

This is only a 3 chapter introduction to the book, Silent Night.  
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# SILENT NIGHT

(2<sup>nd</sup> book in the Orbiter One series)

by Cliff Dale

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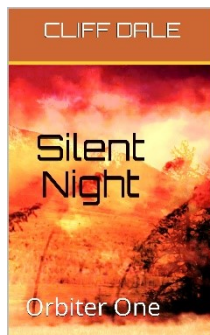
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# 1. Current Affairs

The day started ordinarily enough, on one side of the globe the daylight was just beginning, the people were starting to go about their daily business, children were getting ready for school, the stores were restocking in preparation for the start of the trading day, it was just another day.

On the far side of the globe, their day was about to end, literally.

The people here were also going about their business, except that they had finished work and were considering recreation and relaxation, children were getting ready to go to sleep, the stores had already closed and made way for the food vendors to open, all was as it should be, the close of another ordinary day.

Then everything turned sour, for the population it was a puzzle, things hadn't seemed any worse now than they were the day before, so what had changed?

Sirens were screaming, children were screaming, their parents were screaming, the harbingers of destruction were screaming too, winging their way to their intended targets.

For the residents of the whole globe, it was already too late for answers, the missiles all went up, the curtain came crashing down and then the lights went out, the whole world went dark.

It was now nearly twelve months since the fifth World War, this all-out global war in 2491 was MAD, it was Mutually Assured Destruction, and as far as mankind was concerned, this was decisive.

Today started ordinarily enough too, but there were no people on the surface to witness it, no schools and no children, no businesses to open and no stock to display, and on the other side of the planet it was no different, the sun was going down, mankind was already down, sure, the curtain had lifted, but the lights were still firmly out.

Gaia was strangely absent too, Mother Nature had given up, she had already decided there was no coming back from this, not in a hurry anyway, given time, and lots of it, then maybe, just maybe.

The remnants of mankind were now in space and lucky to be there, they were all that was left of the human species, just over five thousand of them. Sadly, that was the sum total of survivors from a stupid and catastrophic error that removed nearly all traces of civilisation from the globe in just a few hours.

The surface was now covered in layers of fine silt, this silt was the pulverised remains of the human race, and it included the planets flora, the fauna, and all of its buildings and structures, billions of them.

There were a few buildings left intact, almost no roads, and they had discovered absolutely zero infrastructure to provide for even the basic needs of a population. Even the natural basics were missing too, there was no land-based water, no rivers, no lakes, not even an agricultural water deposit, everything was dry. The cloud

cover was minimal, it was hot during the day and freezing at night, but it was slowly changing.

No new plants were growing, no animals stirred, everything was eerily quiet. There was some water, the seas were slowly clearing but were drastically reduced from the near nine-tenths coverage to barely three, and many seas had been boiled away in the devastating firestorms that followed the global conflict.

From their floating Space Station, the search teams had electronically scoured the surface for survivors and found none, that was none of the human kind, nor of the animal. From the depths of space, they scanned the deepest bunkers and shelters and found nothing, they had scanned all the major cities across the whole globe, then the smaller cities and towns, even the remotest of villages, the result was the same, nothing.

It was not looking promising.

Then, almost by chance, they discovered a radio transmission, it wasn't there an hour before, and although it was a repeating signal, it was new, and it did transmit a map reference.

Well, this signal suggested a location that didn't quite match where the transmission was broadcast, on Orbiter One they could pinpoint the source to within a few metres of its origin, they knew the map reference given was not the same place. That suggested that these people, whoever they were, had not been outside yet to witness the level of destruction, they had not seen the state of the devastated planet, had they done so, then they may well have discovered that the planet was now off its traditional axis by eleven degrees.

They were a secret organisation, completely off-plan, unauthorised by the World Council (WC) and hidden from the World Science Council (WSC), and they would prefer it to stay that way. Most of their own Government had no inkling that this place existed, and those that did were very sure that if they disclosed its whereabouts, their whereabouts would soon be in question too.

Silent Night was its designation, and silent it usually was, no one had ever left it, not under their own power anyway, and very few had ever seen it at all in its one-hundred-year history. To those that lived and worked there, this location was simply known as the Facility, and they had witnessed, first-hand, some of the impact strikes on that fateful day. They knew then that they needed to go into a secure state of lockdown, to keep everyone else out, and to this end, the whole Complex went not just offline, but off-grid, the place literally stopped functioning. All work was saved, any experiments ceased, all computers and equipment were powered down as the emergency protocols kicked in. Anything externally exposed to the elements was hermetically sealed, any communications devices were physically disconnected from the NetWide, the only power used was internal, not that they had any external source of supply anyway, the Facility went dark, at least, electronically speaking. They still had lighting, they had a self-sustaining power source, their own food supply, a regenerating air and water supply, and the people within, they knew they just needed to wait for it all to settle down.

Silent Night was now also silent by day.

As per security protocol 139, one whole week later they powered up, unlocked the viewing periscopes and discovered the nuclear storms raging, they certainly knew then that they, and the world outside, were in deep, deep trouble.

They had used their downtime wisely, poured over the data events for the day when everything went haywire, they used the time to track and trace the timeline of that fateful day from the scant information they had gathered before their own curtain came down. They had scoured the logged missile launches and return missile tracts, now they were acutely aware that things were not going to be the same as before.

As a secret entity, very much under the WSC radar, they had already considered that there could be serious consequences should they be discovered, their existence revealed, what they hadn't quite figured on, was just how serious those consequences could be, and it would have nothing to do with the WSC.

What the collated data revealed was a far worse situation than they had originally feared, thousands of missiles launched, and only hundreds of interceptions.

They could see target tracts everywhere.

They could see detonation points globally.

They knew Smart pollution levels would be high, and its contamination would be all over the planet surface.

They knew there was going to be serious devastation, and this would be far and wide.

The most disturbing part of all this was, the total data available spanned just over six minutes of real-time collation before the connection was severed, it left them very much in the dark.

To add to the already alarming news, the periscope view had confirmed the rumours that they had heard, nuclear missiles had indeed been available, this was definitely not good news at all. As scientists, they knew the significance of nuclear fallout and promptly engaged extra safety protocols for this event; the protocols for Smart fallout were already in place and functioning, now they needed to add more.

The Smart dispersant was not nice stuff, it was designed to dissolve the enemy combatants whilst leaving most of the infrastructure intact. After ten to twelve days, it became inert, inactive, and your armies could waltz in unopposed. The idea was simple, you melted the opposition and waited for the effects to wear off, then you occupied the territories without the need to rebuild and restructure a war-torn landscape.

Silent Night was well aware of what was likely to be going on outside their walls, the planet and its population were dying, were possibly already dead, and now it was going to be every man, woman and child, for themselves. Gaia was also at risk of dying, and there was nothing that they could do to save any of them, they had a sworn duty to look after number one.

Mother Nature would try and do what she could to help herself, but she too was as much out of luck as the rest of the planet, the situation was incurably hopeless, and life on the surface was expunged.

All of it.

The Facility was never under threat, they were deep underground, buried inside the granite mountain, the nearest flash burst of EMP was just over two hundred kilometres away and it never reached them.

Emergency Situation Protocols were already in place, and they strengthened them, they were locked in by choice, but then, it had always been so, it was no different than normal in that respect, and there was always a good sense of camaraderie, a community spirit that they all enjoyed, it really was a happy and harmonious place to work, even if it was a clandestine facility.

Current affairs had never bothered them much, they had a hard-wired feed to enable them to get breaking news from the NetWide, so they were not completely cut off from reality, just cut off from humanity. They managed to keep up to date with the World news and political situations both at home, and abroad, and rarely did they ever voice an opinion outside of the Facility confines.

They all knew that the work they did mattered to the United Chinese-Russian Federation (UCRF), the fact it was illegal was just technical terminology, they preferred to refer to it as working in a grey area within the scientific community. There was nothing sinister here, they worked mainly on plant genetics and energy management and efficiency, some of this information was kept for the state to use exclusively, some was revealed later as work coming from those of UCRF origin, conveniently, they would be already working within the World Science Council, and then the WSC passed it on to the World to be used, free of cost.

It was a deception, but it worked.

Their secretive work kept the UCRF one step ahead of the others, of the so-called 'big three', those others being the United Federation of the Americas and the European Federation, and it also kept the UCRF several steps ahead of the rest of the world.

Orbiter One was different, it was in space to start with, in the Deep as it was often referred to, and although it was concealed from the general public view, and it was secretive, it wasn't completely hidden, Orbiter One's intentions were simply exploration beyond the confines of Earth. Here too, nothing was sinister, it was experimental, and it was necessary, the planet was already dying and they needed to either fix it or move on, they were that tool for the moving on, just in case the planet could not be fixed. The World Council funded it, the World Science Council supplied the scientists, the various nations around the globe were asked to provide the staff to populate it, making them feel a part of it, to contribute in assisting to save the planet, to provide some transparency at least.

It wasn't a perfect solution, but it worked.

The idea was simple, it would allow the WC to promote global harmony, and when the time was right, it would be able to reveal the project to the general population, but sadly, that was all far too late now, there was no population left. Orbiter One was perhaps a good idea but it didn't get the chance to work for the benefit of all, and it was almost a stroke of luck that all was prepared when it was, even a short delay would have been so different. Straker would have melted with the rest of the population, A1 James would never hold the reigns of the project he had steered for years, and some of the world's top scientific minds would never



have made it beyond a few hours on the surface, mankind would have disappeared into the void that was the Deep.

Thankfully, that last statement was not correct, mankind had all but disappeared on the surface, previously, on Orbiter One, they had found nothing, in space, in the Deep, they were all there was, there were no distant colonies, no other Space Stations, no bases on the Moon, at least not inhabited ones, currently, they were it, humanity was in a big floating Station, two thousand kilometres above the surface of the Earth, hopeful.

The five thousand or so staff aboard had been there for several years already, like those at Silent Night, they were not permitted to leave either.

The situation on the surface had been dire for weeks, months if the diplomats and negotiators were honest, and things were rapidly coming to a head. The WC and WSC decided to hedge their bets and get the requested supplies and equipment up to Orbiter One whilst the climate was perhaps tense, but not quite lost.

Equipment and stores were gathered, packaged, crated, and loaded, and there were a specific set of scientific people flown in from around the globe especially for this launch, sadly, there were just nine of them.

The launch was set for the 18th of September 2491 and it was envisaged that they would allow a four-hour window between each liftoff of three Ranger Reusable Space Vehicles (RSV). They were somewhere around four kilometres distant from each other, all were fuelled and ready to go, all they needed was the word and Orbiter One would have almost everything it needed.

That word did come, and it was not just the one word, but several, 'get them up, get them all up now!'

The greatest ever feat in the history of space flight was witnessed by just a few people, yet none had the time to record it in the history books, and by the time all the RSVs were in the Deep, there was hardly anyone left to write about this launch, and those that could possibly have read it were having other problems, and reading wasn't one of them.

The political elite was not allowed to go, for them to be on board could be seen as perhaps the abandonment of the planet to its grisly fate, the rats leaving the sinking ship, it could tip the balance toward war.

It didn't matter in the end, for in the end that spectre of war came, and sadly for mankind, war won.

Straker and the other two RSV crews had no idea where they were going at the time of the launch, they did know they were in trouble, a war was raging below them and they had nowhere to land or to dock, or so they thought. They had little food onboard and no landing directives, all they had to offer them hope was a briefcase with 'instructions' that they were not allowed to open until after take-off. Below them, as they rocketed skyward toward a new life, death came calling on rockets falling from the same skies, their only intent was to end life. Within minutes of the first launch, the whole world 'went to hell in a handbasket' as one expression popular at the time went, there was no coming back from that, ordinary life on the surface was ended.

It was a devastating series of events that no one quite understood at the time, and now, as far as the survivors were concerned, no one cared to establish the facts,

there was simply no evidence left to discover anymore, and those to blame were already dead along with what little evidence there once was, for all had now been well and truly ground away in the all-consuming firestorms that followed.

Nuclear detonation ripped through Smart dispersant and both were changed, perhaps for the better in the long-term, in the short-term it really didn't matter that much. In places, this nuclear nanoposition would take a few days to reach, but it still killed everything it came into contact with. If you were lucky, you were nearer a blast zone, death was quick, if you were unlucky, then death was slow and painful, and sadly, guaranteed.

Nothing escaped it.

Nothing survived it.

Planet Earth was bleached clean of life.

It had taken millions of years for life to form, and then hundreds of thousands of years of slow evolutionary development to give mankind the major foothold on the planet, but it took less than a fortnight for Man to completely remove it.

There were only three RSVs ready on the launch pads, they were already pre-loaded with the supplies and equipment requested by Orbiter One, and they were sitting there waiting for a launch sequence that would allow all three to get off the ground safely over a few hours. It was just the fourteen crew and their complement of nine passengers that were to leave the planet on that fateful day, armed only with a simple briefcase with top-secret information. This gave them the indication that there was a Space Station they could enter and wait out the coming storm, it didn't give them any indication of location or its size.

Orbiter One found them, and thankfully, allowed docking access, the Station was huge, well over one and a half kilometres in length, a truly impressive and most welcome sight for the RSV crews.

On arrival, the Station was moved to a safe distance from the surface, they too were wary of incoming projectiles and the damage that could be caused by EMP, an Electro-Magnetic-Pulse. This 'pulse' could destroy electronics, it was what kept them afloat, without computerisation the Station was dead in space, as dead as the planet below it.

It was on Monitor 4, within Orbiter One, that saw the surviving Ranger crews witness the distant farewell to Man, no sounds, just disturbing images of a planet ravaged by war, a species shooting itself not just in the foot, but in the head, and everywhere else that mattered.

Sadly, this devastation included all the other species on the planet too, birds, fish, amphibian, reptile, insects and other earthbound mammals, nothing was spared. The soil was scorched and poisoned, and this was carried into the seas to poison them too, even to the great depths where mankind had never really ventured, nor altered to suit his own purposes.

To add insult to injury, a supersized global firestorm followed, ensuring all was purified, it was a global genocide of the worst kind, total obliteration of the people, the flora and fauna, the structures, everything, and even the bacteria were destroyed.

Straker was horrified at the state of affairs on the planet, he had stated at the time,

“Hell’s fire, what in the name of Gaia was it all for? Nothing can justify the mass slaughter of a World’s population.

This can’t be really happening while we watch, can it?

The planet is dying ... the people are dying.

Surely, nothing, no one, can have survived that hell on Earth.”

He was right that it was all for nothing, and there really was no justification, sadly though, it did happen, and while they watched, and it was painfully true, the planet was dying, the people were dying in their billions, as Monitor 4 displayed the full horror of it in real-time, albeit from a fair distance above the surface of planet Earth, the lights, and life, were extinguished.

The issues with the NME (New Middle East) and others in the region was one of the things that Silent Night was working on, how to release some energy secrets, but not all, and to be able to profit from the power generated for the sake of the UCRF. Sadly, what the UCRF proposed was considered insufficient, the NME wanted more and didn’t want to pay extra for it. Political gesturing came to the fore again, along with a bit of rhetoric and some sabre rattling for good measure. There was still a degree of disparity in the wealth and wellbeing of some nations, there was still the haves and the have less, and the NME was a fair way down the have less scale. It wanted more help, required more help, and demanded that the World Council provide that help. That stance alone earned it no friends at all in the international community, and any genuine will to help soon evaporated.

Asking is always interpreted as being more respectful than just demanding something, that comes across as being belligerent and intimidating, and no one likes a bully.

Religion no longer had anything to do with national decision making, most religions had by then faded into obscurity, and Gaia, Mother Nature, was the only real force to be reckoned with. She was not a God in the sense of a deity with which one has faith, more of a figure to have respect for, to consider. The way the world worked, the way it generated its power, the fuels it used, the resources it constantly consumed, all had Gaia to consider somewhere in their planning. Notwithstanding that Mother Nature herself had a good go at removing the parasitic lifeform called mankind, and she did a very good job of thinning their numbers by around a half, still, ‘she’ figured in the consultation for many things on the planet of Earth.

The truth of the matter was that mankind itself had upset the balance of nature several times in the past, it constantly failed to react when given very clear warnings, and when the consequences of those failings occurred, as usual, it was the ordinary people that lost the most. Mother Nature had several attempts to bring Man back into line, reduced their numbers significantly on many occasions, even had a go at controlling them with their own technology for a while, but somehow, they always managed to circumvent her efforts, these pests were persistent. Now they were gone, not her doing, they had managed to do as they had threatened previously, to destroy themselves. Her methods were slower, less final, aimed at teaching a lesson to be learned, the seas rose some forty metres over one hundred or so years, and in the middle of the 22nd Century came the big melt, this was just a continuation of the proper and disastrous climate change that

had already occurred and could no longer be controlled, and the waters rose again by another seventy-five metres in the next fifty-five years. After that, it sort of slowed down a bit, it only added another thirty-five metres over the next one hundred and fifty years, for mankind, it was still a disaster. The global maps were constantly changing, hundreds of kilometres of retention walls gave way and large swathes of countries were simply flooded, to be reclaimed once more by the seas, nowhere was unaffected, some island nations vanished, lowland Europe all but disappeared, much of India was flooded, Australia was almost cut in half by the floodwaters, and well over three billion people died, again. Earthquakes and tsunamis were commonplace, volcanic activity was the most violent that had ever been recorded, Mother Nature angry at Man's defiance, and there was now nothing that Man could do to prevent it or to fix it, they had broken the planet again, it was fighting back once more.

It was no wonder that religion, people's faith in whatever god or deity they believed in, was tested to breaking point, and it was to be found wanting. Gaia became the new 'religion,' she was to be considered, was to be revered, respected. The sad part was that mankind had been here before, it had made those same promises, and broken them, Mother Nature had no faith anymore either.

For a while, one of the plusses was that mankind became more considerate overall, more tolerant, particularly to his fellow man, and attitudes changed as perhaps they had done hundreds of years earlier, if they had continued, then, it could have made a difference. In the meantime, political wills changed too, the World Council was set up to try and resolve the global crisis, and the World Science Council was made up of the smart people, those who had, for many years, been telling the political world that this storm was coming, and just like times of old, none of them cared, not until it was far too late, many ignored the warnings, made light of them, joked that they did not exist, it was modern fake news, they would be proved wrong, and once more, it was their electorate that suffered.

The WC worked most of the time, many a crisis was avoided, agreements were reached, help and guidance were offered and accepted, the world became, more or less, one nation. Then, as usual, people wanted more, well, actually, the people were fine as they were and it was at Government level that they wanted this 'more', some wanted it now, with a few very prepared to take it rather than waiting for free help in the near future, they rattled their sabres.

Politically, the 'big three' nations stood firm, some concessions were made, minor agreements reached, but it was not enough for some, still, the NME demanded more, not requested, but demanded. So, the big three walked away from the negotiating tables and wanted the NME to consider its position, isolated it stood no chance, it would have to concede to what were reasonable disclosures and offers, it was after all, in 'their' best interest for 'their' people, sadly, 'their' Government didn't quite see it that way at all.

What they planned for was not concessions, but for war.

A battle and missile launch scenario program was engaged to look at the possible outcomes, what plans would be needed for casualty care, for restructuring, for social repair, what they could expect to gain from the conflict, and it was then that things went completely haywire.

The program did what it was supposed to, it ghost-launched outbound missiles, tracked the projected incoming tactical small scale localised Smart-bomb strike scenario, this was the test subject. It was a tailored program, primarily designed to see if they could nudge a few neighbours into submission and to see what the strategic reply from others around the globe was likely to be. They intended to verify the ferocity of the missile response from the neighbouring states, to calculate if the death toll within their population was acceptable, or not. They considered that the UCRF, the UFA and EF, would have a limited interference and retaliatory response to their local aggression, most likely, just some more diplomatic gesturing.

The glitch within the program was discovered as it ran, and it was immediately terminated, but that simple line error in the code had meant there was a failure to engage the safety override.

Sadly, for all of mankind, the NME main Tactical and Defence system had already detected the ghosted incoming threat as genuine, hell on Earth swiftly followed. The response from the United Federation of the Americas and the European Federation was swift and deadly, they responded in a like for like missile launch at this unprovoked attack, the UCRF did much the same, as did the neighbours of the NME.

What followed was that a truly MAD scenario was initiated, it did precisely what the acronym suggested, Mutually Assured Destruction, it led to the destruction of the planet and all the lifeforms on it, well almost.

The Facility was still in the dark so to speak, nothing external worked, they had no method of external public communications anyway, they had always sealed themselves off from the outside world. They had expected some contact eventually, but there had been none, they even sent out teams to try and find out who was in charge, none ever returned. They assumed, quite wrongly, that as a secret organisation there would be consequences to their discovery, now they were about to find out what that could be. Their previously undiscovered Complex was buried deep in the Ural Mountains, and it was, at this very moment, being scanned by forces unknown.

Those on Orbiter One held their breath, the 'word' on the Station, the InfoPath, had already done the rounds, and most were now aware of the contact. It seemed the whole Station waited for a response, hoping that there were others like them, castaways from their species, lost and with nowhere else to go, waiting for that miracle of rescue, waiting in vain.

From space, it appeared as though nothing had withstood the firestorms that followed the devastating missile launches, but they were wrong on that final point. Orbiter One had completed many extensive searches, and it took the best part of a year to finally find evidence of Man's survival, almost by accident they had discovered someone that had survived that hell on Earth. It now seemed that they could get no response from any form of messaging they had tried so far, what could they do now?

Perhaps this message was automated, it was impossible to tell, could it have just started up on its own? It was possible, it would explain why no one had responded to the broadcasts from the global ring of satellites. Standard Emergency Protocol

would suggest the transmission should be by radio wave transmission, onboard the Ranger, R6, they tried SEP and everything else as well, and still, there was nothing, no reply.

Could it be that these people had survived for a while, and like everyone else, they too had perished?

That too was possible.

It would be another cruel twist of fate if they were to discover yet another spurious signal, they had discovered several so far, but nothing like this one, this was too specific to be a random occurrence, and given that it had just appeared, this suggested a planned event, of course, it could still be automated, there may be no one at the other end capable of response to further contact attempts, but hopes were high, there were some positive signs, what they were searching for was confirmation, there was a real chance this was a purposely transmitted signal.

For Silent Night, it was entirely logical that someone should find them eventually, they had been off-grid for the best part of a year, someone was bound to search them out, if they were honest, they expected this event far sooner.

It was perhaps also inevitable that they would be discovered by someone not of their Government, although they could not be certain who these people actually were, they had assumed that their own Government would have come knocking on the big sealed doors first, there was silence there too.

They needed information, they needed answers, and despite their reservations, they wanted the contact. These people within Silent Night were not soldiers, nor were they politicians, they were scientists who wanted no active part in what appeared to be a global power shift, all they wanted to do was science.

## 2. At the Beginning of the End

The eight men were seated in the summer chairs looking out of the mouth of the tunnel, they were heavily wrapped in winter clothing, it was, of course, dark, it was nearly half-past nine in the evening and it was freezing cold already, but then, they were eight hundred metres above sea level, almost at the top of a mountain, and, it was September in the Urals.

The vista from the very edge of the tunnel opening was, when you could see it, spectacular, there was often a glorious night sky, full of the millions of stars that could be seen sparkling away in the darkness that was up there in the place called Space, visible in their elevated position due to there being no high cloud cover, and, at this height, there was no light pollution. Tonight though, the long view was perhaps a little misty, but generally, it was a better view than normal, the base cloud cover was minimal, that was a welcome bonus that you didn't often get this time of year, and below, in the valley, the low ground mist didn't completely obscure the snow glistening on the tall forest pines, just discernible in the moonlight if you braved the look down from the tunnel entrance.

It seemed that you could see greater distances at night than you could in the day, and it was one of those views that you never tire of, especially if you could never visit those places, on a good night, like tonight, you could pick out city lights that were perhaps three hundred kilometres or so.

Directly in front of them, they saw a bright flash way off in the distance, then another, off to the right, that appeared to be slightly further away, and within a few seconds there were another two, both even more distant, but these were different, a longer flare with a brighter flash.

The eight men were all on their feet, puzzled by what they had seen, they looked like they could be explosions, very large ones, were they missile detonations? No, surely not, it couldn't be, could it?

There was the realisation that there was a red light flashing in the tunnel, it was some way behind them, ensuring the light could not be seen from the valley floor some six hundred metres below their secretive perch. That pulsing red light meant the De-Con door was already closing and now they had less than one minute to get back to the entrance, if they didn't make it, they knew they would be locked out.

The summer chairs were tipped up and thermal drinks flasks were knocked flying, all were left where they fell as they jumped onto the electric buggy that had brought them to the tunnel opening. Now, they were speeding off at break-neck speed, travelling the half a kilometre of the tunnel to reach the decontamination access door to give it its proper name, they had to get there before it closed and sealed them on the outside, the wrong side.

The men now knew for certain that they were explosions, there was the realisation that security protocols had kicked in and the Facility was going into lock-down, if they couldn't get back in time then they would be left on the outside of the closing De-Con door, there would be no food, no water, and more importantly, no heating, it was more likely they would freeze to death than starve or dehydrate, they didn't fancy their chances on the outside.

Dimitri had his foot on the go pedal and was trying to push it through the floor, with eight men on board, the battery-powered buggy was going as fast as it could. Everyone was hanging on for dear life, if they fell off the buggy on the journey back to the entrance then that is exactly what it was going to cost them, there was no time to stop.

Dimitri zipped through the slowly closing door, the ratchet system clanking away as the rear of the electric buggy had no more than five centimetres' clearance when it squeezed through the ever-diminishing gap.

Now all they had to do was stop.

Dimitri slammed on the brakes and turned hard right to avoid colliding with the very solid, looming fast, rear wall. The tyres immediately squealed in protest at the manoeuvre, the four people on the left squealed in pain as they were thrown out of the buggy to slam into that same solid stone wall, ending up on the equally solid concrete floor. Those on the right jumped off, grabbed those unfortunates now cursing Dimitri something terrible, and dragged them, hobbling badly and complaining loudly, through the second set of closing big steel doors.

They made it, just.

There was a clunk as the door hit the stops, and the rattle of the locking mechanism was followed by the hiss of the hermetic seals, they were now all locked in, airtight.

In the corridors, the lights were already dimmed, and the red warning lights were busy whirring around and around, making a slightly annoying clicking sound as they did so, inside the Facility, like the tunnel, there was no siren.

Lockdown was completed in under two minutes, and, as per protocol, the Facility would now go dark as it disconnected from the outside world, only the hi-crypt link remained active, and all it was doing was monitoring the mayhem.

That monitoring had lasted just six minutes before it was disconnected, and they spent the next seven days looking at it, not quite being able to believe what data they had collected.

It was that same seven days later, as per ES protocol 139, that they powered back up, they re-enabled the NetWide link to find it still disconnected, and the separate hi-crypt datalink was also down. Perhaps, as Dimitri had described, and they had noted from the logged data, those large explosions were in the bigger cities in the distance, it was logical to assume that communications would be restored eventually, only after the humanitarian needs of the population were taken care of. What Dimitri and the others had described were initially two Smart detonations in the far distance followed by two nuclear detonations even further away, the first, most likely over two hundred kilometres if not more, there were no military targets that were closer. There were unseen explosions on the other side of the mountain too, if these were Smart-bomb detonations then the places hit would be



biologically active for ten to twelve days, so, to remain safe, you would wait for fourteen days to be certain it had cleared.

It was logical to assume that the Science Ministry would realise that there was a broken communication network, and they would only restore it when it was safe to do so. Silent Night could wait, they were not going anywhere, and it was unlikely that anyone was going to come to them, very few knew the Facility existed.

They checked out the viewing telescopes and were disturbed by what they found, it may already be winter-like in the Urals, but this was clearly not a natural phenomenon, the digital imaging via the scopes clearly showed a nuclear winter in progress, extra De-Con protocols and checks were put in place. They re-powered the computers and continued a minimal workload, resuming paused experiments and delaying the restart of those that could not be paused at the time of shutdown, surmising that sometime soon there would be some official contact, all they needed to do was wait. They were safe where they were, they had food, had water, had power, they wanted for nothing, except perhaps, for information.

In the meantime, the Facility safety and security protocols were very rigorously followed.

Their best guess was a global power shift, someone wanted greater control and war was the only way to gain it. It appeared from the data logs that something was not right, although to begin with it looked as if a good deal of information was collected, that data stream seemed to finish quickly. The hi-crypt link might have been severed, but the data flow clearly showed that hostilities were fast and furious and then slowed, all this was evident before the link was cut.

As wars go, this was a puzzle, but it was still sufficient data to know that something had gone seriously wrong. If they assumed the data was correct, then past experience showed that wars were often long and drawn out affairs, tactically astute, and targeted to one or two countries in the preliminary phases. Initial assessments determined the aggressor to be the NME, they were surely too small a force to attempt global domination, perhaps they had the backing of another third-party group, if so, it appeared they didn't respond when the missiles started to fly.

The mystery before them suggested that impacts appeared to be global, surely that had to be an error, hopefully, an anomaly in the data, the information showed that at one point the whole of the world was at war with each other, at the same time. Surely, what the recorded data seemed to show in that six minutes was not possible, there could not have been that much launched in such a short space of time, and worse, they knew that they had launch trajectories that would impact after the datalink was severed, they had not seen the worst of what happened, that was unsettling.

Often world conflicts have involved one or two nations on the same side, several other nations then proceed to try and fight them off and this is the order of past conflicts on the grand scale, there are often a fair few nations who manage to remain out of the conflict until dragged into it by invasion or treaties of intent or protection kick in, some succeed in keeping their neutrality intact until the situation is resolved. This time, it appeared all nations were involved against all

nations, it became obvious that treaties of intent and protection had been invoked, so not everyone was fighting everyone as such, but protecting partner nations. The result of this pandemonium meant the damage was done to all nations by all nations, and Silent Night was certain that everyone that had them, had a go at launching something.

By the time the Facility had gone dark, most of the world was already going dark too, though they did not do it by choice.

The Silent Night project had kept their power usage to a minimum, there was no important workload.

They still kept safety protocols to maximum, this was important and, it worked.

They guessed this event was coming but didn't quite expect it to be this venomous or lethal, but they had prepared for it none the less. The supplies had arrived via the tunnel road some four days before the disaster, they had stocked up on the essentials, paper, pens, paper clips, Petri-dishes, sample jars, test tubes, new lighting and the like. They brought in more material for clothing, restocked medicines, got hold of some new cutlery and around four tonnes of toilet paper, other than that, they needed little else, they grew it, bred it, then they picked it or killed it, cooked it and ate it.

Power, they had masses of, they had switched on their solar collector ring fifteen years ago and it had never given them any trouble. The backup power they had plenty of too, hydrogen fuel cells for the backup generators were already fully stocked, and all of it produced internally.

They had a whole reservoir of pure rock filtered mountain water, and if necessary, they could use natural condensation by diverting the heating system vents into the Water Collection Room, it had been tested and it worked reasonably well.

As to the air, a huge hydroponics set up saw the plants produce all that the Facility could use and more, excess they often separated, compressed and then stored. The external air they didn't use unless they ventured outside the Facility, and for most of the inhabitants that was a rare occurrence. They could go outside if they chose to, but they couldn't actually leave, Dimitri and friends went out as often as they could, most of the others chose not to. Now, of course, the outside air was contaminated, this they knew for sure and so they kept it out.

Excellent safety protocols kept their supply perfectly clean.

They were confident, there was confirmation they were sealed in airtight; they knew they were safe, they were secure, they continued with their work, expecting contact soon.

What they needed now was news, anything to tell them what was happening, who was in control, and who to report to, no news was definitely not good news.

At fourteen days after the disaster, they were woken by loud rumblings in the upper chamber and rushed to investigate, what they discovered horrified them, the viewing periscopes, all six of them, were being shaken by something on the surface. The periscopes were drilled ninety metres into the rock and went from the mountain top to the upper chamber, something was trying to rip them out of their foundations.

They knew these things were a risk, they said so at the time they were installed, these periscopes were a potential point of contamination coming in from above,

and there was a risk of something escaping from below if things went terribly wrong in the Facility, so, they added built-in safety features. Explosive bolts were fitted twenty metres up from the bottom, when detonated, they would take out a further ten-metre length upward, then a super-dense quick sealing gel in collapsible tanks would fill in the spaces, sealing the tubes so nothing got in, or just as importantly, out. Six explosions and a painful screeching noise later, they could no longer see anything of the outside, but they were sure nothing outside could see in either, or more importantly, get at them. The noises had stopped, but they were now completely blind, there was no other monitoring equipment out there on the mountain top. It had always been a seriously harsh place and they had tried remote cameras before, they lasted an average of six hours before failing, eventually, they gave up replacing them and the only option was to install these manually operated, digitally enhanced, high definition periscopes. On the outside of the Facility, there was no one knocking on the door to get in, no one trying to give them new orders, just this shaking of the viewing periscopes that suggested something was dreadfully wrong out there.

After two months of no outside contact, they had a meeting, it was decided that they needed to find more information, it seemed no one was coming to them, so they needed to go outside the Facility and set about trying to figure out what was going on.

They discussed what would be their best option, where to go, how to keep safe, how to keep in contact with each other, plans were suggested, concocted and rejected, eventually, choices were made. A five-man team would be dispatched and any point of contact would remain solely at the entrance doors, they could not risk discovery by the enemy despite the fact they didn't know if there was one, it seemed a sensible precaution, that summed them up, sensible and cautious.

A small volunteer group was formed and the date set, they would venture out through the covered Service road tunnel on foot and then seek advice from the locals as to who was in charge of what, then return and report.

The night before they were due to leave was the night the mountain shook.

It was an earthquake the like of which they had never known, there was a low oscillating seismic wave, an almost pulsing rhythmic movement that flexed through the whole mountain Complex. Everyone felt nauseous, light-headed, and there was a really strange sense that you were somehow lighter in weight, it was as if the gravitational pressure changed. For all in the Facility, it was a disconcerting sensation, prickly skin, loss of balance, certainly, the effects of motion sickness and mild euphoria, almost hallucinogenic, and at times, a sense of anxiety, of dread. It was understandable, there was the risk that this movement would bring the mountain in on top of them, the floors, walls and ceilings just seemed to wobble, it was a weird sensation. In total, there were a constant four days of non-stop movement.

It was strange that damage was light, they expected a cave-in at any moment, they had, after all, excavated a huge complex from the rock of the mountain and it can't have been that stable anymore, but it remained almost undamaged.

Outside, some huge boulders were naturally loose and all they needed was a big enough shove and they would tumble down the mountain, this quake certainly shoved them.

Inside, there was some clean-up required, small chunks of rock dropped out of a few ceilings, slivers of rock fell off some of the walls, but nothing really cracked, nothing really broke. Sure, things like plates and glasses were broken, the odd item was hit by falling debris and was damaged, but the place remained basically intact. People wise, bumps and bruises mainly, and a few stitches here and there gave the medics something to do other than issue motion sickness pills, they were running out of those.

They checked the door frames, still true.

They checked the hermetic seals, still good.

They checked the power generation turbines, stable.

They checked the solar panel alignments, near perfect.

They checked their containment rooms, still airtight.

They checked the food and equipment stores, intact.

They checked their hydroponics, no change.

They checked the animals, smelly, but generally, OK.

It seemed the biggest damage was to the reservoir, well, it wasn't actually damage, some of the water had spilt. The water had oscillated with the quake, around one-third was now outside of the main collecting tank., but they had pumped the water back in again as they didn't want to waste it, it went back into the first pool to drain into the second, eventually to naturally filter back into the main pool.

The water system was a collection of three pools, the first was a higher tier, three metres by four and two metres deep, essentially a debris cleaning tank. The second pool was a huge thirty-metre square tank some ten metres deep cut out of the natural rock, it was concrete-lined making it one of the few artificial floor coverings inside of the whole of the Facility. The water was constantly monitored and tested for bacterial and chemical contamination, and if found, it could be diverted away from the main tank. This second tank filtered out any sediments that had perhaps not been removed from the first tank, this then fed straight into the main pool. The main storage tank was a similar size to the second tank, but it was the only one from which they used the water for human consumption. To keep the water fresh, six times a day a pump engaged and pumped some of the water from the main tank back to the smaller first tank. It worked well, the water was already naturally filtered through the various strata of the rock and came out virtually pure, in the past fifty years they had discovered nothing untoward.

Now they tested twice as often and for five times as many contaminants.

Then they sent in divers to all tanks, not even a hairline fracture could be found, after all that movement it was certainly odd.

They waited another seven days expecting aftershocks, absolutely nothing at all, that was really odd.

So, eleven days later than planned, after a clean-up, a five-man group ventured outside to go and find who was in charge; and fully kitted out for winter survival, they traipsed out the De-Con exit, turned right, and headed into the darkness that was the Service Tunnel, they expected them back in around a week.

They returned in under twenty minutes.

The tunnel was blocked, there had been a cave-in, this was some three hundred metres from the De-Con exit door where they started, and it appeared that the rockfall was substantial. They considered using the heavy machinery but that meant opening some of the hermetically sealed big doors, they didn't want to risk that, plus they were not sure they could operate the equipment anymore.

The air quality in the tunnel was good, stale, but good.

The only sensible course of action was to scale the mountain walls, which meant using the Flight Tunnel and full climbing gear to get down the rock face, there were no steep slopes or even goat tracks, it was proper, full-on, mountaineering, or, you stayed put. The downside was that you needed protection not just from the cold, but from the content they now expected to detect in the air, and climbing in an Environmental Protection Suit was frankly, hazardous. The EPS offered protection from an obviously contaminated atmosphere but had limited vision and restricted mobility, it just added to the already difficult task of getting down a very steep mountainside. A slight slip from here was a rather long way to down there, six hundred metres or so, it was not survivable.

Plan A, had it worked, would have seen the group walk the four kilometres down the internal Service Tunnel to the entrance concealed at the bottom, this was where it joined the local mountain through-tunnel, and the Link Tunnel to the interior access to the Facility that was carefully hidden from prying eyes.

Somewhere around half a kilometre from this large steel doorway they would don their EPS, or sooner if the Geiger counter registered radiation in elevated levels, but they didn't get that far. They had quickly discovered that the tunnel roof had collapsed, and it looked as if there were tonnes of rubble from floor to ceiling. They did shift a few bits of it by hand, but it was obvious that a large section of the roof had given way in the quake.

It was going to take heavy machinery to clear the rockfall and they didn't know if there were other rockfalls beyond this point. The heavy machinery they had in storage, neatly parked and packed into the upper level, that, however, was not the problem. The issue was that the machinery was on the left of the entrance doors and the rockfall was on the right, that meant breaking a hermetic seal that was closer to the outside contaminants, not a wise move. Another more likely problem was that although the machinery possibly still worked, much of it was a hundred years old, most of this old construction equipment hadn't even been started for ten years or more. Perhaps their real challenge was simply that there was no longer any construction crew left on-site to operate them, all those residing in the Facility were the smart people, surely, they could work it out, after all, these mechanical monsters were fairly basic equipment; it can't be that difficult to operate them, could it?

It was the risk of a further tunnel collapse that ultimately put them off, more sensibility and caution.

So, plan A was shelved, they set about plan B.

They made longer rope, gathered the required food supplies, reset and retested the monitoring equipment, and considered waiting for the weather to behave.

It was now the middle of winter, outside, the snow could be as much as four metres deep in places, it was usually extremely windy and normal daylight temperatures would be a warm minus fifteen Celsius, and if it was proper cold then they could expect perhaps minus thirty, possibly minus forty, not good climbing weather. When you factored into that a limited amount of daylight, this climb down was going to be tough on many levels, and not just the physical one. What they didn't know was that the global firestorms were now raging, and if they did have any external monitoring equipment, it would have told them, that right about now, the super-storm would be broiling right outside their tunnel opening. They would have seen there was now no snow either, it had been blown away and then evaporated by the fast-moving horizontal firestorm winds, and right now, this firestorm was slowly climbing higher and higher into the heavily polluted atmosphere, wind speeds were horrendous, far more than any natural extreme weather event, anyone daft enough to attempt to venture outside would not be able to keep their footing for long.

The same team as before volunteered, but it was decided that the best chances came with multiple teams attempting the mountain descent. The logic was that if one team got disoriented or wedged in, perhaps even blocked and could maybe progress no further, then this group could return to the Facility to recoup their strength, restock supplies, and try again later, hopefully, one of the teams, perhaps more, would still be able to find the way down to the base of the mountain and discover the current state of affairs.

As before, communication was left at the entrance, no one carried any ID, it was another sensible precaution, they had no idea who was in control out there.

Fifty of them in ten groups of five made the initial attempt.

Plan B was simple, walk to the end of the interior Flight Tunnel to the left of the main doors and climb down the mountain, once they made it to the nearest village, they were to gain the required information and climb back up, it seemed it should be an easy and relatively straightforward assignment.

They would allow two weeks this time. The climb down would be dangerous enough, but it was the return that was going to be the more difficult and time-consuming. It was also the part that threatened the security of the Facility the most, the climbers would most likely be seen on the slow and arduous ascent, that was not a good thing.

As before, all went to the pedestrian De-Con entrance then out through the airlock and all its vacuum procedures, before marching off into the dark of the tunnel, they exited through the left pedestrian door instead of the right this time, and they lit their way with torches attached to special slots in their padded extreme weather jackets, next to these were the multi-coloured Rad Counter badges.

They passed the construction vehicles wedged into the area scooped out for them, these were just by the De-Con Access door, the other side of the Service Tunnel. Next, were the neatly parked small single-engine hydrogen cell-powered, turboprop-driven aircraft, but they dare not use them as there was no telling who or what was out there, and once more, they had no operators for these either. One aircraft seemed to have a broken canopy, probably from a rock strike during the

quake, another appeared to have collapsed landing gear on one side, and all were coated in a fairly fine covering of dust, but otherwise, they appeared undamaged. They encountered some anomalies not far from their exit point, there was a notable increase in atmospheric pressure that affected the hearing, it created a muffled rushing sound and they assumed it to be an imbalance in the ear canal that most likely caused it.

All who volunteered had not been outside the Facility at all for something like three years, others far longer, sadly they were too distracted and excited to use the proper safety protocols, they assumed things were safe enough in the tunnel, outside it would be different. They knew the risks of radiation and all had monitoring equipment on their jackets, these gave an audible signal when the Rad count changed, each person carried one. They should have sampled the air regularly as they went, but at the De-Con entrance all the monitoring equipment there told them the air was OK, it was not perfect, but then it was a tunnel and five hundred metres inside a mountain, so it was to be expected.

They simply accepted the findings.

Radiation readings were considered normal, inside the mountain they were elevated anyway, and this needed to be considered when making the risk assessment, it was naturally higher as there were several small uranium deposits in the geology, much of which was mined as the Complex was built. They were perhaps partly correct in their safety assumptions, but still, they should have guessed that something was not right, after all, they were smart scientists and they should have been looking for the obscure and the anomalous, they all missed it. What they didn't expect was the mound of silt, they couldn't miss that.

This huge mound was the full width of the tunnel, and almost to the top, it was proving difficult to climb but they had fun, it was comical to see people slipping and sliding as the silt moved when they tried to scale it. They were like children discovering snow for the first time, giggling at others misfortune and mishaps, only to discover that they could not do much better, they eventually behaved like adults and teamed up, and in due course, managed to get someone to the top. Quickly, they formed a human chain, the last man climbing to the ridge by clambering up the people who formed the links. All of them had scrambled to the top and waited at the near ridgeline, trying not to slide back down again. It took an hour to get everyone up there, the roof height to the floor should be ten metres unobstructed, but this mound of silt was wall to wall, and it stretched somewhere around thirty metres along the tunnel, and now, there were just the two metres of clearance left. Because it was liquid-like, it constantly gave way as you clambered across it, so they crawled, spreading their body weight, it was slow going, but with a whoop of delight, everyone arrived at the furthest edge of the plateau ridgeline, and with a childish 'one, two, three,' all slid and scooted to the bottom like silly school children, sliding on what felt like a river of liquefied silt. When they arrived at the bottom all were still laughing and slightly out of breath, many were feeling hot and clammy so they removed their backpacks, then, winter jackets were tossed on the ground, most people removing the torches before doing so, crucially, all the Rad counters stayed on the jackets.

Dusting themselves off they surveyed the scene, dry walls, dry floor, dry mouth, a dry throat and nostrils caked in dried silt, most looked to their backpacks and stopped to take a drink.

This huge mound of silt that must be several tens of tonnes was now behind them, and in the gloom, they could see a fairly heavy dusting further up the tunnel. They were just a few metres from the base of the mound and still more than knee-deep in the silt, it was everywhere. It remained dark though, still, they couldn't see the entrance; it was a straight line to the opening and they were sure it should be daylight.

The rushing noise in their ears was now making it difficult to think, there was a pulsing current of air too, but it was not blowing on their faces, it was dragging their discarded equipment packs and the abandoned jackets, even the people were being pulled ever closer to the entrance. There were a few worried faces, those still wearing jackets checked the badges and the levels of radiation, it was still acceptable, slightly more elevated but within tolerances. Those badges on the now sliding apparel were beginning to flash a warning as the levels increased further, and as the discarded jackets got closer to the mouth of the cave, the faster the warning flashed, the louder the audible alarms became.

Then people started to collapse, more worried faces, concern for their colleagues. There was the realisation that the rushing sound was louder, drowning out the now screaming alarms being whisked toward the entrance. The people were breathless and lethargic, some realised the air must be toxic, the air was low in oxygen, and probably high in carbon monoxides, and had they taken any, most other readings of it would also be off on the normal scale of things, but most were far too confused to care.

Now it was too late, more collapsed and then expired in the silt that was the partial remnants of the local villagers and the forest that surrounded the mountain, some of the silt was the remnants of humanity from other regions and blown here from thousands of kilometres away.

Some valiantly tried to re-climb the silt mound, it was all in vain.

Had they been thinking straight, almost impossible when hypoxia sets in, they would have donned their Environmental Protection Suits, they all carried them, they could have at least worn the head coverings, if they had worked it out then they should have used the safe air within them, but they didn't, they couldn't, monoxide poisoning had slowed the thought processes to a crawl.

All fifty perished.

Outside, the firestorm raged and eventually claimed a few more victims to add to the funeral pyre currently circling the globe. It created a pulsing partial vacuum as it sucked out more air than it let back in, this also pushed in more silt on the left side, and some hours later it would drag out some of the bodies on the right as they rode the tide of moving silt near the entrance to the open tunnel.

Other bodies were just too far from the entrance, eventually, the moisture would be drawn out of them, and in the coming days they would be wholly dehydrated, and in less than a week, they too were just more dust on the floor in the tunnel as the dried flesh just crumbled. The firestorm continued to move slowly skyward into the higher reaches of the atmosphere, over the next few days the winds and



pressure in the tunnel increased, the now-empty winter clothing and discarded EPS suits were dragged out of the tunnel or just buried under more piles of silt, and like the rest of mankind, any evidence of the fifty was erased.

Inside the Facility, work continued, they had changed what they were doing though, now they were actively working to preserve what they had, to make it more efficient, to make it last.

The two weeks came and went, they allowed still more time.

Nothing.

They all met again in the auditorium, it was decided by vote that they should try again, this time should be better as the weather would have improved some more. They hoped that they could perhaps use some of the climbing gear from the previous attempt, it could still be in place, hopefully, this would make any descent, and the return, quicker.

Another fifty volunteers went into the De-Con Chamber, another fifty had fun trying to climb the silt mountain in the dark and slide down the other side, one or two nearly drowning as the still liquescent silt attempted to swallow them. They puzzled at its consistency, it was exceptionally fine particles, it clung together with what appeared to be a static charge, other than that, it was, to all intents and purposes, fine powdered dust. It had no real cohesive properties whatsoever, this made it difficult to press forward, and once over the mound, to walk in, in fact, they waded waist-high through it, it was like a thick mud bath with no water at all. It clung to you if you put a gloved hand in it, and as soon as you moved, it fell off, you didn't need to shake it.

There was a hissing noise in their ears, almost like steam escaping somewhere in the distance, the Rad badges showed that levels were acceptable, the air was stale, it was dry and difficult to breathe, and still, they moved forward on mass. The noise got louder, the air was now drier, and the temperature had increased, some realised it was actually hot, it should be cold, it should be freezing, that should have set off their alarm bells, and although they didn't register it, their previous sensibility and caution was also strangely missing.

At around two hundred metres from the tunnel entrance, there was a noticeable deep orange glow, it was a bit late for sunrise and too early for sunset.

The noise in the ears made them stop, it hurt.

The air was now burning in the throat and in their lungs too.

It was about then that a few fainted, and others realised that the quite strong breeze was not a breeze at all, it was almost sucking them out of the entrance.

Most stood there and could not help themselves as they stumbled forward, the outrushing of air pulling them towards the entrance to be whipped away in the winds being drawn up the side of the mountain. Others stumbled and fell where they stood, their knees no longer able to support their weight as the muscles were deprived of the oxygen in the bloodstream. Smiling at the futility of it all, they would pass out, eventually to expire from oxygen deprivation with a stupid grin on their face and their dust encrusted lips slowly turning blue.

In due course, every one of them was dragged out to join the maelstrom, none returned, not whole anyway.

Another month passed, another meeting was called, new decisions were taken and bigger groups were suggested, there was no shortage of volunteers, life inside the Facility with its lack of news and no distractions was driving them crazy, there were only the same people to talk to about the same nothings, and many now actively wanted out, no matter the risks.

The groups left the next day, they took the same left turn out of the De-Con door and it was still in the pitch black except for the personal torch lights bouncing all over the place. This group were more cautious, air samples and Geiger readings every fifty metres were taken, they noted the construction vehicles, the parked aeroplanes, the silt on the floor, and then they had their encounter with the silt mound.

They checked it out carefully.

There was no light from the other side, but they were still perhaps three hundred and fifty metres from the entrance, this huge mound seemed to fill the tunnel, so no light made sense. The silt was now almost touching the eight fifteen seater planes parked to one side, the new explorers worked their way forward as two separate groups, one on each side of the mound. Their logic was that it should be lower at the ends, perhaps with enough room to climb through if the tunnel was blocked in the middle. They struggled to get up the slope, the silt was constantly moving when you put pressure on it, it was a highly unstable substance, but still, they managed to get to the top by laying two men down on their backs, side by side in the silt and the next pair climbed up them to form the next link, putting their boots on the other's shoulders, the next pair climbed these, and another pair followed, and another. They got everyone to the top and crawled on their bellies looking for a way through. They were in luck, there was a crawl space that opened up a bit the further you went in, ropes were used to pull the human ladder up to join the rest of them on the very roof of the tunnel. It was difficult to move on this stuff, it was like a thick soup but without the water content, they used their EPS to spread the weight and would roll off it and throw it ahead to keep going. Eventually, after what seemed like hours, the ridge of the mound was found, and both groups seemed to arrive at the same time, each could see the others torch lights across the wide tunnel.

They each sent a small group ahead fifty metres to sample the air and check the Rad count, the shouted response was that all was in order, but it was still dark with an eerie orange glow just like an early sunrise. That was not possible, the sun didn't rise this side of the mountain at all, and sunsets were rare, there was usually too much cloud.

It had been hard work, but both groups had managed to scale the mound with lots of amusement and hilarity along the way, they too had slid down the other side to eventually reassemble in the centre of the tunnel. They waded thigh-deep in this dry, clinging, and exceptionally fine silt, as once more they resampled the air. They could see it was not right, but then, it rarely was in the tunnels.

The Rad badges showed Scale 4, this was acceptable, 5 would have been better, or even nothing recorded, but they had registered nuclear detonations as well as smart, and they knew all about the local rad count in the rocks, so it was no big surprise really.

They continued onward, chatting amongst themselves as they went, they had realised the air pressure was off, as they were high up on a mountain it made sense that low pressure was normal, but this hurt. The brain physically ached, they forgot the all-important air sampling rule they had made, and it all went inevitably wrong from that point on.

They trudged forward, one hundred smart people becoming more stupid with every wading step they attempted to make, and it got worse with every rasping breath they tried to take.

Laughter followed the sight of people falling over, then they laughed at themselves as they too fell over, weak at the knees and daft in the head, hypoxia followed.

Those that were conscious and dragged the last seventy-five metres to the tunnel entrance, had not a care in the world; outside of the tunnel, the world cared no less for them as they were sucked upward by the rampaging storm winds, the copious quantity of dust and debris in the air stripped any exposed flesh from the bones in seconds as the now lifeless forms went whooshing skyward, slowly being put through the shredder in the accelerated updraft.

This group also fell victim to the firestorm and its monoxides. It was now swirling high over the mountain top at some five hundred kph, drawing the silt-laden air upward as it did so, dragging more victims to join the rest of humanity, beaten to a pulp and ground to dust in the ashes of war.

In the Facility, they waited and waited for months, not daring to send any more of their number to try and discover the truth, something was wrong, very wrong.

There was nothing of any use, no reconnection of the NetWide or the secure network, no return of the volunteers, no one knocking on the door demanding answers.

Were there new people in control?

Could it possibly be an enemy force?

Perhaps the search teams were captured, they were not soldiers, they were scientists, someone would have caved in and given the Facility up, but still, no one came, so perhaps not.

Conceivably, they had all fallen to their doom on the mountain descent, none were experienced mountaineers or even amateur rock climbers; perhaps that was it, they simply never made it down, at least not in one piece.

Wisely, the remainder of the Facility had unanimously decided it must be dangerous out there, accordingly, they voted to stay put.

Now, nearly one year later, this potential danger might have been scanning their lair, there was nothing they could do except wait for the inevitable, in the corridors and workrooms there was no panic though, just calm acceptance.

Then, finally, they picked up a hint of the radio transmission from the satellite ring, it was something of a relief, could they be rescued at last?

### 3. Silent Night

It was sequestered deep in the Ural Mountains, five kilometres by road from the small town simply called Valiant.

Valiant wasn't a particularly brave place, the town wasn't a particularly pretty place either, and despite its name, no recorded history suggested where the name came from, so, perhaps, someone somewhere just decided it sounded good.

Its surroundings were pretty though, or it used to be, pre-disaster, the glorious town was nestled in a rare lush, forested valley, and the small town of Doblestnyy, as it was known in its mother tongue, was only significant because they built a four-kilometre road tunnel through the mountain rather than go around it. The townspeople were fed up driving to the nearest major town, it was the other side of the mountain range and the nearest passable spot was twenty kilometres in one direction, and in the other, it was forty, in any case, it was still a further forty kilometres beyond that to the nearest town. If you stayed on the same side of the mountain, then it was closer to ninety kilometres to a reasonable size town, so it made sense to go around the mountain. Actually, it made more sense to go over the top, it was a shorter distance, but sadly, the terrain just made it impossible, and impassable, so they decided on a more practical route, something more direct, they decided to dig a tunnel straight through the mountain instead.

There was no real architectural help, there was certainly no Government approval, they had no proper digging or tunnelling equipment to speak of, just a couple of old and battered tipper trucks and a few tatty paint-flaked tractors with big rusty and dented bucket shovels on the front.

What they did have were many willing helpers with a good old-fashioned community spirit, what helped most was several tonnes of high explosive that they used in very small doses.

It was a mammoth project for this small town, and it did take them three years to complete the four-kilometre distance, but they had done it all by themselves, it was more or less in a straight line, and it seemed safe enough, not that anyone was going to pay for a structural survey to prove it. It had cost them next to nothing financially, it did, however, cost the lives of six of their townsfolk in various accidents and incidents, generally, though, safety was good, they were careful, but it was the small, unexpected events that caught them out, the small roof collapses, the mechanical failures, the reduced visibility in the dust and the dark, and all decided that it was worth it in the long run.

The original locals knew of the secret scientific research centre, it was simply known as the Facility, most of them helped build it, most of them had completed the tunnel too, one project was an extension of the other, though, for different reasons, there was a difference in the level of security required.

When the Silent Night Project started, its official title, and after a suitable inspection and safety assessment, the Government smoothed out and widened the Mountain Tunnel road for at least the first half a kilometre through it, then they started a new tunnel, this one veered off to the right and went deeper into the heart of the mountain, not straight through it. They tunnelled during the day and the night, digging, chipping and blasting to some four kilometres into the centre of the mountain. The new road they created climbed steeply, and they scooped out the blasted rock by the truckload, drove it back through the existing tunnel and dumped it down the steep sides of the valley, no one noticed.

To retain some level of secrecy from distant spying eyes, they disposed of this waste material mainly at night, the trucks taking the spoil away had specially adapted headlights so they could see where they were going but could not easily be seen from above, satellites were always looking at every part of the globe, some were rival nations, some were WC administered, all were looking for anomalies and transgressions from the rules and regulations.

The townspeople of Valiant were told it was a classified project, that they should be honoured to be chosen to be part of it, and they were, these were a fiercely proud local people, loyal to the region, and for a while, they enjoyed the work, enjoyed the pay, and revelled in the new lifestyle that this coin allowed.

The townsfolk of Valiant realised far too late that there was a veiled price to pay for this new-found wealth and communal status, and that price was not just their silence and the limitation of freedom of external contact, now there was a permanent restriction of movement, before, they were told it was temporary, they were now trapped in their own town, prevented from leaving.

However, they were treated very well, they were well fed, and they were also well paid, all had more luxuries than anyone in the town had ever known, so it wasn't all bad, and as they had nowhere other than the town to spend their newly acquired wealth, inevitably, Valiant became more affluent, it prospered.

The Mountain Tunnel became a restricted entry at the other end, there was a permanent security presence, and 'they' suggested to all wanting to use the tunnel, that an apparent rockfall was blocking the road partway in, they should turn around and go away. This security personnel also implied that you could not enter the town in any case, the other side of the tunnel was declared as a World Council Environmental Protected Zone (WC-EPZ), a strictly controlled area in which people were expressly prohibited. No one ventured the long way around to find out if the town was OK or not, any friends once there had been incommunicado for months, years, anyone making further enquiries was told the town was within the EPZ, so it had been emptied, its residents moved elsewhere, relocated, at World Council expense of course.

Every so often, a new group of people would pass through the town under the cover of darkness, and then be driven on through the old winding forest road to eventually disappear into the tunnel, never to be seen again.

Still, the truckloads of spoil continued to run as soon as it got dark and ended just before first light, all had to be back in the tunnel before daybreak.

Winters meant long nights; summers meant short ones.

Twelve years, it took twelve years and millions of tonnes of rock, countless thousands of truck journeys before the construction work was finished, then there were four levels of 'carved out of the mountain' caves, for that is what they were, caves, big ones, fancy ones, but still just caves.

These places consisted of smooth polished stone floors, carved smooth walls and ceilings, and tens of kilometres of cable, tubing and ducting for the best scientific laboratories for thousands of kilometres.

It took a year just to furnish, deliveries, unlike normal, were not made under the cover of darkness, the trucks were driven through the town and into the tunnel, and once inside, a spoil truck would be waiting just the other side of the Facility Service Tunnel exit. The delivery truck driver had very specific instructions, park at the roadside restaurant, leave your keys with the waitress, eat, relax, when your keys are returned you go back to the depot, the vehicle will be empty, the food was free. Someone from the project would collect the keys, take the truck into the tunnel and turn off right and go up the new tunnel, a spoil truck would continue out the other side to dump spoil elsewhere. Once the truck had made its deliveries, it all worked in reverse, one empty spoil truck would enter the far end of the tunnel, and a different truck, the delivery vehicle, would exit some five minutes later from the other, no one noticed.

Then the deliveries stopped arriving, the workload decreased to nothing, and the restrictions on the townsfolk were still in place. The children of the town were now all grown up by this time, and sadly, there was no making of a new generation, the women of Doblestnyy could not get pregnant, had not been able to for years, and the old, they were treated well but didn't seem to survive even the slightest illness, and over time, the town of just under three thousand, slowly, but naturally, died off.

By the time of the global disaster, the original townsfolk and all of their offspring were long dead and buried, also, the Facility was already approaching one hundred years old by this time, it was very settled, and more importantly, still a well-kept secret, managing to remain hidden from the rest of the world.

The old town remained occupied though, it was full of friends and family of those in control of the UCRF, and many Government ministers used the location as a holiday home, most never knew of the secret location right on their doorstep, all they knew was that they were enjoying a nice location, a simple but pleasant collection of accommodation units with well-stocked food stores and some of the best pine and fir tree forestation in the land. The road tunnel though was strictly out of bounds, there was, apparently, some radioactive deposit in the tunnel that was very hazardous, as a ruse, it worked rather well.

It took a while, but the creeping death that was the nuclear nanopoint got there in about three days, by the eighth day, all but twelve of the six hundred new residents had perished, and that dozen would only linger on for another day or two, and before long, Valiant was itself silent, and not just at night.

The firestorm was already raging, this proceeded to remove any evidence of Doblestnyy, and whilst it did perhaps put up a valiant resistance, like everything else, it conceded defeat in the end.

The Facility though survived intact, they were deep underground and buried inside the mountain, unaware of the mayhem going on outside of their closed doors, the nearest flash burst of EMP was two hundred and twenty-five kilometres away and it never reached them. Had there been an explosion closer, it was very doubtful that any electro-magnetic-pulse would have penetrated that far into the mainly granite rock that naturally protected the Facility.

Excellent safety protocols saw the filtered water checked eight times a day, every day, and the mountain did its job, it naturally filtered everything including the biological.

The nanopointer though was microscopic, and certainly not natural.

Within hours of the poison reaching the town, it was settling on the mountain rocks, the nuclear rain washed it into the natural waterways and the mountain filtered most of the crud out of it. It took a further four days before any of this made it to the first water pool, the detection systems went crazy. Immediately, the water barrier went up to stop any contaminated water from reaching the second pool, and the science of detection began in earnest. This second pool was to be emptied as a precaution, and the water from the first was diverted down the old subterranean river tube, then they flushed the tank out with water from the second pool before it was emptied.

It then took some agonising eight hours before they discovered this new nanopointer, they re-tested their findings, catalogued it, named it Venenum Dimitrius (after Dimitri!), then set about finding out what it did and if they could stop it.

They discovered it was not pleasant, or at least a dozen unfortunate lab rats did, the rodent kind. They also discovered that there was no cure for it, they could not stop it dissolving the liver and kidneys, which it did rather slowly and painfully, the rats they euthanised, it was clear they were distressed, and they could not help them beyond putting them out of their misery.

The water was sampled every hour on the hour, and another twenty-three days later, the effect of the poison was naturally neutralised.

They still had no idea how to cure this, they couldn't filter it, they couldn't treat it either, all they could do was detect it. It was unfortunate that another six days after this occurrence, the water from the natural mountain supply was reduced to just a trickle, the second pool was, by that time, only one-tenth full. There was sufficient water in the main pool to see them through for several years, and if the water continued to flow, albeit slowly, then it would stretch even further. They enabled the condensation system, it wasn't as much water as the mountain provided, but it would keep the pools topped up, and they knew it was clean.

The mountain Complex was an impressive setup, once they had completed the four-kilometre Service Tunnel then there was a continuation of a natural cave that became a five hundred metre serviceable runway for light aircraft. The mouth of the tunnel was most likely an old waterfall, possibly millions of years old, and it was the old waterways that provided some of the chambers that the Complex was built upon. In between the two tunnels they built the secure entrance, this would provide huge doors that could be hermetically sealed on both sides, one for the

road, one for the runway, also, they built pedestrian access doors, these were the same specs as the main doors, but much smaller.

The Service Tunnel climbed at a ten percent incline, it was quite steep for the trucks but necessary, otherwise, they needed far longer tunnels and the geology was not suited to that. They tunnelled deeper into the interior of the mountain range as they created the storage and accommodation areas, they went deeper again for the workrooms, and deeper still for the agri-centres.

The top was for storage, fuel stocks, dry food stores and material storage, and by comparison, this section was the smallest of the four levels, just one hundred metres squared. It also had the all-important doors that enabled the Facility to cut themselves off from the outside air if they chose to.

Level Two was for accommodation and administration, it was where they built an auditorium, the offices, the sleeping accommodations and the food halls. This gave the upper Level structural integrity, bigger spaces were dug out underneath of the smaller ones on the top, it was normal to do it the other way around, you built from the bottom up, but the principle was the same. Level Two was three times the size of the Level above, three hundred metres squared.

Level Three was a similar size and they hollowed it out once Level Two was complete. These were the workrooms, the science labs and the power production facilities. It housed the solar array, it housed the turbine halls and the backup generators, it was the only Level that was connected to all the others via cable ducts and piping. It was the area of greatest risk of incidents, as a consequence, the walls were wider, the floor and ceilings were thicker, and the important shielding and seals were not just doubled but quadrupled. They were taking no chances of an accident or incident rendering the whole place useless, they wanted a permanent use from this Complex no matter what event befell it. There were airtight doors everywhere, all who worked within were well aware of the risks of a contaminant breach, in an emergency event you would be locked in and left to die, it made you extra cautious when handling the really deadly stuff, not that there was much of it, what toxins they did have were mainly natural, that didn't make them less deadly.

Level Four was made into large pockets, they discovered a natural underwater lake in the heart of the interior, water with no impurities at all, they decided to retain it and add two more pools for collection and filtering, they took the precaution of building a disposal system that followed the natural watercourse, it did eventually come out at the bottom of the mountain some fifteen kilometres away, a natural spring pool that only a few locals knew existed. It was dubbed locally as the waters of life, some called it the fountain of youth, but it was nothing more than naturally pure and exceptionally filtered, mountain water.

They created hydroponic pools for growing crops, created fields for animals to graze, and planted trees to filter the carbon dioxide that the eventual inhabitants of this place would expel. This wooded area was the lungs of this underground world, it was calculated that it should be able to provide more than enough oxygen for the proposed five hundred people required to man it, to be able to absorb all the CO<sub>2</sub> they, and the animals, could expel. All told, this area was fifteen pockets including the water pool, there were six small pockets of more or less fifty metres



squared, four were seventy-five metres square, three were an impressive one hundred metres squared, and the wooded area they had allowed a seventy-five-metre width, a two hundred and eighty-metre length, with a height of forty metres. It was an impressive hall with a huge supporting rock pillar every seventy metres to provide stability, location-wise, it ran alongside the rest of the Complex. Surprisingly, it wasn't cold, and it wasn't damp, the temperature rarely varied by more than one degree Celsius, and the humidity only changed when they modified the airflow. It was a micromanaged environment and it needed to be, this was what they needed to be able to do to seal themselves off from the outside world, they had to rely on this very natural CO<sub>2</sub> scrubber and O<sub>2</sub> provider.

The furnishing of it was impressive, people were required to live, work, and die here, so it needed to be comfortable, no expense was spared.

There were some pretty fancy bits and pieces to this Complex, not least of which was the natural cave tunnel they turned into an aircraft runway. It had all the latest in computerised landing equipment, and it needed to, the roof height was a mere ten metres and most tailplanes of the aircraft to be used were five metres from the ground, there was not a lot of room for pilot error. The system was fully automated, on the approach the aircraft would pick up the beacon and then the computers did all the work, flying the craft in through the mouth of the tunnel. There were three arrester cables, and a catch net should things not quite go to plan, the rather bizarre thing was that the tunnel was never used, except to bring in the aircraft in the first place, and other than that, it served no operational function, people were not going to come visiting, and no one was going to leave, they were never allowed to.

There was a state of the art auditorium, it had automated lighting, digitised sound, holographic projection, the latest in everything, other areas for relaxing were constructed, this gave views of the hydroponics, the fields, the trees and the water pool, they even constructed a heated swimming pool, a luxury the president of the UCRF did not have at his residence. For heating and lighting, it had the latest in technological advances the World Science Council had on its books, plus a few bits they didn't have and wouldn't get.

Their solar array was a room full of mirrors that reflected the light generated from the lamps powered from storage batteries, and that perpetuated and became self-sustaining, should it fail, then there were hydrogen fuel cell generators for backup. This system had been tested and worked well, they had manually shut down the solar array and allowed the batteries to deplete, fired up the generators and switched the powerful lamps on again, they were able to switch the generator off in under six hours, it used just two hydrogen fuel cells to achieve it. This internal solar-generated power then fuelled the water pumping system, some of this was syphoned off to be pumped through a turbine to generate more power. This created heat, the heat drove more fans, these fans drove another turbine, that turbine produced even more power, and more importantly, generated an airflow that enabled the air to be filtered and pumped to the hydroponics, in turn, this allowed the used air to be converted back to oxygen-rich by the plants, and eventually, it would be reintroduced into the airflow for the human residents to consume.

It was a simple but clever concept, with some very clever and more complicated mechanics to make it all happen, and all without a single ray of sunlight. In total, top to bottom, the Facility was a modest ninety metres in height, but it covered a vast distance through the mountain, but it was practical, functional, built to last far longer than its occupants were expected to live, it functioned well. The localised mountainous region had not seen volcanic activity in an estimated 100,000 years, and seismic activity had never been recorded, it was a stable area to build this Complex, and what helped in choosing the site was that it was remote too, the biggest factor by far was the illegally built tunnel. The one small town was of 3,000 inhabitants, and it was one kilometre from the road tunnel entrance and there was nothing else for at least forty kilometres on either side, it was perfect. The town of Valiant was five kilometres by road from the front door entrance to the Facility, and just over one and a half kilometres from the hidden internal tunnel lower doors, but it was only six hundred metres straight down the face of the mountain, it was a steep drop. The mountain itself was steep, very few climbed it, and all knew better than to try and enter the Facility via the old waterfall tunnel, they would not be welcomed with open arms that was for sure. These towns' people would be used as an involuntary labour force, they were already used to working within the mining industry, it was the biggest employer in the area, and the men of the town who worked in those mines had built the road tunnel themselves, it took them years, but they managed it. To work on the Facility, they would be rewarded with good pay and good living conditions, but they would, like those employed to work in the Facility itself, never be able to leave. Those working at the Facility were aware of the conditions of entry, the townsfolk who built it were left to work that out only when it was too late to do anything about it, for some, the good lifestyle that followed was not adequate compensation. The Government controlled all access to the area, it was one of the few places with any decent forest left, global weather patterns had destroyed what there used to be in the way of localised forestation, so the UCRF declared it a protected area and sealed it off. It became a designated WC-EPZ, although it was controlled by the national Government, this allowed them to be able to keep the Facility a secret, and for the UCRF, it all worked out rather well, they even managed to set up a small scientific laboratory to monitor the forest and the indigenous population, all to make it look perfectly innocent and above board. It worked. The Facility was planned in minute detail; it was finished with that same attention to detail too, and all who worked within it knew it was a lifetime job, you didn't leave under any circumstances, you were officially declared dead if you worked in the Facility, all emotional ties with family and friends were severed. It was much the same on Orbiter One, it was also a secret from the general public, the World Council knew it existed, they had paid for it, but you still couldn't leave, but there, on Orbiter One, you were not declared dead.

For both places, it was a vocation without vacation, and you were there for the rest of your natural lifespan, but at least Orbiter One was mobile, there was a chance of leaving the area even if you couldn't leave the project.

Orbiter One was in Space, its location was more than remote, there were no seasons to contend with just an empty vacuum outside of its force shield protected walls, the view though was more than breath-taking, to see that many stars was awesome, to see the planet below was awe-inspiring, there were not many who got the opportunity to enjoy that view.

Silent Night was also a remote location, it did have some severe weather during the winter months, summer was just about OK weather-wise, but the views from the mountain were also breath-taking when you caught a glimpse of it through the low clouds, the ground mist, or the blizzard conditions, it was a shame that very few bothered to take in that view.

In both locations the work was varied and valid, all at both sites were fully trained and competent scientists and technicians, specialists in their field, they were doing what they did best, for what they believed in, generally, they did it for the science, for the discovery. There was perhaps some sense of national pride for both groups, and for Orbiter One, made up, as it was, of multiple nationalities, they created a new nation, the Station was its own entity, independent of identity, loyal to the World Council, the Science Council, those aboard doing their job, not for the fame, as there wasn't any, but for this new sense of national pride, dedication to the Station, the goal to further the expansion of mankind to the stars, and simply to be known as one of the first, a modern pioneer.

The arrival of three RSVs was the first new blood the Station had seen in over a year, no one, except the Cargo flight crews, ever left it, and even they were restricted access to what would be considered as a normal life when they were Earthside.

For Silent Night, new blood was only added when the old were carried out in a wooden box, well, it was actually a composite silicate, but it did have a nice, polished wood effect. The truck with the new staff arrived at the lower tunnel entrance and dropped them off, it picked up the sealed caskets and carried on out the other end of the tunnel. The new blood walked through the interior tunnel and entered the big doors that sealed shut behind them, the town of Doblestnyy was the last they saw of civilisation as they once knew it, and there was the dawning realisation that to re-join that civilisation just passed, you would have to be in one of those wooden effect caskets.

It was what they had all signed up for, agreed to, they knew the conditions of entry and most of them were happy doing it, they now worked in a top-class scientific environment with a small group of the top in their field, a collection of highly knowledgeable scientific minds, they now did what they were born to do, science. However, it was a contract that was not re-negotiable, the major clause was you remained in the Facility, it was not until death you departed.

# Glossary

## Silent Night

AAN – **A**lliance of **A**frican **N**ations, a territorial region

ACD – **A**irlock **C**ontrol **D**oor, a two-door access way, the ship on inside, space on the other, a buffer in between

ACS – **A**utomated **C**ontrol **S**ystem, a sort of autopilot for the RSV

ALS – **A**utomated **L**anding **S**ystem, auto guidance for aircraft landing

ATD – **A**udio **T**ransmission **D**etection

ATP – **A**s **T**o **P**lan, to the building or machine specification logged with the authorities.

AUEFI – **A**dvanced **U**nified **E**xtensible **F**irmware **I**nterface

BFM – **B**reather **F**ilter **M**ask, a lightweight mask with filters and no air bottles

BLAC-T – **B**oot **L**oad **A**uto-**C**onfiguration **T**able

CDM – **C**onserving **D**efferral **M**achine, the chilled food cabinets in the Food Halls.

CoM – **C**ertificate of **M**arriage

ComSys – **C**ommunication **S**ystem, often nothing more than standard Radio equipment, the modern alternative was digital line of sight transmission

DaRT – **D**ata **R**etrieval **T**erminal

DDRP – **D**iagnostic **D**rive **R**ecovery **P**rogram

DoS – **D**enial of **S**ervice, a cyber-attack, the host being bombarded with data blocking use of the network

DPRS – **D**eep **P**enetrating **R**esonance **S**can

EMP – **E**lectro -**M**agnetic **P**ulse, a shock wave capable of disabling/ destroying electronic equipment

EP – (button) **E**ngage **P**rogram (in the DR12)

ESP – **E**mergency **S**ituation **P**rotocol (regulations) used by the Silent Night facility

EPS – **E**nvironmental **P**rotection **S**uit (also used as a space suit)

EPS – **E**nvironmental **P**rotected **Z**one

ERT – **E**mergency **R**esponse **T**eam

ETJ – **E**xternal **T**ank **J**ettison, the automated procedure to detach the External Fuel Tank from the RSV and other craft that had them

ET – **E**xternal **T**ank, a fuel tank fixed to the outside of the RSV for launch

ESB – **E**mergency **S**tation **B**roadcast

EuF – **E**uropean **F**ederation, a territorial region

FC – **F**light **C**ontroller, the person in control of external flights

FED – **F**light **E**ngineering **D**epartment

FPS – **F**light **P**ressure **S**uit, an internal flight crew space suit

Freebie – A free trip on an RSV, often a reward for services rendered

FSG – **F**orce **S**hield **G**enerator, simply, the generator that produced a forced protection field

FSS – **F**ire **S**uppression **S**ystem, automated halon gas safety system to combat fire.  
GCR – **G**alactic **C**osmic **R**adiation  
GCV – **G**round **C**learance **V**ehicle, an earth (soil) moving vehicle  
GPMU – **G**as **P**ropelled **M**anoeuvring **U**nit, also known as a Crew Crab  
GovSpon – A government sponsored flight of an RSV, often to perform experiments  
GSP – **G**lobal **S**ecurity **P**olicy  
GUIPT – **G**lobally **U**nique **I**dentifying **P**artition **T**able  
HazMat – **H**azardous **M**aterial  
HoD – **H**ead of **D**epartment  
HoS – **H**ead of **S**tation (pronounced hoss)  
HRI – **H**igh **R**esolution **I**maging  
HSA – **H**igh **S**ecurity **A**larm, a state of Alarm higher than the normal levels of alert  
HUD – **H**eads **U**p **D**isplay, a digital display projected on a screen, often a helmet visor or windshield  
ICA – **I**ndian **C**ontinental **A**lliance, a territorial region  
IFG – **I**nternal **F**orce **G**enerator, a small device designed to stop rapid deceleration being painful or deadly  
InfoPath – gossip, the Stations grapevine of information  
IRIS – **I**ntelligent **R**etrieval **I**nterface and **S**torage system, the computer storage network  
ISA – **I**nternational **S**pace **A**dministration  
Joyride – on the RSVs, a trip in which the passengers had not paid for a ticket  
LAN – **L**ocal **A**rea **N**etwork  
LED – **L**ight **E**mitting **D**iode, a small, low powered light bulb  
LG – **L**ow **G**ravity, sometimes Low-G, usually this was 80% of Standard Gravity  
LLC – **L**ocal **L**aunch **C**ontroller  
LOCS – **L**arge **O**bject **C**ollision (detection) **S**creen  
LPS – **L**ab **P**rotection **S**uits, these have ceiling mounted piped air supply  
M.A.D. – **M**utually **A**ssured **D**estruction, an old concept of the Nuclear age, no one side had a tactical advantage, if one side intended to destroy the other, they would, in turn, be destroyed  
NCMP – **N**et**W**ide **C**ontrol **M**essage **P**rotocol, commands that are directed at servers and routers  
Netpad – a small handheld computing device, like a tablet  
NetWide – the common name for the internet on the Planet  
NME – **N**ew **M**iddle **E**ast, a territorial region  
OAS – **O**bject **A**voidance **S**ystem  
OM – **O**rbital **M**anoeuvring engines, directional thrust engines for steering  
O-R – (mess hall) **O**ther **R**anks, those not designated as A on the Station  
Papcrete – an alternative to concrete, a solid setting expanding foam  
PD – **P**re-**D**isaster, before the firestorms  
PFC – **P**re-**F**light **C**heck, a set of checks necessary before any flight  
PTV – **P**ersonal **T**ransport **V**ehicle

RAD – **R**emote **A**ccess **D**evice, a remote device to access a vehicle entry door or building entrance

RSV – a **R**eusable **S**pace **V**ehicle

RTD – **R**apid **T**hruster **D**eceleration, slowing forward motion quickly using reverse thrust

RTV – **R**apid **T**ransport **V**ehicles, hydrogen fuel cell powered

SC – **S**tation **C**ouncil, the governing body of Orbiter One

SE – **S**tation **E**ngineering (Department)

SEP – **S**tandard **E**mergency **P**rotocol (or **P**rocedure), a term used for many things, generally, a fixed set of instructions to be followed in an emergency situation so that everyone knows what to use, or, is used.

SecNet – **S**ecure **N**etwork on the Station, used for internal private conversations and items deemed sensitive

SFC – **S**pace **F**light **C**ontrol (Department)

SG – **S**tandard **G**ravity, 1ATM, 760 Torr, 14.695psi

SimGen – **S**imulation **G**enerator, used to train the DR12 pilots

SOL – **S**hift/**S**ection **O**perations **L**eader (usually called Soli)

SPE – **S**olar **P**article **E**vent radiation

SRB – **S**olid **R**ocket **B**ooster, a rocket fixed to the RSV, filled with a solid propellant (not a liquid)

STT – a **S**ecured **T**ransmission **T**unnel, a private network connection

StatNet – **S**tation **N**etwork, the internal information network on the Station, open to all users

StIcker – **S**tation **I**nternal **C**ontrol **R**oom

SVE – **S**pace **V**ehicle **E**ngineering (Department)

TFD – **T**erra **F**orming **D**epartment

TVP – **T**errain **V**irtual **P**rojection, a digital representation of terrain immediately outside of the vehicle

UCRF – **U**nited **C**hino / **R**ussian **F**ederation, a territorial region

UHD – **U**ltra **H**igh **D**efinition, usually, an intensity level of a DPRS scan, or, of a photographic scan

UFA – **U**nited **F**ederation of the **A**mericas, both North and South America, a territorial region

VA – **V**ideo **A**udio, often a VA room, (cinema), or VA Carts, a cassette with a motion picture (movie) or music

VETOL – **V**ertical **T**ake **O**ff (and) **L**anding

VidBook – A handheld Video playback device, a Tablet or Computer Pad.

WC – **W**orld **C**ouncil, the governing body of planet Earth

WSC – **W**orld **S**cience **C**ouncil

xHero – **E**xtrême **H**azardous **E**nvironmental **S**uits, super protection suits designed for extreme conditions

## About the author –

Born in 1961 in London, England, he moved near to Bristol in the summer of '69 and recalls seeing the grainy black and white images of the first moon landing as it happened, it was an exciting time of discovery. Cliff was already an avid reader of Science Fiction by then and brought up with the excellent BBC TV series Doctor Who, which he vividly remembers watching in black and white in the mid-'60s, (hiding from the Cybermen behind the sofa!), and, reinforcing the Sci-Fi adventure with other TV series in the 70's and 80's with the likes of Blakes Seven, Quatermas, Day of the Triffids and more.

He left school for college, studied catering, became a chef, and started work for the MoD for a while, which is when he began writing just for fun, essentially just scribbles in a notebook (the paper kind), none of which have survived to tell any tales.

He got married, to Caroline, they had children (2 boys) and the books took a back seat while family life continued, and other commitments took priority. The kids grew up, eventually moved out, and the parents moved on, Caroline and Cliff moved to the Costa Del Sol and have never left it, they have moved around a few times, but the weather there is better for Caroline's health. Once there, the original typed notes for his early book were rediscovered, that book, Orbiter One, kickstarted the little grey cells again, and more story lines were compiled for the Orbiter One series, and other different stories were written, now there are several available, like this example, and there are more planned with some waiting to be finished, it seems there are not enough hours in a day, but, he manages to work on more stories here and there, and, there is still the same patience from an understanding wife, more green tea, and many enjoyable hours of thought provoking contemplation with Pink Floyd, David Bowie and Be Bop Deluxe.

Now, at 59 years of age, he does have a bit more time available, but, as he mentions, not quite as much time left as when he started the original idea, but there are hopes to be able to complete a whole series of follow-on stories to this book, and to many of the others. They are both still on the Costa del Sol enjoying the Spanish weather at the new Finca (house move number 5), with freshly picked and squeezed OJ for breakfast, straight out of the orchard, and fresh lemonade for the afternoon.

At the time of writing this, several other stories are also complete, but this is the fifth book to be released, and the second in the Orbiter One series, At Worlds End is where this story started, and the third instalment is already well mapped out ready to put to digital ink when Cliff can find the time.

The second book Cliff published was Anecdotes of a Zero (and the escape from the harsh reality), this has two well planned (and started) follow on stories, and another not yet begun.

Breaking News was the third book published, a story about the next virus outbreak to plague planet Earth, this one written during the CoVid-19 lockdown and used some of the fake news generated by an eager world, busy looking for answers and a scapegoat.

The Genesis of Capsaa was the fourth book published, this currently has two follow on stories planned, one is nowhere near ready, the other, The Formation of the CPDF, (working title) is getting near to being complete and was to be available in late 2020, but other issues have delayed that until late 2021 (hopefully).

Anyway, enough of this waffle, Cliff hopes you enjoyed the book, and perhaps you will come across Book Three in the series soon, and who knows, the rest of the series in due course.

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[www.trueblur.com](http://www.trueblur.com)

## OTHER TITLES

BY THIS AUTHOR

### **Orbiter One (series)**

Book 1 – At Worlds End (January 2020)

ISBN: 978-84-09-18312-8

Book 2 – Silent Night (May 2021)

ISBN: 978-84-09-30208-6

### **Capsaa (series)**

The Genesis of Capsaa (August 2020)

ISBN: 978-84-09-22483-8

### **Anecdotes (series)**

Anecdotes of a Zero (May 2020)

ISBN: 978-84-09-19930-3

### **Breaking News (July 2020)**

ISBN: 978-84-09-21928-5

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 *Cliff Dale*