



Your Excursion to
Wellington Caves

*Where Australia's Natural
History Comes to Life!*

**School Camps and Educational Day Visits
On Site Catering and Accommodation Available**

**Caves Road
Wellington NSW 2820**

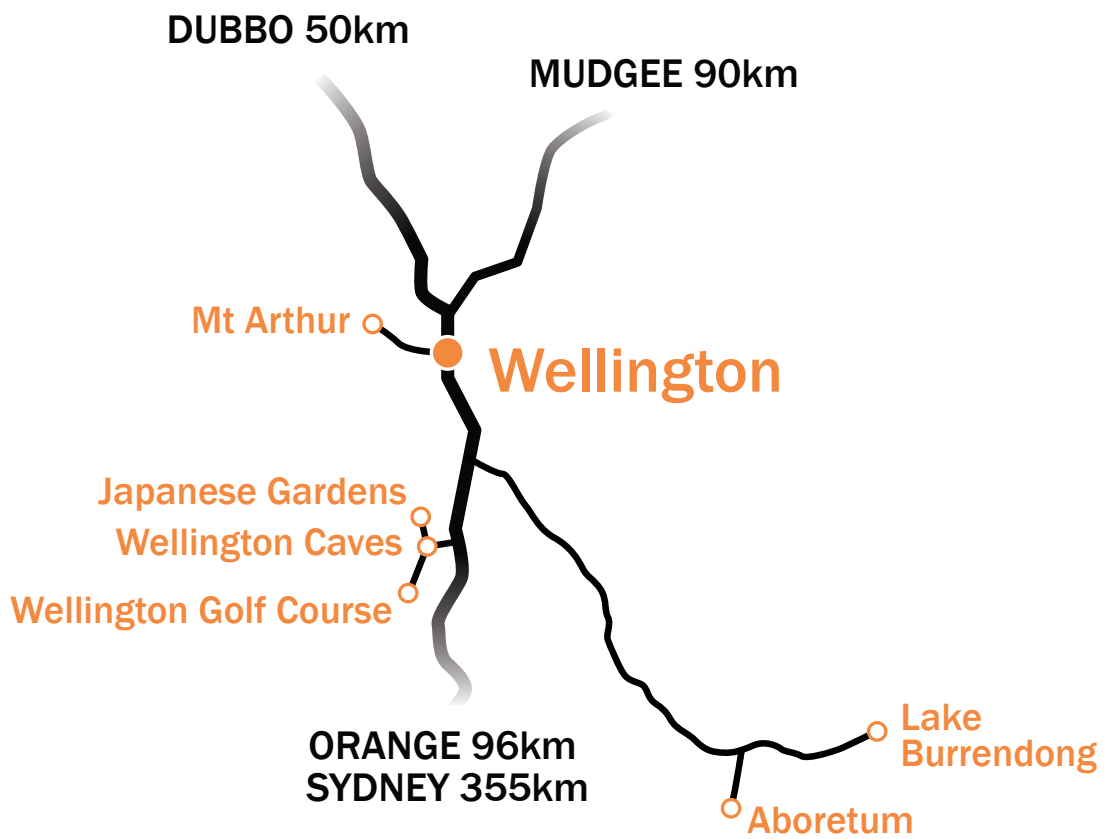
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Where is the Wellington Caves?





Why choose Wellington Caves for your next excursion?

School groups are invited to take a trip back in time and explore the Wellington Caves and the Phosphate Mine. An excursion to the Wellington Caves will provide exciting and engaging field work experiences for students, and will meet key syllabus target outcomes.

The Caves are located in an outcrop of Early Devonian limestone, part of the Garra Formation, which is about 400 million years old. Included in the complex are two magnificent show caves, the Cathedral and the Gaden. Cathedral Cave is famous for its huge stalagmite known as Altar Rock which is 32 metres in circumference at its base and over 15 metres high, described for many years as the world's largest Stalagmite.

The Phosphate Mine is like a time tunnel that has been preserved and restored to show just what it would have been like to work in an underground mine almost 100 years ago. Students will see mega fauna fossil bones and other fossils dating back to the Pleistocene Period of two million years ago. Students are also invited to walk the fossil trail and see pre-historic fossils.

Adjacent to the Caves Reserve are the Osawano Japanese Gardens. There are 1,500 individual plant specimens within the gardens comprising 126 different species. There is a man-made mountain, cascading stream, and Reflection Lake with very large goldfish and a good population of busy ducks.

The Caves Kiosk sells a wide range of souvenirs as well as snacks, drinks, coffee and ice-cream. There is also a visitor centre where students can learn more amazing cave and fossil facts, and school groups can have access to the multi-purpose facility.

All tour activities are conducted by trained staff, and there is Site Manager at the Caravan Park. Wellington Caves has been hosting school groups for well over 30 years.

Accommodation is available at the on-site campground in self-contained cabins. Caravan and tent sites are available with a full amenities block.

On site catering is available and meals can be arranged to meet Group preferences and requirements. Alternatively BBQs and a fully-equipped camp kitchen are available for use in the campgrounds.



Purpose

This document is an Information Pack, one (1) of two (2) documents which comprise the **Wellington Caves Education Pack**.

The purpose of this document is to provide information about the **fabulous, fun** and **engaging** learning experiences students can have at the Wellington Caves.

The second accompanying document provides the teaching and support material for the Education Pack. It contains:

- Details of **targeted learning experiences** for students;
- Teaching resources and worksheets for teachers, that are **directly mapped and relevant to identified key target outcomes** of the new *NSW syllabuses for the Australian curriculum* for Stages 2, 3, 4 and 5;
- Evidence for teachers to assist them to be clear on how the **guided and self-guided tours** provided at the Wellington Caves Reserve are learning experiences directly related to syllabus outcomes; and,
- To provide teachers with **essential pre-reading information and context** for each student learning experience to illustrate how the learning experience is directly related to identified syllabus target outcomes.

The Wellington Caves Management thank the NSW Board of Studies for their assistance regarding the compilation of the Wellington Caves Education Pack, which relates to Stages 2-5 of the *NSW syllabuses for the Australian curriculum, specifically Science K-10 (incorporating Science and Technology K-6) Syllabus*© Board of Studies NSW for and on behalf of the Crown in right of the State of New South Wales, 2012.



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N:B For the Education Pack, Stages 2-5, see separate accompanying document.



Reasons to visit Wellington Caves!

An excursion to the National Heritage-listed Wellington Caves will provide exciting and engaging field work experiences for science students, and will meet key syllabus target outcomes.

Reasons to Visit!

The Wellington Caves are **highly accessible**, **unique** and **different** from other cave systems because:

- The cave Reserve is one of six show cave sites within NSW and *the only site* away from the eastern highlands;
- A diversity of karst solution features have developed on the massive limestone at Wellington caves;
- Thinly bedded limestones of the Garra Formation at Wellington caves contain a rich and diverse fauna of Devonian marine invertebrate fossils;
- The Wellington Caves are one of the most significant mammal fossil sites **in the world** and they contain the largest deposit of Pliocene–Pleistocene mammal fossils in Australia;
- The subterranean waters of the caves are the home of a highly significant invertebrate community;
- The caves are a roosting site for the threatened Bent-wing Bat;
- The cave waters contain a large population of syncarid crustaceans which are considered to be “living fossils”;
- The Phosphate Mine, a completely restored underground mine also located at the Wellington Caves site, preserves a rare example of early twentieth century mining technology;
- There is a Caravan and Camping Park including self-contained units, complete with a fully-equipped camp kitchen, BBQs, amenities and a kiosk, located at the site below the Caves
- Reserve in a green area abundant with native flora and fauna. Onsite catering is also available.

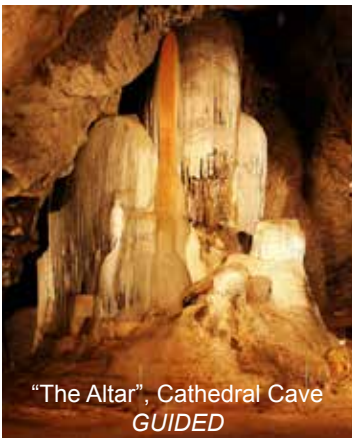
Special arrangements can be made for School Groups

Inquiries & Bookings can be made on E | caves@visitwellington.com.au

P | 02 6845 2970 or 02 6845 1418

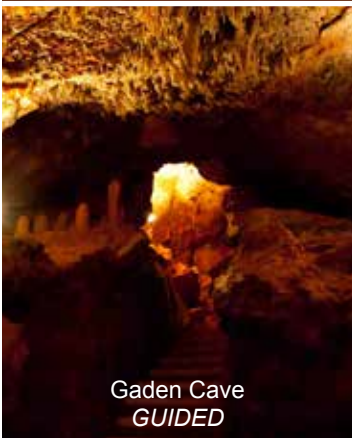


Guided & Self-Guided Tours



"The Altar", Cathedral Cave
GUIDED

Cathedral Cave - is a limestone cave. Its most outstanding feature is 'The Altar' – an extraordinary structure of boulders, flowstone and stalagmites covered in glittering calcite crystal. The cavern that houses The Altar is formed in a fault line, with the walls on one side made of a different type of limestone than those on the opposite side. Students on this guided tour will see anticline folds and a glimpse of water-filled caverns. Remains of some of the marine organisms that formed the limestone can be seen. Thunder Cave is also included in the tour, an area that use to be a maternity colony –with crèches - for the threatened Eastern Bent-wing Bat.

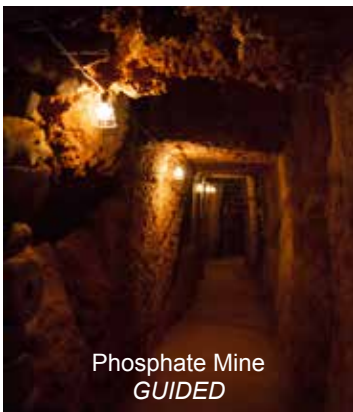


Gaden Cave
GUIDED

Gaden Cave – is smaller than Cathedral Cave, and has the most exquisite formations. There are beautiful crystal stalactites and stalagmites. There are also mysterious helictites – which appear to defy gravity by growing sideways from stalactites. In the lower parts of the Northern Chamber, the walls are densely covered in calcite crystals, shawls and stalactites grow from the roof. The lower half of the Western Wall is almost completely covered with calcite crystals, formed when the chamber was filled with water. Dripstone over some of the crystal masses has formed complex, finger-like structures.



Guided & Self-Guided Tours



The Phosphate Mine (inc Bone Cave) – The Phosphate Mine is illustrative of how mines operated 100 years ago. Students will see parts of tracks and a ‘skip’, a type of cart used on tracks to remove mine workings as well as other infrastructure used to operate the mine. The tour also passes through **Bone Cave**, an area of amazing fossil deposits. Bones can be seen in the walls, as well as bones of megafauna. Casts of extinct *Thylacoleo* and *Diprotodon*, originally named from partial skeletons at Wellington, can be viewed by students. Students will be able to examine some of the bones that have been excavated by scientists doing research in Bone Cave.



The Fossil Trail – Entrance is free to the fossil trail, and a free brochure explaining the fossils at each fossil station on the trail can be obtained from the kiosk. Tilted layers of limestone have worn away in the fossil field to expose various marine invertebrate animals. The fossils are from the early Devonian period, about 400 million years old. Most of the fossils are corals of two extinct types, rugose and tabulate.



The Osawano Japanese Gardens – Located at the Wellington Caves Complex, there are 1,500 individual plant specimens within the gardens comprising 126 different species. The gardens include a man-made mountain, cascading stream, a 4.5 metre stone lantern tower, and reflection lake with very large goldfish and a good population of busy ducks. Entrance is free.



Facilities



Accommodation

Accommodation is available at the on-site campground in self-contained units. There are 84 unit beds in total, which can comfortably accommodate 60-65 guests depending upon Group accommodation requirements. Some units can accommodate up to 8 people. Each unit has its own shower, kitchenette, fridge and television. Caravan and tent sites are also available with a full amenities block.



On-Site Catering, Camp Kitchen & BBQs

On site catering is available. Nutritious meals and snacks can be arranged to meet Group requirements. A clean, fully-equipped camp kitchen is also available for use in the campgrounds, as well as BBQs and a seating area.



Multi-Purpose Room

The multi-purpose room provides an area for the completion of worksheets, night activities, debriefing sessions and indoor games. There is a whiteboard as well as table tennis and television. Table and chair configurations can be organised to each Group's requirements.



Pool & Playground

Students can run around and play in the safety of the campgrounds, which are green and abundant with native flora and fauna. In addition, there is a child's playground and refreshing in-ground pool for guest enjoyment.



Cafe

The Caves Kiosk and Café sells a wide range of souvenirs, as well as snacks, drinks, tea, coffee and ice-cream.

Suggested Itineraries

ONE DAY VISIT

NB: Itineraries can be customised to suit School Group needs.

Stage 2 <i>Target Outcomes:</i> ST2-8ES ST2-4WS ST2-1VA	Stage 3 <i>Target Outcomes:</i> ST3-9ES ST3-10LW ST3-4WS ST3-1VA	Stage 4 <i>Target Outcomes:</i> SC4-12ES SC4-14LW SC4-16CW SC4-6WS SC4-7WS SC4-9WS	Stage 5 <i>Target Outcomes:</i> SC5-12ES SC5-14LW SC5-6WS SC5-7WS SC5-8WS SC5-9WS
Arrive	Arrive	Arrive	Arrive
Morning Tea	Morning Tea	Morning Tea	Morning Tea
Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour
Lunch	Lunch	Lunch	Lunch
Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour
Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour
Afternoon Tea	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Afternoon Tea
Leave	Afternoon Tea	Afternoon Tea	Leave
	Leave	Leave	

Suggested Itineraries

TWO DAYS, ONE NIGHT VISIT

NB: Itineraries can be customised to suit School Group needs.

Stage 2 Syllabus Target Outcomes: ST2-8ES ST2-4WS ST2-1VA	Stage 3 Syllabus Target Outcomes: ST3-9ES ST3-10LW ST3-4WS ST3-1VA	Stage 4 Syllabus Target Outcomes: SC4-12ES SC4-14LW SC4-16CW SC4-6WS SC4-7WS SC4-9WS	Stage 5 Syllabus Target Outcomes: SC5-12ES SC5-14LW SC5-6WS SC5-7WS SC5-8WS SC5-9WS
DAY ONE			
Arrive	Arrive	Arrive	Arrive
Morning Tea	Morning Tea	Morning Tea	Morning Tea
Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour
Lunch	Lunch	Lunch	Lunch
Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour
Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets
DAY TWO			
Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour
Morning Tea	Morning Tea	Morning Tea	Morning Tea
Oxley Museum, Wellington (Syllabus: History & HSIE)	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Oxley Museum, Wellington (Syllabus: History & HSIE)
Lunch	Lunch	Lunch	Lunch
Lake Burrendong & Botanic Garden and Aboretum (Syllabus: Living World / Natural Environment)	Lake Burrendong & Botanic Garden and Aboretum	Lake Burrendong & Botanic Garden and Aboretum	Lake Burrendong & Botanic Garden and Aboretum (Syllabus: Living World / Natural Environment)
Afternoon Tea	Afternoon Tea	Afternoon Tea	Afternoon Tea
Leave	Leave	Leave	Leave

Suggested Itineraries

THREE DAYS, TWO NIGHTS VISIT

NB: Itineraries can be customised to suit School Group needs.

Stage 2 Syllabus Target Outcomes: ST2-8ES ST2-4WS ST2-1VA	Stage 3 Syllabus Target Outcomes: ST3-9ES ST3-10LW ST3-4WS ST3-1VA	Stage 4 Syllabus Target Outcomes: SC4-12ES SC4-14LW SC4-16CW SC4-6WS SC4-7WS SC4-9WS	Stage 5 Syllabus Target Outcomes: SC5-12ES SC5-14LW SC5-6WS SC5-7WS SC5-8WS SC5-9WS
DAY ONE			
Arrive	Arrive	Arrive	Arrive
Morning Tea	Morning Tea	Morning Tea	Morning Tea
Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour	Cathedral Cave Tour
Lunch	Lunch	Lunch	Lunch
Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour	Gaden Cave Tour
Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets	Self Exploration around Reserve / Worksheets
DAY TWO			
Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour	Phosphate Mine Tour
Morning Tea	Morning Tea	Morning Tea	Morning Tea
Oxley Museum, Wellington (Syllabus: History & HSIE)	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Self-Guided Tour of the Wellington Caves Reserve and Osawano Japanese Gardens	Oxley Museum, Wellington (Syllabus: History & HSIE)
Lunch	Lunch	Lunch	Lunch
Lake Burrendong & Botanic Garden and Aboretum (Syllabus: Living World / Natural Environment)	Lake Burrendong & Botanic Garden and Aboretum	Lake Burrendong & Botanic Garden and Aboretum	Lake Burrendong & Botanic Garden and Aboretum (Syllabus: Living World / Natural Environment)
DAY THREE			
Mt Arthur Reserve & Walking Trails: • Bundara / Burrungee / Apex • Bimberdong / Waterloo / Trig inc. Lakeside Picnic Area • Old Wellington Reservoir Includes Morning Tea, Lunch and Afternoon Tea (Syllabus: Living World / Natural Environment; History & HSIE; PDHPE)	Oxley Museum, Wellington (Syllabus: History & HSIE)	Oxley Museum, Wellington (Syllabus: History & HSIE)	Mt Arthur Reserve & Walking Trails: • Bundara / Burrungee / Apex • Bimberdong / Waterloo / Trig inc. Lakeside Picnic Area • Old Wellington Reservoir Includes Morning Tea, Lunch and Afternoon Tea (Syllabus: Living World / Natural Environment; History & HSIE; PDHPE)
	Morning Tea	Morning Tea	
	Mt Arthur Reserve & Walking Trails: • Trails as per Stages 2 & 5 Includes Morning Tea, Lunch and Afternoon Tea (Syllabus: Living World / Natural Environment; History & HSIE; PDHPE)	Mt Arthur Reserve & Walking Trails: • Trails as per Stages 2 & 5 Includes Morning Tea, Lunch and Afternoon Tea (Syllabus: Living World / Natural Environment; History & HSIE; PDHPE)	
Leave	Leave	Leave	Leave



Additional Activities



Lake Burrendong & Botanic Garden and Arboretum

Only 15 minutes from Wellington on Burrendong way, the Lake has bush walking trails and swimming. The Arboretum & Botanic Garden, adjacent to the Lake, has *one of the largest collections of Australian plants in cultivation*. There are over 50,000 Australian flowering plants, trees, shrubs and wildflowers, including numerous rare and endangered plants, from more than 2,000 species. Fern Gully is a lush rainforest area with an outstanding collection of Australian ferns. 158 bird species, including emus, roam wild in the garden, along with lizards, goannas, skinks, tortoises, echidna and wallabies. For further information see:

http://www.burrendongarboretum.org/Burrendong_Aboretum/Welcome.html



The Oxley Museum

The Oxley Museum is run by the Wellington Historical Society. It is situated on the corner of Warne and Percy Streets. The museum was established to preserve and display records of the history and development of Wellington. It contains an extensive collection of historical documents, artefacts and photographs, about churches, people, cemeteries, agricultural activities and sporting events. Collections are displayed in themes, and there is an extensive display in the outdoor area of the museum.

For Group Bookings P | 02 6845 2325 or 1800 621 614. For further information see the museum website, www.oxleymuseum.org.au.



Mt Arthur Reserve

The Mount Arthur Reserve takes in three peaks - Mount Arthur, Wellesly and Duke - and covers 1300 ha of bushland creating a sanctuary for a large number of birds, animals and plants. The Reserve has several walking trails of 1½-4 hours duration plus a number of Lookouts. There is significant plant diversity, with over 400 species of native plants (including 36 species of orchids) and a mixture of plants that commonly grow great distances apart; endangered, rare and interesting vegetation; habitat for state and federally listed threatened species; and the most significant known population of the endangered Small Purple Pea (*Swainsona recta*).

See www.wellington-nsw.com/Mt_Arthur_Reserve or call 1800 621 614 for an updated map and information about the trails.



Contact Us!

For all Bookings and Enquiries:

Wellington Caves Complex & Caravan Park
Caves Road
Wellington NSW 2820

E caves@visitwellington.com.au

P 02 6845 1418

F 02 6845 3086

How to Find Us:

The Wellington Caves complex is 8kms south of Wellington, 40 minutes from Dubbo, 1 hour from Orange, and only 3.5-4 hours west of Sydney on the Mitchell Highway. Caves road is a sealed road, only one kilometre off the Mitchell Highway.

We hope to see you soon!