

Where Has All the Limestone Gone?

Plumbing the Depths of Canberra

Mark Butz

With Canberra once known as the Limestone Plains, why is limestone now so rarely seen here? Over the past 200 years limestone in Canberra has been, sequentially: a source of local identity; a resource to be exploited; a complication to be overcome in construction; and a marker of deep time. But how does it rate as heritage?

Freelance consultant and writer Mark Butz has had a lifetime interest in how the natural world affects human history and vice versa, and is particularly fond of limestone, karst landscapes, and cryptic water.

As Canberra's East Lake urban renewal project emerges, efforts are being made to protect a low clump of grey rocks huddled in the corner of the yard around the former Weights & Measures building (Newcastle House, opened 1980). The site is now isolated at the eastern end of a disembodied Eyre Street.

With so much of this area becoming a clean slate for development, why spare this unprepossessing outcrop? Why accept the increased cost of working around it and pledging to protect it?

The reason is that parts of only two such limestone outcrops remain visible and accessible on the plains adjoining the Molonglo River in central Canberra, tangible reminders of the Limestone Plains. Today they are starting to be valued and protected for that rather romantic association. This has not universally been the case.

Limestone: a Rock Type

Limestone is a sedimentary rock derived from shells or lime-rich secretions of marine organisms, a mix of biological and sedimentary processes typical of shallow, relatively warm seas. It may incorporate recognisable fossils of shells, corals, trilobites, crinoids and other marine creatures, most now extinct.

It is composed primarily of calcium carbonate, a compound that also forms eggshells and chalk. Because carbonate minerals react to mildly acidic rainwater, surface outcrops often show sculpting by solution of the rock, including sharp rills that were once attributed to the clawing of sinners attempting to escape the Biblical flood. On a larger scale this characteristic produces 'soluble terrain', as underground water dissolves the rock and enlarges cracks and cavities. Some may become large enough to swallow stream flow from the surface, and some may have secondary deposits of calcite as cave formations. These kinds of features typify a karst landscape. While they occur in many parts of the world and many parts of Australia, each karst landscape is distinctive.

In terms of today's metropolitan Canberra, small isolated outcrops of limestone extended: across about 15 kilometres west-east from near Coppins Crossing through Acton to Red Hill to Mahon trig near Fyshwick; southwards for several kilometres along Jerrabomberra Creek; and northwards for about five kilometres through Braddon, Lyneham and Dickson to Hackett. Eight kilometres further north again were several outcrops, now in Harrison and Throsby.

The separated nature of the Canberra outcrops means that surface karst features are small-scale and localised. However, other (subterranean) karst characteristics have certainly proved challenging.

Limestone: an Identity

When Smith, Wild and Vaughan became the first Europeans within the present ACT border, from December 1820, they noted outcrops of limestone along the Molonglo, identifying it by chemical testing. It fizzes in contact with acid, which Throsby had sent with them for that very purpose (probably hydrochloric acid). The first printed account

of the area by Throsby in June 1821 described 'very fine limestone, in quantities perfectly inexhaustible'. This was a source of lime for mortar in construction, essential for stone buildings, or for stone chimneys to stay upright over time. It is probably no coincidence that modern geological maps portray limestone with a standard pattern resembling bricks in stretcher bond.¹

It is uncertain just when, and by whom, the area was first termed the Limestone Plains. Perhaps it was by Throsby. It is clear on the map of the 1823 travels of Currie, Ovens and Wild to the Monaro, which is the earliest map to show any part of today's ACT. John Gale later stated Currie had done the naming, although Currie does not claim this in his journal, as he does for other areas.²

In an early indication of official acceptance of the name, Joshua Moore (December 1826) applied to purchase his 1000 acres 'situate at Canberry, on the E. bank of the river which waters Limestone Plains ...'. Indicating popular use of the name, Sydney newspapers referred to the Limestone Plains district from at least mid-1827, and the label is central to the earliest map of land holdings, by Surveyor Dixon in 1829.³

Visiting naturalist John Lhotsky in 1834 described the Limestone Plains in some detail, with the 'Kembery Plain' to the NNW. He termed the Molonglo River 'Limestone', while noting that the natives had originally called it 'Kembery'. In 1835 aspiring squatter William Brodribb made a journey similar to that of Lhotsky, noting: '... the beautiful plains called 'Limestone Plains', from the circumstance of that part of the colony being limestone formation, well-grassed, and well-watered by a small tributary of the Murrumbidgee, named "Molonglo River"'.⁴

But which plains were the actual Limestone Plains? Surveyor Dixon's 1829 map labelled the Limestone Plains from the north between Black Mountain and Mount Ainslie, continuing southwards along the Jerrabomberra Valley to Palmer's homestead. This was repeated on Surveyor White's map of January 1834.⁵

However, Surveyor-General Mitchell's map of 1834 labelled the Limestone Plains from the lower Majura Valley southward along the Jerrabomberra Creek Valley. Surveyor Dixon's unofficial map of 1837 had the Limestone Plains heading south-west from the lower Majura Valley towards the Woden Valley, and this was repeated in *Baker's Australian County Atlas 1843-1846*. By the time of Basch's Atlas in 1872 the label ran from Jerrabomberra Creek westwards along the Molonglo.⁶

The known distribution of limestone outcrops reflects closely the labelling on the earliest maps of Dixon and White. But perhaps all of the mapped interpretations were 'correct', if the label Limestone Plains was applied to a complex of low-lying 'downs' areas centred on that first European campsite on the north bank of the Molonglo, in what is now central Canberra. This is consistent with Lhotsky's estimate that the Limestone Plains were 'at least seven miles long' with 'several other branches'.⁷

So a rock type signified the area's first European identity from the 1820s. From then, Hoddle (1832) referred to Campbell's 'Limestone Cottage' (first stone residence in the district) and painted the view from 'Limestone Hill' (now Mount Pleasant), while the locality was referred to as 'Limestone' (minus 'Plains') from Lhotsky (1834) at least up to 1875-76 listings in *Greville's Official Post Office Directory*. In 1836 the first post office in the district was established, labelled Limestone Plains, and located in what shortly after became Queanbeyan.⁸

A Google search shows only one official locality in Australia still known as 'Limestone', near Rockhampton, Qld (population 7 in 2016), and only one extant 'Limestone Plains' is readily found, near Parkes, NSW. But the name attaches persistently (and perhaps sentimentally) to Canberra. This association is seen in Limestone Avenue, 'Limestone House' at Acton, and 'Limestone Plains' as a Canberra Tracks itinerary. For a time, some well-used Canberra cricket venues were 'Limestone Oval' nos. 1, 2, and 3, being adjacent to Limestone Avenue.⁹

An additional localised identifier is the kurrajong (*Brachychiton populneum*), a tree that is distinctive here for its deep green, glossy leaves in a compact crown. Whilst it is commonly thought to indicate limestone, some dismiss this as mere myth when obvious outcrop is absent. It is more precise to say that the kurrajong may indicate the presence of calcareous (calcium carbonate-rich) elements in the soil and rocks, a product of the same conditions that lead to limestone. This is geology reflected in biology, the underground expressed above the surface.

This identity indirectly derived from limestone is expressed in: Kurrajong Hill (now Capital Hill); the Kurrajong Hotel; the local electorate of Kurrajong; Kurrajong Point (Weston Park); and we have a Kurrajong forest in the National Arboretum.

Limestone: a Resource

Before Europeans arrived, Aboriginal people would have made little use of limestone as a rock, but they may have used parts of caves for shelter. The term 'cave' in a karst landscape refers to a cavity formed by solution of the rock that is sufficiently large to have a dark zone with no natural light. This distinction separates karst caves from granite overhangs and shelters such as those in Tidbinbilla and Namadgi. Contrary to common assumptions, there are many examples of the use of karst caves by Aboriginal people, including use of the deep twilight or dark zone in the eastern highlands of Australia, whether deliberate or accidental. It is suggested that these mostly date from periods of inhospitable climate.¹⁰

It is likely that the First People arrived in this area at the height of the last Ice Age, when temperatures were on average about 9°C cooler than today. This would place a premium on shelter for inhabitants of the open plains and adjacent hills, which were at that time dominated by tussock grasses. Survival implies that any substantial cave would be used at times. But the Canberra limestones contained few caves with openings to the surface, mainly due to their limited thickness and extent.¹¹

Only one cave of any notable extent that was open to the surface has been formally recorded, as 'Limestone Plains Cave' (or 'Lennox House Cave') in the Acton limestone. About 8 metres long, it opened from the rear of a small quarry, so it may once have been larger. This is probably the only surface outcrop in the area with enough mass to form a substantial cave or overhang, with the bonus of facing east in the lee of a ridge.¹²

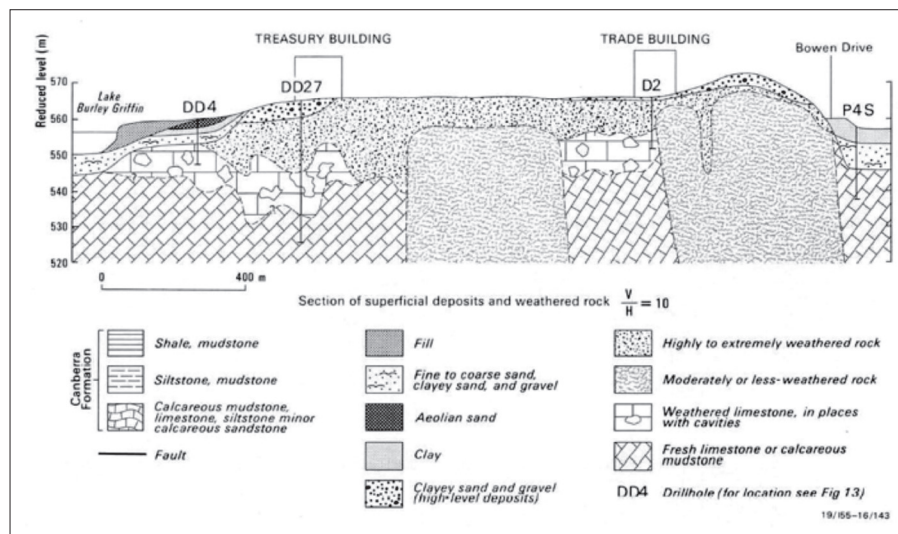
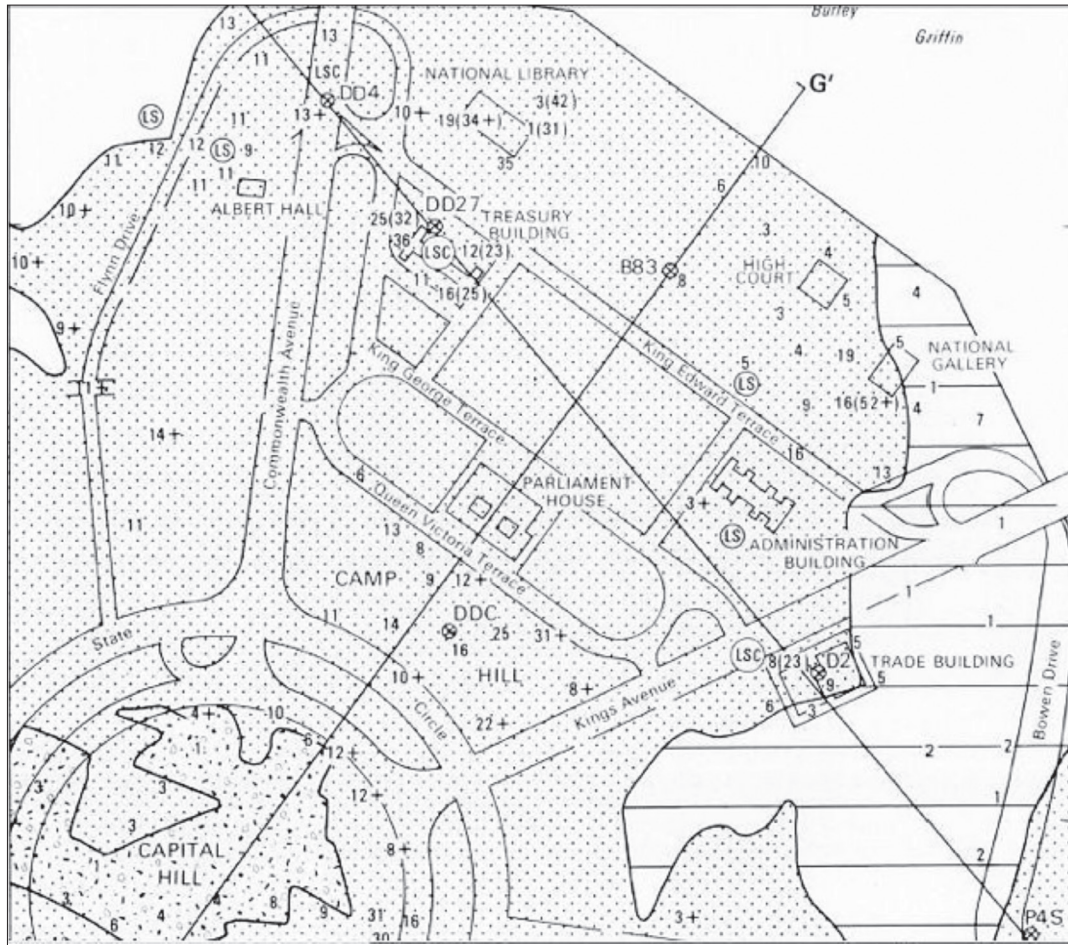
An anecdote (post-1910) reports 'Aboriginal paintings in caves under Civic'. This has been repeated as being in 'caves/overhangs of the limestone outcrop' at Acton. All rock art sites are highly valued as they hold stories about ancestral pathways, past seasonal migration, and symbolic systems. But none appear to have survived in the city area.¹³

It is notable that there is little evidence of rock art in NSW caves (as distinct from shelters). This may be due to unsuitable wall conditions, rates of decay in the drawing medium, concealment by mineral deposition, cave deformation (such as rockfalls), and reduced opportunities to renew art following colonial dispossession.¹⁴

There was no comment about such an art site in Canberra geological survey and detailed mapping from the 1910s to the late 1950s. There may be several explanations for this: the known cave at Acton was within the Molonglo floodplain (and now under Lake Burley Griffin), so silt from flooding may have obscured rock art, as might rubbish known to have been dumped in it over some time, or any decorated section may have been effaced, or quarried away, unrecognised and unrecorded. All of these are questionable in timing.

And whilst there appears to be no record of the practice, local Aboriginal people may have used limestone caves and cavities in the city area for disposition of human bones, as this is well documented in other karst areas in the broader district, including London Bridge, Cave Flat (Burrinjuck) and Cooleman.¹⁵

Other uses for limestone became



Geological cross-section of the Parliamentary Triangle. The tilted brick pattern is underlying limestone and calcareous mudstone; the punctuated layer above is limestone with cavities.

Source: G. A. M. Henderson, *Commentary on the Central Canberra 1:10,000 Engineering Geology Sheet*, Australian Capital Territory. Canberra, AGPS, 1986, p. 20

important after the decision to establish the Federal Capital at Canberra. The first mapping of the district's geology by Edward F. Pittman (1911) formed part of the background information sent to city design competitors. This described the limestone outcrops in the central Canberra plain as 'numerous within the city area and the surrounding territory'. They stand out strongly on the map, a deep blue contrasting with warm tones for all other rock and sediment types. The thickest exposures were at Acton and modern Regatta Point. These are most likely the outcrops noted in the journal of Charles Throsby Smith from that first European visit in 1820 where, along the banks of the Molonglo, they found 'immense quantities' of limestone.¹⁶

Pittman reported that the limestones 'appear to be of good quality for the manufacture of mortar and hydraulic cement'. He noted that concrete was becoming more

widely used and foreshadowed the need in Canberra for 'a Government cement factory' to save freight costs. He also thought good use might be made of widespread calcareous tuffs (from volcanic ash) such as those on Red Hill.

D.J. Mahony and T. Griffith Taylor in 1913 undertook a geological reconnaissance of the Federal Territory 'with special reference to available building materials', while J.E. Carne and J.L. Jones in 1919 assessed the Canberra outcrops within the limestone deposits of NSW. Both reports described the Acton Limestone, about 200 yards/180m long by 50 yards/45m wide, as the best outcrop within the city limits. It was capable of taking a high polish, making it a useful 'marble' for interior decoration. Blocks of considerable size could be quarried, with a potential yield of about 80 000 cubic yards/61 000 cubic metres.¹⁷

Mortar was a rather less showy but more universally important use. Production of mortar had begun in the colony by burning enormous quantities of seashells (readily won from Aboriginal middens) and also broken limestone imported as ships' ballast. In a delightful chemical roundabout, burning separates carbon dioxide to produce quicklime (calcium oxide), which is mixed

BELOW: An unfortunate traditional use of limestone caves and quarries: the Wells Limestone quarry in 2012, now under the suburb of Throsby.

Source: Phase 1 Environmental Site Assessment Report: Proposed Throsby Site: Blocks 733 and 718 Gungahlin District, ACT. Warriewood NSW, Geo-Logix Pty Ltd, 2012





with water to make hydrated lime (calcium hydroxide). This in turn is mixed with sand to make a mortar, which when dried reverts to calcium oxide and then absorbs carbon dioxide to go back to calcium carbonate, solid once more but in a tractable and useful form. As settlement spread inland it was limestone that provided the raw material for mortar, exploited in localised, small-scale lime kiln enterprises.¹⁸

The first rock-derived lime was

ABOVE: Limestone kiln at Acton. Griffith Taylor Photograph, c.1913.

Source: Christine Anderson collection

BELOW: Limestone broken for burning on the road to Lennox Crossing at Acton. Griffith Taylor Photograph, c.1913.

Source: CDHS, Daley papers, folder 193



produced in NSW in 1823, at Limekilns near Bathurst. Exploitation of Canberra outcrops for lime began shortly after, from the early 1830s, on the Molonglo about 13 kilometres below Yarralumla (near modern Coppins Crossing). This was the first lime kiln south of Goulburn, most likely operated by Thomas Salisbury (called Tom Sayersbury by Shumack). Since Salisbury was an assigned convict at 'Duntroon', it is possible that this was a Campbell family enterprise. Salisbury moved his kiln operation in 1867 to the Majura Valley, on the Cameron property.¹⁹

The notebooks of Surveyor Hoddle note a lime quarry at Acton in 1832. It is likely that this supported a later kiln at Acton in the 1860s, built and operated by George Rottenbury, who dug a chamber 10 metres into the slope. Rottenbury was a stonemason and bricklayer whose emigration was assisted by Charles Campbell. He remained in the Campbell employ for more than fifty years and is said to have built most of the cottages on 'Duntroon'. His son George Henry Rottenbury continued the kiln operation from the 1870s. The 1913 reconnaissance noted two quarries, seven shafts, and a kiln in the Acton outcrop.²⁰

One account (in 1926) declared that the Bachelors' Quarters at Acton was built on 'one of the finest limestone quarries in Australia' from which 'good quality lime' was burned and sent to Goulburn, Sydney and Newcastle. But despite early optimism, most of the Canberra limestone outcrops had little long-term commercial value, being individually too small, too structurally complex (interbedded with other sediments, containing unwelcome impurities), and too widely separated from each other.²¹

The building of Canberra required a lot more concrete than could be supplied from local limestone, and in 1915 the Commonwealth compulsorily acquired the limestone deposit at Mount Fairy in NSW to enable either cement manufacture or quarrying of marble. Due to legal wrangles, this was short-lived but left a long story.²²

Supply of lime for mortar in Canberra was taken up by a new quarry and kiln at

White Rocks south of Queanbeyan and by an older kiln nearby at Jumping Creek. These continued production until the late 1920s and early 1940s respectively. Most of the supply for concrete was being drawn from the Marulan-Goulburn area, and by 1938 an account of economic geology in Canberra made no reference to limestone.²³

Later limestone quarries known within the city area include a shallow quarry about a hundred metres north-east of the ABC Studios (near Dooring St, Dickson) and a sizeable quarry in the 'Wells Limestone' about 13 kilometres north of the city (now Throsby). Both appear to have been worked in the 1950s for crushed road aggregate.²⁴

The Acton outcrop did eventually contribute to construction in Canberra. It yielded a black marble which was used in the foyer of the Institute of Anatomy (now National Film & Sound Archive), and this virtually exhausted the quarry.²⁵

Limestone: a Complication

A lesser known tale connecting Canberra limestones to city construction concerns excavations encountering buried limestones with cavities and other solution features, hidden from view but making their presence felt. We could perhaps think of this as solution creating a problem.

From 1915, miners driving the tunnel for the city's main outfall sewer from Hotel Canberra to Weston Creek encountered so much cavernous limestone that the foreman declared that the proposed lake would likely never hold water.²⁶

In the 1950s, investigations for a weir to impound the proposed lake included a site at Lennox Crossing, Acton that could avoid inundation of the golf links and racecourse. However, one drill hole entered a cavity about 10 metres deep within massive limestone. That site was abandoned as 'troublesome' because of the risk of leakage through both cavernous limestone and permeable beds of sand and gravel.²⁷

Oral history has it that in 1959-60 when driving steel tube piles for the Kings Avenue

Bridge, one suddenly disappeared into the ground, with workers reporting that they heard it 'hitting the sides on the way down' ... but did not hear it hit the bottom.²⁸

In the late 1960s limestone caused problems with foundations for the hospital on Acton Peninsula. Subsequent drilling revealed that underlying limestone had been weathered by solution along joints to form 'floaters'—hard residual blocks suspended in dense clay. This was rather predictable, having been clearly documented in Mahony & Taylor's 1915 reconnaissance at Acton, but it necessitated very costly drilling to a depth of 45 metres below the foundation level to ensure piers would not sink. The geological report cautioned designers about groundwater fluctuations in cavernous or fractured limestones, especially near fault zones (numerous in central Canberra), with potential damage to foundations.²⁹

Groundwater was elevated by a full Lake Burley Griffin after 1964, seeping into the foundations and lift wells of some city buildings. Several had pumping designed into their foundations as a result. An additional hazard arose when groundwater contaminated with petrol from storage tanks allowed a build-up of explosive fumes. This

occurred in cavernous limestone beneath the NRMA Building (Northbourne Ave/Elouera Street, built in the late 1960s, since demolished), while fractures in other rock types led to fatal consequences at the Centre Cinema in 1977.³⁰

In the mid to late 1960s limestone 'floaters' were also encountered in construction of buildings opposite the ABC Studios—later Macarthur House (12 Wattle St, Lyneham, since demolished) and John Overall Offices (220 Northbourne Ave, Braddon). Isolated and irregular masses of solution-affected limestone complicated construction, with one pinnacle about 5.5 by 3 metres in the floor of the excavation, rising to about 2.7 metres high.³¹

Hidden cavernous limestones had notably confounded construction of the seven-storey Secretariat (now Treasury)

BELOW: Silurian outcrops near Scotts Crossing in 1958, with calcareous shale at the surface and a sinkhole above limestone.

Source: A.A. Öpik, 'The Geology of the Canberra City District.' Bureau of Mineral Resources Australia, Bulletin 32, 1958, p. 29



Building in the early 1960s. Surface deposits were shale up to 24 metres deep, and preliminary testing identified underlying rock as basalt. After construction began, problems arose with sinking foundation piers. Drilling revealed that the whole site was actually underlain by limestone with caverns and cavities 'at all elevations' and with their location, size and shape 'impossible to predict'. This tapped a significant aquifer with an 'uncontrollable flow of groundwater at the foundation level'. Pumping at 180 000 litres per hour made little impression on water levels, that would fill about two Olympic swimming pools per day. The base of the limestone was more than 50 metres below the surface in places, with cavities up to 3 metres high. Extensive alterations to foundation design were required.³²

Interestingly, the National Capital Development Commission denied 'that any limestone caves had been struck or that any unusual delay had occurred'. Rather, they maintained, the foundation conditions were what one would expect in that vicinity and adjustments were being made to verify what was learned from preliminary foundation testing.³³

Despite such defensiveness, inadequate investigation before construction at the Secretariat building proved to be a cautionary tale for the late 1960s. Encounters with limestone were then reported at the foundations for Commonwealth Avenue Bridge, National Library, Gowrie Hostel (210 Northbourne Ave), and in the ANU at Ward Bridge (now MacPherson Bridge), affecting the planned route of the North Molonglo outfall sewer, and under Ursula Hall. Geologists advocated careful investigations of possible solution cavities and/or residual 'floaters', particularly in the sweep of the Canberra Formation from Dickson to the west of City Hill to Parkes, Barton and Narrabundah. The proposed lakeside site for the new Parliament House received specific mention (concern about leaks?), along with sites for the High Court and for the Royal Mint (initially just west of the National Library). And there was no certainty that

limestone in other rock formations might not prove just as difficult.³⁴

The wisdom of such warnings became evident in the 1970s when investigations revealed limestone beneath the site of the Trade Group in Barton (later Edmund Barton Building), from 6 metres to more than 50 metres depth, with caves at depths from 20 metres. Anecdotally, caverns were also encountered when driving piles for the nearby National Gallery. While that record is unconfirmed, limestone has been mapped beneath that site.³⁵

Limestone: a Marker of Deep Time

Of the limestones that outcropped on the surface near the Molonglo, the tip of the Acton outcrop remains accessible today because of the water level of the lake. It is now on the Commonwealth Heritage List, a far cry from earlier use of the cave as a quarry and then a rubbish tip. These same fates befell the 'Wells Limestone', now buried under housing in Throsby. There may be some irony there, as Throsby's account was the first to describe the limestones of what would become Canberra.

Another outcrop associated with the naming of Limestone Plains, possibly the first encountered by Smith, Wild and Vaughan in 1820, lies buried under lakeside landscaping near Regatta Point. The limestones at the end of Acton Peninsula and on the opposite side of the Molonglo were buried or drowned (or both) in shaping the lake, although some limestone blocks have been salvaged for the gardens at the National Museum of Australia. In an early loss, a small patch of limestone to the south-west of St John's church was so assiduously plundered by fossil-hunters that most of it had been removed by 1938.³⁶

Other outcrops dotted southward along Jerrabomberra Creek occur in leased land. One long strip of limestone, perched above Jerrabomberra Creek close to the Molonglo, was interred in the Causeway Tip in the 1960s-70s, topped off later with spoil excavated from Capital Hill for Parliament House.

That leaves the terrestrial parts of Acton

and what remains of the Eyre Street outcrop as the only accessible *in situ* outcrops in central Canberra.

Not far to the east of Eyre Street, drill cores from the Dairy Road development site, where there was no outcrop visible, have plumbed the depths to reveal a thick dark grey limestone to about 65 metres underground, richly layered with fossils. This 'deep time' record samples Canberra Formation rocks from the Early Silurian period (428-425 million years ago), a product of warm shallow seas and increasing activity of volcanoes. At that time our location was on the edge of the global ocean, very close to the Equator, before our tectonic plate commenced its slow drift southwards. Perhaps these cores can help us to a newfound appreciation of deep time.³⁷

Another help may be the ACT adopting its own fossil emblem—the Silurian trilobite *Batocara mitchelli*. Trilobites, now all extinct, were marine arthropods related to crabs, insects, spiders and about 80% of today's animal kingdom. They were very diverse and widespread, and a dominant lifeform from about 520 million years ago (early Cambrian) until a mass extinction about 250 million years ago (Permian).

An almost complete specimen of our emblematic ACT trilobite came from a drill core for those troublesome foundations at the Secretariat (Treasury) Building, drawn from about 20 metres depth. The specimen could have been missed or destroyed in the random act of a 5-centimetre diameter core intercepting a 4-centimetre trilobite, but it is now safe in the Commonwealth Palaeontological Collection. It is a reminder of the warm shallow seas that gave us the geology that in turn gave the first European identity to the Limestone Plains, and more recently a limestone specimen representing the ACT in the National Rock Garden.³⁸

Perhaps the very existence of the ACT fossil emblem, National Rock Garden and Commonwealth Palaeontological Collection signifies that deep time is beginning to sit conformably with what we have long considered to be historical time.

Certainly in Canberra we have a strong story of how what lies beneath the surface has shaped the history of settlement and use above.

Limestone: Heritage?

From the recent past, no lime kilns remain in recognisable form in the ACT. One is recalled in the Majura Valley's Lime Kiln Road, and embodied in Mount Majura Vineyard's Lime Kiln Red. In the Majura (Woolshed Creek) Valley an 1864 survey plan was labelled 'Limekiln station', even before Salisbury moved his kiln there from Acton (1867), and it is shown as the 'Lime Kiln Block' on the c.1915 Federal Territory Feature Map. The property 'Limekilns' is recorded as home to the Majura Camerons from about the 1860s to at least c.1915. This is presumed to be the location of Salisbury's lime kiln, with limestone visible at the surface. However, due to the absence of conclusive evidence of either lime kilns or quarrying there, it fell short on criteria for heritage listing, seen as 'an element of local interest in the rural landscape of Majura'.³⁹

Across the border, the old kiln and quarry at Jumping Creek, at Greenleigh in the east of Queanbeyan, has been abandoned for nearly 80 years but is now to be conserved and presented in the public realm of new suburban development. This place is recognised on the Queanbeyan Local Environment Plan and on the NSW State Heritage Inventory as an item of local significance.⁴⁰

So lime kilns do get recognised as heritage places, being evidence of human economic activity. It is not certain that the same can be said of limestone outcrops that are not directly connected to such activity, despite the value of their associations with naming of the Limestone Plains two centuries ago.

Nonetheless, we are seeing considerable effort being expended in Kingston to save a lonely little outcrop of limestone. Perhaps the public realm around it could also feature

kurrajongs. This would incidentally connect deep time to the future. The kurrajong has been identified as a potential boon for amenity in an increasingly warming and

drying climate, it being notably dry-tolerant, shady, and long-lived. It is a tree born largely of limestone, as was Canberra.⁴¹

RIGHT: Limestone outcrop at Eyre Street, Kingston.

Source: Mark Butz



RIGHT: The remaining Acton limestone keeping its head above water; August 2014.

Source: Mark Butz



ENDNOTES

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