## Geological Society of New Zealand Inc 2003 Annual Conference



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# Field Trip Guides

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## GEOLOGICAL SOCIETY OF NEW ZEALAND ANNUAL CONFERENCE 2003 FIELD TRIP 5

## DUNEDIN BUILDING STONES AND ARCHITECTURAL HERITAGE

### Jane Forsyth and Michael Findlay

The tour begins at **St Margaret's College**, which was established in the old Leith St manse in 1911, for the accommodation of women students. The present building was erected in 1914, with new wings added later.

**Professorial Houses.** These Gothic-style semi-detached houses (1879) were designed by Maxwell Bury for the university's first four professors. Originally in polychromatic brick with distinctive cross-braced gables, a veneer of Moeraki gravel (from north Otago) was added in the 1930s.

The Dunedin area is well suppplied with volcanic building stone, as most of the urban area and the surrounding hills are the remnants of a large Miocene volcano. These volcanic rocks provided several types of building stone for the 19<sup>th</sup> century settlers. The two that gained widest acceptance were Leith "andesite" (actually a trachybasalt according to Benson) and Port Chalmers Breccia. Leith "andesite" was taken from several localities in Ross Creek and the Leith valley (see later).

**The Quadrangle.** The oldest part of the University of Otago comprises the Registry (clocktower) and Geology Buildings. Main material Leith "andesite"; base Port Chalmers Breccia; facings Oamaru Stone; roof Welsh slate. Maxwell Bury designed these Gothic-style university buildings in 1878; at one stage the northern part of the Registry building housed the whole university. More modern additions to these buildings have concrete in place of Port Chalmers Breccia.

The Archway, Marama Hall (1919), Home Science Building (1918). Further additions to the university generally copied the original style.

**Union St bridge.** Base Leith "andesite"; carvings Tasmanian sandstone; War memorial Otago Schist slab. The bridge incorporates a memorial to university students who served in World War 1.

**The Water of Leith** is named after a stream flowing through Edinburgh. Just downstream of the Union St bridge, underneath the Home Science Building, Miocene conglomerate and sediment (including leaf beds) are exposed in the stream bank. Similar sedimentary rocks occur between the lava flows in several parts of the Dunedin Volcano.

**Richardson (formerly Hocken) Building.** This 1979 concrete Brutalist building is listed as the most successful of its type on the campus. The Brutalist school was a late 1950s European modernist movement exemplified by the work of Le Corbusier and (in the U.S.) Louis Kahn. Concrete was used to achieve a massive, heavy, monolithic effect.

**Information Services Building.** Extensive use of Oamaru Stone (from Parkside Quarry), both rough and sawn. Timaru basalt slabs are used along corridor floors inside, and also interspersed with brick in the piazza outside. The Information Services Building houses the central library and other study facilities, and was opened in 2001, together with a link through to the University Union building.

**University Staff Club.** Mainly Leith "andesite". Another building in the style of the original university, this has previously been, in turn, the Dental School, the Registry and the Law Faculty.

**Chemistry, Biochemistry, Microbiology, Science III buildings.** A line of concrete buildings dominates the Cumberland St frontage of the university. They were erected in the 1970s, culminating in the Science Library (1978).

**St David lecture theatres.** Oamaru stone (Parkside Quarry) plus Timaru basalt ("Timaru Bluestone") at ground level both outside and inside. Built in 2000, as part of the recent (and ongoing) redevelopment of the northern end of the university campus.

**Crown Research Building.** On the corner of St David and Cumberland Sts, this was built for the DSIR in 1985. It now houses the Institute of Geological & Nuclear Sciences (GNS) and Landcare Research (Manaaki Whenua) – but perhaps not for much longer, as the site is still owned by the university who show signs of wanting it back.

All Saints Anglican Church, late 1860s. Designed by William Clayton, and standard Victorian Gothic in form, it was considered daring in its use of coloured bricks. It remains in use as a church, and backs onto Selwyn College (see later). The architect Basil Hooper (see later) designed alterations to both the church and the hall in 1911 and 1918.

From the corner of Dundas and Cumberland Sts, several examples of terrace housing are seen. **The Dundas St Methodist Church** is another locally significant building. Though perhaps no longer filled with the holy spirit, you can buy Speights here and it is once again part of the community as a café and theatre.

**Titan Street** contains a mixture of century-old cottages (including one managed as a writers' retreat) and charmless concrete block units. In term time it can be particularly squalid.

A line of more substantial one- and two-storey residences on both sides of George Street leads along to the **Gill House** (1905). On the corner of George & Warrender Sts, this is the first house designed by the architect Basil Hooper after he set up practice in

Dunedin. It has the complex roof geometry of most of Hooper's houses, and was described at the time of building as a "modern villa" said to "strike off from the stereotyped style of former days".

**Bingham house.** On the corner of Warrender & Queen Sts, it was built by Henry Sydney Bingham in 1914. Bingham's family are still monumental masons in Dunedin. The house was designed by Edmund Anscombe, who succeeded Maxwell Bury as university architect and who was responsible for additions to the University Quadrangle. The Bingham house & retaining wall are of Oamaru Stone - very much darkened, compared with paler material in new university buildings.

**Queen St.** Kerb & channelling in "bluestone"; outcrop of lava flow; retaining wall of "bluestone". According to Benson's map the outcrop is olivine dolerite ("Roslyn dolerite").

**Queen St footpath to Woodhaugh.** Tall timber houses below the street have slate roofs – probably Welsh slate as used in many of Dunedin's older buildings, but possibly from the Otepopo slate deposit in north Otago.

**Queen St at Woodhaugh end.** Still visible is part of a mansion built in the 1880s for William Gregg (of coffee fame, whose company still survives in Dunedin). The house was cut into pieces and parts of it moved to nearby sections shortly after it was built.

**Through Woodhaugh Gardens.** The area is a remnant of the original vegetation which covered the Leith floodplain, including kahikatea, matai, lacebark, ribbonwood and lemonwood. An 1863 painting, "Picnic at Woodhaugh", shows the dark, primaeval forest towering over the tiny figures of the settlers. Old Leith flood channels are still visible in the bush although the stream is now channelled well below the floodplain surface, a result of human intervention following several disastrous floods in the late 19<sup>th</sup> and early 20th centuries.

**The upper Leith Valley** was clad in dense bush, from which logs of rimu, totara, matai, cedar and kahikatea were brought to sawmills in this area by teams of horses or bullocks. The last bullock team working was photographed in 1929, by which time the forests of Leith Saddle, Maori Hill, Pine Hill, Cargill and Flagstaff were much depleted. In the early days large logs were obtained, three logs making up a load for the wagon and up to two loads a day being delivered to the sawmill.

**The Woodhaugh Hotel** (1883-92) on the corner of Woodhaugh and Malvern Sts is alleged to be a former house of ill repute. The first licence for a Woodhaugh Hotel was issued in 1880.

**Upper Leith walkway.** Recently formed to enhance walking opportunities along what was a weedy and neglected stretch of streambank. In the late 19<sup>th</sup> century, every available area alongside the stream was occupied by mills of various sorts – paper, flour, flock, flax and sawmills, together with dairy farms, vegetable gardens and plant nurseries. The land is shaded in winter and curling pond was also recorded in 1886.

**Woodhaugh Quarry.** One of several quarries in the area, this was in operation from about 1900 to 1949. There are good examples of lava flow jointing and inter-flow rubble. Rock types according to Benson's map are trachybasalt (Leith Valley "andesite") at stream level and trachyandesite higher up. Dry foot approach to the rock faces is possible a little further on (under trees).

Ross Creek Quarry. A 5 mins return side trip up Ross Creek leads to a larger quarry.

**Ross Creek Reservoir** (further upstream). This was completed 1867 to supply Dunedin City with water. The valve tower and earth dam are the oldest structures of their type still in use in New Zealand, being five years older than the lower Karori Dam in Wellington.

**Clarkes Store** (1882) is the stone building on the corner of Woodhaugh and Malvern Sts (79 Woodhaugh). It is made of local bluestone, with some corners of Oamaru stone. As well as being a shop, it has housed a post office and telephone bureau that served the whole of Leith Valley.

Houses in this area are mainly  $20^{\text{th}}$  century – in the late 1800s, it was not so densely settled, with many farms and gardens. **The Deerstalkers Hall** is yet another use for an old Methodist church.

Back along Water of Leith track through lower Woodhaugh Gardens to George St. Weirs on the Water of Leith, upstream from George St, have recently been enhanced by the addition of fish passes to enable trout to reach spawning grounds higher up.

**George St bridge** 1903. The parapet is of dressed Leith stone, with trains of vesicles in places, surmounted by a wrought iron railing. The base on the downstream side is of Port Chalmers Breccia.

### Willowbank Historic Area.

The information that follows is taken from the Historic Places Trust's proposal for recognition of this significant area.

An area proposed for Historic Area status is based around sites occupied during the 19<sup>th</sup> and 20<sup>th</sup> centuries by two important industries – brewing and flour milling. While parts of the industrial buildings have been substantially altered, what remains is an important representation of a cluster of industries which operated in North Dunedin and particularly around the Water of Leith. Backing onto the industrial sites are well-preserved dwellings associated with the industries.

Houses on both sides of George St, including the well-preserved Victoria Terrace, provided accommodation for the Willowbank industrial area. In this area are villas, two-storeyed villas and terraced housing. All were built during the years following subdivision in 1896, which accounts for the unity of style and section size.

1020 George St (1903) former flour mill owner's house.
1028 George St (1903) former flour mill owner's house.
1036 George St (c 1898) former flour mill owner's house.
Victoria Terrace (1897) former brewery workers' accommodation.

**The Willowbank industrial site** shows the scale and type of those industries vital to Dunedin – beer and bread.

**The Wilson's Distillery building** (1872) is probably of Leith "andesite". The malt house next door dates from 1876. An early brewery on this site was Well Park (c 1862 – 1894). The Wilson's Malt Extract Company and Dunedin Brewery Company variously operated here from 1910. The Wilson's Distillery complex was mothballed in 1994 after 25 years of operation, and the plant was sold and moved to Fiji. The buildings are currently being remodelled into student housing. There were several breweries in the immediate area - see also possible old oast house across the road in the grounds of Leisure Lodge, probably also of stone from the Leith quarries.

Flour milling also took place on the section adjoining the brewery, although the buildings were destroyed by fire and can no longer be seen. Flour and oatmeal milling were carried out from 1859 - 1925. The most recent company to operate here was Harraways, a name still associated with rolled oats and the only company still to make porridge from New Zealand-grown oats.

**The Dunedin Botanic Gardens**, among the oldest in New Zealand, were established in 1863. They cover 28 ha and extend up the face of the hill and across the ridge, providing many spectacular views and a variety of habitats.

**Castle St.** This street shows the elements of the Dunedin "scarfie" district, with an eclectic mixture of building styles - examples of terraces, bungalows, villas etc of many different ages, all now converted to student flats. Some are very shabby while others have been well restored. It seems the fortunes of Castle Street have risen and fallen over the years, as substantial residences jostle against much smaller houses. In December it will probably be tidier and quieter than usual as many of the students are on holiday.

The Gardens Pub was built in 1960s as the Lion Tavern.

**1880 houses.** A well-preserved pair of semi-detached houses survives next to the Gardens Pub. Built of double brick, they would have housed families, but not very grand ones. They have a Historic Places II classification.

**The Allen House**, 1908, is another Basil Hooper house, designed for the MP James (later Sir James) Allen. The main windows are surmounted by recessed arches, a feature that Hooper used relatively sparingly in his domestic designs. However, note that this feature is echoed (intentionally?) in nearby modern motels and flats.

**Selwyn College** is an Anglican hall of residence, founded by the first Anglican bishop of Dunedin, Samuel Neville, in 1893 and added to over the years.

**Centre for Innovation building** (2002). Architecturally interesting use of angles and glass, but not everybody thinks it complements the university campus. There are good reflections of the older neighbouring buildings in the Castle St glass wall.

**St David St footbridge**. Several proposals have been advanced to replace this historic category II bridge (which dates from 1902-03) with a vehicle bridge for ceremonial purposes. Widespread opposition has forced a compromise, whereby the footbridge will be retained and a vehicle bridge for occasional use built alongside. Debate continues on the subject, but some of the University management are determined to build the new bridge (for which money is already set aside).

Return to St Margarets College.

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