


APPENDIX 1 Permit to Excavate, P11876, Site Heritage Victoria

PERMIT	
HERITAGE ACT 1995	
PERMIT NO:	P11876
APPLICANT & OWNER:	Matthew Jackman
ADDRESS:	City of Greater Geelong PO Box 104 Geelong VIC 3220
ARCHAEOLOGIST:	Dr Roger Luebbers
ADDRESS:	24 Gordon Grove Menzies Creek VIC 3159
	
HERITAGE REGISTER NO:	H2088
REGISTRATION CATEGORY:	Archaeological Place FILE: PL-HE/03/0482
NAME OF PLACE /OBJECT (IF ANY):	Former Mineral Springs, Clifton Springs
LOCATION:	Clifton Springs, within the City of Greater Geelong
<p>Pursuant to Section 74 of the Heritage Act (1995) and in respect to the above-mentioned place / object, the Executive Director, Heritage Victoria hereby grants a PERMIT, subject to conditions as prescribed hereunder to carry out the following:</p> <p><i>To conduct archaeological investigations of the former mineral springs, to evaluate the remaining site fabric and make recommendations regarding interpretation and conservation.</i></p>	
CONDITIONS:	
<ol style="list-style-type: none"> 1. The archaeological investigations are to be conducted in accordance with the proposal submitted by the project archaeologist (dated 6 June 2007). Areas proposed for investigation include: timber enclosure, bottle dump, cellar opening, and other areas with the potential to contain archaeological deposits including artefacts and structures. 2. The excavation methodology it to be carried out in accordance with the <i>methods</i> and <i>tasks</i> section (see pages 2 & 3 of the project proposal). 3. The applicant will be liable for any expenses arising from the conservation, storage and management of any significant artefacts recovered during the works. 4. All portable relics excavated are to be listed in an Inventory to be submitted in the final report. A copy of the artefact inventory, in electronic Excel format, must also be submitted to Heritage Victoria. All artefacts recovered from the site are to be placed in corflute boxes and labelled with acid-free labels. All artefacts (including surface finds) are to be retained, unless approval has been obtained from Heritage Victoria to allow the non-retention of any designated artefacts. All artefacts are to be managed as directed by the Conservator, Heritage Victoria in the document <i>Archaeological Artefacts Management Guidelines</i>, February 2004. 5. Two copies of the project report and site plan must be submitted to Heritage Victoria within 6 months of the completion of the works. In addition to the project report, a photographic (digital) record of the excavation is to be submitted to Heritage Victoria as part of the project archive. The project report must include recommendations for site interpretation and site conservation. 6. The site is to be appropriately remediated at the completion of the works. 7. This permit shall expire if the permitted works have not commenced within one (1) year of the date of issue of this permit. The permit can be revoked at any time at the discretion of the Executive Director. 8. The Executive Director is to be informed when the on-site works are about to commence and when they have been completed. The finding of Aboriginal archaeological remains must be reported to Heritage Victoria and Aboriginal Affairs Victoria Heritage Branch as soon as possible. 	

APPENDIX 1: Heritage Victoria Permit, continued

NOTE THAT PERMISSION HAS BEEN GIVEN FOR INSPECTIONS OF THE PLACE OR OBJECT TO BE UNDERTAKEN DURING THE CARRYING OUT OF WORKS, AND WITHIN SIX (6) MONTHS OF NOTIFICATION OF THEIR COMPLETION.

TAKE NOTICE THAT ANY NATURAL PERSON WHO CARRIES OUT WORKS OR ACTIVITIES NOT IN ACCORDANCE WITH THE PERMIT OR CONDITIONS IS GUILTY OF AN OFFENCE AND LIABLE TO A PENALTY OF UP TO 2,400 PENALTY UNITS (\$240,000) OR 5 YEARS IMPRISONMENT OR BOTH, OR IN THE CASE OF A BODY CORPORATE 4,800 PENALTY UNITS (\$480,000).

THE ATTENTION OF THE OWNER AND/OR APPLICANT IS DRAWN TO THE NEED TO OBTAIN ALL OTHER RELEVANT PERMITS PRIOR TO THE COMMENCEMENT OF WORKS.

HERITAGE VICTORIA

Signed Executive Director

7/8 Nicholson Street, EAST MELBOURNE 3002

Date

APPENDIX 1: Heritage Victoria Permit, continued

File No.: PL-HE/03/0482

Permit No.: P11876

18 June 2007

Matthew Jackman
Capital Works Manager
City of Greater Geelong
PO Box 104
GEELONG 3220

Dear Mr Jackman,

**RE: ARCHAEOLOGICAL INVESTIGATIONS AT FORMER MINERAL
SPRINGS, CLIFTON SPRINGS**

Attached is a permit for the above place, which is included in the Heritage Register, as place **H2088**. Please read the conditions listed on this permit carefully.

Please note condition 3 which specifies that:

The applicant will be liable for any expenses arising from the conservation, storage and management of any significant artefacts recovered during the works.

An appeal to the Heritage Council against any of the conditions must be lodged within 60 days of this permit. Appeal Forms can be obtained from the offices of Heritage Victoria, Level 7/ 8 Nicholson Street, East Melbourne 3002, or by phoning (03) 9637 9297.

Notice of appeal should be addressed to the Chairperson, Heritage Council, Level 7/ 8 Nicholson Street, East Melbourne 3002.

If you have any queries please contact Janet Sullivan, Permits Co-ordinator, on (03) 9637 9474 or Jeremy Smith, Senior Archaeologist, on (03) 9637 9773.

Yours sincerely

**RAY TONKIN
EXECUTIVE DIRECTOR**

APPENDIX 1: Heritage Victoria Permit, continued

HERITAGE ACT 1995

REPORT AND RECOMMENDATION TO EXECUTIVE DIRECTOR ON APPLICATION FOR A PERMIT

FEE RECEIVED: N **AMOUNT:** N/A

REFUND REQUIRED: N **SENT:** N/A

APPLICANT: Matthew Jackman
ADDRESS: City of Greater Geelong
PO Box 104
Geelong 3220

ARCHAEOLOGIST: Dr Roger Luebbers
ADDRESS: 24 Gordon Grove
Menzies Creek 3159

HERITAGE REGISTER NO: H 2088
FILE NO: PL-HE/03/0482

NAME OF PLACE/OBJECT: Former Mineral Springs

ADDRESS / LOCATION: Clifton Springs

APPLICATION RECEIVED: 15 June 2007 **60 DAYS EXPIRES:** 14 August 2007

CLOCK STOPPED: N **RESTART:** N/A **EXPIRES:** N/A

ADVERTISING REQUIRED: No

WHERE ADVERTISED: N/A

ADVERT PERIOD ENDS: N/A

OFFICER REPORTING: Jeremy Smith

DESCRIPTION OF APPLICATION: The applicant requests permit approval to allow a program of archaeological investigations.

SITE INSPECTION:
Not recently conducted.

DISCUSSION WITH APPLICANT:
N

FORMAL PRESENTATION BY APPLICANT:
N/A

COMMENTS FROM OWNER/APPLICANT OR SUMMARY OF FORMAL PRESENTATION:
N/A

RECORD OF CURRENT CONDITIONS:
Site has recently been added to VHR.

APPENDIX 1: Heritage Victoria Permit, continued

HOW CULTURAL HERITAGE SIGNIFICANCE OF REGISTERED PLACE OR OBJECT IS AFFECTED BY PROPOSAL:

The former Mineral Springs, Clifton Springs, represent the site of a significant late 19th century recreational spa resort. It operated until it was destroyed by fire in 1923. The Springs were located on a narrow sandy beach, just above the high tide mark. The site consisted of a boiler house, kiosk, ornate spa bath house, and a cool room.

The site has been extensively eroded, by high tides and by the slumping of the foreshore. The site has also been disturbed by bottle collectors.

The aim of these works is to conduct archaeological investigations to evaluate the condition of the site, and make recommendations regarding the interpretation and conservation of the site.

EFFECT REFUSAL WOULD HAVE ON REASONABLE OR ECONOMIC USE OF THE PLACE OR OBJECT:

N/A

EXTENT OF UNDUE FINANCIAL HARDSHIP ON THE OWNER IF THE APPLICATION IS REFUSED:

N/A

IF THE APPLICANT IS A PUBLIC AUTHORITY, THE EXTENT TO WHICH THEIR ABILITY TO CARRY OUT A STATUTORY DUTY WOULD BE AFFECTED BY REFUSAL OF THE APPLICATION:

The City of Greater Geelong are interested in considering management recommendations for the site, in order to prevent the continued deterioration and erosion of the place.

ANY RELEVANT MATTERS RELATING TO PRESERVATION OR CONSERVATION OF THE PLACE OR OBJECT:

Urgent conservation works are required to stabilise and protect the site.

COMMENTS FROM REPORTING OFFICER:

The proposed archaeological investigation will provide a current evaluation of site condition, and make recommendations regarding interpretation and conservation options.

RECOMMENDATIONS:

That a permit be issued with the following conditions:

1. The archaeological investigations are to be conducted in accordance with the proposal submitted by the project archaeologist (dated 6 June 2007). Areas proposed for investigation include: timber enclosure, bottle dump, cellar opening, and other areas with the potential to contain archaeological deposits including artefacts and structures.
2. The excavation methodology is to be carried out in accordance with the *methods* and *tasks* section (see pages 2 & 3 of the project proposal).
3. **The applicant will be liable for any expenses arising from the conservation, storage and management of any significant artefacts recovered during the works.**
4. All portable relics excavated are to be listed in an Inventory to be submitted in the final report. A copy of the artefact inventory, in electronic Excel format, must also be submitted to Heritage Victoria. All artefacts recovered from the site are to be placed in corflute boxes and labelled with acid-free labels. **All artefacts (including surface finds) are to be retained, unless approval has been obtained from Heritage Victoria to allow the non-retention of any designated artefacts.** All artefacts are to be managed as directed by the Conservator, Heritage Victoria in the document *Archaeological Artefacts Management Guidelines*, February 2004.
5. Two copies of the project report and site plan must be submitted to Heritage Victoria within 6 months of the completion of the works. In addition to the project report, a photographic (digital) record of the excavation is to be submitted to Heritage Victoria as part of the project archive. The project report must include recommendations for site interpretation and site conservation.
6. The site is to be appropriately remediated at the completion of the works.

APPENDIX 1: Heritage Victoria Permit, continued

7. This permit shall expire if the permitted works have not commenced within one (1) year of the date of issue of this permit. The permit can be revoked at any time at the discretion of the Executive Director.
8. The Executive Director is to be informed when the on-site works are about to commence and when they have been completed. **The finding of Aboriginal archaeological remains must be reported to Heritage Victoria and Aboriginal Affairs Victoria Heritage Branch as soon as possible.**

OFFICER: Jeremy Smith/

DATED: 18 June 2007

PERMIT: P11876

APPENDIX 2: Timeline, Clifton Springs Mineral Springs Site

Land: Crown Portion 6, Parish of Bellarine at Indented Head, County of Grant

Date **	Topic	Comments / Details	Title Reference /
1848, Aug 8 1848, Nov 24	Land ownership	First Crown Portion grantee James COWIE Size: 378 acres Price: £396.18.10	Application File AP 10167a
1850	Land subdivision	Crown Portion 6 Subdivided vertically into 3 allotments [1] West allotment: a little under 100 acres [2] Central allotment: a little over 100 acres [3] Eastern allotment: 178 acres The area of interest (Dell and Springs) is the northern part of section [3] and part of [2]	Application File AP 10167a
1850, Apr 20 1850, May 29	Conveyance [2]	James COWIE to Samuel EADES Price: £105	Application File AP 10167a
1850, Apr 20 1850, May 29	Conveyance [3]	James COWIE to Patrick Homan O'HARA Size: 178 acres Price: £186.18.0	Application File AP 10167a
1854, Aug 21 1854, Aug 24	Mortgage [3]	Patrick Homan O'HARA To Charles James WHYTE Amount: £1500	Application File AP 10167a
1859, Jun 3 1859, Jun 18	Settlement [2]	Samuel EADES to Anna EADES (his wife - reason: natural love and affection), James COWIE and James NOBLE	Application File AP 10167a
1858, Jun/Jul 1858, Nov	Land dispute [3]	Involving Patrick Homan O'HARA, Hugh McPHILLIMY, Alexander SAYERS, Thomas PICKEN, Thomas LITTLE and others, C J WHYTE (held mortgage) and Robert REDE, Sheriff Geelong Circuit District Details: not stated but appear to relate to a) a small strip of land 0.2 chains wide to the east of Crown Portion 6 involving Portions 7 and 8 owned by some of the above. Map included in AP 10167a shows the width of subdivided land totals 39.20 chains whereas the original Crown Portion 6 was 39 chains b) right of way through land to the east. Outcome: Charles James WHYTE (who held the mortgage for [3]) was the owner who sold the land a month after the resolution of this dispute.	Application File AP 10167a
1858, Dec 31 1859, Aug 15	Conveyance [3]	Charles James WHYTE to William BURROWS Price: £1780	Application File AP 10167a
1864, May 4 1865, Mar 22	Conveyance [3]	William BURROWS to Thomas BATES Size: not stated if all or part of [3] but certainly includes the bulk of it based on later subdivision and Certificate of Title in name of Thomas BATES Price: £600	Application File AP 10167a
1865, Feb 15 1866, Mar 29	Conveyance [2]	James COWIE, James NOBLE and Anna EADES to Thomas BATES Price: £300	Application File AP 10167a

Date **	Topic	Comments / Details	Title Reference /
1865, Oct 21 1866, Mar 29	Conveyance [1]	James COWIE to Thomas BATES Price: £389	Application File AP 10167a
1868, Jan 1	Thomas BATES residence	"Clifton" stated to be the residence of Thos BATES	<i>Geelong Advertiser</i> Summary
1870, Dec 28	Mineral Springs	The discovery of the Mineral Springs on Mr BATES' property near Drysdale is announced and tests by Dr BLEASDALE and Mr Panton give great promise of benefits. Total of 12 springs selected for production, although different mineral composition is noted. Bates put down two crocks that produced crystal clear water. Paper speculates that construction of a hotel accommodation house for invalids will be attempted.	<i>Geelong Advertiser</i>
1871, Apr 4	Mineral Springs	Seven springs are developed, and bridal and carriage paths in the Dell are constructed. An eighth spring containing sulphur is earmarked for development as a spa bath.	<i>Geelong Advertiser</i> See Appendix 7 for full article.
1871, Apr 5	Mineral Springs	BALFOUR & HAYES, agents, advertised that the steamer "Kangaroo" would make excursion trips to Clifton Mineral Springs during the Easter holidays.	<i>Geelong Advertiser</i> Summary
1871, May 19	Mineral Springs	Alan GRANT, manager, Clifton Springs advertised that he had leased the house of Thos BATES and converted it for parties desirous of obtaining the benefits of the Springs until the lessee, J F LEVIEN (MLA), was able to build more suitable buildings for the purpose. The curative benefits of the mineral waters are advocated, especially the Sulphur Spring baths. A cab to the springs leaves Geelong on Tuesdays, Thursdays, and Saturdays at 10 o'clock.	<i>Geelong Advertiser</i>
1871, Dec 16	Mineral Springs	S Lea ALLNUTT protested in the <i>Geelong Advertiser</i> because people were using his property as a short cut to Clifton Springs.	<i>Geelong Advertiser</i> Summary
1872, Dec 1 1873, Jun 3	Mortgage [2], [3] and part [1]	Thomas BATES to James SCOTT Amount: £1500	Application File AP 10167a
1872, Dec 19	Mineral Springs / Bates and COLLINS	A temporary licence granted to COLLINS for Clifton Mineral Springs over the holiday period, by Drysdale Licensing Court. He will erect a tent in the Dell. Mr Bates intends to build small four roomed cottages for visitor accommodation.	<i>Geelong Advertiser</i>
1873, Mar 1	Thomas BATES house	Thomas BATES, Drysdale, called tenders for a 7 roomed house at Clifton Springs. Plans etc. at J M GARRATT's office, Moorabool Street North, or MOFFAT's Store, Drysdale.	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1873, Mar 13	Mineral Springs	Clifton Mineral Springs said to be growing in popularity. Report of an old identity of the area that the Springs started 20 years ago when a bullock was found there dead.	<i>Geelong Advertiser</i> Summary
1874, Aug 14	Mineral Springs / KRUSE	Mr KRUSE, the well-known Melbourne Chemist, said to have purchased the Old Bellarine Mill at Drysdale to establish a chemical works connected with the waters from the Clifton Springs, Drysdale.	<i>Geelong Advertiser</i> Summary
1874, Oct 8	Mineral Springs / KRUSE	<i>Geelong Advertiser</i> reported that Mr KRUSE would probably start that day to manufacture litho, or dynamite, for mining purposes at the Old Portarlington Mill.	<i>Geelong Advertiser</i> Summary
1874, Oct 20	Mineral Springs / KRUSE	Mr KRUSE said to have commenced operations at the Drysdale Mill (not the Portarlington mill as previously reported). He was making dynamite and other chemical works, but later would be bottling the mineral waters at Clifton Springs for export.	<i>Geelong Advertiser</i>
1874, Dec 8 Dateline is Friday Dec 5	Mineral Springs/ bottling. KRUSE	The chemical works at Drysdale are rapidly progressing, and amongst other things, some most delicious summer drinks are being prepared, in which the waters from the Clifton Springs form an important ingredient. A building in connection with the works is about to be erected at the springs for bottling purposes.	<i>Geelong Advertiser</i>
1874, Dec 8	Bucks Head Hotel, Drysdale	Mr Thomas Collins advertises curative powers of Clifton Springs mineral waters under "Trade Notices"	<i>Geelong Advertiser</i>
1874, Dec 8	Mineral Springs/ bottling. KRUSE	Mr KRUSE who has recently established a chemical works at Drysdale has commenced making summer beverages using Clifton Springs mineral waters. This is decidedly a good way of bringing these waters prominently before the public.	<i>Geelong Advertiser</i>
1874, Dec 16 1875, Feb 5	Mortgage [3]	Thomas BATES to James SCOTT Amount: £500	Application File AP 10167a
1875, Jan 13	Mineral Springs / Summer House	Preparations for bottling the waters now nearly completed. Building, rather like a summer- house, was erected over one of the mineral springs on Saturday. It will give protection to the apparatus used to collect the gas.	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1875, Jul 14	Mineral Springs / KRUSE	Johann KRUSE said by Drysdale correspondent to be making dynamite cartridges for blasting at Bellarine Mill - it was said he was prevented from carrying out his other plans to bottle spa water at Clifton Springs.	<i>Geelong Advertiser</i>
1875, Dec 2	Thomas BATES Land auction at Clifton Estate	Reference to the sale on 18/12/1875 of 18 suburban allotments at South Clifton near the celebrated Clifton Springs (4-5 acres in each allotment) - John DAVISON is auctioneer.	<i>Geelong Advertiser</i> Summary
1876, Jan 4 1876, Jan 29	Reconveyance [3]	James Scott to Thomas BATES Amounts: £1500 and £500	Application File AP 10167a
1876-1877	Multiple conveyances	Subdivision of land in the south part of [1], [2] and [3] and the west [1] including sales from Thomas BATES to William WISBEY £394.6.0 Henry MATTHEWS £115.11.0 John RAY £180.2.0 William Henry MATTHEWS £115.11.0 George FORD £115.11.0 Henry MARTIN £462.15.0 Henry ALLEN £219.3.9 Robert LESLIE £120.0.0 George JACKSON £130.12.6 Matthew ASHWORTH £105.10.0	Application File AP 10167a
1876, Jan 27	Mineral Springs	R C BAGOT and several medical men visited Clifton Springs to determine whether a mineral spa should be formed there. The party came down on the steamer "Sprightly"; Capt. SMITH, owner.	<i>Geelong Advertiser</i> Summary
1876, Mar 2	Mineral Springs	Reported that visitors to Clifton Springs would in future have to go by way of Drysdale as the short cut through Mr T BATES property had been closed.	<i>Geelong Advertiser</i> Summary
1876, Sep 25	Mineral Springs Company	Preliminary meeting held at the Bucks Head Hotel, Drysdale, to form a Clifton Springs Company - E TRETOWAN in the chair.	<i>Geelong Advertiser</i> Summary
1876, Nov 17	Mineral Springs Company / KRUSE	Notice of dissolution of partnership on 15.11.1876 of Thomas BATES and Samuel Lea ALLNUTT, trading as Clifton Mineral Water Co. The debts of the company were to be taken over by John KRUSE.	<i>Geelong Advertiser</i> Summary
1877, Jan 12	Clifton Springs / ferry	R J MILLER advertised that the SS "Jaffa" would commence running to Clifton Springs every Monday, Wednesday & Friday, starting 15th Jan, 1877.	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1877, Nov. 27	Mineral Springs Advertisement / KRUSE	William JOHNSON, analytical chemist to Victoria Government quoted in detail as to the quality of Clifton mineral waters. John KRUSE was the chemist bottling them at Clifton Springs, and they compared more than favourably with world famous mineral waters. KRUSE made lemonade, ginger beer, raspberry mineral water, etc. from the mineral water. Article suggests KRUSE is employing improved bottling technique involving "extra charge" of natural gases.	<i>Geelong Advertiser</i> Summary
1877, Nov 5	Clifton Springs / ferry	James A McMEIKAN advertised that SS "Athletic" would run twice a week between Portarlington, Drysdale and Clifton Springs and Melbourne - fares 5/- single, 8/- return.	<i>Geelong Advertiser</i>
1878, Jan 8	Clifton Springs / hotel	Reported that a 6-roomed house was being erected on the hill above the Clifton Springs for accommodation of visitors in anticipation of increased popularity.	<i>Geelong Advertiser</i> Summary
1878, Apr 10	Mineral Springs / KRUSE / railway	Johann KRUSE, lessee of Clifton Mineral Springs, wrote a long letter to the Geelong Advertiser on the route of the proposed Geelong-Queenscliff railway.	<i>Geelong Advertiser</i> Summary
1878, May 3, p 2	Mineral Springs / KRUSE / insolvency	John KRUSE, analytical chemist of Drysdale, filed his insolvency schedule: liabilities £1300/19s, assets £333/8s and deficiency £977.11.5, due to losses sustained at Clifton Mineral Springs and starting business w/o sufficient capital and machinery. (ed. note- KRUSE operated two businesses at Clifton Spring, one manufacturing dynamite, the other mineral water).	<i>Geelong Advertiser</i>
1878, Sep 4	Land ownership	Thomas BATES , Gentleman Size [probably]: 310 acres 3 roods 20 perches [parts of first page missing but based on visible words, initial size - 378 acres - plan on front page, and subdivision sales in AP 10167a]	Certificate of Title Vol 1059 Fol 631
1878-1987	Land transfers	Subdivisions and multiple sales to various people, excluding land of interest	Certificate of Title Vol 1059 Fol 631
1878, Nov 2	Clifton Springs / hotel	Clifton House, Clifton Springs, advertised seaside accommodation for families and boarders, with sea Bathing and Springs - £2.10 per week; 10/- per day. Coaches leave Geelong Daily.	<i>Geelong Advertiser</i>
1879, Feb 17	Mineral Springs	Reported that C A HODGSON of Geelong and C S REEVES of Creswick have leased the Clifton Mineral Springs from Messrs BATES and ALLNUTT, and were at present erecting an engine for utilising the waters of the Springs. HODGSON'S experience with agency for Clifton mineral waters cited.	<i>Geelong Advertiser</i> Summary
1879, Oct 16	Land sales	Thomas BATES, JP, advertised the auction sale on 25/10/1879 of his "Spring Villa" and 30 villa sites at "Clifton".	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1879, Dec 12	Publican's license	Publican's Licence (new) granted to D O'LEARY, Clifton Springs.	<i>Geelong Advertiser</i> Summary
1880, Jun 21	Mineral Springs Company	Advertiser reported it had learned that there was a prospect of a company being formed to work the Clifton Mineral Springs.	<i>Geelong Advertiser</i> Summary
1880, Jun 21	Mineral Water	J G REEVES advertised that the mineral waters of the Clifton Mineral Springs, Drysdale, were now being sold by C A HODGSON, Market Square, Geelong.	<i>Geelong Advertiser</i> Summary
1880, Aug 5	Mineral Springs Company	William SKENE Esq advertised at "Lunan" (Geelong) - he was supporting the prospectus of the Clifton Mineral Springs Company.	<i>Geelong Advertiser</i> Summary
1880, Aug 5	Mineral Springs Company Prospectus	The Clifton Mineral Springs Co. set out in detail with reference to chemical analysis by W Johnson, medical testimony, and recommendations from patrons. 7 provisional directors named. Capital £5,000 in £2 shares. Six springs present, reference to hot Sulphur Baths, Seltzer, Sulphur and Iron Springs, bottling facility currently producing 5125 dozen bottles with forecasts to 26,000 dozen, annual rent of £100, and presence of small hotel.	<i>Geelong Advertiser</i> See full text, Appendix 7
1880, Sep 7	Mineral Springs Company	Provisional directors of the Clifton Mineral Springs Company resolved that the company be formed and shares applied for issued.	<i>Geelong Advertiser</i> Summary
1880, Sep 2	Mineral Springs Company shares	"The following several persons, on 20th September, 1880 subscribed to the formation of the Company in pursuance of the Memorandum of Association, and agreed to take the number of shares, as under, in the Capital of the Company: J F LEVIEN, Drysdale, farmer, 50 S L ALLNUTT, Drysdale, landowner, 125 C BRAZIER, Drysdale, draper, 25 Thomas BATES, Drysdale, landowner, 125 Charles ANDREWS, Geelong, warehouseman, 25 J G REEVES, Drysdale, manufacturer, 50 W YOUNG, Geelong, bank manager, 10 Benjamin FREEMAN, Geelong, tinsmith, 5 Henry A WHYTE, Geelong, banker 5 Charles IBBOTSON, Geelong, merchant, 5 Frederick HARVEY, Geelong, merchant, 5	John Richardson 1985?:14-15
1880, Sep 25	Mineral Water	William H SYMONS, 22 years, employed at Clifton Springs, Drysdale, in danger of losing the sight of one eye from a bottle that exploded when bottling mineral water.	<i>Geelong Advertiser</i>

Date **	Topic	Comments / Details	Title Reference /
1880, Oct 8	Mineral Springs Company	J M GARRATT appointed secretary of Clifton Mineral Springs Company, Drysdale, his office being the Company's registered office. The Colonial Bank was appointed as the Company's Bank.	<i>Geelong Advertiser</i> Summary
1880, Nov 9	Mineral Water	McCOUBRIE Bros., wholesale confectioners & caterers of Cavendish Street, Geelong, appointed agents for the sale of the waters of Clifton Mineral Springs Co. Ltd., Drysdale.	<i>Geelong Advertiser</i> Summary
1880, Dec 10	Clifton Springs hotel	Margaret O'CONNOR advertised her intention to apply for a Publican's Licence for a 7-roomed house at Clifton Springs.	<i>Geelong Advertiser</i> Summary
1880, Dec 28	Clifton Springs hotel	William DOBLE signed an advertisement as secretary of the New Year's Day Sports, Clifton Hotel, near Drysdale.	<i>Geelong Advertiser</i> Summary
1881, Jun 28	Mineral Springs Company	Office of Clifton Mineral Springs Co removed from Malop St. Geelong to the works site. John M REEVES was secretary.	<i>Geelong Advertiser</i> Summary
1881, Jul 29	KRUSE	John KRUSE, analytical chemist, Drysdale, granted an Insolvency Court Certificate of discharge at Geelong.	<i>Geelong Advertiser</i> Summary
1881, Nov 21	Mineral Springs Company	John REEVES signed in <i>Geelong Advertiser</i> as secretary, Clifton Mineral Springs Co Ltd, Drysdale. He was seeking a sole agent in Geelong for the Company's products.	<i>Geelong Advertiser</i> Summary
1881, Dec 8	Clifton Springs hotel	Lizzie CAVE of Drysdale, publican, gave notice of her application for a license for a 12-roomed hotel at Clifton Springs.	<i>Geelong Advertiser</i> Summary
1881, Dec 15	Clifton Springs hotel	License granted at Drysdale Court: L CAVE, Clifton Springs Hotel	<i>Geelong Advertiser</i> Summary
1882, Sept. 30	Balance Sheet, annual report	Reports loss despite increased output of waters, citing unsatisfactory conduct of agency. Receipts for water and baths is £408.1	
1884, Feb 7	Mineral Springs spa / hotel	The Clifton Springs Spa area is described and a Miss CAVE is the proprietor of the hotel. "Here also, at a house in which are the offices of the company, the invalid may have his sulphur bath, as comfortably as he could take it in Melbourne..."	<i>Geelong Advertiser</i> Summary
1884, Nov 6	Clifton Springs hotel	Licence of the Clifton Springs Hotel transferred from Mrs GELL to Mrs SUMMERS.	<i>Geelong Advertiser</i> Summary
1884, Nov 21	Clifton Springs hotel	Beatrice SUMMERS, widow, advertised her application for a publican's licence for the 16-room Clifton Springs Hotel.	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1884, Dec 9	Mineral Springs	John G REEVES advertised as lessee, Clifton Mineral Springs.	<i>Geelong Advertiser</i> Summary
1885, Jan 13	Clifton Springs hotel	Mrs Ellen GELL said to have been the former proprietor of the Clifton Springs Hotel. A charge against her of false pretences was withdrawn.	<i>Geelong Advertiser</i> Summary
1885, Apr 20	KRUSE	Appointment of John KRUSE as analyst, Corio Shire, said to have been approved by Central Board of Health.	<i>Geelong Advertiser</i> Summary
1886, Aug 23	Mineral Springs Company	Geelong Advertiser recorded the decision on 19/8/1886 to form the Clifton Sea Mineral Springs Co Ltd.	<i>Geelong Advertiser</i> Summary
1886, Nov 10	Mineral Springs Company	Reference to a plan to float a £50,000 company to exploit the Clifton Springs Mineral Waters.	<i>Geelong Advertiser</i> Summary
1887, Jun 13, p 4	The Clifton Hotel, Springs, and Spa Co	Reference to a failed proposal some months ago to form a company with £20,000 (with £1 shares) to build a hotel and a venture by local investors to resurrect interest in the name of Clifton Springs Hotel & Spa Co Ltd. This company proposes to raise £15,000 in 150 shares and renovate the springs and upgrade accommodation facility. Existing hotel to remain, with new site for two-story brick structure next to it. Facility and scale of new hotel is described, with plans for expansion and additions as needed. Springs currently being enclosed and glassed over with cement protection. Two cemented tanks installed to collect rainwater and Mr J. DONAGBY installed 2 hp boiler with pipes connected to sulphur spring and the sea so that sea water, spring water, and freshwater could be distributed hot or cold. Vandalism of existing springs mentioned.	<i>Geelong Advertiser</i>
1887, Aug 29	Clifton Springs Hotel	LOWEISH, MOORHOUSE & FIGGIS called tenders, closing 16/9/1887, for erection of a two story brick hotel at Clifton Springs.	<i>Geelong Advertiser</i>
1887, Sep 29	Clifton Springs Hotel	License of the Clifton Springs Hotel transferred from Eleanor ATKINS to Charles DARTON.	<i>Geelong Advertiser</i> Summary
1887, Oct 28	Clifton Springs Hotel	M HANNAH, contractor, Drysdale, wins contract for erection of the Clifton Springs Hotel at a price of £4,000. At the completion of construction expected to last 21 weeks the hotel will include a lobby, office, hall, 2 bars, drawing and dining rooms, and unparalleled views from a balcony and windows. The upper story of 22 bedrooms, two sitting rooms, and three bathrooms are available to patrons. A detached kitchen to rear of the hotel is planned.	<i>Geelong Advertiser</i>

Date **	Topic	Comments / Details	Title Reference /
1888, Jan 28	Clifton Springs Sea bathing house	LOWEISH, MOORHOUSE & FIGGIS of Melbourne called tenders for sea bathing-house and fencing, Clifton Hotel and Spa Co Ltd.	<i>Geelong Advertiser</i>
1888, Aug 21	Land transfer	From Thomas BATES to Clifton Hotel and Spa Company Drysdale Limited Size: 29 acres 3 roods 10.2 perches	Certificate of Title Vol 1059 Fol 631 Instr 227910
1888, Aug 21	Land ownership	Clifton Hotel and Spa Company Drysdale Limited of the Clifton Springs, near Drysdale Size: 29 acres 3 roods 10.2 perches	Certificate of Title Vol 2081 Fol 008
1888, Nov 5	Mortgage	The Clifton Hotel and Spa Company Drysdale Limited to David Boswell REID and George Nugent SYNNOT	Certificate of Title Vol 2081 Fol 008 Instr 96392
1889, Oct 30	Clifton Springs Hotel	Chas B SPEARING of the Continental Hotel, Sorrento, said to be the new Lessee of Clifton Springs Hotel etc.	<i>Geelong Advertiser</i> Summary
1889, Nov 21	Clifton Springs Hotel	Tenders closing 25/11/1889 called for provision of a balcony and water-proof paint for the Clifton Springs Hotel. C D FIGGIS, architect.	<i>Geelong Advertiser</i>
1889, Dec 1	Jetty Development	The Schooner <i>Georgina Smith</i> , arrives at the new wharf to assist the contractor in driving piles to extend the jetty into deeper water.	<i>Geelong Advertiser</i>
1889, Dec 9	Clifton Springs Hotel	Chas DARTON said to be applying for transfer of the license of the Clifton Springs Hotel on 18/12/1889 to Chas Brougham SPEARING, Clifton Springs.	<i>Geelong Advertiser</i> Summary
1889, Dec 11	Clifton Springs / ferry / jetty	Schooner "Georgina Smith", drawing 8½', said to be the first vessel to use the new Clifton Springs jetty. The vessel was to be used by a contractor to extend the jetty to deeper water - depth at present 10'.	<i>Geelong Advertiser</i> Summary
1889, Dec 20	Clifton Springs Hotel	Chas R DARTON's application relative to "Clifton Springs" Hotel was deferred	<i>Geelong Advertiser</i> Summary
1889, Dec 24	Clifton Springs Hotel	George WHITE, an employee of Victoria Hotel, said to have been appointed manager, Clifton Springs Hotel.	<i>Geelong Advertiser</i> Summary
1890, Jan 3	Mineral Springs / spa and testimonial	Robert LARE said to be the attendant in charge of the hot Sulphur Baths and C. R. DARTON was retiring as manager of Clifton Springs resort and George White is his successor. New Years Eve party in the drawing room is described.	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1890, Jan 8	Mineral Springs Company	Registered office of Clifton Land & Spa Company removed to the office of Frederick SMITH, Malop Street, Geelong.	<i>Geelong Advertiser</i> Summary
1890, Jan 9	Clifton Springs Hotel	Licence of Clifton Spa Hotel transferred 8/1/1890 From Charles A DARTON to William White.	<i>Geelong Advertiser</i> Summary
1890, Jan 20	Clifton Springs promotion	Hotel staff are observed preparing grounds for summer season under new managers of Misses Powell. Cottages and hotel are elegantly furnished and ready for visitors. The kiosk from which the famous mineral waters are served, the hot water baths at the sea, the new jetty, and the springs are mentioned. Last week, the staff of P. Mathews and Co, cordial and aerated water manufacturers are the first in the season to hold a picnic at the Dell, completely catered by the hotel. Described are a concert in the music room, catering arrangements, and sports/game activities.	<i>Geelong Advertiser</i>
1890, Aug 25	Clifton Springs Hotel	Licence of Clifton Springs Hotel transferred from George WHITE to Ellen POWELL	<i>Geelong Advertiser</i> Summary
1890, Sept. 30	Company Report	Assets listed include freehold property, Jetty, Mineral water Kiosk, furniture and fittings amounting to £67484.1.1. Earnings of £2382.0.10 reported from House, rent, cellar, baths, etc.	Clifton Land and Spa Co. Ltd. balance sheet, half year ending today
1890, Dec 19	Clifton Springs Hotel	Licences granted at Drysdale Licensing Court, 18/12/1890: Clifton Springs Hotel - Miss Ellen POWELL	<i>Geelong Advertiser</i> Summary
1891, Jul 20	Mortgage Transfer	David Boswell REID and George Nugent SYNNOT to William HIGGINS [Snr or Jnr?]	Certificate of Title Vol 2081 Fol 008 Instr 306763
1891, Dec 19	Clifton Springs Hotel	Licences granted at Drysdale: Clifton Springs Hotel - Miss Ellen POWELL	<i>Geelong Advertiser</i> Summary
1892, Jul 7	Clifton Springs Hotel	E POWELL advertised at Clifton Springs Hotel.	<i>Geelong Advertiser</i> Summary
1892, Sep 14	Clifton Springs Hotel	Licence of the Clifton Springs Hotel transferred 13/9/1892 from Miss Ellen POWELL to Edward KINSELLA.	<i>Geelong Advertiser</i> Summary
1892, Dec 19	Clifton Springs Hotel	Publicans' Licences granted at Drysdale Court, 17/12/1892: Clifton Springs Hotel - Edward KINSELLA	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1893, Sep 4	Clifton Springs Hotel	Announcement of auction of 40-room Clifton Springs Hotel on 30 acres of land with mineral springs and a 2,160' jetty. A large 8 room wooden building, stabling, and outhouses mentioned around the hotel, swimming and mineral baths available on the sea shore.	<i>Geelong Advertiser</i>
1893, Nov 23	Clifton Springs Hotel	D O'LEARY said to have taken the Clifton Springs Hotel. His effects were for auction Lt Myers Street, Geelong, close to Yarra Street, 29/11/1893.	<i>Geelong Advertiser</i> Summary
1893, Dec 7	Clifton Springs Hotel	William HIGGINS, Geelong, owner, gave notice of his intention to transfer the licence of Clifton Springs Hotel from Henry BOSE to Daniel O'LEARY, Clifton Springs, on 16/12/1893.	<i>Geelong Advertiser</i> Summary
1893, Dec 19	Clifton Springs Hotel	Publicans' Licences granted at Drysdale Court for the Bellarine District, 16/12/1893: Clifton Springs Hotel - Daniel O'LEARY	<i>Geelong Advertiser</i> Summary
1894, Oct 31	Land transfer	Sarah Ann HIGGINS, William HIGGINS and Walter Herbert HIGGINS to Daniel FOWLER	Certificate of Title Vol 2081 Fol 008 Instr 352727
1894, Nov 12	Clifton Springs Hotel	Licence of the Clifton Springs Hotel - application for transfer of licence from Daniel O'LEARY to Charles Augustus FORSTER.	<i>Geelong Advertiser</i> Summary
1895, Dec 4	Clifton Springs Hotel	Application for transfer of Publican's Licence, 14/12/1895 - Chas Augustus FORSTER to Mary Ann McGEE, licence of Clifton Springs Hotel.	<i>Geelong Advertiser</i> Summary
1896, Jun 10	Clifton Springs Hotel	Mrs D O'LEARY, formerly of Clifton Springs Hotel, said to have taken over the Royal Mail Hotel, Yarra Street, Geelong.	<i>Geelong Advertiser</i> Summary
1896, Dec 9	Clifton Springs Hotel	Annie FOWLER of Clifton Springs gave notice of her application on 18/12/1896 for transfer of the licence of Clifton Springs Hotel to Mary Ellen FOWLER, Clifton Springs.	<i>Geelong Advertiser</i> Summary
1896, Dec 19	Clifton Springs Hotel	Queenscliff Licensing Court granted, 18/12/1896, transfer of Licence of Clifton Springs Hotel from Annie FOWLER to Mary Ellen FOWLER.	<i>Geelong Advertiser</i> Summary
1897, Nov 18	Clifton Springs Hotel Fire	A 16-room wooden cottage at the Clifton Springs Hotel is destroyed by fire on 16/11/1897. It started in the laundry of the fully furnished cottage at about midnight and everything was lost. The structure was located some distance from the main building and was insured for £650. [The cottage is believed to be the same one that is mentioned in the 1884, Nov 21 entry that was known as the Clifton Springs Hotel].	<i>Geelong Advertiser</i> Summary

Date **	Topic	Comments / Details	Title Reference /
1897, Dec 3	Clifton Springs Hotel	J McGEE, Melbourne, purchased Clifton Springs Hotel in 30 acres for £4000 on 2/12/1897.	<i>Geelong Advertiser</i> Summary
1898, Aug 5	Clifton Springs Hotel	Mrs Leah JACOBS said to be licensee, Clifton Springs Hotel.	<i>Geelong Advertiser</i> Summary
1898, Sep 13	Clifton Springs	A spacious tennis court said to be being constructed at Clifton Springs - it would be one of the finest in the Colony.	<i>Geelong Advertiser</i> Summary
1899, Jan 21	Clifton Springs Hotel auction	Notice by Robinson, Burns, Sparrow, in conjunction with Neil Campbell, that Clifton Springs Hotel, occupied by Mrs M JACOBS, will be auctioned on 23 February by instructions from D FOWLER. It consists of about 30 rooms, ornamental trees etc.	<i>Geelong Advertiser</i> Summary
1899, Jan 28	Clifton Springs Hotel facility	Auctioneers (RBS & Campbell) list possessions and attractions of hotel for sale on 23 February as: substantial brick building with balcony and magnificent tower with commanding view, 30 rooms, with accommodation appropriate to first-class hotel, on 30 acres of rich agricultural land, ornamental trees, with kiosk, and a building useful for tea rooms and a cave. A pier ¾ mile long, swimming baths. Medicinal baths and sea baths are in going order. Five springs are mentioned by name to serve invalids as a hydropathic establishment. Easy access by rail, road, by water.	<i>Geelong Advertiser</i>
1899, Jun 24	Clifton Springs	H LOWE appointed caretaker of Queen's Park, 23/6/1899, at a salary of £85 p.a., plus cottage. He had held a similar post at Clifton Springs.	<i>Geelong Advertiser</i> Summary
1899, Dec 4	Clifton Springs Hotel	John BUCK advertised application to transfer the licence of the Clifton Springs Hotel on 15/12/1899 to Daniel FOWLER of Geelong.	<i>Geelong Advertiser</i> Summary
1900, Apr 24	Clifton Springs Hotel	Clifton Springs Hotel said to have been sold to Mr R B NUNAN of Melbourne.	<i>Geelong Advertiser</i>
1900, Oct 26	Lease	Daniel FOWLER to Timothy Berchmans NUNAN	Certificate of Title Vol 2081 Fol 008 Instr 8012
1902, Sep 19	Mortgage	Daniel FOWLER to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 2081 Fol 008 Instr 213828
1903, Jul 11	Lease surrendered [8012]	Daniel FOWLER to Timothy Berchmans NUNAN	Certificate of Title Vol 2081 Fol 008 Instr 8012

Date **	Topic	Comments / Details	Title Reference /
1903, Jul 11	Lease	Daniel FOWLER to Timothy Berchmans NUNAN	Certificate of Title Vol 2081 Fol 008 Instr 8998
1907, Sep 17	Mortgage	Daniel FOWLER to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 2081 Fol 008 Instr 254540
1908, Jul 29	Caveat		Certificate of Title Vol 2081 Fol 008 Instr 38671
1910, Mar 19	Registration of artistic copyright, No. 1546.	Josiah E Barnes, press photographer from Kew, copyrights a photograph titled "Nightingalls automatic wireless telegraph receiving station, Clifton Springs" showing an operator seated in front of partially homemade telegraph system inside a timber clad room.	NAA A1861 See Appendix 4 for view of this photograph and assessment
1912, Sept. 23	Prospectus, Clifton Spa Ltd.	Issued to raise £10,000 supported by report of medical benefits, testimonials from prominent backers, and a photo collage of the springs facility. Sulphur Bath House from springs is shown attached to another building at hotel and its original position next to Kiosk is shown as vacant. Directors M. P Macgillicudy, John Head, P. J. Connor, W. P. Steane, and J. H. Chambers	B18_4817
1912, Oct 14	Mortgage [213828] discharged	Daniel FOWLER to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 2081 Fol 008 Instr 213828
1912, Oct 14	Mortgage [254540] discharged	Daniel FOWLER to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 2081 Fol 008 Instr 254540
1912, Oct 14	Caveat [38671] lapsed		Certificate of Title Vol 2081 Fol 008 Instr 38671
1912, Oct 14	Land transfer	Daniel FOWLER to Timothy Berchmans NUNAN	Certificate of Title Vol 2081 Fol 008 Instr 698004
1912, Oct 14	Land ownership	Timothy Berchmans NUNAN Licensed Victualler of Clifton Springs Size: 29 acres 3 roods 10.2 perches.	Certificate of Title Vol 3641 Fol 082
1912, Oct 14	Mortgage	Timothy Berchmans NUNAN to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 3641 Fol 082 Instr 311952

Date **	Topic	Comments / Details	Title Reference /
1912, Oct 14	Mortgage	Timothy Berchmans NUNAN to James McConnell KERR	Certificate of Title Vol 3641 Fol 082 Instr 311953
1915, Nov. 15	Lease	Australian medical unit runs hotel as a convalescent hospital from Nov 1915 - July 1916. Descriptions of facility are presented. Reason for letting lease lapse given as high operating costs and patient objection to isolated location	AWM32/30 Convalescent houses and hospitals No 8.
1918, July	Depts. of Repatriation and Defence	O'Connor & Co, property agents and insurers attempt to interest Commonwealth in purchasing Clifton Spring Hotel from their client Timothy NUNAN. Asking price £11000. Some assets identified are good fishing, extensive electro-hydro therapeutic equipment, pipe clay deposit with commercial potential, farm animals, and post, telegraph and telephone services. Writing a year earlier in this file, Nunan reported there were 8 mineral water baths in the hotel with hot water service and electric lighting, 80 rooms with air gas lighting, golf links, and tennis court.	B18_4817
1918, Dec 18	Mortgage [311953] discharged	Timothy Berchmans NUNAN to James McConnell KERR	Certificate of Title Vol 3641 Fol 082
1921, May 4	Hotel fire	H. C. Holden is reported to have discovered raging fire in his office about 10 O'clock yesterday morning that soon engulfed the premises. A photograph of the ruin indicates outbuildings were also gutted.	GA, 1921
		[written across entry: Made on 12 Oct 1921]	Instr 311953
1921, May 5	Hotel fire described	H. C. Holden recounts circumstances of fire and cites uninsured losses.	GA, 1921
1921, Aug 9	Mortgage [311952] discharged	Timothy Berchmans NUNAN to The National Mutual Life Association of Australasia Limited	Certificate of Title Vol 3641 Fol 082 Instr 311952
1921, Aug 9	Land transfer	Timothy Berchmans NUNAN to Henry Clemons HOLDEN Licensed victualler of Clifton Springs	Certificate of Title Vol 3641 Fol 082 Instr 1008067
1922, Jul 1922	Mortgage	Henry Clemons HOLDEN to Eleanor Emma FARRELLY	Certificate of Title Vol 3641 Fol 082 Instr 448465
1924, May 21	Mortgage [448465] discharged	Henry Clemons HOLDEN to Eleanor Emma FARRELLY	Certificate of Title Vol 3641 Fol 082 Instr 448465
1924, May 21	Land transfer	Henry Clemons HOLDEN to William John RICHARDS Importer of 380 Collins Street, Melbourne	Certificate of Title Vol 3641 Fol 082 Instr 1166280

Date **	Topic	Comments / Details	Title Reference /
1926, Apr 29	Mortgage	William John RICHARDS to The Bank of Victoria Limited	Certificate of Title Vol 3641 Fol 082 Instr 538383
1927, Nov 9	Mortgage [538383] discharged	William John RICHARDS to The Bank of Victoria Limited	Certificate of Title Vol 3641 Fol 082 Instr 538383
1927, Nov 9	Land transfer	William John RICHARDS to The Clifton Springs Seaside Golf House Limited of 84 William Street, Melbourne	Certificate of Title Vol 3641 Fol 082 Instr 1342975
1927, Nov 9	Mortgage	To William John RICHARDS	Certificate of Title Vol 3641 Fol 082 Instr 578554
1930, Aug 4	Mortgage	To Alfred William PURNELL	Certificate of Title Vol 3641 Fol 082 Instr 650504
1940, Nov 4	Land transfer	By Mortgagee to Edmund Ambrose RICHES Catherine Devine GOODWIN Charles William Lyndon GIBSON	Certificate of Title Vol 3641 Fol 082 Instr 1793801
1940, Nov 4	Land ownership	Edmund Ambrose RICHES , investor of "Norwood", Esplanade, Brighton Catherine Devine GOODWIN , widow of 40 Park Place, South Yarra Charles William Lyndon GIBSON , accountant of Chapman Avenue, Glenroy As Tenants in common in equal shares Size: 29 acres 3 roods 10.2 perches	Certificate of Title Vol 6427 Fol 348
1945, May 11	Land transfer	To Edmund Ambrose RICHES Charles William Lyndon GIBSON	Certificate of Title Vol 6427 Fol 348 Instr 1951608
1945, May 11	Land ownership	Edmund Ambrose RICHES , investor of "Norwood", 100 Esplanade, Brighton Charles William Lyndon GIBSON , accountant of Chapman Avenue, Glenroy As Tenants in common in equal shares Size: 29 acres 3 roods 10.2 perches	Certificate of Title Vol 6759 Fol 640
1946, Feb 8	Land transfer	To Margaret Frances HOWELL [HOWETT?] Married woman of 50 Princes Street, North Carlton	Certificate of Title Vol 6759 Fol 640 Instr 1986004
1946, Feb 8	Mortgage	To Edmund Ambrose RICHES and Charles William Lyndon GIBSON	Certificate of Title Vol 6759 Fol 640 Instr 852741
1946, May 13	Mortgage [852741] discharged	To Edmund Ambrose RICHES and Charles William Lyndon GIBSON	Certificate of Title Vol 6759 Fol 640 Instr 852741

Date **	Topic	Comments / Details	Title Reference /
1946, May 13	Mortgage	To Bank of New South Wales	Certificate of Title Vol 6759 Fol 640 Instr 855977
1948, Jan 14	Mortgage [855977] discharged	To Bank of New South Wales	Certificate of Title Vol 6759 Fol 640 Instr 855977
1949, Nov 25	Land transfer	To Clifton Springs Hotel Pty Limited of Clifton Springs	Certificate of Title Vol 6759 Fol 640 Instr 2121709
1950, Dec 7	Land transfer	To John Reginald HOWETT [HOWELL?] Hotelkeeper of Clifton Springs Hotel, Clifton Springs	Certificate of Title Vol 6759 Fol 640 Instr 2366043
1955, Aug 15	Mortgage	To The Commercial Bank of Australia Limited	Certificate of Title Vol 6759 Fol 640 Instr A23480
1955, Sep 30	Caveat		Certificate of Title Vol 6759 Fol 640 Instr A47041
1957, May 24	Caveat	Caveat withdrawn [no date]	Certificate of Title Vol 6759 Fol 640 Instr A340658
1958, Jul 10	Caveat		Certificate of Title Vol 6759 Fol 640 Instr A564501
1959, Jun 9	Mortgage [A23480] discharged	To The Commercial Bank of Australia Limited	Certificate of Title Vol 6759 Fol 640 Instr A23480
1964, Mar 3	Caveat lapsed [A47041]		Certificate of Title Vol 6759 Fol 640 Instr A47041
1964, Mar 3	Caveat lapsed [A564501]		Certificate of Title Vol 6759 Fol 640 Instr A564501
1960, Dec 13	Caveat	Caveat withdrawn [no date]	Certificate of Title Vol 6759 Fol 640 Instr B120645
1963, Jun 11	Land transfer	John Reginald HOWETT died 2nd September 1954 Probate granted 11th June 1963 To The Trustees Executors and Agency Company Limited of 401 Collins Street, Melbourne	Certificate of Title Vol 6759 Fol 640 Instr B676781

Date **	Topic	Comments / Details	Title Reference /
1963, Jun 11	Land transfer	To Clifton Springs Development Co Pty Limited of 150 Queen Street, Melbourne	Certificate of Title Vol 6759 Fol 640 Instr B676782
1977, Jun 24	Caveat	[excepting lots 342 to 346 - subdivided lots south of Clear Water Drive sold 7th September 1977]	Certificate of Title Vol 6759 Fol 640 Instr G681526
1983, Nov 23	Caveat [G681526] lapsed		Certificate of Title Vol 6759 Fol 640 Instr K588223
1983, Oct 14	Land transfer	To President Councillors and Ratepayers of the Shire of Bellarine NOTE: some land south? of Clear Water Drive was also transferred at this time - presumably to Shire of Bellarine but this separate title has not been pursued.	Certificate of Title Vol 6759 Fol 640 Instr K588223
1983, Oct 14	Land ownership	President Councillors and Ratepayers of the Shire of Bellarine	Certificate of Title Vol 9533 Fol 693
1994, Jun 22	Caveat	Modlin Pty Ltd, lodged by Williams Winter & Higgs	Certificate of Title Vol 9533 Fol 693 Instr T155070T
1996, Nov 19	Caveat [T155070T] lapsed		Certificate of Title Vol 9533 Fol 693 Instr T155070T
1998, Mar 6	Agreement	Section 173 Planning and Environment Act 1987 Golf Course? Transferred to new Title Plan of subdivision PS344298B	Certificate of Title Vol 9533 Fol 693 Instr V304627S
1998, Jul 1	Land ownership	Greater Geelong City Council Lot 2 on Plan of Subdivision 344298B	Certificate of Title Vol 10389 Fol 869 also PS344298B

** Two dates generally indicate date of event then date of registration of the event as a Memorial

APPENDIX 3 Historic Water Quality Assays, The Dell

Copy of Analysis of three Mineral springs at Clifton.

The following represents the quantity of ingredients (as measured in grams) contained in one Imperial gallon each, held in solution by carbonic acid:

Secretary of Mines reports on the analysis of four mineral springs in a prospectus dated 1912. Earlier reports of analysis issued by Wm Johnstone, Government Analytical Chemist as follows

OPINIONS Extracted from Mr Johnson’s report “Government Analytical Laboratory, Melbourne GA Sept. 20th 1877, p3.

I have visited the Mineral Springs as Clifton, and have carefully examined the waters as collected by myself, and other samples forwarded to me by the Proprietors with the improved process of bottling the waters, previously extra charged with the natural gasses as they issue from the well. What they call Seltzer Water, I find to be nearly identical with the celebrated Apollinaris water, now creating such a furore in Europe, to the almost entire exclusion of all other aerated waters. The main difference between the imported water and that supplied from the Clifton Springs appears to be this: that the former was comparatively flat (possibly from long being bottled and from a voyage), whilst the Colonial was bright, sparkling, and very brisk indeed, like the best champagne. The Proprietors are fortunate possessors of several other kinds of natural waters, all at Clifton, resembling Carlsbad and even Harrogate Waters. No doubt when these really valuable waters become known, they will completely replace the imported article, which is often putrid and quite incapable of being used. The attention of the medical profession should be turned to this matter in the interest of suffering humanity, as here, as it were at our own doors, we have a splendid supply of a most exceptional article, at prices far less than can possibly be paid for a vastly inferior imported article. Wm Johnson

Content	Soda Well	No. 1	No.2 Well
Carbonate Magnesia	55	22	38
Carbonate Lime	8	12	10
Carbonate Iron and Soda	trace	trace	3
Chloride Calcium	28	41	31
Chloride Magnesium	8	17	9
Chloride Sodium	270	330	285
Alkaline Sulphates (principally Soda)	43	43	30
Total weights in grams	412	465	406

Analysis conducted by Joseph Flude, Superintendent of Laboratories of the School of Mines, Ballarat. Analytical Assay 1880

Dr Lyttleton, Drysdale: These springs generally may be divided into three classes—the ferruginous, the Magnesia, and the Sulphur Springs. The first is extremely useful in ordinary cases of debility and atonic dyspepsia, and I have used it frequently with considerable success, the small quantity of iron being in such a form that it is most easily assimilated to the system. The second class are much more purgative, and are useful in various forms of dysopias and chronic constipation. Intemperate persons, and those suffering from acidity of the stomach, cannot fail to derive benefit from a course of these waters. Like all alkaline waters, they are also excellent in the treatment of gout or rheumatism. The third, or Sulphur spring, is peculiar, on account of it being the only one at the locality, although I know of one or two others further down the coast. According to the analysis, this water contains no free sulphur, and I understand, but little more salts of sulphur than the others. It has however, always been known as the Sulphur Spring, and its appearance and smell are very distinctive. All the deposits surrounding it are black, and silver coins are readily blackened if left in it. Before it was closed in, the smell of sulphuretted hydrogen was very powerful at times, and this was never found at any of the others. The taste also was quite distinctive. This water I consider to be excellent for baths, especially for gouty and rheumatic constitution, I have repeatedly used it for hot baths with the best of effect. In conclusion, I may say that I am perfectly satisfied of the medical value of these waters, entirely apart from the fact that some of them are pleasant as simple beverages. The situation I need not remark about, as that has often been done already; but I would point out that, from the formation of the land, the place is not subject to the sudden and extreme changes of temperature so trying to an invalid, and for which Queenscliff is, in my opinion, very objectionable.

rail from Melbourne.

WM. JOHNSON,
Analytical Chemist to the Government of Victoria.

School of Mines, Ballarat,
31st March, 1880.

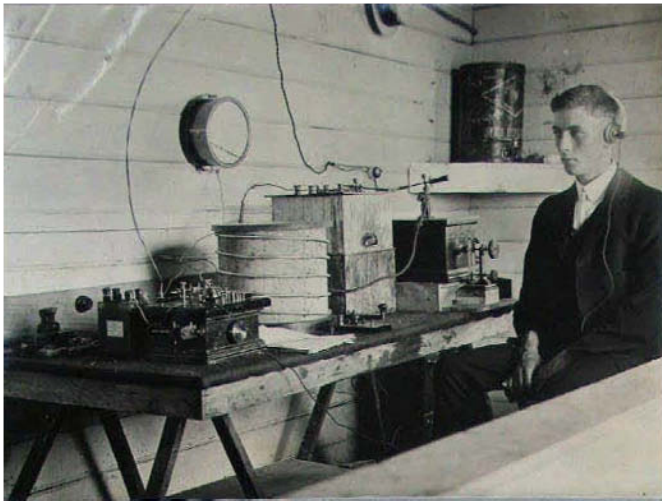
Report of Special Analysis of (5) Five Samples of
Mineral Waters from the Clifton Springs.

	Magnesia Spring.	Seltzer Spring.	Soda Spring.	Iron Spring.
No. of Analysis ...	613	614	615	620
Temperature as taken from the Springs	68°	60°	64°	68°
Specific Gravity at 60° Fahrenheit ...	1006.5.	1008.	1005.5	1005.
<hr style="width: 30%; margin: auto;"/>				
Silicia500.	1.150.	.840.	.730.
Ferrie Carbonate (Iron)700.	.910.	.279.	1.156.
Di-Calcic Carbonate (Lime)	3.464.	8.064.	5.904.	1.536.
Magnesian Carbonate (Magnesia) ...	13.625.	11.130.	10.038.	9.768.
Hydro-Sodic Sulphate (Soda Sulphate)	3.244.	3.171.	3.028.	9.560.
Hydro-Sodic Chloride (Common Salt)	51.400.	34.411.	37.069.	57.250.
Hydro-Sodic Carbon- ate (Carbonate Soda)	14.667.	35.564.	28.069.	4.200.
<hr style="width: 30%; margin: auto;"/>				
Total amount of Solid Matter per pint of water	87.600.	94.400.	85.227.	84.200.
 JOSEPH FLUDE, Superintendent of Laboratories.				

APPENDIX 4: Wireless Telegraphy at Clifton Springs

A local post and telegraph office opened at Clifton Springs in 1890 as a service to patrons and local residents as was customary in country settings where public amenity was limited by availability of infrastructure and the absence of population centres.

A wireless station also was installed for more direct communications to Geelong and Melbourne offices, although the details of its operation remain sketchy. The evidence for its existence is two fold. On March 10, 1910, Josiah E. BARNES, a press photographer living at Cotham Street Kew applied for an artistic copyright on a photograph titled " Nightengall's automatic wireless telegraph station, Clifton Springs" (NAA series A1861, Control symbol 1546, bar code 702534). In this photograph, see below, an operator wearing headphones is seated in front of telegraphic equipment that appears fully wired up and functional. The title of the copyright submitted by Barnes suggests this is the station at Clifton Springs at the date of registration.



Photograph 1 This image of an operator in front of a wireless telegraph was included in J. Barnes application of Copyright with the date of 10 March 1910.

The photograph was shown to Neal McEwen, host of the Telegraph Office website <http://www.telegraph-office.com>, for comments about the technology shown in the image. His preliminary assessment reads as follows.

I would say this is typical of wireless stations of the ca 1910 period. It may be experimental rather than commercial as about 1/3 to 1/2 of the apparatus is home made. The receiving tuner (far left), spark coil (far right), and sending key are commercially made. The remainder appears homemade. The stacked boxes in the middle are probably plate condensers, perhaps commercial, hard to determine.

Also I see nothing here that would indicate automatic sending or receiving. The spark coil is of the battery-powered variety using a mechanical interrupter to chop the DC. This by itself indicates low power and hence a limited range, perhaps 50 miles on a good night. Commercial transmitters and receivers of 1910 could have upwards of 5 to 10 KW and a nighttime range of 1500 miles. They used motor generator sets to develop high voltage for the spark gap.

Having stations in hotels was popular in this era. It gave an air of importance to the hotel to have a station and the taller the hotel, the taller the antenna. This room appears to be a wood 'shack'. The spark made a terrible noise and produced ozone, so most often the stations were isolated in a makeshift shack on the roof.

The round looking things on the wall are probably voltage and ammeters or a hot wire antenna current meter. One might also be a ship's clock for keeping accurate time in a logbook. McEwen, 2007/08/08, edited.

The second glimpse of wireless system at the hotel is inadvertently captured in a photograph taken from the long steamer pier, where a large vertical mast is seen set into the ground on the cliff top some 150 m east of the Clifton Springs Hotel. The wires attached to the mast resemble an antenna from which signals could be transmitted across the bay to Geelong and other stations in the district. In this same photograph, the hotel can be seen just above tree line and it shows foreshore structures related to mineral water extraction in an arrangement that is broadly consistent with the antiquity of the Barnes copyright request. The hotel burned in May 1921. The wireless unit shown above was too low powered to send a signal over the distance of several hundred meters to the mast however. The mast could be a later model that was designed for radio transmission.

APPENDIX 5: HOTEL INVENTORY OF CHATELS, December 1915

NAA Primary Item: 371050

Title: Clifton Springs – Invalid Home

Barcode: 371050

Series No.: MP367/1

Control Symbol: 569/.3/27

Compiled as condition of Lease between T. B. Nunan and the Commonwealth of Australia.

Signed by AG of Commonwealth, 20 December 1915.

Main House:

- Rooms 29 & 30
 - linoleumleum-printed all over
 - 2 beds
 - 2 mattresses
 - 16 hooks
 - 1 pillow
 - 3 blinds to skylight
 - 1 chair
- Landing, 3rd floor
 - Linoleum
 - Hooks
- Stairs
 - Blind to window, printed Holland Spring
- Rm 1
 - Linoleum printed 7 sq yards
 - Bedstand iron 3 ft
 - Cedar Chest
 - Mattress Spring
 - Mattress, Kapok
 - Pillows, kapok
 - Hooks, H & C
 - Mirror-cedar damage
 - Cjaor, Vienna
 - Blind, Venetian
 - Gas Pendant
 - Key
- Room 2
 - Carpet "Axminster"
 - Bedstead Double W & B
 - Mattress, Kapok
 - Mattress, Wire
 - 3 Pillows, Kapok
 - Wardrobe, Kauri, Mirror
 - "D" Table, half duchess
 - Toilet table, half duchess
 - Curtains, Madras Muslin
 - Curtains, Lace
 - Poles, rings & brackets
 - Hooks, H & C
 - Armchair, Vienna
 - Chair
 - Cushion plush-to armchair
 - Fender & Irons
 - Ewers and Basins
 - B owl Sponge
 - Toothbrush Base
 - Chambers W & G
 - Blinds Venetian
 - Gas Pendant
 - Key
- Rooms 3, 5-7
- Room 8 1st floor
 - Chest of drawers, Duchess cedar, 4 d. 2 J. D.
 - Hooks
 - Gas pendant
 - Blind Venetian
- Rooms 9-12, 15,16, 26 -28
- Room 25, Bathroom and W. C
 - Linoleum
 - Bath-enamel show screen
 - Table small
 - Grating wood 3'x 1½'
 - 3 hooks
 - key
- Rooms 14, 17-24
- Landing & Passages
 - Linoleum
 - 5 Carpet stripes, hair, 3' wide, 55 yards total
 - Couch upholstered Utrecht
 - Mirror frame on wall, 6' x4'
 - Table cedar 7'6 x 1'6
 - 6 Gas pendants plus globes
 - Fire extinguisher "Eureka"
 - 2 blinds Holland
 - Filter and tank, fixed (presumably drinking water)
 - Blind Venetian South passage
 - Stairs carpet, hair 12 yds
 - 23 rods
- Drawing Room
 - Gas Pendant 3 lights & globes
 - 6 blinds, Venetian
- Dining Room
 - Linoleum, 117 yards
 - Mirror framed 6' x 4'
 - Overmantle, Walnut, 7 mirrors
 - Dinner wagon, walnut 3 shelves
 - Sideboard 6' mirrors, cabinets 2 d, & 3 cupboards
 - 56 chairs, Vennia
 - Table circular, pedestal, cedar
 - Table oval top 6' 3'
 - 2 Tables, Deal, 6' x 3'6", & 7 6' x 2'9"
 - 3 pair curtains, art serge, trimmed
 - 3.5 pair curtains, lace
 - 3 poles & rings, 1 curtain, cedar
 - 3 spring roller blinds, Holland
 - 5 gas pendants
 - 1 gas pendant 2 lights
 - 7 globes
 - 1 gas bracket, single
 - 1 gas bracket double
 - 1 cupboard, built in
 - 7 blinds, Venetian
- Bedroom Off entrance
- Room 4 (bedroom)
- Lounge
 - Gas pendant
 - 2 globes
 - 3 Blinds, Venetian
- Post Office
 - Linoleum
 - Desk & pigeon holes
 - Mail box, fixed

- o Counter & flap, fixed
 - o Shelf, rough cupboard under
 - o Clock American 8-day
 - o 3 chairs
 - o 2 Blinds, Holland
 - o Gas pendant + globe
 - o Blinds, Venetian
 - o Telephone silence cabinet
 - o Letter list 42 pigeon holes
 - o Wall set telephone and switch board
- Bar
- Rooms 31-39, 41-46
- Billiard Room
- o Billiard Table, Alcock, full size plus all equipment, access.
 - o Haake Piano
 - o Various tables 7 chairs
 - o Fender
 - o Paper rack
 - o Gas pendants etc.
- Entrance Hall
- o Linoleum
 - o Felt-red floor
 - o Settee half pillar
 - o 2 Settees, tapestry 4'6"
 - o 1 settee, tapestry 6'10"
 - o couch-chesterfield 9'
 - o clock wall "Ithaca"
 - o Map, Port Phillip framed, glazed
 - o Notice case Blackwood glazed, locked
 - o Gas pendant, ornamental globe
- Main Corridor
- o Linoleum, 30 yds
 - o Hall stand, cedar and mirror
 - o Hall stand, cedar, 7 pegs
 - o Table kitchen, 4'6" x 2'6"
 - o Electric bell indicator (good order)
 - o [as pendant
 - o 2 couches, red Utrecht
 - o hall stand, cast iron
 - o fire extinguisher
 - o pas pendants
 - o 1 globe
- Rooms 47-49,
- Bathroom 6
- Bathroom 8
- Bathroom 10, 11, 7, 9
- Room 50
- o Linoleum 181
 - o Bedstead combination 2'6"
 - o Mattress fibre
 - o 2 pillows
 - o table top 5' x 2'6" & trestles
 - o cedar mirror
 - o chair
 - o hooks
 - o roller blind
 - o Electric vibrator complete w/ motor
 - o Roller towel
 - o Electric light flexible w/globe & shade
- Rooms 51-53
- Bath passage
- o Weighing machine "Howe's scales"
- o Electric light
 - o Shades, globes
 - o Blinds
 - o Gas pendant
- Bath Vestibule
- Servery
- Linen Press
- China Pantry
- Lobby off China Pantry
- Storeroom off Lobby
- Kitchen
- o Gas bracket
 - o Gas pendant 2 lights
 - o Kitchen Range "McEwan" damaged
 - o Grill "Andrews"
 - o Table Kitchen linoleum top
 - o Cupboard sliding doors
 - o 2 sinks, wooden & draining boards
 - o Plate rack
 - o Hot water cylinder copper
 - o Butchers block
- Larder off kitchen
- o Meat safe
 - o Flour bins
 - o Table shelf
 - o Shelves
 - o Chair, Vienna
 - o Gas pendant
- Vestibule off Kitchen
- o Linoleum
 - o Meat safe
 - o Safe, small
 - o Table
 - o Form, wooden 8'
 - o Form, wooden, 4'
 - o 3 blinds
 - o Gas pendant
- Cellar
- o Shelving
 - o Block, Butcher's
 - o 15 hooks
 - o Rods
 - o Table
 - o Refrigerating chamber
- Conservatory
- Women's E C
- Men's Lavatory
- Lamp Room
- Men's E.C.
- Front
- o Mat, Coir large Initials "CSH"
 - o Cast Iron Umbrella Stand
 - o Boot scraper
 - o Dinner Bell
 - o 4 Wooden garden Seats
 - o 2 canvas chairs
 - o Cane Couch
 - o Quoits & Pegs, set of 6
 - o Gas Pendant "Graetzin" outside light
 - o Gas pendant, Globe
- Lamp Post, glass, at Garden Gate
- Upper Balcony
- Flag Pole and Halyards off Look Out
- Servant's Quarters
- Tents
- o Bell tent

- 11 Tents w flies, w/ wooden floors
 - 5 bedsteads Iron
 - 6 Combination bedsteads
 - 10 stretcher beds
 - 8 fibre mattresses
 - 5 spring mattresses
 - 13 kapok mattresses
 - 21 kapok pillows
 - 2 bolsters
 - 2 chest of cedar drawers
 - 4 Chest of Kauri Drawers
 - 4 white chest of drawers
 - 10 mirrors
 - 11 chairs
 - 2 bedroom chairs
 - 2 pedestal tables
 - Table w drawer
 - 2 oval tables
 - 2 shaped tables
 - 2 tables
 - 2 tables w veneer top
- Masseur's Cottage
- Double Bed
 - Spring Mattress
 - 2 pillows
 - bolster

3.4 Engine Room-Beach

- "Coulson" Engine, 6.5 HP, Kerosene oil engine and pump
- Set of 4 spanners and 1 hammer
- Volt Meter, Power Switch
- Electric Motor AETG 220 volts, 12.5 amps
- Gas bracket w globe
- 4 hand pumps, "Douglas" to Medicinal Springs

3.5 Boiler House

- Donkey Boiler; 2.5 hp HORIZONTAL steam Pump to pump water from underground tank to supply tanks on roof of house.
- Tools

Air Gas Plant

- "Quirks" air gas plant (registered No. 2463/13) including angle iron weight tower

Ladders-12"

3.6 On Golf Links

- Artesian Bore, Windmill & pump

3.7 South Paddock

- GI tanks, pumps

APPENDIX 6; CLIFTON SPRINGS HOTEL FLOOR PLAN, 1915

NAA Primary Item: 371050

Title: CliftonSprings - Invalid Home

Barcode: 371050

Series No.: MP367/1

Control Symbol: 569/3/27

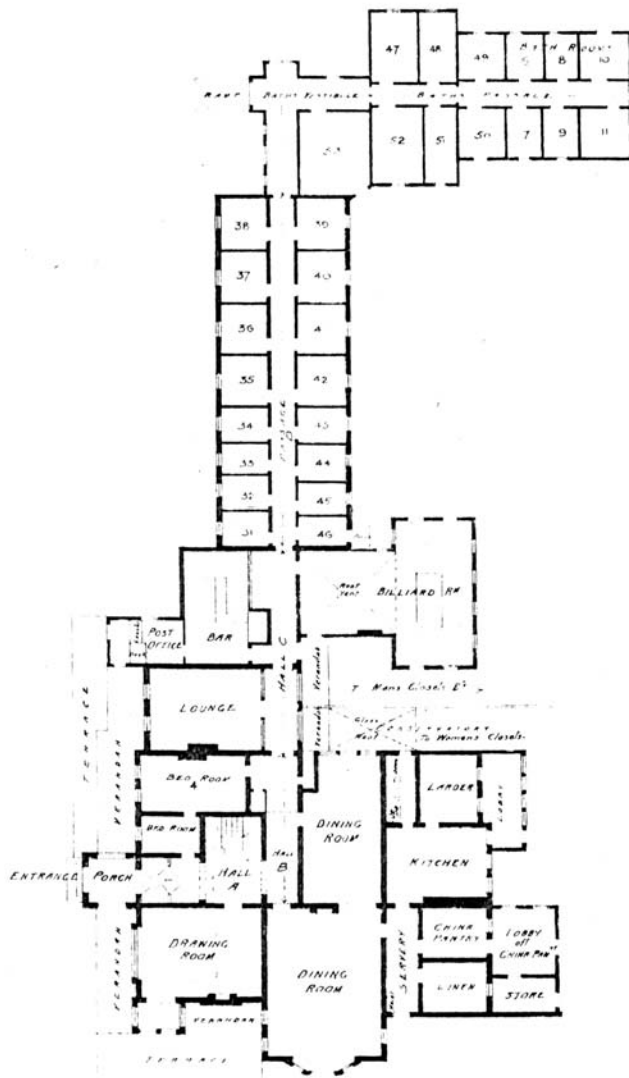
Compiled as condition of Lease between T. B. Nunan and the Commonwealth of Australia. Signed by AG of Commonwealth, 20 December 1915

CLIFTON SPRINGS HOTEL — CLIFTON SPRINGS —



Handwritten signature: Maclelland
Works Director
12.12.1915
VICTORIA

Rough Plan — Scale 1/4 inch to One Foot —



— GROUND FLOOR PLAN —



— ATTIC PLAN —
2ND FLOOR



— FIRST FLOOR PLAN —

APPENDIX 7: SELECTED 19TH CENTURY ARTICLES FROM *GEELONG ADVERTISER**Geelong Advertiser 1871.04.04*

The Clifton Mineral Springs (by our special reporter)

Attention has been repeatedly called in our columns to the existence of valuable mineral springs near Drysdale, and as they are fast becoming a favourite place of public resort a few particulars about the route to them and a description of the locality in which they are situated, may be found interesting. By the Portarlington road they are easy to access, the drive from town through a splendid agricultural country taking about an hour and a-half. On arrival at Drysdale the visitor must leave the main road, and turning down the road at the rear of Mr Moffatt's store drive over hill and dale for about twenty minutes when he will see a gate on the left hand side which is the entrance to the property; the bay is seen in the distance, but "Fairy Dell" is not yet in view. Three minutes drive over a cross road, that is to be materially improved, will bring him to Mr Grant's house, where he can obtain a guide to the spring, distant about a quarter of a mile. It is not, however, until he gets on the very brink of the dell that he can see it. The bush, which is park-like, apparently, extends some distance, when suddenly the visitor is arrested by a tolerably steep ascent, and discovers the bay glittering in the sunshine a hundred feet below him. The view he obtains is a really beautiful one. On the left appears Point Henry and the town and port of Geelong; opposite to him, on the other side of the Bay, can be seen the You Yangs, Anakies, and other well known hills; whilst on his right hand sailing ships and steamers coming from and going to the metropolis of Victoria vary the scene, and render it one that on a fine day we should never get tired of looking at. The dell at the foot of which the springs bubble night and day is of a semicircular form, between three and four hundred yards broad at the opening, and of equal depth, the cliffs all round being between one hundred and one hundred and firth feet in height, level at the top and undulating down to the beach. The descent is covered with a velvety sward, and well supplied with trees, affording a most grateful shade, where the visitor, after taking his medicinal nip at the springs, may retire to enjoy the beauties of the scene, and inhale invigorating sniffs of the briny. Although the virtues of the springs have only lately been brought forward prominently before the public, their existence has been known and appreciated for many years by some of the residents of the locality. Thus we hear of an old shepherd in Miss Drysdale's time, many years ago, having been cured of severe rheumatism by using the waters, and of other miraculous cures too numerous to mention. Of course a great percentage of these stories may be fabulous, fables always will be told about springs, and had those of Fairy Dell, or some equalling them in their medicinal properties, been discovered, in the dark ages, a saint would no doubt have been called upon to give them his name. It is, however, positively asserted that some really wonderful cures in gout, rheumatism, and nervous complaints have been effected within the last few months, and if there was no virtue in the waters we do not think that the inhabitants of the surrounding districts would flock to them in the manner they have been doing recently. When our reporter first visited the place—some months ago—he found that the springs were situated in a morass formed by their over pouring through which it was a matter of difficulty and danger to approach them. Since then, however, that enterprising young colonist, Mr. H. F. Levien, M.L.A., has secured a long lease of the land on which they were found, and in company with a friend has already effected great improvements. Formerly it was a tedious task to any except a mountaineer, to get down the cliff. Now, little exertion is required, a winding carriage road having been made on one side of the dell, and a bridle-path on the other, both leading down to the springs. The greater part of the morass has been filled in, crocks placed in the springs that have been opened out, and the surplus water from there conveyed by an efficient system of drainage down to the bay five or six feet below the springs. Seven springs have been properly opened out, and these yield on the average two gallons each per minute. The water bubbles up through earthenware crocks two and a half and three feet in length, the bottoms being cemented on the bedrock. Since being cemented the waters have been found to lose, to a very great extent, the saline properties, which they necessarily acquired in passing through the layers of shell above the rocks. The old site of the morass is being covered with gravel, and the crocks are to be surrounded with tile floors. As before mentioned, the springs opened out are seven in number, and the waters from six of these have been analysed and qualitative results ascertained by Mr Sydney Gibbons. These are considered most favourable, but it is intended to have another analysis as it has been found the improvements effected have increased the value of the waters exceedingly. Four of the springs are soda springs dug out of the solid rock, and have been highly spoken of by Dr. Bleasdale and Mr Panton. The other three are strongly impregnated with iron and magnesia, turning brandy as black as ink, and the whole contain a great deal of free carbonic gas. There is also an eighth spring very strongly impregnated with sulphur, which can be detected by the smell, and as for the taste, it is the reverse of agreeable. It is intended, however, to use this spring for bathing purposes, for which sulphur springs are considered invaluable in cases of scorbutic and other skin diseases, as well as gout and rheumatism. Two of the springs yield at the rate of four gallons per minute, and the water bubbles, boils, and "sings" in the crocks just as if

there was a fire underneath. Strange to say, that at present no other mineral springs have been discovered beyond those mentioned. A spring was opened to the westward, but found to be quite salt, whilst fifty yards beyond this again pure fresh water was found at a depth of four feet. With regard to the accommodation provided for visitors all will depend upon the patronage received. Some has already been provided by Mr. Grant, under whose special supervision the springs have been opened out, and who was the first to bring the waters under the notice of the public. Mr Grant has taken a lease of Mr Bate's late residence, and is at present very busy in getting everything "ship shape." It is beautifully situated within five minutes walk of the springs and is surrounded by an extensive garden. It is not Mr Grant's intention to make a public house of it, but a comfortable retreat for visitors or invalids; and as we have found out by experience, his worthy helpmate has a knack of making strangers feel at home, it may fairly be anticipated he will have no cause to complain of any want of patronage, a number of ladies and gentlemen having already written to secure apartments. Should the patronage afforded equal anticipations it is intended to carry out still more extensive improvements. An esplanade will be made round the dell, pumping rooms erected, suitable drives made along the beach, and a large marine hotel erected. In addition to the attraction offered by the mineral waters, there is good fishing and shooting in the neighbourhood, and when baths have been erected plenty of good sea bathing. By water, the Dell is still easier to access than by land, and it is intended that a boat shall meet the steamer plying between Geelong and Melbourne to take off passengers. Doubtless now that the beauties of the place have thus been made fully known, it will become a centre of attraction for yachtsmen and picnic parties.

1880 Aug 05 Prospectus of the Clifton Mineral Springs Company Drysdale *Geelong Advertiser*

To be registered under the companies Statute 1864
Limited Liability

Capital £5000, in 2500 shares of £2 each. Deposit 10s per share, 10s on allotment, balance in calls not exceeding 10s per share, at intervals of not less than three months. The company to be registered as soon as 1250 shares are allotted.

Provisional Directors:

S. L. Allnutt, Esq., J. P. Bellarine.
Chas. Andrews, Esq., J. P. Geelong
Chas. Brazier, Esq. J. P. Drysdale
Thom. Bates, Esq, J. P. Bellarine
Wm. Higgins, Esq, J. P. Geelong
J. F. Levien, Esq. M. P. Bellarine
W. M. Lyttleton, Esq., M. D., Drysdale
Bankers and Brokers lists

The highly medicinal and curative properties of the CS Mineral Waters are well known, and have been established beyond all speculation or doubt—1st, by chemical analysis, 2nd by medical testimony, and 3rd by the experience of many who have used them with marvellous benefit. The demand for these mineral waters has always been great, and the want of capital only has prevented the possibility of placing a larger quantity on the market.

In order therefore, to bring the Clifton Springs mineral waters before the public in a manner commensurate with their great value, and to secure a certain and handsome profit, it is proposed to form this Company,

The Clifton Springs, comprising a series of springs of six different qualities, are most delightfully situated on the properties of Messrs Bates and Allnutt, on the shores of Port Phillip Bay, near Drysdale in close proximity to Railway Station.

These gentlemen have offered to grant a lease of the property consisting of about twenty acres of land (as per survey in proposed lease) including the Springs, manager's residence, bottling house, and outhouses, for a period of seven years, with the option by the Company of extension for another fourteen years—in all, twenty one years—at a rental of £100 per annum, and a further lease of twenty one years at a rental of £200 per annum. As a guarantee of good faith and confidence in the success and profitable operations of the Company, the proprietors have also agreed to take up shares to the value of £500. The present plant, which is in good order, is valued at £400 (subject to adjustment). The whole of this amount will also be taken up in shares of the Company, thus leaving the called-up capital free to be expended in placing the waters on the market through the colonies.

The quantity of mineral waters sold during the year ending March, 1880, was 5125 dozen (61500 bottles). With the present machinery and plant, and a reasonable outlay for a sufficient supply of cylinders, bottles, the establishment of agencies, etc., the present Manager say he could easily out 500 dozen weekly, or 26,000 dozen per annum. The selling wholesale price is 2s 6d per dozen, which, estimated at the minimum profit of 1s per dozen, would yield £1300 per annum, thus showing a very handsome profit on the capital of the Company after payment of all expenses. With more powerful machinery, etc, the supply could be increased to an almost unlimited extent.

Independent of the ordinary consumption of the mineral waters, there is a comfortable Hotel in close proximity to the springs, where visitors reside during the summer months, for the purpose of availing themselves of the use of the waters, both internally and externally.

Appended to this Prospectus is 1st, descriptive particulars showing the chemical properties of the six mineral ; 2nd a report from Mr Johnson, the government analytical chemist, as well as a few testimonials selected from a large number recorded in the Visitor's Book

From these it will be evident that the Clifton Mineral Springs are really a magnificent property, yielding, without doubt, waters of the most health-giving character; and in the hands of a Company, with a very moderate capital and proper management, a source of large profit to the shareholders.

As soon as the required number of shares are allotted the company will be registered, a meeting of shareholders will be called, the Articles of Association adopted, and permanent Directors appointed.

As a large number of shares have already been applied for, and as it is desirable to make preparation for the ensuing summer season, early application of shares is necessary.

THE CLIFTON MINERAL SPRINGS, DRYSDALE

Spring No. 1, generally called the Iron Spring", resembles in composition the celebrated "Kissengen Rakoczi" and our Clifton Rakoczi" is even richer in chalybeate properties than the world renowned Bavarian Spa. The principal characteristics of these Springs are as follow: they are laxative, and useful as a cure for indigestion, obstructions of the liver, morbid condition of the kidneys, and for giving tone to these organs. The Clifton Iron Water has been proved highly beneficial in all these cases, as well as an invigorator to debilitated and worn-out constitutions.

Spring No. 2 is the "Clifton Seltzer Springs and possesses all the qualities of the celebrated German Seltzer Water. As Mineral Waters of this class act beneficially on all the organs of the human body, it is not too much to say that they may be used in almost every kind of ailment, and with great advents. The Clifton Seltzer Water is bottled under high pressure with the natural gas, and at once became extremely popular; and in a paragraph which appears in the Argus of 28th Jan, it is pronounced "excellent," while *Public Opinion* describes it as the "Queen of Spas."

Spring No. 3 is called the Magnesia Spring, by the use of which very remarkable cures have been affected in cases of long-standing indigestion.

Spring No 4 resembles Spring No. 3, with an addition of Iron, and is therefore called the Magnesia and Iron Spring.

Spring No 5 is the "Sulphur Spring", and has proved highly beneficial in the cure of cutaneous affections, eye-lid diseases, eruptions of the skin, as well as for piles, and gouty and rheumatic complaints. Warm Sulphur Water Bath will be provided by the Clifton Mineral Waters Company.

The springs are neatly built in, and covered with plate glass; they are thus protected from dust or disturbance of any kind, and are so arranged that their natural pure Carbonic Acid Gas is collected equal to 2000 gallons daily.

APPENDIX 8: ARTEFACT CATALOGUE 2008 INVESTIGATION

This catalogue of over 400 artefacts is designed to comprehensively itemize all artefacts obtained in the course of excavation of the site in the course of 2007 according to context, constituent materials, and typology. Once recorded, the artefacts that were considered to have little continuing significance to the site were discarded and the remainder were individually given registration numbers and lodged with Heritage Victoria at the conclusion of the study. Notes following this catalogue elaborate further on the constituents and their likely significance and they present a rationale for the reduction of the artefact assemblage.

The catalogue is subdivided into the main excavation areas of the site as follows:

The Cellar, Rock face and Post-holes, and the Seltzer Well

Table 1: The Cellar

Eight trenches excavated according to visible stratigraphic units

Table 2a: The Rock face to east of the Cellar

Two informal trenches cut from vertical rock face over post-holes and plumbing. Sediment is overfill containing artefacts in secondary context.

Table 2b: Trench 2, Rock Face to Rock Pit at Cellar

Table 3: Pipe Trench

Table 4: Dump 1

Surface

Layers 1-3

Table 5: Dump 2

Units 1-5

Table 6: Well House

Table 7: Surface

Notes:

1. Constituents
2. Artefact Registration Process
3. Conservation Requirements

TABLE 1: The Cellar

Provenience/ Cat No	Date	Material	Wt gm	Description
Surface at Rock Face	31/07	Glass		Hamilton bottle frags. No type ID
Surface at Rock Face		Glass		Dark olive gin case bottle fragment
Surface at Rock Face		Glass		Dark amber beer bottle
Surface at Rock Face		Rock		No Id
Surface at Rock Face		Shell		Oyster
Surface at Rock Face		Clay		Rd oblong ball with central hole—lead pipe joiner or net weight.
Surface at Rock Face		Glass		Clear sheet w. polished edge. 7.5 mm tick, saved for collection
Surface at Rock Face		Coal		Lump, black, saved for reference collection
Surface at Rock Face		Iron		Nails, saved for reference collection
Surface at Rock Face		Iron		Water pipe, ½ inch diameter frag
Surface at Rock Face		brick		Fragments only
Surface at Rock Face		Glass		Various bottles
Surface at Rock Face		Copper		Large headed nail
Surface at Rock Face		Plant		Plum seed
Surface at Rock Face		Iron		Thin flat sheet fragment
Surface at Rock Face		Iron		3 wire nails
Surface at Rock Face		Wood		Timber fragment w. red paint
Tr. 1 Surface Area	01/07	Iron		Crown Seal Cork, beer cap
Tr. 1, Shell layer 1		Iron		Nail fragment
Tr. 1, Shell Layer 2	01/07	Mortar		Shaped curved edge with green paint. Similar to mortar edge of entrance to Seltzer Well, see photograph.
Tr 1, Shell layer 5	01/07	Slate		3 frags. 4.0 mm thick, no edges
Tr 2, Unit 3	26/07	Glass		Two bottles, one medicine machine made, other small drink bottle base, no marks on either.
Tr 2, Unit 3:		Iron		Wire nail w/ rose head
Tr 2, Unit 4	26/07	Glass		Clear drink bottle glass, Geelong Aerated Water Pty. Ltd.

APPENDIX 8: ARTEFACT CATALOGUE continued

Tr 2, Unit 4		glass		Amber bottle, w embossed spade image "C. V. ..." "property ". Beer container, 750 ml.
Tr 2, Unit 4		Lead		22 calibre slug, compressed from impact.
Tr. 2, Unit 5	30/07	Brick		Small frag. No edges, low temperature firing
		Metal		2 Crown seal caps for bottle, too rusted for ID
		Mortar		Small frag
		Shellfish		3 valves, <i>Mytilus edulis</i> , one paired
		Seeds		Peach x 3
		Copper		Washer?
		Bone		4 long bones. Two sheep, one bird, & unidentified
		Bakelite		Screw stopper, blk,+ rubber rim seal for drink bottle
		Iron		Short shaft frags, too rusted to ID
		Shell		Marine gastropods, water worn, No ID
		Glass		Clear bottle base, round, flat, No manufacturers marks
		Glass		Light olive green, body part, no marks
		Glass		19 century drink bottle, body part only, no marks
		Glass		Light amber, drink bottle, 750 ml, probably beer bottle, crown seal.
		Glass		Light amber, as above
		Glass		Beer Stubbies, saved
Tr 2, contact with rock floor: 0231	02/07	Iron	2.4	Square shank 2 " nail, rose-head, complete, probably Ewbank.
Tr. 2, Unit 4		Slate		Small frag., 5.0 mm thick
Tr. 2, hard shell layer sample, equiv Tr 3, Unit 7	02/07	Shell & sand		Friable laminae of shell, sand, clay; display evidence of compaction and layer distortion. Saved for study
Fill above Tr 3	25/07	Shell		Oyster valve
Tr 3, Unit 1: 0230	25/07	Iron	5.2	Nail, retained for study
Tr 3, Unit 3		Wood		Various HW & SW offcuts
Tr 3, Unit 4		Glass/metal		Electric light bulb, probably 12 v
Tr 3, Unit 4	25/07	Shell		2 Oyster valves, incomplete
Tr 3, Unit 4		coke		Four pieces
Tr 3, Unit 4		Glass		Clear glass bottle frag. no marks
Tr 3, Unit 4		wood		Slender carpenter's wedge, SW
Tr 3, Unit 5	25/07	Glass		Various frags clear and amber drink bottle glass, no marks
Tr 3, Unit 5		Brass		Battery terminal w/ threaded rded. Nut
Tr 3, Unit 5		Ceramic		Plate fragment, plain white, no marks
Tr 3, Unit 6	25/07	Glass		Amber bottles, 750 & 375 ml beer bottles w/ cork crown seal, machine made, probably 3 total. One amber bottle neck & lip with screw top, machine made.
Tr 3, Unit 6		Glass		Sea green drink bottle lip, applied lip w/fine tooled finish, early 20 th century.
Tr 3, Unit 6		Glass		Clear glass, 2 x four side pharmaceutical bottles. "AGM" embossed on bases.
Tr 3, Unit 6		Glass		Clear glass, base drink bottle, probably 750 ml, "... brothers this bottles..." embossed around heal of base.
Tr 3, Unit 6		Glass		Clear glass sauce bottle lip, threaded, machine finish
Tr 3, Unit 6		Bone		Sheep rib, complete
Tr 3, Unit 6		Bone		Rabbit rib, complete
Tr 3, Unit 6		Porcelain		Tea cup base frag, w ring foot, plain white, no marks
Tr 3, Unit 6		Copper		Screw, round head w/ slot, tip missing

APPENDIX 8: ARTEFACT CATALOGUE continued

Tr 3, Unit 6		Marble	167.9	Slab fragment with cut rebate, polished face; 39 mm thick. Joins 0220. Retained
Tr 3, Unit 6	25/07	Shell	0.5	Oval polished button w/ wire attachment loop
Tr 3, Unit 6		brick		Orange cream of original type, small fragment
Tr 3, Unit 6	25/07	Iron	14.6	Two nails, 1 square shank w/ rosehead, saved to study
Tr 3, Unit 6		Silver	0.4	10 cent coin
Tr 3, Unit 6	25/07	Slate	85.8	Shingle fragment, 100 x 70 mm, 3.5 mm thick, w/ trace of mortar
Tr 3, Unit 9		Shell		3 oyster valves, 7 <i>Katylisia spp</i> valves
Tr. 4, Unit 1		Aluminium		Food wrapping, too small for ID, no writing
Tr. 4, Unit 1		Shell		Oyster valve
Tr 3, Unit 6		Iron		Thin gauge sheet metal; shaped rd curvature and edge flange, No functional Identification
Tr 3, Unit 6		Iron		Nails for reference collection
Tr 3, Unit 6		Glass		Amber beer stubby
Tr 3, Unit 6		Sediment		Iron pigment, for reference collection
Tr 3, Unit 6		Brick		Small red fragment, no edges
Tr 3, Unit 6		Iron		Nail Head w/ ½ shank, wire
Tr 3, Unit 6	30/07	Iron		Numerous nails, too rusted to keep
Tr 3, Unit 6	31/07	marble	334.9	Marble (white) slab w rebate & two polished faces; mortar in rebate. Cojoins 0219
Tr 3, Unit 6: 0219	31/07	Glass		Amber beer bottle frag.
Tr 3, Unit 7: 0229		Bone		Rabbit vertebrae
Tr 3, Unit 7		Glass		Clear bottle glass frag., w/ "6" embossed.
Tr 3, Unit 8: 0227		Copper	0.8	Nail, complete, square shank w/ head
Tr 3, Unit 8: 0228		Iron		Nail, complete, too rusted for ID
Tr 3, Unit 9, on floor: 0226		Earthenware		Fragments of crock or large pipe
Tr. 4		Iron		Crimped, distorted sheet fragments
Tr. 4		Wood		Floor board slivers w/ T&G, prob Baltic Pine, w/ green paint on edge
Tr. 4		Copper		Nail, Square shank, ca 40 mm
Tr. 4		Iron		Nail, Square Shank
Tr. 4		Glass		Clear drink bottle glass, no marks
Tr. 4		Glass		Clear flat sheet frag with curved edge; 1.0 mm thick
Tr 4 Unit 7	31/07	Glass		Clear drink bottle, probably soft drink
Tr 4 Unit 7		Glass		Clear drink bottle, w/ marks for reference collection
Tr 4 Unit 7		Iron		Metal strip, 10 x 2 mm; no ID
Tr 4 Unit 7		Wood		Strip, 5 x 150 x 19 mm SW
Tr 4 Unit 7		Iron		Wire nail, 75 mm long for collection
Tr 4 Unit 7		Copper		Nail, head and ½ shaft
Tr 4 Unit 7		Iron		Nail shank, too rusted to keep
Tr 4 Unit 7		Copper		Rivet, 3 mm dia w/ copper washer
Tr 4 Unit 7		Glass		Clear glass drink bottle, body fragment
Tr 4 Unit 9	31/07	Silver		Coin, Australia Five cent piece
Tr 4 Unit 9		Glass		Amber Beer Bottle, marked,
Tr 4 Unit 9		Iron		Screw top bottle cap, too rusty for ID, 40 mm dia
Tr 4 Unit 9		Iron		Nails, saved for reference collection
Tr 4 Unit 9		Glass		Amber drink bottle, no marks
Tr 4 Unit 9		Iron		Various Nail? shanks
Tr 4 Unit 9	31/07	Silver	0.9	Coin
Tr 4 Unit 9	31/07	Iron	3.1	Complete wire nail, saved for reference collection
Tr 4 Unit 9		Iron		Nail
Tr 4 Unit 9	31/07	Glass		Base, small bottle, clear light olive colour
Tr 4 Unit 9		Iron		Rusted lumps
Tr 4 Unit 9	31/07	Mortar		Two amorphous pieces
Tr 4 Unit 9		Glass		Drink bottle, light green, 3.8 mm thick, slight solarization

APPENDIX 8: ARTEFACT CATALOGUE continued

Tr 4 Unit 9		Glass		Round bottle body, 4 rows of dots, probably drink bottle
Tr 4 Unit 9		Stone		Quartz, from tuff ceiling
Tr 4 Unit 9		Glass	7.8	Clear glass container with 4 rows of short lines ?embossed around body. Fragments conjoin
Tr 4 Unit 9	31/07	Glass		Clear sheet, 2.6 mm & 2.0 mm thick
Tr 4, Unit 9: 0221		Slate		Thin sheet frag
4 Unit 10:0218		Rock		From Ceiling
		Cork		Rd Flat solid piece, 19 mm dia. Could be leather
4 Unit 11	31/07	Glass		Sheet glass, probably from window
	31/07	Slate		Tiny frag
Tr 4 Unit 13		Mortar		Amorphous shape, fine grained sand
		Wood		Timber, demolition
Tr 4, Unit 16	01/07	Wood		Baltic pine timber 19.0 mm thick, 30 mm wide, 590 mm long w/ rough cuttings to one edge. Offcut?
Tr. 4, Unit 16	31/07	Slate		Numerous small frags at several thicknesses
		Glass		Clear sheet glass, 2.0 mm thick
		Wood		Thin slivers, 15.0 mm wide, some tapered to both ends, probably carpenter's shavings/debris
Tr 4, Unit 17	01/07	Wood		3 timber pieces: 1) 100 x 75 mm HW w/ full mortise, (2) 100 x 25 mm HW wedge, 280 mm long, (3) 50 c 20 mm pine board, 250 mm long w/ green paint.
Tr 4, Unit 4, post hole	01/07	Rock		Soft rock, possibly weathered limestone
Tr. 4, Unit 18		Wood		Sliver of timber
Tr 5, Unit 1		Ceramic		Plain White, dinner plate base frag. W/ subtle edge scallop; Hi glaze, no marks.
Tr 5, Unit 1		Ceramic		White tile frag.; no décor.; glazed; 10.0 mm thick; w/ mortar
Tr 5, Unit 1		Glass		Torpedo bottle base frag.
Tr 5, Unit 1		Glass		Drink Bottle base frag w/ pontil lift; light green
Tr 5, Unit 1		Glass		Plate Glass, 6.4 mm thick; polished curved edge section; both edges bevelled; both faces heavily abraded & pitted. Probably observation window for a well.
Tr 5, Unit 1		Iron		Tapered rod section, ca 18.0 mm dia., heavily oxidized. Probably spike from CI enclosure cage around Seltzer Well.
Tr 5, Unit 1		Bone		Metatarsal young cow.
Tr 5, Unit 1		Earthen ware		Finished edge frag. of crock, red, 30 mm thick
Tr. 5, Unit 2	01/07	plant		Pine Cone, whole
		Wood		Dressed timber block, 18.0 x 60.0 170 mm
		Shell		Oyster valve
		Wood		Timber block, painted green., w/ sq notch on edge, 12.0 x 52.0 90.0 mm
		Bone		Fish, No Id
		Brick		Paver, frags., cream/beige, 40 mm thick, corner only
		Ceramic		Tile frag, light red w/ green paint; 24.0 mm thick
		Iron		Nail
Tr. 5, Unit 3	01/07	Wood		Floor board offcut w/ T&G;
Tr. 6, shell layer: 0225	02/07	Copper	6.2	Flat rectangular sheet w. rded corners, hole punched in one edge.
Tr. 8 Surface	02/07	Wood		J&G floor board offcut 21 x 100. x 360 mm. Baltic pine, no nails, 90 degree cuts.
		Wood		Hardwood wedge from 100 mm stock
Tr 8, Unit 4; 0224	02/07	Copper	3.1	Nail w/ head, point missing
		Iron		Square shank nail
Well 6 (seltzer) fill	25.07	Iron		Probably cast iron spiked rod from cage enclosure

APPENDIX 8: ARTEFACT CATALOGUE continued

Well 6 (seltzer) fill		brick		Dark, w/coarse fabric and daggs. No edges
Well 6 (seltzer) fill		ceramic		White plate, glazed. No diagnostic features
Well 6 (seltzer) fill		brick		Thick, irregular glaze
Well 6 (seltzer) fill		ceramic		Plain white glazed tile w/ edges. 10.0 mm thick
Well 6 (seltzer) fill		glass		Plate glass clear 7.8 mm thick
Well 6 (seltzer) fill		lead		Pipe; 8.5 mm dia, 190 mm long
Well 6 (seltzer) fill		Earthen ware		Crock edge, flanged
Well 6 (seltzer) fill		slate		4.5 mm sheet shingle w/ att'ment holes
Well 6 (seltzer) fill		copper		Square shanked doubled nail, complete

TABLE 2a The Rock Face to East of the Cellar

Provenience	Date	Material	Description
J. Gill Overfill Trench	30/07	Marble	Pipe 170mm long, dia =9.0 mm.
		Lead	Pipe, 110 mm x 9.0 mm dia.
		Lead	Heavy Plate fragments. Shaped, polished edge. 7.5 mm thick. 26.2 gms
Tr 1, rock floor: 0233	03/07	Glass	Shingle fragment w/ edge
Below bricks	03/07	Slate	Heavy plate w shaped edge, 9.0 mm thick
Surface, rock face	31/07	Glass	Elongate clay lump shaped roughly round with central hole thru its length. May be a pipe join or a net weight.
Surface		Clay	3 nails, discarded as too rusted
Surface		Iron	Pipe 100.0 mm long, 9.0 mm dia. Look for residues
Surface		Lead	Bottle glass frags.: 1. dark olive case gin body, 2. Black olive, body, ca spirits, and 3. Shoulder, clear glass. No marks
Surface		Glass	Possibly window glass, v. small
Surface		Sheet glass	Timber board, decayed
Surface		Wood	Hardwood board, heavily weathered, w/ iron nails, cut to reduce size and study nails.
Stone face	01/08	Wood	Pipe 170mm long, dia =9.0 mm.

TABLE 2b: Trench 2, Rock Face to Rock Pit


Cat No.	Date	Material	Wt gms	Description/comment
0201		glass	449.1	Blk Olive bottle base & body; dip moulded, asymmetrical glass distribution in base; high, cupped lift; no marks. Heavy abrasion across whole ext surface. 1870-95 date of manufacture
0202		glass	437.9	Bottle type B6 base, body & neck, marble seal. Embossed on body is "REGISTERED TRADE MARK...GEELONG" on banner. The letter "T" is embossed on lift and MCBCO is embossed around heel. This trade mark was registered by J. J. Trait in 1895. see Arnold 1990:111
0203		glass	229.9	Body & finish, clear glass bottle. Internal thread for stopper; refined blob lip. BOLLINGTON HOPS BEER embossed in raised oval panel.
0204		glass	205.8	Grn bottle body fragment, wine. Discarded
0205		Glass	69.0	Clear Bottle glass, body frags. No ID marks. Discarded.
0206		China	692.6	Two plain white dinner plates, incomplete; w raised laurel and dot band on semi-scalloped edge. 280 mm dia. J. G. Meakin, post 1912, is the manufacturer.
0207		marble	48.2	Fragment of decorative marble slab w polished face around shallow rebate.
0208		Galv iron	7.3	Roofing nail, shank pressed into washer head. 60 mm



TABLE 3: Pipe Trench 1

Proven/Cat No	Date	Material	Wt (gms)	Description/comment
1.0 surface 0049		Glass	541.9	CSH-2, two incomplete bottles

APPENDIX 8: ARTEFACT CATALOGUE continued

1.0, 0050		glass	475.8	CSH-2, No marks
1.0, 0051		glass	109.3	CSM-1, body and base fragment
1.0, 0052		glass	312.9	CSM-2, body & base
1.0, 0053		glass	136.3	CSM-2, body & base frags only
1.0, 0054		glass	66.6	Neck of bottle, type unidentified. Rim fire finished
1.0, 0055		glass	27.4	CSH-2, Neck only w/ blob finish
1.0, 0056		glass	136.7	B-1 Base salad oil bottle
1.0, 0057		Earthen ware	734.6	Flange end of drain 6" drain pipe
1.0, 0058		glass	94.0	Base 2, Lamont bottle
1.0: 0059		ceramic	68.6	Coffee cup, cream colour; glazed; Standard emblem "Clifton Spring Hotel" in banner in red, over band of red and ochre lines circling body. Missing handle and base. The CS Hotel ware bears the following signature of the Globe Pottery works.
				
1.0: 0060		glass	45.9	7 pieces from one container
C 1.0: 0061		glass	45.1	Body frag of bottle
C 1.0: 0062		glass	91.2	Body fragments of one case gin bottle
C 1.0: 0063		glass	67.9	Neck fragment, possibly wine bottle, no rim
C 1.0: 0064		ceramic	22.7	Flat plate frag with "Royal Ironstone China" printed over lion and unicorn emblem of British Monarchy and terminal text reads "...Bro ^s " Plain white, no edges, water worn
C 1.0: 0065		lead		Pipe 9.0 mm dia, flattened, crimped both ends, distorted fragment
C 1.0: 0066		Porcelain		White bowl rim fragment, large diameter
C 1.0: 0067		Plated brass		Cigarette lighter, fuel tank plus head, missing case.

Provenance Cat No.	Date	Material	Wt (gm)	Description
Unit 1: 0030		Coke	51.3	Unconsumed fuel. 50.6 gms
Unit 1: 0031		Coal	143.3	Bright shiny coal, black, unconsumed.
Unit 1: 0032		Copper	0.9	Thin copper wire, possibly corking wire
Unit 1: 0033		Marine shell	15.0	<i>Mytilus edulis</i> and Oyster spp. fragments only, possibly food
Unit 1: 0034		Terra cotta	30.4	Lip fragment of pot
Unit 1: 0035		Mortar	41.7	4 thin sheets of uniform thickness
Unit 1: 0036		iron	44.9	Various small flat and folded sheet metal
Unit 1: 0037		iron	11.3	Nail, tube, and rod sections
Unit 1: 0038		Lead/tin	12.2	Folded sheet over mortar. 1
Unit 1: 0039		brick	30.1	Red fine paste, small fragments w/o edges
Unit 1: 0040		Glass	120.5	30 grn bottle body frags
Unit 1: 0041		glass	378.4	47 grn bottle body frags
Unit 1: 0042		glass	180.2	30 grn bottle body frags
Unit 1: 0043		glass	19.0	4 s grn bottle body frag w. marks
Unit 1: 0044		glass	38.9	4 frags amber bottle glass; probably beer bottle
Unit 1: 0045		glass	107.5	18 fragments s. grn bottle neck, no marks
Unit 1: 0046		glass	116.9	30 fragments s. grn bottle body, no marks
Unit 1: 0047		glass	93.6	30 fragments s. grn bottle body, no marks
Unit 1: 0048		glass	93.1	10 fragments, grn bottle body, no marks
Unit 1: 0068		glass	672.5	90 bottle body fragments, aerated water
Unit 2: 0080		glass	132.2	CSM-1a body and base frags to make 2 bottles
Unit 2: 0081		glass	243.9	Body frags with partial unidentified marks, aerated bottles. "PRAHAN..." is one mark. N=23.s grn
Unit 2: 0082		glass	290.6	Body fragments, aerated bottles, one marked "...XON" probably Dixon. Green 21 frags.
Unit 2: 0083		glass	272.8	65 body & neck frag, aerated water, s grn.
Unit 2: 0084		glass	396.3	38 bottle body & neck frags, aerated water, s grn
Unit 2: 0085		glass	240.5	43 bottle body & neck frags, aerated water, s grn
Unit 2: 0086		glass	35.0	Clear body fragment-alch bottle, no marks

APPENDIX 8: ARTEFACT CATALOGUE continued

Unit 2: 0087		glass	8.0	Clear body fragment, no marks or ID. Discarded
Unit 2: 0088		glass	251.5	22 frags champagne bottle, drk grn
Unit 2: 0089		glass	185.0	1 Hamilton base, s grn no marks
Unit 2: 0090		glass	142.3	2 frag Hamiltons w "ROWLANDS" marks
Unit 2: 0091		Glass	326.3	1 Hamilton base & body, s grn
Unit 2: 0092		glass	290.7	1 Hamilton base & body, s grn
Unit 2: 0093		glass	348.2	8 large Hamilton body frags, s grn
Unit 2: 0094		glass	324.3	12 small Hamilton body frags, s grn
Unit 2: 0095		Mortar	67.4	Thin slabs of fine grained mortar
Unit 2: 0096		Copper	4.8	6 Copper corking wires
Unit 2: 0097		china	2.1	1 fragment plain white finish, no functional ID
Unit 2: 0098		Stoneware	17.9	Stone ware lid fragment
Unit 2: 0099		coal	67.5	Discarded
Unit 2: 0100		coke	97.1	Discarded
Unit 2: 0101		charcoal	12.3	Discarded
Unit 2: 0102		cork	5.0	1 bottle cork stopper frag. discarded
Unit 2: 0103		shell	6.1	2 valve frags <i>Mytilis</i> discarded
Unit 2: 0104		shell	15.8	1 Oyster valve frag. discarded
Unit 2: 0105		Metal	131.2	Nails, iron sheet, lead. Heavy deterioration
Unit 2: 0106		Mortar	201.0	Lumps and daggs. Discarded
Unit 2: 0107		glass	82.6	F2 rim w body frags. Probably Lamont Patent
Unit 2: 0108		glass	40.4	F3 rim frag
Unit 2: 0109		glass	266.8	8 type F1 rims
Unit 2: 0110			134.5	Neck fragments, aerated water bottles
Provenance Cat No.		Material	Wt (gms)	Description
Unit 3: 0069		Glass	191.4	4 F1 finishes + neck frags, incomplete, s green
Unit 3: 0070		glass	19.2	CSM-1a 3 body fragments only
Unit 3: 0071		glass	106.2	B-3 + 7 body fragments, green probably wine bottle
Unit 3: 0072		glass	30.0	4 black olive body frags
Unit 3: 0073		glass	63.4	7 body fragments w embossed letters: "...RATE..." "REET..." "...LA." & others. Soda water bottles
Unit 3: 0074		glass	580.1	Various soda bottle frags. X 67.
Unit 3: 0075		iron	25.4	Various nails, misc. rusted pieces
Unit 3: 0076		mortar	102.2	Various thin sheets and daggs
Unit 3: 0077		coal	41.2	Pieces, bright shiny black
Unit 3: 0078		iron	29.1	Rusted sheet metal, edge bent around wire—probably a bowl or round metal container. Discarded
Unit 3: 0079		Shell	2.1	<i>Mytilus Edulis</i> valve frag. Discarded

TABLE 5: Dump 2

Provenance Cat No.		Material	Wt (gms)	Description
Unit 1: 0111		glass	80.4	Dresser cover leaf w/ bevelled edges, clear, 6.2 mm thick; width 120 mm. Irreg edge grinding
Unit 1: 0112		glass	297.7	Type CSH1, body and base frag, no marks
Unit 1: 0113			13.5	Type F1 rim frag.
Unit 1: 0114		glass	21.7	Wine bottle Base frag, drk grn
Unit 1: 0115			60.6	11 frags, misc body bottle, aerated water
Unit 1: 0116		iron	5.7	1 ½ inch nail; heavily encrusted
Unit 1: 0117		limestone	34.1	Natural stone; 6 pieces. Discarded.
Unit 2: 0124		copper	0.82	Loop of corking wire
Unit 2: 0125		lead	8.2	Round pipe section w/mineral infill
Unit 2: 0126		bone	22.1	2 Sheep metacarpal, diagonal cut to one. Discarded
Unit 2: 0127		iron	4.2	Unidentified, discarded
Unit 2: 0128		glass	337.9	Base type B5, "BREFFIT'S BOTTLE MAKERS CRATES, BOXES & CASES. AIRE & CALDER CO LONDON" on heal. Monogram and "BREFFITS BOTTLE PATENT" on base uplift.
Unit 2: 0129		glass	270.6	Base Type B2, "KGB 1014" embossed on base uplift.
Unit 2: 0130		glass	179.9	Base type B2, "JOHN LAMONT GLASGOW" embossed
Unit 2: 0131		glass	227.9	Base Type B4, BELL PATENT & "MELBOURNE GLASS BOTTLE WORKS Co." embossed.
Unit 2: 0132		glass	125.5	Bottle Type CSM-1b base only

APPENDIX 8: ARTEFACT CATALOGUE continued

Unit 2: 0133			254.5	Base Type B6. P MATHEWS GEELONG AERATED WATER [®] embossed on oblong panel on body, and emblem KBG 4342 [™] on base lift.
Unit 2: 0134		Glass	95.7	Type B4 body
Unit 2: 0135		glass	244.9	Type B6 base/body
Unit 2: 0136		glass	99.3	Type B6 base, MELBOURNE GLASS WORKS
Unit 2: 0137		glass	168.2	Type B6 base x 3 JOHN LAMONT MAKER GLASGOW
Unit 2: 0138		glass	48.9	Type B6 base; KBG 4342
Unit 2: 0139		glass	222.1	Bottle Type CSM-1A x 2
Unit 2: 0140		glass	36.6	Type F2 complete, green
Unit 2: 0141		glass	29.5	Type F1 rims x 2, s grn, incomplete
Unit 2: 0142		glass	49.3	Hamilton body, panel with miner & farmer, probably Rowland & Lewis, no manufacturers name.
Unit 2: 0143		glass	84.5	Body frag, "DIXON" & "MELBOURNE" embossed clear glass
Unit 2: 0144		glass	45.9	Body frag, "...CO MELBOURNE" embossed, s grn
Unit 2: 0145		glass	24.0	Body frag, partial raised hand of Type B3 Lamont.
Unit 2: 0146		glass	57.1	Type F1 finish, s grn
Unit 2: 0147		glass	38.3	Type F2 finish, s grn
Unit 2: 0148		glass	32.5	Type F1 finish, grn
Unit 2: 0149		glass	35.3	Type F3 finish, s grn
Unit 2: 0150		glass	124.0	Type B4 base, MGBW embossed
Unit 2: 0151		glass	128.2	Body frags x 4, aerated water bottle
Unit 2: 0152		glass	42.0	Body/neck frag, aerated bottle, "P MATH..." embossed
Unit 2: 0153		glass	74.9	Clear w/ light pebble finish one side, thickness var =9.0-10.5 mm, nearly flat. Industrial
Unit 2: 0154		glass	7.6	Glass marble, aerated water seal, incomplete
Unit 2: 0155		glass	278.3	Body Type B4 x 5. Four bottles MIC
Unit 2: 0156		glass	224.2	Type B5 Body & Base frags x 2. Two bottles MIC. Breffit's Patent
Unit 2: 0157		glass	56.6	Body fragment, "...wis" embossed.
Unit 2: 0158		glass	53.6	Base Type B2, drk grn, no marks
Unit 2: 0159		glass	43.8	Body fragment w/ indent of Codd construction. No marks. Aerated bottle
Unit 2: 0160		glass	82.8	Base of unidentified type; drk grn with uplift. Probably beer bottle.
Unit 2: 0161		stoneware	59.0	Body of stoneware container
Unit 2: 0162		cork	2.9	Cork bottle stopper, discarded
Unit 2: 0233		glass	217.2	CSM-2 embossed CANTRELL & COCHRANE SEE THAT EACH CORK IS BRANDED around base.
Provenance Cat No.		Material	Wt (grms)	Description
Unit 3: 0191		glass	31.1	Rim F1 x 2, Two MIC, discarded
Unit 3: 0192		glass	42.2	Misc bottle body fragments
Unit 3: 0193		iron	46.0	17 pieces rusted iron items. Discarded
Unit 3: 0194		limestone	34.8	2 lumps with iron staining
Unit 3: 0195		Shell	2.1	Marine gastropod; <i>Zeacumantis diemenensis</i> , discarded
Unit 3: 0196		shell	1.2	Marine gastropod; possibly <i>Larinopsis</i> , discarded
Provenance Cat No.	Date	Material	Wt (grms)	Description
Unit 4: 0118		bone	9.1	Proximal end, sheep rib, no cut marks.
Unit 4: 0119		glass	14.2	Type F1 rim frag.
Unit 4: 0120		glass	21.1	6 small bottle body fragments, no type id
Unit 4: 0121		iron	28.6	5 nails
Unit 4: 0122		cork	0.65	2 cork fragments; discarded
Unit 4: 0123		limestone	121.0	Natural nodules discarded
Provenance Cat No.	Date	Material	Wt (grms)	Description
Unit 5: 0197		glass	22.9	Various bottle body fragments, no identification
Unit 5: 0198		slate	38.1	Shingle fragment, one corner; discarded
Unit 5: 0199		copper	1.1	Wire, probably corking wire, discarded
Unit 5: 0200		iron	32.1	Rusted items, no identification, discarded

TABLE 6: Well House

Cat No.	Date	Material	Wt	Description/comment
0209	Fri	glass	340.5	Drk green bottle base, B7, heavily abraded, in upper clay contact with sand laminae, interior. Machine-made

APPENDIX 8: ARTEFACT CATALOGUE continued

0210		Earthen ware	467.9	Round pipe, 60 mm dia (OD), 38 ID; incomplete length, same orange colour as bricks used in wells.
0211		ceramic	73.8	Glazed tile fragment w floral design
0212		iron	*9.5	Roofing nail w/ washer head, from <i>in situ</i> , 2"
0213		Iron/wood	28.3	Fixing nails, ?square shank, <i>in situ</i> from top plank SE corner.
0214		Iron/wood	169.3	Assemblage of iron roofing nail collected with CI sheet & 75 mm wide timber batten, <i>in situ</i>
0215		Iron/wood	18.4	2" iron roofing nail <i>in situ</i> with soft wood trim on false rafter.
0216		glass	212.3	Drk gm square base & body w/ dots & circle on uplift as drawn. Case gin bottle from rubble infill, external trench S side of structure. Discarded
0217		glass	42.6	Drk gm rim, F5 w irreg glass distribution of ring. Discarded.
0232		wood	1.9	Timber fragment from gable w/ paint resembling Brunswick Green. The assembly containing the false rafter, batten, a portion of the folded CI, and moulding with roofing nails collected from the well house gable was partially discarded after being photographed.

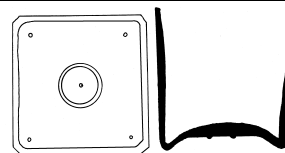


TABLE 7: Surface

0002		ceramic		Tile fragments, floral pattern, w/ mortar, from beach
		lead		Pipe, various diameters; discarded
		brick		Hand -made ; distinctive orange colour, discarded
		Tile		Plain white glazed,; 6" x 6", discarded
0234		timber		T&G floor board off-cut, Baltic Pine, 1 x 4".

NOTES

1 Constituents in Catalogue

Wood in the collection is either soft wood (SW) or hard wood (HW) that occurs as manufactured products or in the form of twigs, branches or logs without evidence of manufacture. Charring from burning is common, suggesting use as firewood in the chamber rather than flotsam. Occasionally rough cut-marks by a steel blade are present in otherwise unmodified wood, but milling is considered here the primary indicator of manufacture. An elongate piece with evidence of longitudinal splitting is referred to as a sliver or splinter to distinguish it from a finished piece that is a block, an off-cut, or dressed timber stock—this material most probably results from demolition. A carpenter’s wedge was identified as a tapered shaft with cut (sawn) edges. The wood specie is identified as most probably Baltic Pine, although Oregon, Red Pine, and Hoop Pine are also plausible wood types that were popular imports for the period. Microscopic examination of plant structure to identify species was not undertaken.

Rock has two origins in the collection: pebbles and cobbles of quartz are common on the beach, and several rock types of angular gravel in the cellar fill have been identified as roof fall. Larger slabs of basalt and nodular limestone are also present in the beach rock component, both introduced into the cellar from beach repair programs or from recent marine transport. Limestone was incorporated into the resort landscape as decorative stone around the Sulphur Spa Bath House in the 19th century.

Slate appears to be small fragments of roofing shingles, as suggested by attachment holes and intact edges where these are preserved in individual specimens. Thick slate fragments are also present (rare) and mortar on these and the thinner shingles indicates masonry attachment, possibly for decorative finish of wells or well heads. Slate was used for entry steps on the site.

Iron in this collection is heavily corroded from salt infestation and the incidence of thick layers of oxidized iron is high. Identification of metal artefacts thus encrusted is difficult to suggest in the absence of readily recognized features, especially in sheet metal and wire components. Wire, nails, rods, sheet metal, and folded edges of manufactured articles such as paint tins or washtubs are the most likely items represented. Nail description is limited as a result and few specimens are available to identify diagnostic characteristics for this analysis.

Mortar is present widely in site deposits in two principle forms: irregular shapes such as daggs and lumps and in pieces shaped by surrounding material or as distinctly shaped pieces. The shapes appear to reflect the particular application between masonry elements such as bricks or stone or they are deliberately formed edges of a structure the nature of which is a matter of speculation. Thin (4.0 mm) slabs of fine-grained mortar in the collection are too

APPENDIX 8: ARTEFACT CATALOGUE continued

regular in thickness to be brick-to-brick mortar and are more probably architectural rendering. Paint or some pigmented material may be present in minute quantities on some mortar and brick fragments are commonly attached.

Marine Molluscs in this collection consist of the mud whelk *Zeacumantus diemenensis*, a thin shelled gastropod (cf *Larinopsis* spp), the mussel *Mytilus edulis* and the mud oyster *Ostrea angasi*, licensed commercial beds of the bivalves being common at Clifton Springs in the 1870s and 1880s. Hinged pairs of the mussel occur in the Cellar deposits connected by soft tissue and the periostracum (thin horny outer cover) is often present in small amounts, suggesting they were recently deposited as flotsam. Shells of the same species in open contexts in the site are always fragmented and unjoined, and they are missing natural colouration, which raises the possibility they are fossils. Oral history from descendants of workers and residents living in the town before the hotel burned down suggests these two shellfish were served to patrons on the beach by hotel staff. The possibility that the shellfish were deposited as fossils in landscape fill taken from the beach or as storm surge must be considered plausible in light of the relative elevation of this work area above MSL and the use of natural shell beds in the esplanade and other pedestrian areas. Evidence of food discard deposits, such as heaps of shells containing other culinary material or tableware was not uncovered to make a solid case for the dietary role of shellfish in the site.

Copper Wire in the collection is always a single thin bare wire that is twisted into a pattern with a central knot and loops that are often joined by a blob of solder or wax. These assemblies were a part of the corking seal on aerated water and champagne and their presence in the deposits most probably results from the uncorking of a bottle prior to its consumption.

2 Artefact Registration Process

The retention of all artefactual material removed from a known sedimentary context in the Dell allows future analysis to develop an understanding of the use and abandonment patterns for the site with reference of the primary collection. The loss of much of the original fabric of the bottling plant and spa bath facilities has meant that such interpretations will necessarily be limited to specific activity areas and small samples related to discard behaviour without reference to site-wide patterns. The artefacts collected from the site were cleaned and recorded at the initial stage of the study to compile the catalogue that follows.

The registration process aimed to identify individual artefacts for possible conservation and future reference while at the same time reducing the size of the collection. The selection criteria for reduction included the rationale that the most valuable artefacts were excavated from sediments formed during the life of the resort and those with the least value were recovered from discard that had little association with activity at the site. Artefacts missing associated fabric, such as isolated nails, milled timber or masonry, were considered less likely to play a role in reconstruction of temporal or functional interpretations and hence were commonly ignored in the registration process.

The evidence from the cellar suggests that almost all the artefacts were discarded by marine transport during submersion of the foreshore. Consequently, the vast majority of the assemblage from the cellar is ignored in the analysis and hence were not registered items. The exception pertains to artefacts that were assessed as potentially belonging to the pre-marine transgression of the site or else conveys significant information about the site irrespective of their secondary context. Hence artefacts reasonably well preserved from the cave floor, or those that retained a pigment or through their fabric reveal something of potential value were registered. The same principle pertains to finds collected from the foreshore surface, the beach or the embankment areas of the site. The registered artefacts are distinguished in the catalogue by a registration number and an accompanying weight.

3 Conservation Requirements

The state of preservation of articles in the collection varies enormously depending on conditions of burial and susceptibility to weathering. Most glass artifacts exhibit surface deterioration for chemical weathering resulting in flaking ranging in degree from mild to advanced, the latter presenting as active exfoliation under storage conditions. Iron objects are also in an advanced stage of oxidation from exposure to salt water and contact with wet wood. Only nails recovered from an assembly context or with apparently good state of preservation have been retained in the collection for future reference. The nail collection contains less than 15 specimens and as a matter of priority, it should be treated and recorded as a further contribution to the site history.

APPENDIX 9: WATER QUALITY ASSAY, 2008, SELTZER WELL, CLIFTON SPRINGS



Barwon Laboratories
49 Carr Street
Geelong 3220
Tel +61 52 269249
Fax +61 52 290242

ECOWISE Environmental (VIC) P/L

Certificate of Analysis

Date: 23-Jul-08

Report No.: 0807177

Page 1 of 3

Client: City of Greater Geelong (Geelong Office) Sample ID: 0807177-001
 Contact: Mr Matthew Jackman Collection Date: 08/07/2008 13:00:0
 Client Sample ID: Bore Water Received Date: 08/07/2008
 Site Description: Bore Water, Clifton Springs

Analyte	Method	Reporting Limit	Result	Unit
Calcium	WEC061	0.50	180	mg/L
Magnesium	WEC061	0.50	420	mg/L
Potassium	WEC061	0.10	87	mg/L
Silica	WEC061	0.01	61	mg/L
Sodium	WEC061	0.50	2600	mg/L
Soluble Arsenic	WEC079F	0.0010	0.013	mg/L
Soluble Cadmium	WEC079F	0.0002	<0.0002	mg/L
Soluble Chromium	WEC079F	0.0010	0.058	mg/L
Soluble Cobalt	WEC079F	0.0010	0.003	mg/L
Soluble Copper	WEC079F	0.0010	0.002	mg/L
Soluble Iron	WEC079F	0.050	4.0	mg/L
Soluble Lead	WEC079F	0.0010	<0.001	mg/L
Soluble Manganese	WEC079F	0.0010	0.18	mg/L
Soluble Mercury	WEC079F	0.0001	<0.0001	mg/L
Soluble Nickel	WEC079F	0.0010	0.024	mg/L
Soluble Selenium	WEC079F	0.0010	0.006	mg/L
Soluble Tin	WEC079F	0.0010	<0.001	mg/L
Soluble Zinc	WEC079F	0.0020	0.013	mg/L
Sulphur	WEC061	0.10	190	mg/L
% Difference	BAR010	0.01	-3.27	
Anionic Strength (meq/L)	BAR010	1.00	170	
Cationic Strength (meq/L)	BAR010	1.00	159	
TDS (calc.) mg/L	BAR010	1.00	9400	
TDS (meas.) / TDS (calc.)	BAR010	0.10	1.01	
E.coli (MPN Collert)	BAM009	0	0	MPN/100mL
Faecal Streptococci	BAM015	0	0	org/100ml



Mark Sheedy
Mark Sheedy
Biology / Microbiology

Frank Matthies
Frank Matthies
Chemistry / Biology

EXT / * - Not covered under scope of NATA accreditation
 WEM = Mt Waverley Micro 992:989
 WEC = Mt Waverley Chem 992:985
 Microbiology samples analysed within 24 hours of collection date
 Samples analysed as received Sampler : Client

APPENDIX 9: WATER QUALITY ASSAY, 2008, SELTZER WELL, CLIFTON SPRINGS
Continued



ECOWISE Environmental (VIC) P/L

Certificate of Analysis

Date: 23-Jul-08 Report No.: 0807177 Page 2 of 3

Client: City of Greater Geelong (Geelong Office)	Sample ID: 0807177-001
Contact: Mr Matthew Jackman	Collection Date: 08/07/2008 13:00:0
Client Sample ID: Bore Water	Received Date: 08/07/2008
Site Description: Bore Water, Clifton Springs	

Analyte	Method	Reporting Limit	Result	Unit
Total Coliforms (MPN Coliert)	BAM009	0	11	MPN/100mL
Ammonia as N	BAR069	0.050	0.055	mg/L
Chloride	BAR006	50	5300	mg/L
Nitrate as N	BAR069	0.010	0.12	mg/L
Nitrite as N	BAR069	0.010	< 0.010	mg/L
Sulphate	BAR006	50	570	mg/L
Total Oxidised Nitrogen as N	BAR069	0.010	0.12	mg/L
Bicarbonate Alkalinity as CaCO3	BAR001A	5.0	410	mg/L CaCO3
BOD	BAR008	2	13	mg/L
Carbonate Alkalinity as CaCO3	BAR001A	5.0	< 5.0	mg/L CaCO3
Chemical Oxygen Demand	BAR112A	50	160	mg/L
Electrical Conductivity	BAR001C	0.1	14000	µS/cm
Hydroxide Alkalinity as CaCO3	BAR001A	5.0	< 5.0	mg/L CaCO3
Oxygen, Dissolved	BAR013	0.1	0.5	mg/L
pH	BAR001D	0.1	5.8	pH Units
Reactive Phosphorus as P	BAR110B	0.010	0.041	mg/L
Total Alkalinity as CaCO3	BAR001A	5.0	410	mg/L CaCO3
Total Dissolved Solids	BAR032B	5	9500	mg/L
Total Kjeldahl Nitrogen as N	BAR028A	0.1	0.4	mg/L
Total Nitrogen as N	BAR028B	0.5	< 0.5	mg/L
Total Phosphorus as P	BAR110A	0.005	1.1	mg/L
Total Suspended Solids	BAR032C	5	790	mg/L
Turbidity	BAR040	0.1	200	NTU



Mark Sheedy
Mark Sheedy
Biology / Microbiology

Frank Matthies
Frank Matthies
Chemistry / Biology

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 WEC = Mt Waverley Chem 992:985
 Microbiology samples analysed within 24 hours of collection date
 Samples analysed as received Sampler : Client

APPENDIX 9: WATER QUALITY ASSAY, 2008, SELTZER WELL, CLIFTON SPRINGS
Continued



Barwon Laboratories
 49 Carr Street
 Geelong 3220
 Tel +61 52 269249
 Fax +61 52 290242

ECOWISE Environmental (VIC) P/L

Certificate of Analysis

Date: 23-Jul-08 Report No.: 0807177 Page 3 of 3

Client:	City of Greater Geelong (Geelong Office)	Sample ID:	0807177-002
Contact:	Mr Matthew Jackman	Collection Date:	08/07/2008 13:00:0
Client Sample ID:	The Dell	Received Date:	08/07/2008
Site Description:	The Dell, Clifton Springs		

Analyte	Method	Reporting Limit	Result	Unit
Electrical Conductivity	BAR001C	0.1	47000	µS/cm



Mark Sheedy

Mark Sheedy
 Biology / Microbiology

Frank Matthies

Frank Matthies
 Chemistry / Biology

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 WEC = Mt Waverley Chem 992:985
 Microbiology samples analysed within 24 hours of collection date
 Samples analysed as received Sampler : Client