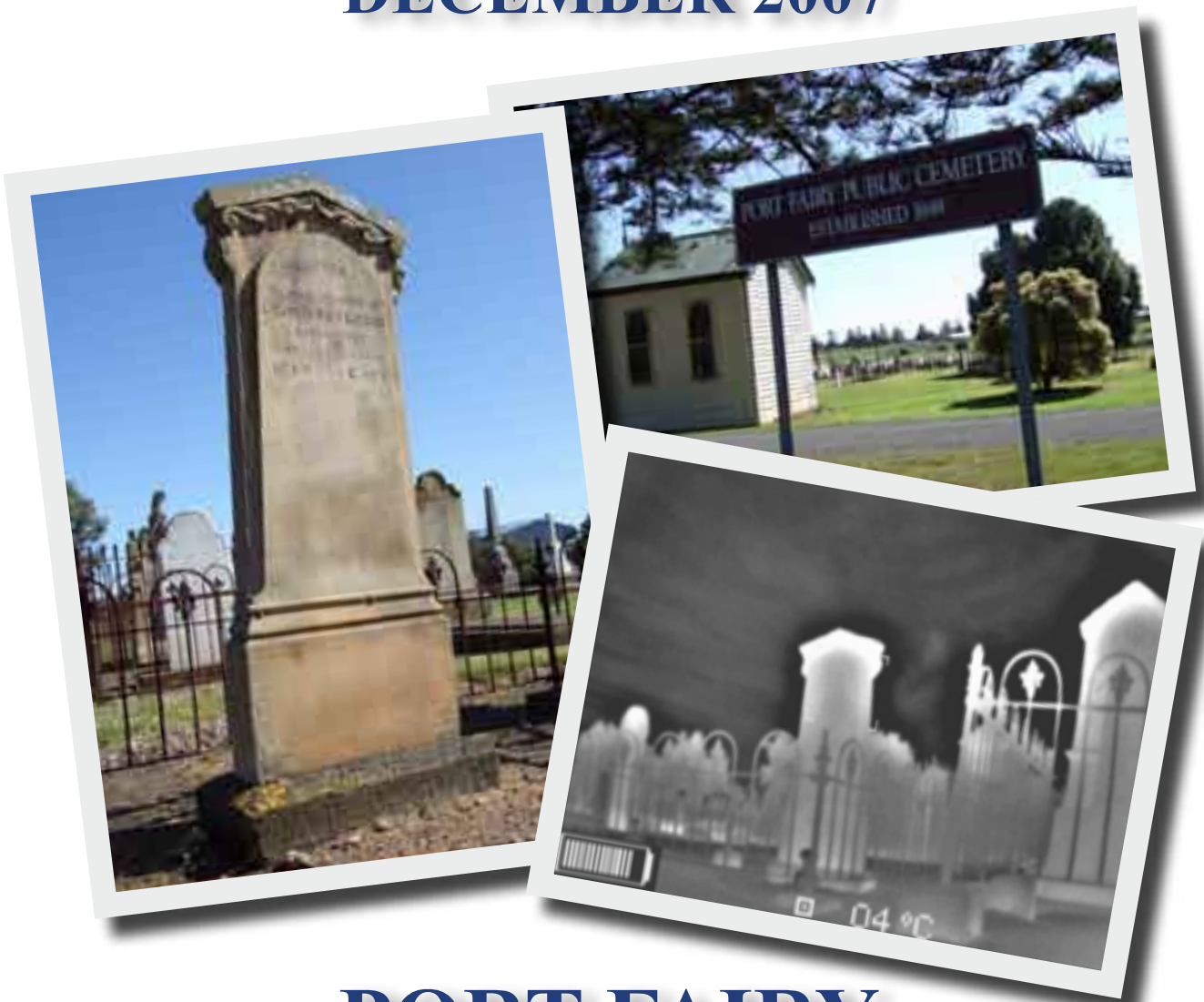




INVESTIGATION REPORT

DECEMBER 2007



PORT FAIRY PUBLIC CEMETERY

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LOCATION & BACKGROUND INFORMATION

SITE DETAILS

LOCATION: Port Fairy Public Cemetery
Princes Highway, Port Fairy, Victoria 3220
38°23'02.43"S 143°13'22.60"E
Elevation: 6 metres

DATE/TIME: 9pm Sat Dec 17th - 2am Sun Dec 18th 2007

CONDITIONS: Moon: Rise 12.56pm (17/12) Set 1.18am (18/12)
Disc Illum: 49.42%
Age: 7.3 days (First quarter)

Sun: Set 8.37pm (17/12) Rise 5.55am (18/12)
Solar X-Rays: Normal Geomagnetic Field: Quiet



GENERAL BACKGROUND

The team's investigation at the Port Fairy Public Cemetery resulted from an examination of the legend of Lloyd Rutledge, whose ghost has been said to appear at his grave site within. It should be noted that the team does not generally conduct cemetery investigations without there being prior reports of paranormal activity.

The bulk of the report conveys the history behind the legend and is followed by a brief vigil at the site to monitor for any activity.

HISTORICAL BACKGROUND

Lloyd Rutledge was the son of James Rutledge and Martha (nee. Forster). James was born at Ballymagirl, near Bawnboy, County Cavan, Ireland, and Martha was born at Longford, Ireland. They were married in Kilmore, Ireland in 1803 and had eight children, all born in Ballymagirl (near Kilmore). William (1806-1876), John (1808), Richard (1810-1887), Mary Anne (c.1812), Forster (1816), Thomas (1818-1904), Martha (1821-1903) and Lloyd (c.1826-1858). Apparently all the children except for Forster later travelled to Australia.

The eldest son William arrived at Sydney, Australia aboard the ship "Harriet" in December 1829. William came to Australia with members of his mother's family - the Forsters. He became a merchant, banker and settler involved in many enterprises in early Australia.

In 1837 William purchased land at Molongo, near Queanbeyan, New South Wales. This property was known as "Carwoola". It was also around this time that six of his seven siblings arrived at Carwoola from Ireland.

In the late 1830's and early 1840's William had acquired land in Victoria and commenced various ventures there. He established a tenant community at Kilmore and is accepted to be the town's founder, naming it Kilmore after the town where he was born in County Cavan, Ireland. He visited Port Fairy in 1843 and founded "William Rutledge & Co" which was involved in shipping commodities to and from England.

William purchased land around the district through the government's Special Survey regulations which he then tenanted to others. James Atkinson, a Sydney solicitor, acquired most of the land on which the township was formed. Atkinson renamed the town "Belfast" in 1843 and both William and James promoted the township and encouraged immigrants, most of them Irish, to settle there.

William's home at Port Fairy was "Emoh" which was built on land he purchased in 1847. This home has changed over the years but still stands at 8 Cox Street and is listed on the Register of the National Estate.

Lloyd married Isabella Bennett, daughter of Richard and Ann Bennett, at Saint Bartholomew Church of England in Prospect, New South Wales in August 1852.

It appears they then joined William at Port Fairy. Lloyd and Isabella had three children in Belfast (Port Fairy), Edward Lloyd in 1853, Annie in 1855 and Percy Lloyd in 1856.

In 1855 Lloyd Rutledge built “Cooinda”, a double storey home on land purchased from James Atkinson.

Lloyd was well known for his drinking and is believed to have arrived home at Cooinda under the influence one night and fell backwards down the stairs breaking his neck. According to his tombstone he died on December 17th 1858 aged 32. However the register of deaths (ref 8537) lists his age as 31.

The unfortunate accident that resulted in Lloyd’s death was not the last turn that fate was to play. On the day of the funeral there was an intense thunderstorm which spooked the horses pulling the hearse which subsequently bolted, resulting in mourners carrying the casket to the cemetery nearby.

At the grave site the storm continued and at the moment of internment one of the ropes being used to lower the casket slipped, causing it to land head first in the grave.

William Rutledge & Co went bankrupt in 1862 with debts amassing over 100,000 pounds. This not only effected the Rutledge empire but the township of Belfast itself. In 1865 William moved to work his property at Farnham, near Koroit, where he regained wealth in livestock. Farnham was apparently also named for it’s connection to Kilmore, Ireland.

TIMELINE - THE RUTLEDGE FAMILY

- | | |
|-------------|---|
| 1803 | James Rutledge and Martha Forster married in Kilmore, Ireland. |
| Jan 22 1806 | William Rutledge was born at Ballymagirl, near Bawnboy, County Cavan Ireland. |
| 1808 | John Rutledge was born in Ireland. |
| 1 Apr 1810 | Richard Rutledge was born in Ireland. |
| c1812 | Mary Anne Rutledge was born in Ireland. |
| 25 Dec 1816 | Forster Rutledge was born in Ireland. |
| 12 Mar 1818 | Thomas Rutledge was born in Ireland. |
| 1820’s | Captain James Wishart names the town of Port Fairy after his cutter “The Fairy”. |
| 1821 | Martha Rutledge was born in Ireland. |
| c1826 | Lloyd Rutledge was born in Ireland. |
| Dec 1829 | William Rutledge (Lloyd’s brother) arrived in Sydney aboard the “Harriet”. |
| 1834 | William had a property at the “Field of Mars”, now Marsfield, Sydney. |
| 1835 | John Griffiths purchased the island at the mouth of the Moyne river and named it Griffiths Island. |
| c1837 | William acquired land at Molongo, near Queanbeyan. This property was known as Carwoola. |
| 1840 | William married Eliza Kirk on August 18th at St James Church of England in Sydney. They later had 2 sons and 5 daughters. At this time they lived in a newly constructed house called “Eastwood”. |
| 1841 | Thomas Rutledge arrived in Australia. It seems all but one of William’s siblings arrived in Australia around this time |
| 1843 | James Atkinson purchased land during the government’s special survey land release and renamed the township “Belfast”.
William visited Port Fairy, set up a business and acquired land. |
| 1844 | Martha Rutledge, Lloyd’s sister, married Edward Knox at Hunter’s Hill Church of England in NSW. |
| 1847 | William purchased land for his home “Emoh”. |
| 1849 | Thomas Rutledge (brother of Lloyd) married Martha Foster on October 21st at Hunters Hill in NSW. They later had 5 daughters and 4 sons. |

- 1852 Lloyd Rutledge married Isabella Bennett in Prospect, NSW.
- 4 Aug 1853 A son, Edward Lloyd, was born to Lloyd and Isabella at Belfast (Port Fairy).
- 1855 "Cooinda" was built by Lloyd Rutledge.
- 24 Apr 1855 A daughter, Annie, was born to Lloyd and Isabella at Belfast (Port Fairy).
- 15 Oct 1856 A son, Percy Lloyd, was born to Lloyd and Isabella at Belfast (Port Fairy).
- 17 Feb 1858 John Rutledge stabbed Sergeant George Dodds in Sackville Street, Belfast. Sergeant Dodds later died of his wounds.
- 17 Dec 1858 Lloyd Rutledge died at Cooinda.
- 8 Aug 1859 Sergeant George Dodds died as a result of injuries sustained during an attack by John Rutledge.
- 1862 William Rutledge & Co went bankrupt.
- 1865 William Rutledge left Port Fairy to work at his property at Farnham, near Koroit. James Atkinson died.
- c1865 Cooinda was owned and occupied by William Young who was manager of the Belfast branch of the Bank of Victoria.
- 1 Jun 1876 William "Billy" Rutledge died at Port Fairy.
- 24 Oct 1887 Richard Rutledge, brother of Lloyd, died at Warrnambool, aged 77.
- 1887 Annie Wilshire (nee Rutledge), daughter of Lloyd, died at Grafton. An act of parliament reverted the townships name back to "Port Fairy".
- 1888 Eliza Rutledge (nee Kirk), wife of William died in Warrnambool aged 68.
- 11 Nov 1903 Isabella Rutledge (nee Bennett), wife of Lloyd died at Woolahra.
- 1903 Martha Knox (nee. Rutledge), sister of Lloyd died at Woolahra.
- 23 Nov 1904 Thomas Rutledge, brother of Lloyd died aged 86 at Carwoola, NSW.
- Nov 1909 The verandah at Cooinda was demolished by a storm.
- 1911 It appears the last tenants at Cooinda were Margery Cock (nee. Alexander) and her daughter Johanna May Jamieson (nee. Cock). Johanna was born in Belfast (Port Fairy) in 1874 to Margery and Samuel Cock. In 1903 Johanna married Herbert James Jamieson and had two children, Thelma and Claude both born in Port Fairy. It appears the Jamieson's lived at Cooinda until 1911. Johanna died at Footscray in 1921, aged 47.
- 1912 Cooinda, which was then owned by John Finn was abandoned and remained unoccupied in a state of disrepair for some time afterwards.
- 4 Apr 1915 Edward Lloyd Rutledge, son of Lloyd and Isabella died at Sydney, NSW.
- 1940 Percy Lloyd Rutledge, son of Lloyd and Isabella died at Bathurst, NSW.
- 1950's It is believed Cooinda was fully demolished during the 1950's.

PREVIOUS REPORTS OF PARANORMAL ACTIVITY

There were locals that believed that Lloyd was cursed due to the series of events at the funeral and subsequent collapse of the Rutledge empire.

Legends tell of how Lloyd's ghost could be seen at the head of stairs at Cooinda on the anniversary of his death each year. Others say that the ghost was seen at the grave and then travelled to his former residence of Cooinda, which was located nearby.

Cooinda saw a number of owners and tenants after Lloyd's death and folklore suggests there were numerous reports of events over the next 50 years. The house fell into to disrepair and was eventually abandoned in 1912. It appears to have become known locally as "The Haunted House" before being demolished completely in the 1950's. Apparently reports at the grave site still continued at midnight each December 17th, although there are no known recent reports of activity.

SITE APPRAISAL

The Port Fairy Cemetery lies nestled behind trees off the Princes Highway which is the main thoroughfare through the town.

The oldest graves at the cemetery date back to the 1840's and include many pioneers of the region. During the 1850's and 60's stone mason Walter McGill carved intricate ornate monuments, many of which still stand today. The headstone of Lloyd Rutledge has scrolls and carved faces at each edge.



The gravestone of Lloyd Rutledge showing carved ornamental scroll and face.

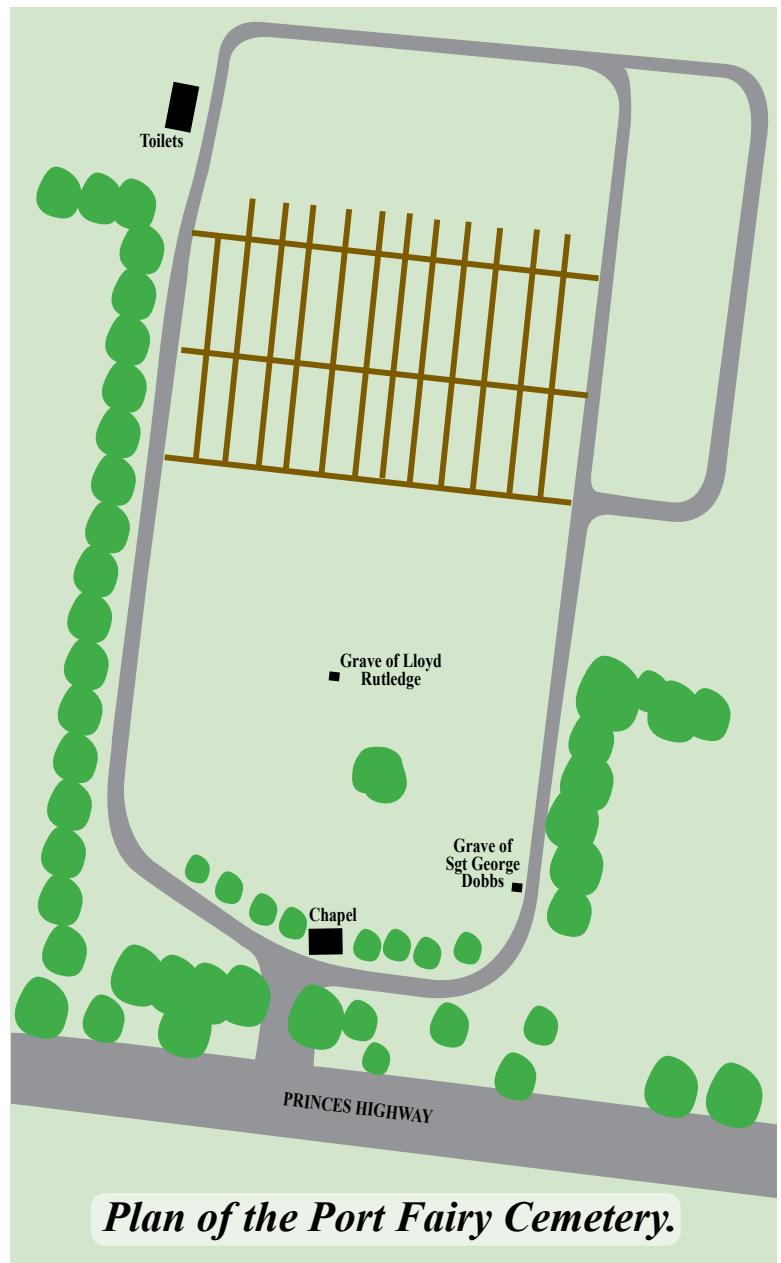
Amongst those buried there include the Mills brothers, John and Charles who as sealers built huts on Griffiths Island. Later they built cottages in the township which still stand today.

Also buried at the cemetery is Sergeant George Dodds who died August 8th 1859 aged 54 from injuries sustained during an attack which occurred on February 17th 1858. John Rutledge had been arrested at the Star of the West Hotel in Belfast for being drunk and disorderly and stabbed Sergeant Dodds while being escorted to the watch house. At his trial on May 12th 1858 John Rutledge was found not guilty on grounds of insanity and was sent to the Yarra Bend Lunatic Asylum. By the end of 1858 John Rutledge had been released from custody, being found no longer insane. It is believed John later moved to California before returning to Ireland where he died.

The site is typical of most cemeteries being open to the elements and with no power present EMF levels are naturally low. The site is managed by the Port Fairy Public Cemetery Trust who granted the team access.



Wide angled view of the cemetery, the grave of Lloyd Rutledge is in the centre.



Plan of the Port Fairy Cemetery.

EQUIPMENT

The team utilises various pieces of equipment during investigations. For the Port Fairy investigation we also called upon the vast resources of TechRentals, a leading specialist instrument supplier and a division of the TR Corporation. This allowed the team to study the site at a greater level and to evaluate the use of such equipment for further research.

Because of the many theories surrounding paranormal phenomena, readings are taken from a large gamut of instruments in an effort to record anything that could be helpful to determine a cause - natural or otherwise.

Some of the equipment which the team may take on investigations is given below, together with a brief description of each.



INFRARED LASER THERMOMETERS

Infrared laser thermometers are used to monitor temperature fluctuations. Rather than recording the air temperature, they indicate the surface temperature of objects they are directed at.



EMF DETECTORS

Electro Magnetic Field detectors are used to detect changes in the electromagnetic field which some believe may indicate paranormal activity. Conversely high EMF has been linked to causing people to feel nauseous, experience headaches, sense a presence and even hallucinate.



STILL AND VIDEO CAMERAS



A range of still and video cameras are used including the two items displayed here. The Finepix F30 camera (left) was voted the best low light compact camera in 2006 - capable of shooting at ISO3200 at 6.3 megapixels it can minimise the necessity for a flash. Camcorders with nightshot functions are also used and their abilities may be enhanced with the addition of infrared illuminators like the one at right.



NIGHT VISION EQUIPMENT

Night vision equipment such as monoculars, scopes, binoculars and goggles which incorporate light intensifying tubes and infrared illumination allow the observation of otherwise dark locations.

INFRARED ILLUMINATORS

Assorted infrared illuminators are used to enhance night vision devices such as night scopes, nightshot camcorders and IR surveillance cameras. The spotlight (at right) is a rechargeable 5,000,000 candle power spotlight modified so it can emit either normal or invisible infrared light.



PIR AND ULTRASONIC MOVEMENT DETECTORS

Passive infrared and ultrasonic movement detectors can be used in two ways - assisting to make a controlled location ensuring human interference can be detected or it can indicate movement where there's no reason for it.

THERMAL IMAGING CAMERAS

A range of thermal cameras may be used including the Marconi Argus 2, SAT S160, FLIR Systems E45 and InfraCam. They provide a visual picture of the temperatures present in a location and can identify the presence of animals which may be causing false reports.





INFRARED SURVEILLANCE CAMERAS

These are interfaced into the DVR system, with in built infrared light emitting diodes they send out infrared light to which the cameras are sensitive to, but is invisible to the human eye. Wired and wireless models are used dependent on site conditions.



SOUND AND VIBRATION RECORDERS AND ANALYSERS

A range of audio recording devices are used to capture, monitor and analyse any unusual sounds from a location.

The Svantek 912A Sound Vibration Analyser (left) is used to monitor sub-sonic noise in the frequencies of 0Hz to 20Hz. This covers the region of infrasound, which current scientific studies reveal may contribute to reports of unusual activity.



ENVIRONMENT MONITORING EQUIPMENT

A range of monitoring equipment may be used to accurately record environmental conditions such as temperature, humidity, dewpoint, barometric pressure, rainfall, wind speed, wind direction and altitude.

Data is collected from multiple points and relayed back to the control station where it is charted against time and monitored for any fluctuations. Some people believe there may be fluctuations in temperature and barometric pressure when paranormal activity is experienced.



At right is a HIOKI 3651-20 kit of 8 temperature and humidity loggers which can be used to monitor various points around a site with relative ease. Portable weather stations may also be used to record temperature, humidity and barometric pressure.



AIRBORNE PARTICLE MONITORS

The TSI 8520 DustTrak Airborne Particle Monitor measures the quantity and size of dust particles in the air. This can aid to identification of unusual photographic results. A visible beam laser may also be used to give a quick indication of moisture and dust particles in the air as well as determining angles of light and accurate positioning of cameras.

AIR QUALITY MONITORS

Devices like the TSI Q-Trak plus Indoor Air Quality Monitor (right) record temperature, humidity, carbon dioxide and carbon monoxide levels. Increased levels of such gases are thought to be possible contributors to reports of unusual activity. By monitoring such levels it can assist to verify or rule out their influence in reported events.



RADIATION MONITORS

There are some documented cases where Geiger counters have indicated increased levels of radiation during reported activity.

The SE International 4 Nuclear/X-Ray Monitor (left) which monitors Alpha, Beta, Gamma and X-ray radiation may be used to record such results.

X-10 EQUIPMENT

A range of X-10 equipment may be used to allow control of mains devices such as lights and appliances. The DVR computer also contains software that can also take control or monitor any X-10 enabled devices including PIR detectors. Alternatively this can also be configured to allow control and monitoring from a remote location.

DVR SYSTEMS & COMPUTERS

The central control computer used at investigations is designed to match the needs of a particular site. It often incorporates a Digital Video Recording Surveillance system. Multiple computers are available enabling simultaneous investigations to take place. The DVR systems can record up to 16 cameras continually for well over 24 hours, this is extended considerably if less cameras are used or any camera is placed in motion detection mode.

The computers also provide for transferring data from digital cameras and audio devices on site, controlling X-10 equipment, recording data from environmental sensors and logging reported events into the system. Once set up the system may be monitored or controlled remotely if an internet connection is available. This allows for the control of cameras, X-10 and environment monitoring equipment off site, as well as the broadcasting of all data to a remote location.



Some products such as a thermal imaging camera may be required to be used in a mobile configuration rather than being fixed in a static location. A portable system such as the Archos AV700 Mobile DVR may be used for this purpose or alternatively a wireless transmitter added to relay images and sound to the DVR computer.

CUSTOMISED EQUIPMENT

We do specially construct or modify items to suit our requirements - at left is the remote unit which includes infrared camera, additional 48 LED infrared illuminator, ultra violet and red lights - all controlled via wireless remote. A single connection is all that's required to power the unit. The camera can pan through 300 degrees and the lights switched on or dimmed from the control desk. The ultra violet and red lights are for testing at the edges of the visible spectrum which some believe may provide a greater chance of capturing an image. Seances of old were often held in red lighting for this reason.



PORTABLE POWER PACKS



Whilst it's always preferable to have mains power available when and where required, it doesn't always work that way.

The need for portable power is evident at many investigations and a range of 12 volt packs are often used, as well as 240 volt inverters providing mains power when it is otherwise not available.



OTHER EQUIPMENT

A range of ancillary equipment is often used such as UHF two way radios etc... along with lot's of batteries, cables and coffee as required!

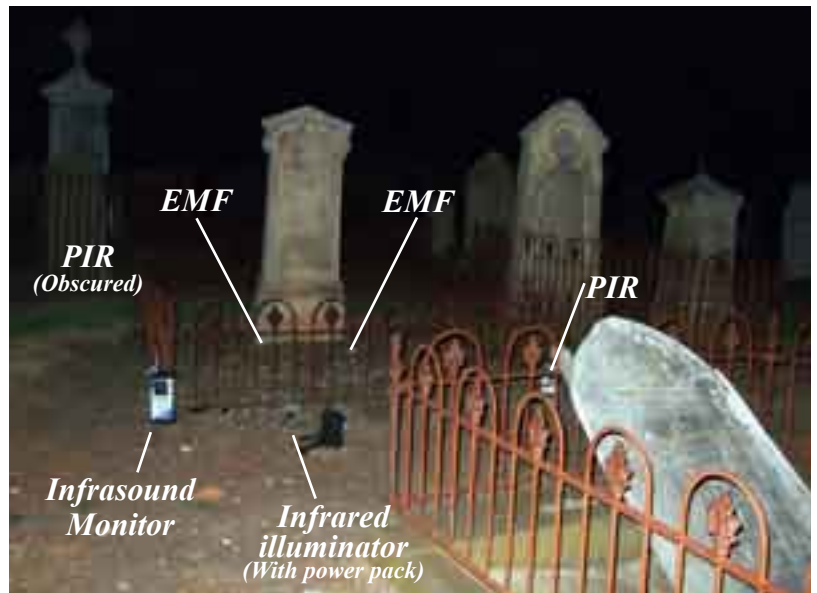


Left: Commencement of equipment setup at the grave site

THE INVESTIGATION

The team arrived for the investigation at 9pm on December 17th 2007 with three members attending. The investigation was chiefly concentrated on the small area of Lloyd Rutledge's grave and so minimal resources were required. Once static equipment was set up there was little to be done but wait. Being a short investigation requiring minimal exploration there was considerable opportunity to further evaluate additional equipment.

Two passive infrared motion detectors were placed covering the grave at different angles. Two electromagnetic field meters were placed and the Svantek 912A Sound Vibration Analyser was placed to monitor infrasound.



Arrangement of some equipment to monitor the area around the grave site.

The area was monitored by night vision camcorder and thermal imaging camera used in roving and static configurations throughout the night. Other equipment was used at various points during the investigation.

Cemetery investigations have their own set of characteristics and many investigative groups have spent time amongst the resting places of those departed. The inherent “spooky feel” draws many to this type of investigation while others prefer sites with an established history of events when the souls were living.

Since there were no known reports of recent activity we set about conducting a single continuous vigil at the site to record any events (natural or otherwise) which could have some bearing on the legend.

The legend of Lloyd Rutledge and previous historical reports of activity were the reason behind the GRI team's attendance on the night, but the relative “quietness” of this visit also afforded the opportunity to have a look at some of the attributes common to cemetery investigations.

The first thing noticed on the night was the large number of mosquitoes present, which not only made it very uncomfortable but also provided the opportunity to display how bugs can impact on results obtained during cemetery investigations. These were noticed on camcorders, digital cameras, and the thermal imager.

When bugs, dust, or moisture particles travel inside the focal plane of a camera, the camera cannot focus on them and they became a blur of light, reflecting the light given off by the camera. This may be the infrared illumination of a video camera or the flash of a still camera.

CAMCORDER:

Shown below are 3 frames from a night vision camcorder captured within a single second showing the movement of a mosquito inside the camera's focal plane and being illuminated by the camera's infrared light emitting diodes. The solid centre and “misty” edges created by the flapping wings are tell tale signs of a bug. Notice the last frame which shows what could be mistaken for a mist near the gravestone.



DIGITAL CAMERA:

At right is another “orb like” anomaly near the gravestone taken with a digital camera. Again this is an out of focus mosquito. Some cameras, like this one, may display another feature when this occurs. Notice the hexagon shape to the “orb” which is created when something is so out of focus it takes on the shape of the cameras aperture, which in this case is hexagonal.

This can be an advantage as it assists in identifying what’s natural and what isn’t. Other cameras may have a more circular aperture and thus always give the classic circular “orb shape”.



“Orb object” near the grave site.



*Date Time : 2007:12:17 21:19:17
Exposure Time : 1/60Sec
F-number : F2.8
Flash : Fired
Focal Length : 8.00(mm)*



*Date Time : 2007:12:17 21:19:20
Exposure Time : 1/4Sec
F-number : F2.8
Flash : Not fired
Focal Length : 8.00(mm)*

To take this a step further, above are two photographs taken of the same area. The first (left) is a photograph very typical of many cemetery photographs and was taken using the cameras standard default settings.

For the second photo, taken only 3 seconds after the first, the flash was suppressed and a longer exposure was given. This allowed more natural lighting to enter providing illumination for the scene, but more importantly the flash didn’t fire and thus prevented the reflections of bugs back into the camera.

Exif information is provided below each photograph showing the relevant settings. Notice the bug at the base of the first image which is close to being in focus.

This displays the reasoning for the preference of not using a flash whenever possible. If a “true orb” is captured it should still appear, given that they are believed to be “balls of energy” which give off their own light.

Although the preference for non-flash photography is highlighted in open environments such as cemeteries, this does flow onto closed locations where dust, bugs and moisture still exist, although usually at lower levels.

Using longer exposures however, can create it’s own set of problems as moving objects or camera shake can create blurs as in the photograph at right. Light trails may also become more apparent. A tripod will help to avoid any camera movement.



Above: Motion blur at left of frame.

THERMAL IMAGING CAMERA:

Thermal cameras are not immune to the effects of bugs either. They can still appear as “orbs”, but rather than a reflection, they are caused a bug’s heat signature close to camera and out of focus (see below). What is captured on a thermal image is not light, but a picture of the temperatures of various surfaces within the frame, represented in the form of light of varying colours or shades.



The Marconi Argus 2 black and white thermal imaging camera used here is a high resolution self adjusting camera in that the hottest part of a frame is solid white, the coldest black, and the range in between is varying shades of gray. It’s robust design, high resolution and self adjusting qualities make it a common tool used by fire firefighters to locate people or the source of a fire in pitch black, smoke filled conditions.

At right is digital photograph containing two “orb type” anomalies taken at 12.04am. Neither of these appear in pictures taken just before or after. The fainter of the two is a likely a bug that has taken on the hexagonal shape, indicating it is extremely out of focus. Reflections can also take on this shape. The brighter “orb” is more unusual, not only due to it’s brightness but the fact it looks more like a point of light.

Like most “orb” images it does remain inconclusive as the possibility of it being a bug cannot be disproven. If it could be seen to be providing illumination nearby, casting a shadow or being partly obscured by a closer object, it would heighten the quality of the event.

In examining the image in negative the “orb” is clearly visible as a dark spot. Viewing in this way can often assist in identifying more detail. Notice the fainter hexagonal “orb” at top right.

Another feature also becomes noticeable on the gravestone of Lloyd Rutledge. Some may interpret this as a figure. Looking closer you may even make out a face, head, shoulders, arms and legs.

Seeing such things in inanimate objects is known as “pareidolia”. This is a psychological phenomenon where obscure and random stimulus is perceived as something more familiar. Seeing animal shapes in clouds is an example of this. The phenomenon can be visual or audible and some may be very intriguing.



“Orb type” anomalies photographed at 12.04am



Negative version revealing additional features

In this particular instance, the ageing of the stone does have random discolouration when viewing the image in positive.

It seems that given that the gravestone is almost 150 years old, such discolouration is only to be expected. Most graves run in an east-west alignment for religious reasons, but usually the weather runs in a similar alignment, maximising erosion on the surface of tombstones. The effect shown in the photograph is easily duplicated and exists in various images taken both during the night and sometime before. While some may consider it interesting, it has been rated as “natural explanation highly likely”.



Above: The gravestone shown in both negative and positive.

At around 11:00pm a representative from the Port Fairy Public Cemetery Trust arrived with her friend and gave a tour of site outlining particular graves of interest. They left just after 1:00am.

On a few occasions a green light was reported towards the northern end of the cemetery but no cause could be found, nor did it appear when camera's were covering the area.

There was some interference recorded on a camcorder after 1.00am, mainly affecting the accompanying audio. Two EMF meters were in view of the camcorder and failed to show any corresponding spikes in the electromagnetic field. This was a new digital tape which had been loaded about an hour earlier, however a fault in the tape cannot be ruled out as a possible cause.

There were no events reported during the investigation which are considered overly abnormal. There were no indications by the passive infrared movement detectors that could not be accounted for. The investigation concluded at 2.00am.



The grave site at 12.30am

ENVIRONMENT MONITORING RESULTS

Temperature & Humidity

Average temperature experienced throughout the investigation was 15.8°C and the humidity 84.5%. No temperature or humidity fluctuations were recorded that were considered abnormal.

Electromagnetic Field

There were no spikes or abnormal levels of EMF noted. Levels did not exceed 5mG through the night.

Infrasound

Given that the Port Fairy investigation was relatively quiet, it is perhaps a good opportunity to expand on the topic of infrasound, it's relationship to reports of paranormal activity and the reasoning behind the teams interest in monitoring it's level. Infrasound levels were recorded at Port Fairy throughout the investigation.

Infrasound refers to sound vibrations that are at a frequency too low to be heard by the human ear which has a range from 20 Hz to 20,000 Hz (called the audible range). Levels below 20 Hz are described as infrasonic (infrasound) and those above 20,000 Hz are ultrasonic.

While we may experience discomfort at sounds we can hear at volumes of around 80 decibels upwards, it is believed exposure to low frequency sound vibrations which we cannot detect may also have considerable impact on humans. In much the same way many find the audible bass of a high volume car stereo annoying, sounds at even lower frequencies may interfere with our emotions and perceptions. It is known that military forces have examined the effects of infrasound and even looked into its use as a weapon.

Exposure to infrasound has been demonstrated to effect recipients with symptoms including fear, sorrow, depression, anxiety, nausea, chest pressure and hallucination. It can cause objects to move through vibration and some believe the body's internal organs can be effected. It is suggested that levels above 80 decibels at frequencies between 0.5 to 10Hz may start to effect the vestibular of the inner ear thus causing disorientation. Any high volume sound can trigger the body to react by increasing respiration, heart rate and blood pressure, but when they cannot actually hear the sound recipients are left with no explanation for the sudden onset of these symptoms. This may then lead to further effects caused by the minds possible reaction to the unknown, as outlined below.

Once the mind receives information it considers unusual it may enter into "search mode" to try and explain what is being experienced, calling on all senses to assist - sight, sound, touch, smell etc... The longer the search goes on without an answer, the more intense the scrutiny. In the extreme, the body may react in "survival instinct" - fear sets in, pulse races etc... This is the body's natural reaction to the unknown, preparing it for possible "fight or flight" from danger. At such times, because the senses are so heightened and "in tune" for experiencing something, the brain may begin to misinterpret what the senses are picking up. Much akin to sitting alone in the dark after watching a horror movie although to a much greater extent. This is all a natural reaction of the brain and very real to the witness. Possible triggers (either alone or in combination) are anything that may suggest something strange is occurring including high EMF, infrasound, low atmospheric pressure, carbon monoxide exposure, darkness, isolation and any stimulus that may create suggestion such as watching a spooky movie, being in a spooky location, or Ouija board use.

The range of infrasound is generally accepted to be between 0-20 hertz with a specific area of interest between 17 and 19 hertz. Tests by NASA have revealed that the human eyeball resonates at around 18Hz, to which infrasound exposure may cause a reaction and lead to hallucinations.

Infrasound occurs quite naturally at some locations and possible causes include storms, earthquakes, waterfalls, volcanoes, ocean waves and wind reacting with structures such as chimneys. Some buildings or natural features can act as Helmholtz resonators and create infrasound at high levels. Ancient places of worship or ceremonial burial such as the Maeshowe mound in Orkney, have been shown to act in this way. It is possible that any room with an open doorway or window can operate like a Helmholtz resonator, similar to blowing a column of air across an empty bottle. Subsonic sound can travel long distances, pass through walls and may be amplified in tunnel like structures. Standard hearing protection is of little use for subsonic sound as it often can pass straight through and may even be amplified.

There have been links reported between supposedly haunted locations and the presence of infrasound, which is the reason the GRI team monitors infrasound levels whenever possible, in it's search to find answers.

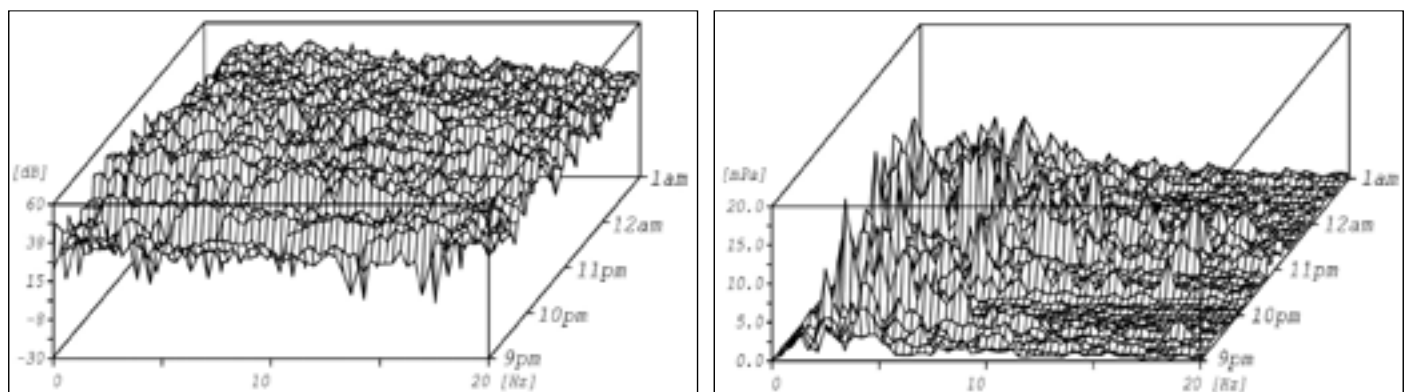
The following text gives some insight into how infrasound levels are represented, how they can be compared to sounds we can hear, and may be of some assistance in interpreting the results of monitoring.

There is a huge variance in sound pressure ranging from the minimum that can be heard by the human ear, 20 μ Pa (micropascals), to the threshold of pain, 20 Pa (pascals). Because of this huge range a logarithmic scale is used to represent the sound pressure level (SPL). A reference of 20 μ Pa (micropascals) is commonly used, being the lowest level that can be heard by the human ear at a frequency of 1000 Hz. This is equal to .02 mPa (millipascals) or 0.00002 Pa (pascals). The unknown level is compared to the 20 μ Pa threshold which is given a value of 0 dB (decibels) and the resulting level is expressed in decibels (dB). Because the human ear perceives sound intensity differently depending on it's frequency, weightings may also be applied in attempt to match what the human ear experiences. "A-weighted" levels are the most common used, although a "G-weighting" is perhaps more suitable for infrasound.

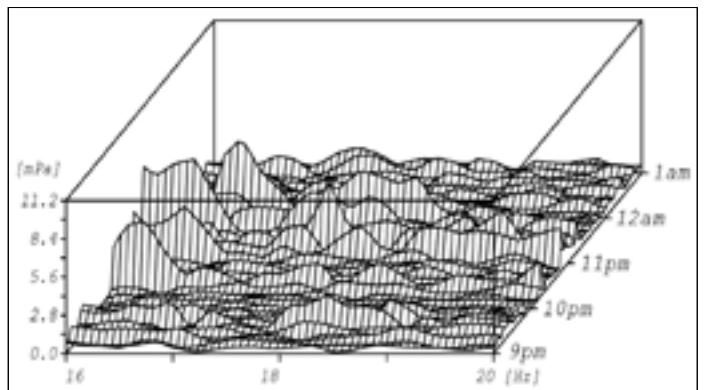
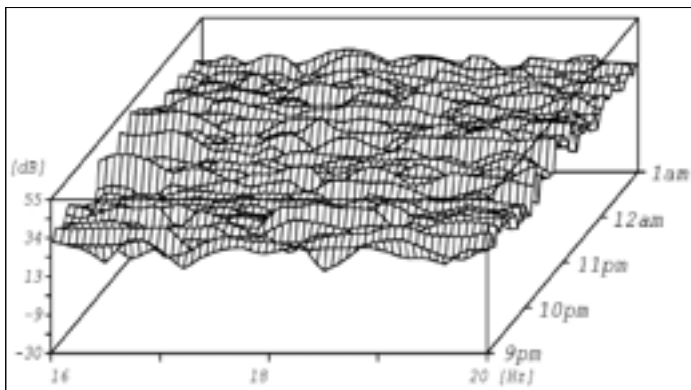
For comparison dB levels for some audible sounds are given below.

0-10dB	Threshold of human hearing.
10-20dB	Normal breathing, rustling leaves.
20-30dB	Whispering at about 1.5 metres.
40-50dB	Coffee maker, library, quiet office, quiet residential area.
50-60dB	Dishwasher, electric shaver, office, rainfall, refrigerator, sewing machine.
60-70dB	Air conditioner, alarm clock, background music, normal conversation, television.
70-80dB	Coffee grinder, toilet flush, freeway traffic, hair dryer, vacuum cleaner.
80-90dB	Blender, doorbell, heavy traffic, hand saw, lawn mower, ringing telephone, whistling kettle.
85dB	Lower limit recommended for the wearing of hearing protection.
90-100dB	Electric drill, shouted conversation, tractor, truck.
100-110dB	Baby crying, boom box, factory machinery, motorcycle, subway train.
110-120dB	Ambulance siren, car horn, leaf blower, walkman on high, power saw, shouting in the ear.
120-130dB	Auto stereo, rock concert, chain saw, pneumatic drills, stock car races, thunder, power drill.
130-140dB	Threshold of pain, air raid siren, jet airplane taking off, jackhammer.
150-160dB	Artillery fire at 500 feet, balloon pop, cap gun.
160-170	Fireworks, handgun, rifle.
170 -180	Shotgun.
180 - 190	Rocket launch, volcanic eruption.

Because of the open air environment of the Port Fairy Public Cemetery, wind played a great part in the infrasound levels experienced during the investigation. The highest peaks occurred at around 11.20pm which coincided with noted wind gusts. The southern end of the cemetery is on the main thoroughfare through the town, however traffic was light and no noticeable impact on infrasound was noticed.

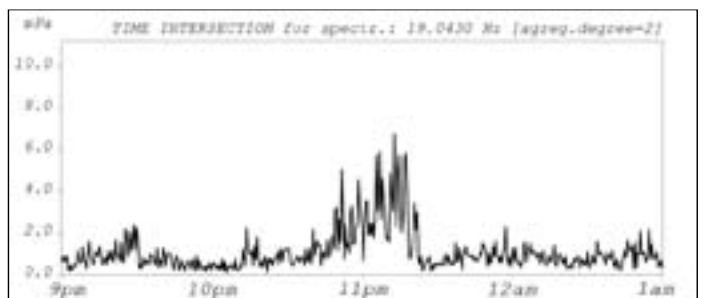
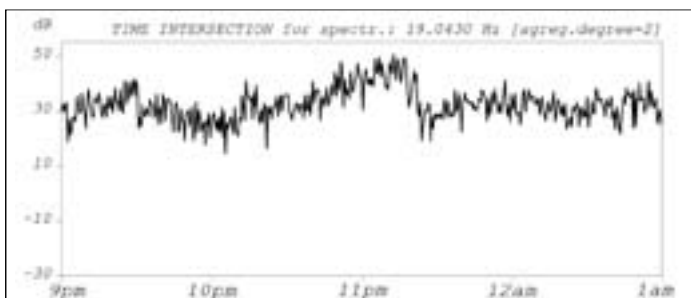
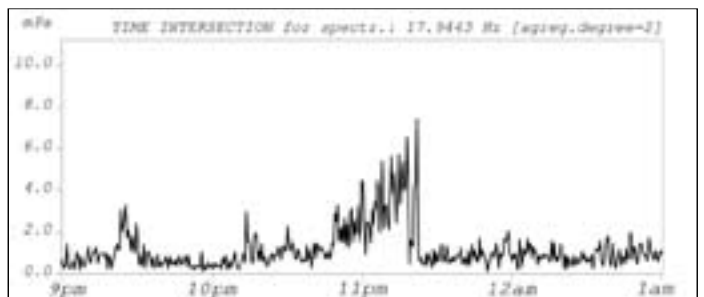
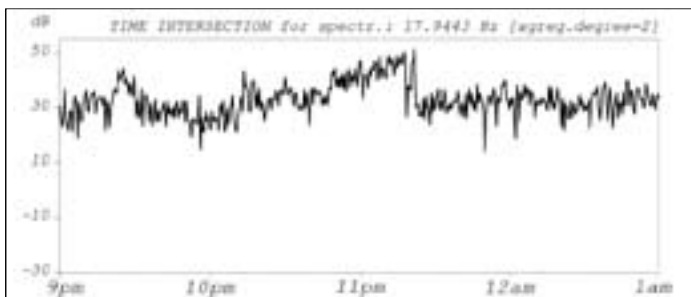
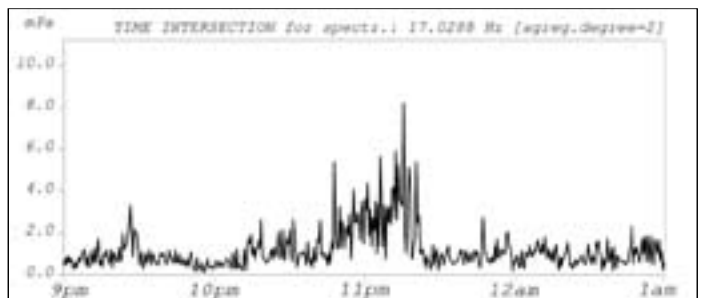
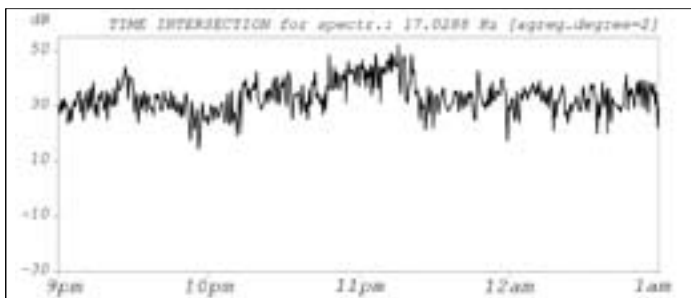


The spectra graphs above show the infrasound levels experienced throughout the evening between 0 and 20 Hz. On the left is a logarithmic scale showing values in decibels (dB) and on the right expressed as millipascals (mPa).



Zooming in on the spectra to show the range from 16 to 20Hz, again represented in dB (above left) and mPa (above right), the peaks at around 11.20pm can be seen.

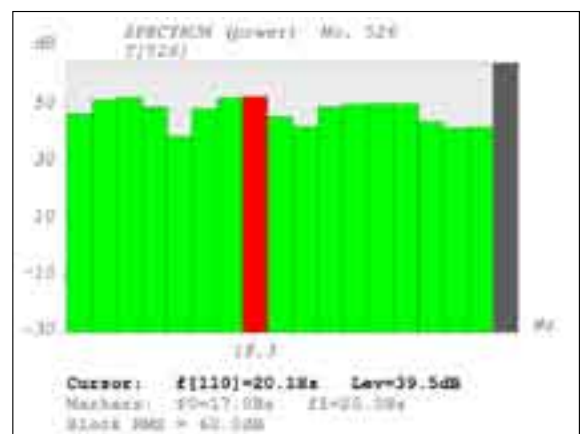
The graphs below show the individual time intersections at the key frequencies of 17Hz, 18Hz and 19Hz respectively, represented in both dB and mPa.



It suggested that the effects of infrasound may become noticeable at around 85 dB and increase considerably at higher levels. This level was not attained during our night at the cemetery.

The level of infrasound recorded during the night is therefore considered to be too low to have any noticeable impact. Wind speed was considered low during the investigation and traffic was minimal. However, it is considered that given the right conditions, the levels of infrasound could become high enough to be a possible contributor to reports of activity.

The table at right represents the sound spectrum between 17 and 20 Hz at a peak time of the night. All levels are well over 30dB, with a peak of over 50 at 18.3Hz. The block root mean square (RMS) value achieved in the range 17-20Hz was 60dB.



CONCLUSIONS AND RECOMMENDATIONS

RATING SYSTEM

To assess reported events and/or sites a rating system is adopted that is weighted towards the skeptical viewpoint. There is no assumption made that ghosts exist. This ensures the highest rating is achieved only when all natural explanations have been eliminated. This may cause some events which may be paranormal in origin to be discarded because they *could* be caused by something natural. This viewpoint is preferred because to claim that an event is caused by something not currently widely accepted as fact, demands considerable hard evidence be provided to support the claim.

The classifications used are as follows:

Explained	All characteristics of an event can be fully satisfied by natural explanations which the evidence indicates is the actual cause.
Natural explanation highly likely	A natural explanation cannot be ruled out and remains highly likely.
Inconclusive	No conclusion can be reached due to a lack of data to enable further analysis.
Indication of possible activity	Likely natural causes have been eliminated and there remains characteristics considered unusual but a lack of more supportive data prevents a higher rating.
Evidence of activity	Solid evidence and supportive data exists that documents an event which defies all natural explanations.

It is rare to be in the “right place at the right time” together with the required equipment that allows all of the necessary to data to be available. For this reason most events fall within the second, third or fourth classifications.

The Port Fairy Public Cemetery investigation was a very quiet one and allowed some expansion on the topics of orbs and infrasound in this report.

There were no reported events that were considered overly unusual and all were rated as “natural explanation highly likely”. If the ghost of Lloyd Rutledge, as reported in the legend, is still among us today there were no signs of him during our investigation.

RECOMMENDATIONS

It could be noted that we were present on the evening of December 17th and into the morning of the 18th, allowing for daylight savings which had not been introduced at the time of the death of Lloyd Rutledge. Perhaps another investigation covering the evening of the 16th and morning of 17th could be worthwhile. The year 2008 also marks the 150th anniversary of the death of Lloyd Rutledge.

Any future investigation would benefit from the use of an inverter or generator to provide full power to run all DVR cameras and ancillary equipment. In this case a suitable shelter would also be required. Insect repellent would also be an essential item to have on any investigation at the site!

SITE CLASSIFICATION

Based on the events recorded during this investigation the rating of “*natural explanation highly likely*” is deemed appropriate.

The legend is of course time based so it is a matter of being present when activity occurs in order to allow proper evaluation. Further investigations would be required to alter the rating from the current status.

ACKNOWLEDGEMENTS

Each investigation is conducted with the help and support of others who assist in making sure we are given the opportunity to be in the right place, at the right time and suitably equipped to capture any data which may ultimately provide answers, whether they be natural or supernatural in origin.

Many of these have no official stance on the existence or otherwise of ghosts but graciously provide support to the team for conducting research into the phenomenon.

We would like to particularly acknowledge the following who provided such assistance for this investigation.



The Port Fairy Cemetery Trust

The Port Fairy Cemetery Trust granted access to the site, provided related information and an informative tour of the location. It is only through the kind support of site owners and trustees that we have the opportunity to investigate locations fully.



The assistance of the TechRentals company in providing additional, fully calibrated monitoring equipment is greatly appreciated and the benefit to the quality of research possible was substantial.



The Victorian Police Force - Port Fairy

The Victorian Police at Port Fairy were notified of our attendance and conducted drive-bys ensuring everything went well.

