Gmail **Tisbury Parish Council <tisburypc@gmail.com>**

FW: C24 Chicksgrove Road; update

4 messages

Cc: Tisbury Parish Council <tisburypc@gmail.com

I am copying you with the email message below, Simon, sent this morning to my neighbours along the Chicksgrove Road, in case you want to share its contents with Tisbury Parish Council at your next meeting on 21st September.

I'm planning to be there myself and could summarise it – I promise in less than 3 minutes – if invited.

This message particularly concerns the issue of 38 articulated wagon movements to/from the EHD warehouse in Sutton Mandeville:

- In point 2, I have tried to make plain why 'mitigation' measures are a non-starter.
- In points 3 and 4 (plus the attachment) I summarise progress in identifying a potential alternative strategy for Fowler Fortescue and the Fonthill Estate

I am hopeful that Tisbury Parish Council will give its support to conversations that are continuing on this topic, as I have requested in my earlier submissions.

Do please come back to me if you've any questions or comments.

Best regards

Sent: 12 September 2021 08:32
To: Chicksgrove Road network <
Subject: C24 Chicksgrove Road; update

I trust you're all well, and hope I'm not overwhelming you with emails.

I want to bring you up to date with events over the last couple of weeks.

1. Following the Teffont Parish Council meeting (on August 24th) I exchanged a number of emails with regarding the issue of the EHD wagons and the hazards they present to all users of the C24. My aim was to convince FF these hazards will not go away, merely get worse as time goes on and Tisbury expands – hence they need to find alternative tenants.

2. FF, on the other hand, were focused on defending the status quo and on finding ways to mitigate the impact of the EHD lorries. Tony Deane (previously Tisbury's

Wiltshire Councillor and Chair of the CATG) had proposed a roundabout at the junction of the C24 with the B3089, and FF) suggested 'improvements' at the C24/B3089 junction in a conversation with Nick Errington (Tisbury's Wiltshire councillor). My view is that the difficulty the EHD wagons have negotiating the B3089/c24 junction is a symptom of the problem, not the problem itself. Moreover, as we all know from history elsewhere, 'improvements' to roads merely encourage more traffic and higher speeds. After sorting out the problem at the C24/B3089 junction the next thing would be to widen the road at the pinch points, straighten it out, bit by bit, with the result that volume and speed of all traffic would tend to increase. Mitigating the impact of the articulated lorries is not the same as solving the problem itself, that EHD's use of the Fonthill bunker site is inappropriate. We want to improve safety on this road but to do this we do not need to 'improve' the road itself. Indeed to improve the road would be counter-productive and detrimental to the character of the area and against the interests of the communities it serves. That part of my correspondence with FF came to an end with concluding we were never going to agree.

3. To try to tackle the underlying issue, at my wife, , suggestion, I put to FF the idea that a far better use of the Fonthill bunker space is as a data storage centre. replied: ***" We are of course, always open to approaches and have looked closely at data storage before. If the data storage is more than a thought and you have a contact we would be happy to be introduced."*** As a result of which I did some online research that generated the note attached; please take a look. Around the world there are numerous examples of bunkers just like this one being re-purposed as highly secure and (relatively speaking) environmentally responsible centres for cloud computing. A couple of days later (& after, I believe, a nudge from a mutual acquaintance) I had a call on Friday afternoon from F , the upshot of which is that we are due to meet – though as his diary is very congested, not till late October. My basic position is that I/we should do all we can to come up with an alternative use for the site that is commercially sustainable, providing it doesn't involve 38tonne wagons trundling down the C24.

4. F shared with me a couple of things during our conversation; most important, that he is open to alternative suggestions.

a. 8 years or so ago he did think about data storage as a use for the site, but at that time there was effectively no internet connection. Since Wessex Internet's arrival that limitation may have disappeared.

b. There's a long term lease agreement with EHD, though he didn't say how long. I had previously been told it is for 5 years, but that there is a break clause. One way or another, though, the solution to this issue isn't going to come quickly.

Though I'm optimistic, there are doubtless innumerable reasons why data storage may not work in this location. And even if it does work, it's going to take time – maybe a long time. So no cause for celebration yet.

5. In the meantime, the question of whether the C24 should be subject to a 40mph speed limit has been added to the agenda of the Wiltshire CATG at the request both of Tisbury and Sutton Mandeville Parish Councils. This is also going to take time, as there's a huge backlog of work for the Wiltshire Highways engineers that has built up during the pandemic.

Please let me know if you've reflections or comments on any of this, and specifically if you can contribute anything by way of personal experience or contacts regarding data storage centres, or have alternative suggestions.

Best wishes

NOTE FOR FILE - 9th September 2021

Underground Data centres

People to talk to:

Andy Hague CEO and founder of Cyberfort Group, based at Greenham Common, tel:01635 C established in 2017 as a vehicle for acquisitions in the field that acquired the Bunker Secure Hosting Limited which operates underground data centres in Kent and at Greenham Common, Newbury ://www.thebunker.net/bunker-compliance-security/

Huw Owen, CEO or **Rob Sylvester**, Real Estate Director**;** Ark Data Centres Limited, Spring Park, Hawthorn, Corsham Wiltshire, SN13 9GB United Kingdom Ark Data Centres Ltd was founded in 2005.

Julian David, CEO of techUK, the trade association that "brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. We create a network for innovation and collaboration across business, government and stakeholders to provide a better future for people, society, the economy and the planet". He leads techUK's 60 strong team in representing more than 950 member companies, including multi-nationals and more than 500 SMEs to ensure that the digital tech industry is at the heart of a modern society and economy in Britain. He is a member of the government and industry Cyber Growth Partnership and Digital Advisory Council. He is also techUK's representative on the National Trade Association Council of DIGITALEUROPE. CEO's office: T

Steve Hone, CEO and co-founder of the Data Centre Trade Association know globally as the Data Centre Alliance, DCA. Steve has over 25-year experience in IT communications Industry. In 2010 Steve co-founder Steve also sits on a number of steering committees and advisory boards for organisations and other T/As connected to the data centre sector. To contact Steve - email:

Event to attend? 30 September; Datacloud UK & Ireland - America Square Conference Centre London, UK. "Datacloud UK & Ireland is the prime event for reconnecting with the region's infrastructure leaders. Designed to give you the ability to engage with the most pressing trends in the industry, network with your peers and get business done, you will come away from the event equipped with the connections and the knowledge to build your strategy in 2022 and beyond. " https://events.broad-group.com/event/30cd3045-4ac3-420a-8a84-5706c5e3987a/websitePage:2368f9bd-b116-419f-817d-bb969173fb99

There are half a dozen **YouTube video** tours of underground data centres; start at https://www.youtube.com/watch?v=3jZqbyhVQDs

There is a useful **essay in the Journal of the Royal Anthropological Institute** that describes a tour of the Fort, and underground data centre in Northern England, to be found at https://rai.onlinelibrary.wiley.com/doi/10.1111/1467-9655.13481

And a lengthy piece in the **New Yorker magazine** about the life of a German obsessed with bunkers at https://www.newyorker.com/magazine/2020/08/03/the-cold-war-bunker-that-became-home-to-a-dark-web-empire

Source: ***https://www.cloudscene.com/blog/secure-colocation-datacenters***

Data center operators have been retrofitting underground bunkers into functional data centers for many years. But as security (and unfortunately political) considerations and energy demands intensify, there's **an increasing trend towards building subterranean colocation facilities to host mission-critical infrastructure and data**. Surrounded by rock and often featuring just a single entrance, underground facilities are physically highly secure with many boasting sufficient strength to withstand a nuclear attack. And since subterranean temperatures are naturally regulated, cooling costs are often reduced which is passed down to enterprise customers. Construction costs can also be lower, and speed to market faster, since in many cases the facility is already there and simply needs to be fitted out with the necessary infrastructure to make it a functioning colocation data center. There's also a certain James Bond allure to these subterranean facilities, with operators emphasizing the data center's location in their marketing collateral to stress their security advantage.

Here are the some of the world's most secure underground data centers:

The Bunker – United States Located in Montgomery, Texas, The Bunker was originally a 40,000 square foot nuclear bomb shelter constructed in 1982 by Louis Kung to protect his family and employees in the event of war or breakdown of society. The entrance to the facility previously concealed numerous gun ports and rooftop-mounted machine gun nests. Today, the site is a state-of-the-art data center campus with an adjacent four-story building used as a disaster recovery site. Built into the side of the surrounding terrain, an existing access tunnel still exists which connects customers to both of Houston Bunker's facilities – Data Center One and Data Center Two – with the latter being built in 2014 and tripling the data center space of the campus to 143,000 sq ft.

Bahnhof Pionen – Sweden Located 30 meters deep inside a Cold War nuclear bunker, and protected by video surveillance and a 40cm thick steel door, Bahnhof Pionen is deemed one of the world's most secure data centers (and famous for once being the home to Wiki-leaks). The facility is powered by German submarine engines, and features underground waterfalls, greenhouses, simulated daylight and a 2,600-liter saltwater fish tank. The bunker houses Bahnhof's Network Operations Center and is built to withstand a hydrogen bomb. Bahnhof is one of Sweden's largest ISPs, with four other data centers across the country.

The Bunkers – United Kingdom Built to protect British citizens in the event of a nuclear attack, two former command and control bunkers in **Kent and Newbury** were acquired from the UK Ministry of Defence and US Air Force in 1994 and converted into two colocation data centers. Self-proclaimed as "the UK's most secure data center", the Kent facility is located 30 meters behind a perimeter fence and boasts 3-meter-thick walls, 24-hour on-site technical and security team (ex-military & police), on-site MOD trained guard dogs, infrared cameras and military electromagnetic pulse protection.

Swiss Fort Knox – Switzerland Secure Infostore AG, a Swiss IT security solutions provider, operates two retrofitted Cold War bunkers known as the Swiss Fort Knox. Located 10km apart and hidden beneath the Swiss Alps near Lausanne, the data centers pull glacial water from a deep subterranean lake to enhance its cooling systems. The site features unparalleled security including facial-recognition surveillance and bulletproof surfaces to resist any military or terrorist threat. Swiss Fort Knox is one of 85 colocation facilities in Switzerland.

Iron Mountain – United States Referred to as a "nuke proof" data bunker, the Iron Mountain's flagship data center in Western Pennsylvania was in fact a former limestone mine before it became one of the world's most secure colocation sites. The facility is located 65 meters beneath the ground, within a 200-acre campus protected by heavily armed guards, perimeter security, metal detectors, CCTV, biometric access controls and mantraps. Other features include private suites, secure cages, individual cabinets and a carrier-neutral network. Iron Mountain manages a total of six data centers across the United States, with other facilities in Boston, Kansas, New England, Pittsburgh and Virginia. Federal agencies and 94% of Fortune 1000 companies have selected Iron Mountain for their data storage requirements.

Further underground data centers around the world include:

The Nuclear Bunker in Vilnius, Lithuania

The Colocall Bunker in Kiev, Ukraine

The InfoBunker in Des Moines, Iowa, USA

The CyberBunker in Middleburg, Netherlands

Source URL: https://www.datacenterknowledge.com/archives/2009/07/14/the-data-bunker-boomlet

The Data Bunker Boomlet

There is growing interest in the niche for underground "nuke-proof" data storage facilities housed in former military facilities, mines or limestone caves. These subterranean fortresses have strong appeal for tenants seeking ultra-secure hosting that will survive any eventuality.

The futuristic Bahnhof data center, located 100 feet beneath Stockholm, is one of many facilities built in nuke-proof subterranean bunkers.

The expansion by The Bunker reflects the growing niche for underground "nuke-proof" data storage facilities housed in former military facilities, mines or limestone caves.

These subterranean fortresses have strong appeal for tenants seeking ultra-secure hosting that will survive any eventuality - including a nuclear blast. This trend has given new life to aging military bunkers in the US, UK and Canada. Although security is usually the primary motivation for customers, underground facilities offer advantages to the data center operator. Chief among them is cooling, as these subterranean facilities typically have a natural temperature of 60 degrees or lower.

There are challenges as well, especially managing humidity that can be harmful to servers. Underground data centers also can't receive certification under the LEED (Leadership in Energy and Environmental Design) program for energy efficient buildings because the U.S. Green Buildings Council's standards has no provision for subterranean facilities.

Here's a list of all the underground data bunker projects we've been tracking at Data Center Knowledge:

• **Bahnhof Pionen**: Better known as the "James Bond Villain" data center , this former military bunker is 100 feet underneath Stockholm, Sweden and features waterfalls, greenhouse-style NOC, glass-enclosed conference room “floating” above the colocation floor, and blue-lit diesel engines.

• **SmartBunker** is an ultra-secure data center located in a former NATO command bunker in Lincolnshire, UK. The power used within the 30,000 square feet data centre is generated entirely from wind energy. SmartBunker says it is the first UK facility with no carbon emissions.

• **The U.S. Secure Hosting Center** is an underground colocation center in Iowa that hosts the web infrastrucutre for Wikia, one of the projects of the Wikimedia Foundation.

• **Iron Mountain** hosts data center operations for Marriott Corp. and other customers in its huge data storage facility located 220 feet underground in a limestone cave outside Pittsburgh. The 145-acre facility has its own fire company, water treatment plant and 24-hour security and maintenance force.

• **Montgomery Westland** , previously known as the Westlin Bunker, operates 40,000 square feet of underground data center and office space in Montgomery, Texas. The facility was initially built by Ling-Chieh Kung, a nephew of Chiang Kai-shek and founder of Westlin Oil. Fearing a nuclear war, the reclusive Kung built a nuke-proof survival shelter.

• **The Mountain Complex** is a disaster recovery data center in a former mine built into the side of a dolomite mountain in the Ozarks near Branson, Missouri. The facility houses backup data for thousands of financial institutions.

• **The SpringNet Underground** is a 56,000 square foot data center located 85 feet underground in a limestone cave near Springfield, Missouri. The site hosts missioncritical patient data for a network of hospitals.

• **The Bunker** is a 10-year old ultra-secure colo facility built in former nuclear bunkers in Newbury and Kent in the UK. The company, which houses many financial services clients, recently announced expansion plans.
• The InfoBunker is a 65,000 square foot ultra-secure underground data center in Iowa, built in a decommissioned Air Force bunker designed to survive a 20-megaton nuclear explosion. It features three-foot thick cement walls and shielding to protect equipment from an electromagentic pulse (EMP).
• Cavern Technologies operates a 200,000 square foot facility near Kansas City that is 125 feet underground.
• Sun Microsystems is among the participants in an underground data centers in Japan's Chubu region in which 30 Blackbox (Sun MD) data center container units will be installed in a a former coal mine located 100 meters under the ground.
• BastionHost has purchased an former government continuity bunker in Nova Scotia as part of its plan to build a “Dataville” of data centers in the province.
StrataSpace, a 500,000 square foot underground data center under development outside Louisville
• PrairieBunkers is planning to convert up to 184 World War II ammunition bunkers in central Nebraska into data centers.
• Mountains West Exploration plans to develop former military ammunition bunkers as ultra-secure storage.

Source: Colocation Exchange Limited, Meadow View House, Tannery Lane, Bramley, Surrey, GU5 0AB https://www.colo-x.com/contact-colo-x/

The Bunker Newbury Data Centre

The Bunker, Venture West, Greenham Business Park, Thatcham, Berkshire, RG19 6HX

Ultra secure data centre on former NATO base near Newbury, Berkshire.

Ideal for any regulated business needing IL Official security ratings

Facility description

The Bunker's Newbury data centre is based in a former nuclear "command and control centre" built on the Greenham Common airbase which was home to a fleet of mobile cruise missile launchers during the height of the '80s cold war. The building was designed to protect the systems that would provide launch codes for the missiles and as such was designed to withstand a direct hit from a 500lb bomb as well as EMP protection from a nuclear blast, thus 1.5m thick concrete walls, huge blast doors etc. The missiles were eventually removed in June 1991 and the base closed in 1993 with the 750 acre site passing into private ownership in 1997. The Bunker acquired a lease on the building in 2004 which has recently been renewed and is of long length.

The Bunker's Newbury data centre now comprises 7 separate rooms offering colocation space for some 300 cabinets or a total IT load of 1.5-2MW and all services are designed to offer ultra-secure solutions. Two sub-stations provide power grid connections, each of which can support full load with 2 LV power rooms and 4 UPS systems designed to ensure maximum uptime, all supported by generators and a significant onsite fuel store. As with their Kent data centre, The Bunker is very much focused on regulated businesses such as financial services (fintech), healthcare or public sector customers needing the highest levels of security for their data centre operations. Certifications are obviously crucial and The Bunker can support Government ratings of IL Offical, PCI DSS v3.2, ISO27001 and will work with customers on all audits.

Colocation solutions range from rack space through to individual private suites, though this is not a large scale site, we estimate only offering 300 cabinets of colocation capacity or 1.5-2MW overall. A full suite of managed services is also available, including hardware or platform as a service and cloud on a private or multi-tenant basis.

Source: ***https://www.dailymail.co.uk/sciencetech/article-2131650/The-Bunker-Underground-data-centre-proofed-nuclear-blast.html***

Worried about computer security? Why not move your music and pictures to 'The Bunker' - the underground data centre that will survive a nuclear war

Data centre proof against nuclear, biological and chemical attack
Dogs, barbed wire and security men protect underground vaults
Blast doors protect servers full of company data
Generators will continue to run for three months after power grid collapses

By ROB WAUGH
PUBLISHED: 17:38, 18 April 2012 | UPDATED: 19:10, 18 April 2012

The barbed wire and attack dogs surrounding The Bunker's underground vaults leave one in no doubt that this is a seriously secure data centre - the underground computer banks used to store 'cloud' information such as music email and pictures.

But the Bunker is more secure than most - proof against nuclear, biological and chemical attack. Not only are its buildings hardened against EMP - the electromagnetic pulses released by nuclear blasts -it has generators that can keep it going for three months after civilisation collapses.

The underground storage is nuclear-blast proof, with generators that provide up to three months' power for the air-conditioned data centres beneath

The green buildings house the power supplies for the underground data centres - and are hardened against EMP, the electromagnetic pulse from a nuclear blast

The bunker uses barbed wire, attack dogs and security guards - and has its own generators

The high-security data centre has isolated power supplies and air conditioning to ensure its server racks keep functioning

The Bunker was originally set up during the Cold War as a radar facility to protect British airspace against potential attacks from the Eastern Bloc.

Website Humans Invent visited the facility - now providing ultra-secure data storage to companies who want to ensure online information survives anything... even a nuclear attack.

The base was originally owned by Britain's Royal Air Force, and is just outside Sandwich in Kent.

Managed Services Director, Paul Lightfoot, who originally worked at the base when it was owned by the forces, tells me. He says, 'If you imagine the air defence network, there were four nodes around the UK passing data around, this was one of those secure nodes, so it could have operators monitoring airspace from here or it could just be passing data around the network which actually makes it very similar to what it is used for today.'

As we walk towards The Bunker, Lightfoot points to buildings in the middle distance. 'Look at the two green boxes up there, they are inside what is called EMP (Electromagnetic Pulse) hardened buildings, which are designed to deal with the magnetic pulse that is generated from a nuclear bomb'

The interior is guarded by blast doors and is proofed against nuclear, biological and chemical agents

The bunker, near Sandwich in Kent, originally housed communications for Britain's Royal Air Force - hence the incredible protection for the systems inside

A useful hangover from the Cold War, these buildings house the power feeds that are necessary to keep the servers up and running.

Going in to The Bunker, I show my pass to another security guard and enter through a large, metal turnstile before heading down a flight of stairs – the Bunker is 33 metres deep set out on three levels.

On the second level there are two industrial looking metal doors, the first apparently is blast proof and the second protects from chemical and biological warfare.
Lightfoot says, 'This was a purpose built data centre built with all the relevant protection and the redundancy in place for the air defence network so there were large mainframe computers and 42 of these air defence consoles.'
Now the air-conditioned rooms play host to ordinary companies - and ordinary people's photos, music and email, all secure in blinking racks of computer servers.
Many data centres have fail-safes - but The Bunker is one of the few that will function after the society that built it collapses.

Source: ***https://www.theguardian.com/technology/2009/nov/11/data-server-farms***

Secrets of the data bunker

A former mine in Wiltshire once equipped as a cold war government retreat has become one of the world's greenest server farms

In a world where increasing amounts of our data are held somewhere in vast server farms, the opening of a new data centre in Wiltshire may seem like no big thing. Enormous sheds filled with racks of computers pop up every day and everywhere, the silent power strengthening the ever-more-connected and ever-more-digital world.

But in Ark Continuity's new SQ17 server farm buried deep in the former stone mines of Corsham, is something worth noting. The facility, unveiled today, is probably the most sustainable and environmentally friendly of its kind in the world: a combination of location and design means that it uses more than a third less energy than a typical data centre.

"Between 25-40% of the cost of running a data centre would be in the electricity," says Jeffrey Thomas, chief executive of Ark Continuity. "So if we can cut that in half, we're making a significant economic saving for our occupiers, even before their CO2 reduction obligations."IT accounts for around 2% of the UK's carbon emissions and the sector is aware of increasing impact it will have on energy and environment as it grows. "Being more efficient in the data centre is synonymous not only with saving carbon but also saving money," says Kate Craig-Wood, co-founder of the carbon-neutral ISP Memset. "So it's pretty common sense really."

Digital Europe, the EU-wide trade body for the tech sector, has committed to getting its members to reduce their emissions by 20% by 2020, relative to 2008 levels. Given that the number of servers is expected to increase globally from 13m in 2008 to 122m by 2020, the potential energy footprint is a serious issue.

"We are passionate about the future of this planet," says Thomas. "It is the only and right way to do things."

He acquired what is now known as Spring Park ten years ago. A hundred miles from London and with a million-square-feet hole underground, it was not immediately obvious to Thomas that the site should be used as a data centre. The facility had been an underground munitions dump and factory site during the Second World War. "In the Cold War, latterly under Macmillan and Thatcher, it became the seat of government in a time of crisis. Part of it became a nuclear bunker."

This meant the underground buildings were some of the most secure facilities in the UK, reinforced and strengthened so that they could withstand three 10-megaton nuclear strikes at the same time. And it also had interesting environmental characteristics – being a damp mine, it was ideal at staying cool. "The sun never shines down there so there's no solar gain," says Thomas. "With the size of it and the evaporative qualities of the mine, we can dissipate 20MW of energy with adiabatic cooling with 10 litres of water a second, which is just cycled around in a fog underground."

"At our latitude and altitude, we'll get around 60-65% of the year we should achieve free air cooling – that means the temperature of the outside of the building is cool enough to use to cool the inside of the building."

The server space at Spring Park costs around 20% more to build than typical setups, thanks to the cleaner technologies involved. Rather than using cooling systems with greenhouse gas refrigerants, SQ17 uses chilled water. "And that costs more but is lower carbon – some of the technologies cost more, the design is more sophisticated." But this leads to much lower operational costs, mainly in electricity savings.

The efficiency of a data centre can be assessed using the power usage effectiveness (PUE), a measure of the amount of power needed for cooling and other management (such as lights and security) for every kilowatt consumed by the IT infrastructure. The UK average is around 2.2: for every kilowatt spent on IT, 1.2 KW used to cool and manage the space. "Best practice PUE around 1.5 and there are some stellar examples where you might get to 1.2 or 1.3 but they're typically not the most robust data centres," says Thomas.

At Spring Park, for those days where the surface temperature is above 18C, Thomas says the ground source cooling mechanism does all the required work and the PUE of the data centre gets down to between 1.09 and 1.12.

Other factors that raise the energy costs of data centres include redundancy and security. Doubling up hardware in case anything failed was the obvious thing to do when servers were not as efficient or reliable, says Craig-Wood. But nowadays it just wastes resources and it is possible to be smarter about how ISPs and data centre operators manage failures. The EU's new code of conduct for data centres even recommends that consumers shy away from doubling up and only use what they need. Craig-Wood says that, in most cases, doubling the number of servers is simply not necessary.

Another reason Spring Park uses less energy is location. "Before 9/11," according to Thomas, "every data centre had to be based in London for the UK and everyone wanted to hug their servers."

With improvements in technology infrastructure and broadband connections, it began to matter less where data was physically located, so the biggest driver became sustainability. "London is 1.5-2C warmer than Wiltshire – so we enjoy an 18% addition free air cooling by just not being in London."

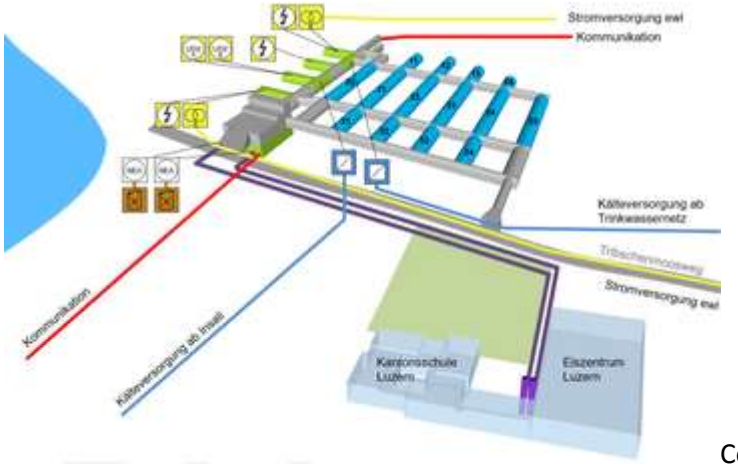
Craig-Wood, who also sits on the energy and environment working group of Intellect, the UK's high-tech trade body, said that in addition to meeting its own commitments, IT will play important roles in helping other sectors reduce their carbon impact in the coming years. Through smart logistics, smart buildings and tele-working, she says that intelligent applications of IT could help Europe cut around 15% of its CO2 emissions by 2020. "High-tech capacity and IT has the capacity to be one of the new engines of growth to bring us out of the recession," she says. "So it's important we do it but in a sustainable way."

Source ***https://www.datacenterdynamics.com/en/news/ewl-starts-construction-4mw-nuclear-bunker-data-center-switzerland/***

EWL starts construction on 4MW nuclear bunker data center in Switzerland
It's nuke-proof, tsunami-proof and cooled using renewable energy, what's not to like?

April 30, 2019 By Will Calvert
Swiss energy and infrastructure provider Energie Wasser Lucerne (EWL) has started construction of a 4MW data center in an unused nuclear bunker in Lucerne, Switzerland.

The facility will cover 1,700 square meters (18,300 sq ft) of IT floor space, made of up of six galleries of 150 to 200 square meters (1,600-2,150 sq ft) each.



Cold war relic

Once completed, EWL's underground data center will house around 530 racks and be cooled by water from the nearby Lake Lucerne. Waste heat from the facility will also be used to heat nearby homes.
In 1601, the towns surrounding Lake Lucerne were decimated when a landslide fell into the lake, causing a four-meter-high tsunami. EWL say that the underground bunker could withstand such a wave, according to their projections.
The bunker was built in the 1960s following a Swiss federal law that was implemented to try and create enough nuclear fallout shelters to house the entire population of the country.
The Lucerne shelter is a seven-story deep cavern between two motorway tunnels that at one point contained a command post, an emergency hospital, a radio studio, a telephone center, prison cells and ventilation machines. The shelter was designed to withstand the blast from a one megaton nuclear explosion from one kilometer away.
Around the same time that this bunker was being built, the US government invested billions into underground bunkers and missile silos in preparation for all out war with the Soviet Union. After the threat of nuclear receded, these sites have found new life as data centers amid fresh security concerns.
These hangovers from the Cold War are dotted all around the globe, European cloud and colocation specialist DEAC operate a data center out of a disused Soviet nuclear bunker in Latvia. The company announced yesterday that it is looking for a co-owner/long-term partner for a new data center being built in Riga, Latvia.

Source: https://www.datacenterdynamics.com/en/news/cavern-technologies-expand-underground-data-center-40000-square-feet/

Cavern Technologies to expand underground data center by 40,000 square feet
The US data services provider claims 100 percent uptime for the last 12 years

March 22, 2019 By Will
Cavern Technologies is expanding its underground data center in Lenexa, Kansas by 40,000 square feet. The three million square foot facility is housed 125ft underground and has a potential capacity of 50MW.

Cavern Technologies

Expansion or excavation?

"This expansion will enable Cavern to accommodate significant growth for new clients and existing customers. As large companies address enterprise cloud strategy and plan to accelerate growth, Cavern is well-positioned to support their colocation and hybrid IT needs," said John Clune, CEO of Cavern Technologies.

Cavern offers a variety of data center products, ranging from half rack to build-to-suit suites. The build-to-suit offering is for suites larger than 5,000 sq ft.

The US data services provider claims to have provided its customers with 100 percent uptime for the last 12 years.

A major benefit of building a data center underground is that the rock surrounding the server units gives added resiliency from extreme weather events like tornadoes and hurricanes.

As mines are naturally colder for being underground there is also a benefit for operating costs as cooling energy consumption is reduced, saving money for customers.

Another example is Bluebird Network, which operates an underground facility in the Midwest. The Springfield, Missouri data center is located 85ft underground in a disused limestone mine.

Elsewhere, some data center providers have chosen to use dormant nuclear bunkers to house their data centers. These facilities are built to survive the very worst that man or nature can throw at them, so they make a perfect environment for a high security data center.