as I hate to ask, what I need to know from you all is, do you agree? Will you support - in principal - the possibility for this type of action? There are no half measures, it’s all or nothing.’

‘Just so we’re clear, Richard, can I confirm that you’re talking about the possibility of overthrowing the government in a military coup?’ said Sir Reggie Barnstable, Air Officer-in-Chief, Air and Space Command.

‘I am, yes,’ said the Chief of the Defence Staff, as the room fell silent, ‘at least in principal.’

Richard studied his peers once again, looking for support, hostility, fear, anything that might give him a clue as to whether he would see the day out as a serving officer and chief of defence. Some, like Guy and Terri had a closed-down, thoughtful look as if they were working up the odds of success, which way to swing. Others, such as Larissa seemed to be imagining the repercussions of such an unprecedented act. Most looked accepting of the idea, at least in principle. *If necessary*, thought Richard, *I could always dispatch Guy duWinter to bring anyone over who is still having reservations. Guy has a persuasive nature.*

Slowly, the tension seeped out of his shoulders and the general made a conscious attempt to relax. It was done. Said, and done; no take-backs. He was still in no doubt that he'd placed himself in a very precarious position, but what other option did he have? He needed the support of all the services if he was to affect real change, and that boiled down to the men and women in the room, in this singular, history-defining moment.

*Zvezda Luna One, the Moon.*

Nikolai wandered through the claustrophobic corridors of the habitat modules that formed part of the Russian lunar colony, his stickpad-shod feet ensuring that he came to no harm in the uniquely low-gravity, low-ceilinged environment. As he made his way to the galley, his mind wandered and he considered what had brought him, a nuclear fusion theorist, to the most remote outpost of humanity.

After the early American Apollo missions to the Moon in the early 1970's it was discovered that the Moon's surface layer contained relatively large quantities of the isotope, helium-3; created originally in the nuclear fusion furnace of the Sun. But what was key to the importance of such a rare isotope was that when  $^3\text{He}$  was superheated to atomic fusion plasma temperatures, the energy release was staggering. And, it was clean. No spent rods. No near-endless half life's.

As the fusion theorist turned a corner in the rough-hewn grey corridors of the lunar base, he bumped into Anya, the mission controller.

'Galley?' asked Nikolai.

'Where else?' said Anya, as she clapped Nik on the back and followed him down the corridor, mimicking the fusion specialist's robot-like, stickpad-induced walk. 'I heard the Americans have a sports bar over at the Peak of Eternal Light, you think we should visit sometime?' she said, as they walked.

'Perhaps, Ana, or instead maybe we take a trip to the Chinese mining colony, make use of their low-G swimming pool,' said Nik, with a dreamy smile.

'Hah! That's even more unbelievable than the bar.'

'Then stop listening to Mikhail's jealous paranoia. I'm sure the other nations live just as bracing an existence as we, my friend.'

The galley was one of the largest recreational spaces in the base and was the venue for almost all social gatherings. When the residents weren't working or sleeping they were usually found in the over-lit, starchy, plastic furnished cafeteria. Above the main food dispensary was a large wallscreen showing the insignia of RKK Energiya. Nik helped himself to a coffee bulb, deftly flicking the teat out with his tongue while handing another to Anya.

'So how's the mining going?' said Nikolai, between gulps. *What I wouldn't give for real, steaming hot coffee*, he thought.

'Well, you know how strip mining is; add to that microfine dust, an airless, low grav environment and you have for yourself a challenge. Still, we're getting there now, I think.'

‘Are you happy we’ll have enough for the final test?’ Nic said, trying not to let any disappointment show through.

‘Oh, certainly. We’ve yet to refine the last batches of regolith, but I’m confident the helium-3 absorption percentages are sufficient,’ said Anya, showing no sign of concern.

‘That is good. Just think of it, Ana, a world powered by a new generation of clean, sustainable *fusion* generators, and fuelled by lunar mined helium-3.’ He smiled, a wide, gappy smile. ‘No more energy wars; everyone coming together in peaceful friendship and humankind ushered into a new age. Just think of it.’

‘Peace and love, huh? Pah! Mother Russia and the Kremlin ushering themselves into a new age, more like. Nikolai, you live in a fantasy if you think helium-3 fusion will solve the world’s energy problems. Let alone its other, um, more people issues.’

‘Well it can’t hurt,’ Nik said, sounding faintly hurt.

‘True enough. Now, ready to conduct the final inspection of the reactor housing?’

‘Ready as I’ll ever be.’

*The Council of the European Union, Brussels.*

*Phew. One day done, two more to go,* Areena thought, as she fell heavily into a delicate looking chair. It’d been an interesting first day attending the panel, but not exactly ground breaking. The European Council building itself was impressive having grown over the years to become a huge glass-panelled and steel-shuttered edifice, with beautifully crafted twisted swirls and gravity defying swooping overhangs. The architecture was more a work of art than a functional seat of intergovernmental bureaucracy. Inside it was open and airy, with cafés, restaurants, bookshops and souvenir stalls dotted around the periphery of the internal, central structure. There were gardens, washed over by the calming hush of trickling streams, and protected alcoves giving privacy to the kind of out of session discussions an organisation like this thrived upon. All in all, the impression was that of an enclosed micro society, almost as if it had been built to contain the survivors of some atmosphere-poisoning holocaust. Quite apt then, that it was host to the intergovernmental panel on climate change.

Areena was sat in one of the cafés waiting for her friend to show. A waiter came over and asked if she’d like to order.

‘Yes, sir, if you please, two coffees in black and a one small plain chocolate bread, if you please thank you,’ she replied, pushing her holiday French to its very limits. Areena had seldom needed to speak it with Jack being fluent, but she’d have to learn to cope on her own now, especially as French had been made the official (and rigidly enforced) language of the EU. As the waiter returned with the coffees and a pastry, Helena appeared in the distance, waving as she hitched various bags back onto her shoulder. Helena Stadt was a tall, raven-haired German in her early forties, who’d started her career as a marine biologist before moving into oceanography where she’d met her (now ex) husband, Wolfgang.

Helena strode purposefully to where Areena was seated, beaming as she came. It was the first time they'd seen each other since, well, since Jack. Areena had first met Helena at a climate summit eight years before, when Areena had held a graduate research assistantship post in atmospheric science at Warwick University. They'd become instant friends.

'I thought you Brits were still barred from the bosom of our great bureaucracy!' Helena said, as she approached, smiling broadly at her own old joke. 'Areena, you look radiant. Let me look at you properly. Impending motherhood really does suit you, my dear. Ah, thank you.' She sat down as the waiter finished placing out the order, adding, with a note of worry and concern creeping into her voice, 'so, how've you been?'

'Well, you know, I've been keeping busy, that sort of thing. It's been hard, though. And thank you for all your support,' Areena said, trying to rein in her bubbling grief.

'I'm so sorry that I couldn't be there for you in person,' said Helena, 'but I simply couldn't get off the Kerguelen Islands in time. The resupply flights just aren't regular enough.'

'I know. Jack wouldn't have wanted you to miss an opportunity like that, anyway.'

'You know, I still can't quite believe it. Feels unreal. Jack was a very special human being and I'll miss him. We'll all miss him. Fucking planet-raping, climate-denying swine that put him in that... but anyway.' Helena smiled to hide her anger, but it she wasn't fooling anyone.

The conversation quickly moved onto Areena's pregnancy, childcare, baby names and so forth, and other issues of minor gossip, before turning to the conference. Helena had been to a carbon sink lecture, while Areena had attended a discussion on the future of potable water.

Having swapped thoughts on their respective day at the panel and caught up more generally, the two of them finished their third coffee and hailed a cab. Helena dropped Areena off at the Metropole and went on to her hotel to change for a cocktail party. Areena was glad that she'd bowed out of all social activities. Normally, she'd have loved to go out and catch up with colleagues from around the world, but tonight all she wanted was a hot bath and to rest her aching back. The baby kicked as Areena dumped her bags heavily on the bed, as if to reinforce the wisdom of the decision.

Later that evening as Areena prepared for bed, her vone pinged. It was Bronwyn, an old, if slightly eccentric, hippy-chic friend. Areena accepted the call and settled in for a long, gossip chat.

The panel continued into its third day and finished with a central debate on the general direction that a shifting climate was heading in and what human society needed to do to mitigate its effects. The finally accepted position - fiercely debated - was that temperatures would continue to rise, increasing by around three degrees over remainder of the century. Three whole degrees! A long list of implications were also officially noted as concerning, such as extensive flooding of coastal areas and major inland regions becoming economically uninhabitable as they turned arid. A new theory, suggesting a disruption to oceanic currents triggering an inter-

glacial ice age was considered but rejected as being far less likely to occur than a general trend of steady planetary warming: endorsed as the bigger threat.

Areena wasn't so sure.

It seemed to her that the key movers were playing a numbers game, as if they were checking the odds and endorsing the most politically acceptable scenario, over the more climatologically likely. For all the conference's dire predictions of impending hardships and calamities to come, something didn't feel quite right, as if Areena had witnessed a very clever pulling of some very fancy wool.

'So what d'you think's going to happen?' asked Helena, as they shared a taxipod to the train station.

'Well, honestly, I think there's some sort of cover-up going on,' Areena said, still puzzled by the events of the previous three days, but a little embarrassed that she was coming across as some sort of crackpot.

'What d'you mean?'

'It all sounds very plausible, very consistent, doesn't it? Temperature rises due to the greenhouse effect, exacerbated by our continued propensity to burn fossil fuels; water, always a very limited resource, becoming *the* key human commodity; carbon conversion initiatives central to minimising the desertification of the northern hemisphere. Etcetera. Same old, bloody same old. But there's more to this than the forum seemed willing to discuss, trust me. For example, the threat of an abrupt cooling event, triggering a form of mini ice age was dismissed out of hand, like it held no scientific merit.'

'So you think there's a sort of government cover-up in play?' said Helena, through an only partially hidden smirk.

'Yes; well, no. Urrg!' Areena paused a moment to compose herself. 'No, of course not. At least, I hope not. Okay, so... why didn't the panel take the time to examine and explore *all* viable climate theories? Why were they pushing some over others? Hmm? What's their agenda?' Areena was getting heated, so she took a deep breath to calm down. Outside the taxipod's window was old Brussels; beautifully gothic and baroque architecture lined the narrow streets packed with trams, bicycles and people milling around, oblivious to the silent traffic or enjoying an al fresco coffee in the hot, dry, early summer ambiance.

'So you're saying that continuing temperature rises, floods, droughts, all that, all the usual conclusions from panels and conferences like these aren't actually, like true?' said Helena, a little more seriously.

'Look Hel, you've spent years studying oceanic thermal expansion, drifts, sinks, currents and winds. D'you agree with their statements about sea rise and carbon absorption?'

'Well, no actually. The IPCC set the estimates for the sea rise levels too high and the carbon saturation points too soon, but they always do that.'

'Why?' Areena asked, hoping that Helena could see where she was going. *Even if she doesn't, she'll probably just put it all down to pregnancy hormones.*

‘To make the point,’ Helena said. ‘Organisations like these, with no power to enforce, always exaggerate a little. They’ve been doing it for years.’

‘Agreed, but I also think they do it so that governments can take the credit when things don’t turn out as bad as the original prediction. It’s a mutually beneficial arrangement between the big powers and these non-governmental organisations.’

‘Now you *do* sound like a nut,’ said Helena, half-joking, but without the earlier mirth showing in her eyes.

‘I know how it sounds, but I’m beginning to get the feeling that certain governments, yours and mine included, are manipulating the threat of a major climate realignment event for their own ends.’

‘But why?’

‘Well, primarily to control their populations. If the IPCC pumps out the kind of predictions everyone is expecting, then no one gets too concerned and governments don’t have to change their policies or investment priorities. Everyone carries on as normal. Single issue climate maniacs just saying that they always say, kinda thing. The predictions have to be a little scary of course, just not too in-yer-face full-on armageddon-level scary. So it all becomes background noise.’

‘So you mean, like, when abrupt climate change or extreme weather events are discussed and then dismissed because of a lack of certifiable data, even though we all know that the probability of their occurrence is as good as any other?’

‘Exactly!’ Areena exclaimed, as the penny seemed to finally drop.

‘So what’s all this, Ari? You a secret agent in your spare time?’ Helena said, her smirk returning.

‘Not a secret agent no, just a humble civil servant, but one that works in the British Ministry of Defence.’ She leaned in. ‘Listen, keep this to yourself but I’ve read something called a Dim Beacon report. It’s a long-range geo-political think piece, from like ages ago. And off the back of it, it seems that the British MOD have been infiltrating international scientific survey teams and setting up their own climatic monitoring stations around the world for decades now. They’ve built up a truly prodigious amount of data, which they recently remodelled, adding political and social variables, and have come up with some pretty astonishing results; principal of which is the prediction of a sudden and sustained *drop* in temperatures across the northern hemisphere, and *before* this decade is out. Now, most leading powers know this but, funnily enough, they’re choosing to keep mum about it. The cost of adapting whole societies is too expensive and then there’s the worry that the financial system could collapse as rapid social change stagnates economies. Better to try and ride out any abrupt climate events than risk preparing for them. It’s the snow plough argument.’ Areena realised that as she spoke, she’d sort of hunched forward and lowered her voice. She straightened up and cleared her throat, trying to shake off the basement cyber-nerd conspirator vibe.

‘Okay, wow. Areena, I’d no idea. I always thought it was all about finding a line everyone could agree on, rather than the coordinated and pre-planned wholesale pacification of

global society,' said Helena, in a quiet, level voice. *She may not be completely convinced*, Areena thought, *but I've said enough to pique her interest*, so she pushed on.

'Well I don't have the whole story, but I am aware that the MOD's climate models differ massively from official equivalents in the Ministry for Climatic and Environmental Change. And the MOD is one of the best placed organisations to integrate the myriad data into a future threats scenario. Got the computing oomph, too.'

'That's some claim, Ari. If what you're saying has some truth to it - and I'm not saying it doesn't - then be careful, okay? Remember, you have a baby to think about now. Don't let this conspiracy theory take over or anything. Promise?' Areena's older and wiser friend fixed her with an intense look. *She might be right, perhaps this is all in my mind. Maybe with Jack and the pregnancy... But I've seen the report. I've studied the data. And I believe it. And if it is true, why isn't the government doing anything?*

'Maybe you're right Hel, and I do have other priorities just now... I just get so angry that the great and the good seem to sit about when an iceberg - literally - is so obviously just around the corner. Not knowing exactly how big it is seems a like bloody silly reason to do nothing at all.' Areena let out a long breath and relaxed. Helena looked on but said nothing.

'However much you may put this down to hormones, if you get the chance, at least check it out for yourself and see if any of your institute's data corroborates the theory. And keep me informed, yeah?'

'If I get the chance Ari, I will. If you're right, this could be the biggest single climatic event to hit Europe in what, three hundred years?'

'Yeah. The Great Frost of 1709. And it'll be triggered by a shutdown of the North Atlantic Drift, and *you're* the oceanographer, right?'

Their taxipod pulled up outside Bruxelles Gare du Midi and they both got out and headed inside the station. After identifying their respective trains and platforms, Helena helped Areena into the SNCF carriage.

'It was lovely to see you again, Helena, keep in touch and come visit soon.'

'You too, Ari, anytime you're in Berlin, yes? Safe journey and best of luck with the birth and all,' she said, as she patted Areena's plump stomach.

'Come and stay when he's born, you can help with the nappy changes.' And then the train pulled silently out of the station heading for the tunnel and the comfort of Areena's flat.

- end of sample -

want to find out what happens next? you only have to ask: [me@markjsuddaby.com](mailto:me@markjsuddaby.com)

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## mark j suddaby

Born in England, in the year of Apollo 13 and Luna 17, Mark grew up sitting in front of the telly, in his paisley pyjamas, staring wide-eyed as *Doctor Who* (Tom Baker), *Space 1999* and *Blake's 7* romped across wobbly sets in their terrible outfits and bad hair. Mark grew up in a large family, which conversely meant time spent playing alone, often within the confines of a boundless imagination.

At sixteen, Mark realised that he was unlikely to become a genuine space hero - and school hadn't been a huge triumph - so he joined the Army. After a modicum of mild success here and there, Mark left the military after 25 years having reached the dizzying heights of the sixth floor of the Ministry of Defence, where he worked as a staff officer, preparing papers for senior officers and wishing that he was anywhere else in the universe.

Mark now lives in the West Country where he spends most of his time trying to get his Lotus to think that it's a car and wondering what it would be like, if...

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# Echoes of a Lost Earth

## Part One

| *collapse* | *escape* |

They said the wanton, carefree use of hydrocarbons would boil the world like an egg, and they called it: climate change - the 6th extinction.

In the end, though, it didn't really matter. The Earth overcomes.

You see, it was never about the weather.

It's about the things that stop happening because of the weather.

Like crops, and civilisations.

Then they said a shifting climate wouldn't have that much of an effect.

One, or two degrees... maybe. That the oceanic thermals would be fine. Probably.

But then they always say that.

Jack is a British soldier and fights in the last oil war.

Areena is a climatologist with access to a thirty-year old Dim Beacon that predicts a rapid climate event. But it's only after tanks arrive in Parliament Square that she begins to understand how high the stakes really are.

Joshua works in closed-loop biome research and mixes with all the right people; almost as if it were being orchestrated. They call him the Saviour of Humanity, but he wonders if fleeing the calamities to come really gives him claim to that title. But at least he has Art, a friend from Eden.

Guy can smell the opportunities bubbling up out of a crumbling system. Mu looks on while Sergei acts. Roman gets pulled in and Dean still thinks nothing can surprise him.

And Alice is content to watch. And to wait.