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Resource page link building

Resource page link building

Google Analytics referral traffic"Referral traffic in Google Analytics shows visitors who arrive at your site from other websites. By analyzing referral traffic, you can understand which external sources drive the most visitors and focus on building strong partnerships and outreach campaigns."

Google Analytics remarketing audiences"Remarketing audiences in Google Analytics are user segments that you can target with personalized ads. By defining criteria based on user behavior, you can create more relevant campaigns and increase conversion rates."

Google Analytics sampling thresholdsSampling thresholds in Google Analytics determine when data is sampled.

SEO service Sydney - Google crawl budget

- Google core updates
- Google crawl budget

Best SEO Agency Sydney Australia. Understanding these thresholds helps you interpret reports accurately and decide whether to use aggregated or raw data for more detailed analysis. Best SEO Sydney Agency.

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- Resource page link building
- responsive design
- responsive images
- responsive site design
- rich snippet optimization
- schema markup
- schema markup

Google Analytics session duration"Session duration in Google Analytics measures how long users spend on your site. Best Search Engine Optimisation Services. By analyzing session duration, you can identify which content keeps users engaged and make adjustments to improve overall time spent on your pages."

Google Analytics setup"Setting up Google Analytics involves creating an account, adding your website property, and installing the tracking code on your site. This process enables data collection, allowing you to monitor site traffic, user behavior, and conversion rates."

Google Analytics site speed"Site speed reports in Google Analytics show how quickly your pages load for users. By identifying slow-loading pages, you can implement improvements that enhance user experience, reduce bounce rates, and boost search rankings."

responsive images

Google Analytics tags"Google Analytics tags are snippets of code that track and send data from your website to your analytics account. By correctly implementing these tags, you gain insight into pageviews, events, and user interactions, which help refine your digital strategy."

Google Analytics time on page"Time on page in Google Analytics measures how long users spend on individual pages. Best [Local SEO Sydney](#). By analyzing time on page, you can identify engaging content, optimize underperforming pages, and improve overall user satisfaction."

Google Analytics tracking code"The Google Analytics tracking code is a JavaScript snippet added to your websites HTML. It collects data on user interactions, such as pageviews and events, and sends that data to your Google Analytics account for analysis."

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Google Analytics user explorer"The user explorer report in Google Analytics provides a detailed view of individual user behavior. [SEO Packages Sydney](#) . By analyzing this data, you can identify trends, personalize user experiences, and improve overall engagement and retention."

Google Analytics user segmentation"User segmentation in Google Analytics lets you divide your audience into specific groups based on behavior, demographics, or acquisition source. Analyzing these segments helps you tailor marketing efforts and improve overall site performance."

Google Analytics UTM parameters"UTM parameters are custom URL tags that track campaign performance in Google Analytics.

SEO service Sydney - Google core updates

- Search performance reports
- Search engine optimization

By adding these parameters to your marketing links, you can identify which campaigns, sources, and mediums drive the most traffic and conversions."

rich snippet optimization

Google Business Profile accessibilityEnsuring that your Google Business Profile is easily accessible to all users helps improve your reputation and search performance. Accessibility features like detailed descriptions and accurate hours make it simple for everyone to find and engage with your business.

Google Business Profile analytics"Analytics for your Google Business Profile show how users find and interact with your listing. By reviewing these insights, you can identify areas for improvement and implement changes to increase engagement and visibility."

Google Business Profile appointment links"Adding appointment links to your Google Business Profile allows customers to book services directly from your listing. By making it easy to schedule appointments, you improve convenience for your audience and increase conversions."

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schema markup

Google Business Profile best practices"Following best practices for your Google Business Profile, such as using high-quality images, updating your information regularly, and engaging with customers, helps improve your local search visibility and build a positive reputation."

Google Business Profile branding"Your Google Business Profile can be a reflection of your brand identity.

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1. Google SERP features
2. SEO-friendly URLs

By using consistent logos, professional images, and a cohesive business description, you strengthen your brand image and stand out in local search results."

Google Business Profile business description"A compelling business description on your Google Business Profile communicates what makes your company unique. By including relevant keywords and highlighting your strengths, you increase the chances of appearing in search results and attracting the right audience."

schema markup

Google Business Profile business hours"Keeping business hours updated on your Google Business Profile ensures that customers know when you're open. Accurate hours reduce confusion, enhance customer trust, and improve the likelihood of in-person visits."

Google Business Profile call tracking"Call tracking on your Google Business Profile measures how many customers call your business through the listing. Analyzing call data allows you to understand customer behavior, refine your approach, and improve the effectiveness of your profile."

Google Business Profile call-to-action"Including a clear call-to-action (CTA) in your Google Business Profile encourages customers to take the next step, such as visiting your website, calling your business, or making a purchase. An effective CTA improves engagement and drives conversions."

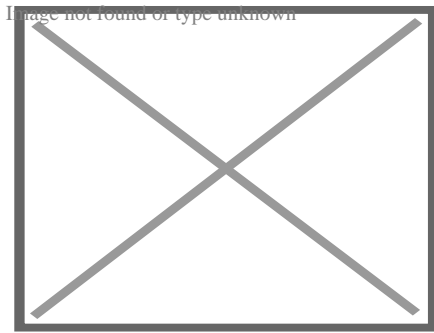


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About Web crawler

This article is about the internet bot. For the search engine, see [WebCrawler](#). "Web spider" redirects here; not to be confused with [Spider web](#). "Spiderbot" redirects here. For the video game, see [Arac \(video game\)](#).



Architecture of a Web crawler

A **Web crawler**, sometimes called a **spider** or **spiderbot** and often shortened to **crawler**, is an **Internet bot** that systematically browses the **World Wide Web** and that is typically operated by search engines for the purpose of **Web indexing** (*web spidering*).^[1]

Web **search engines** and some other **websites** use Web crawling or spidering **software** to update their **web content** or indices of other sites' web content. Web crawlers copy pages for processing by a search engine, which **indexes** the downloaded pages so that users can search more efficiently.

Crawlers consume resources on visited systems and often visit sites unprompted. Issues of schedule, load, and "politeness" come into play when large collections of pages are accessed. Mechanisms exist for public sites not wishing to be crawled to make this known to the crawling agent. For example, including a **robots.txt** file can request **bots** to index only parts of a website, or nothing at all.

The number of Internet pages is extremely large; even the largest crawlers fall short of making a complete index. For this reason, search engines struggled to give relevant search results in the early years of the World Wide Web, before 2000. Today, relevant results are given almost instantly.

Crawlers can validate **hyperlinks** and **HTML** code. They can also be used for **web scraping** and **data-driven programming**.

Nomenclature

^[edit]

A web crawler is also known as a *spider*,^[2] an *ant*, an *automatic indexer*,^[3] or (in the **FOAF** software context) a *Web scutter*.^[4]

Overview

^[edit]

A Web crawler starts with a list of **URLs** to visit. Those first URLs are called the *seeds*. As the crawler visits these URLs, by communicating with **web servers** that respond to those URLs, it identifies all the **hyperlinks** in the retrieved web pages and adds them to the list of URLs to visit, called the **crawl frontier**. URLs from the frontier are **recursively** visited according to a set of policies. If the crawler is performing archiving of **websites** (or **web archiving**), it copies and saves the information as it goes. The archives are usually stored in such a way they can be viewed, read and navigated as if they were on the live web, but are preserved as 'snapshots' [5]

The archive is known as the *repository* and is designed to store and manage the collection of **web pages**. The **repository** only stores **HTML** pages and these pages are stored as distinct files. A repository is similar to any other system that stores data, like a modern-day database. The only difference is that a repository does not need all the functionality offered by a database system. The repository stores the most recent version of the web page retrieved by the crawler. [citation]

The large volume implies the crawler can only download a limited number of the Web pages within a given time, so it needs to prioritize its downloads. The high rate of change can imply the pages might have already been updated or even deleted.

The number of possible URLs crawled being generated by server-side software has also made it difficult for web crawlers to avoid retrieving **duplicate content**. Endless combinations of **HTTP GET** (URL-based) parameters exist, of which only a small selection will actually return unique content. For example, a simple online photo gallery may offer three options to users, as specified through HTTP GET parameters in the URL. If there exist four ways to sort images, three choices of **thumbnail** size, two file formats, and an option to disable user-provided content, then the same set of content can be accessed with 48 different URLs, all of which may be linked on the site. This **mathematical combination** creates a problem for crawlers, as they must sort through endless combinations of relatively minor scripted changes in order to retrieve unique content.

As Edwards *et al.* noted, "Given that the **bandwidth** for conducting crawls is neither infinite nor free, it is becoming essential to crawl the Web in not only a scalable, but efficient way, if some reasonable measure of quality or freshness is to be maintained." [6] A crawler must carefully choose at each step which pages to visit next.

Crawling policy

[edit]

The behavior of a Web crawler is the outcome of a combination of policies: [7]

- a *selection policy* which states the pages to download,
- a *re-visit policy* which states when to check for changes to the pages,
- a *politeness policy* that states how to avoid overloading **websites**.
- a *parallelization policy* that states how to coordinate distributed web crawlers.

Selection policy

[[edit](#)]

Given the current size of the Web, even large search engines cover only a portion of the publicly available part. A 2009 study showed even large-scale [search engines](#) index no more than 40–70% of the indexable Web;[\[8\]](#) a previous study by [Steve Lawrence](#) and [Lee Giles](#) showed that no [search engine indexed](#) more than 16% of the Web in 1999.[\[9\]](#) As a crawler always downloads just a fraction of the [Web pages](#), it is highly desirable for the downloaded fraction to contain the most relevant pages and not just a random sample of the Web.

This requires a metric of importance for prioritizing Web pages. The importance of a page is a function of its [intrinsic](#) quality, its popularity in terms of links or visits, and even of its URL (the latter is the case of [vertical search engines](#) restricted to a single [top-level domain](#), or search engines restricted to a fixed Web site). Designing a good selection policy has an added difficulty: it must work with partial information, as the complete set of Web pages is not known during crawling.

Junghoo Cho *et al.* made the first study on policies for crawling scheduling. Their data set was a 180,000-pages crawl from the stanford.edu domain, in which a crawling simulation was done with different strategies.[\[10\]](#) The ordering metrics tested were [breadth-first](#), [backlink](#) count and partial [PageRank](#) calculations. One of the conclusions was that if the crawler wants to download pages with high Pagerank early during the crawling process, then the partial Pagerank strategy is the better, followed by breadth-first and backlink-count. However, these results are for just a single domain. Cho also wrote his PhD dissertation at Stanford on web crawling.[\[11\]](#)

Najork and Wiener performed an actual crawl on 328 million pages, using breadth-first ordering.[\[12\]](#) They found that a breadth-first crawl captures pages with high Pagerank early in the crawl (but they did not compare this strategy against other strategies). The explanation given by the authors for this result is that "the most important pages have many links to them from numerous hosts, and those links will be found early, regardless of on which host or page the crawl originates."

Abiteboul designed a crawling strategy based on an [algorithm](#) called OPIC (On-line Page Importance Computation).[\[13\]](#) In OPIC, each page is given an initial sum of "cash" that is distributed equally among the pages it points to. It is similar to a PageRank computation, but it is faster and is only done in one step. An OPIC-driven crawler downloads first the pages in the crawling frontier with higher amounts of "cash". Experiments were carried in a 100,000-pages synthetic graph with a power-law distribution of in-links. However, there was no comparison with other strategies nor experiments in the real Web.

Boldi *et al.* used simulation on subsets of the Web of 40 million pages from the .it domain and 100 million pages from the WebBase crawl, testing breadth-first against depth-first, random

ordering and an omniscient strategy. The comparison was based on how well PageRank computed on a partial crawl approximates the true PageRank value. Some visits that accumulate PageRank very quickly (most notably, breadth-first and the omniscient visit) provide very poor progressive approximations.^{[14][15]}

Baeza-Yates *et al.* used simulation on two subsets of the Web of 3 million pages from the .gr and .cl domain, testing several crawling strategies.^[16] They showed that both the OPIC strategy and a strategy that uses the length of the per-site queues are better than **breadth-first** crawling, and that it is also very effective to use a previous crawl, when it is available, to guide the current one.

Daneshpajouh *et al.* designed a community based algorithm for discovering good seeds.^[17] Their method crawls web pages with high PageRank from different communities in less iteration in comparison with crawl starting from random seeds. One can extract good seed from a previously-crawled-Web graph using this new method. Using these seeds, a new crawl can be very effective.

Restricting followed links

^[edit]

A crawler may only want to seek out HTML pages and avoid all other **MIME types**. In order to request only HTML resources, a crawler may make an HTTP HEAD request to determine a Web resource's MIME type before requesting the entire resource with a GET request. To avoid making numerous HEAD requests, a crawler may examine the URL and only request a resource if the URL ends with certain characters such as .html, .htm, .asp, .aspx, .php, .jsp, .jspx or a slash. This strategy may cause numerous HTML Web resources to be unintentionally skipped.

Some crawlers may also avoid requesting any resources that have a "?" in them (are dynamically produced) in order to avoid **spider traps** that may cause the crawler to download an infinite number of URLs from a Web site. This strategy is unreliable if the site uses **URL rewriting** to simplify its URLs.

URL normalization

^[edit]

Main article: **URL normalization**

Crawlers usually perform some type of **URL normalization** in order to avoid crawling the same resource more than once. The term *URL normalization*, also called *URL canonicalization*, refers to the process of modifying and standardizing a URL in a consistent manner. There are several types of normalization that may be performed including conversion of URLs to lowercase, removal of "." and ".." segments, and adding trailing slashes to the non-empty path component.[[]

Path-ascending crawling

[[edit](#)]

Some crawlers intend to download/upload as many resources as possible from a particular web site. So *path-ascending crawler* was introduced that would ascend to every path in each URL that it intends to crawl.^[19] For example, when given a seed URL of `http://llama.org/hamster/monkey/page.html`, it will attempt to crawl `/hamster/monkey/`, `/hamster/`, and `/`. Cothey found that a path-ascending crawler was very effective in finding isolated resources, or resources for which no inbound link would have been found in regular crawling.

Focused crawling

[[edit](#)]

Main article: [Focused crawler](#)

The importance of a page for a crawler can also be expressed as a function of the similarity of a page to a given query. Web crawlers that attempt to download pages that are similar to each other are called **focused crawler** or **topical crawlers**. The concepts of topical and focused crawling were first introduced by [Filippo Menczer](#)^{[20][21]} and by Soumen Chakrabarti *et al.*^[22]

The main problem in focused crawling is that in the context of a Web crawler, we would like to be able to predict the similarity of the text of a given page to the query before actually downloading the page. A possible predictor is the anchor text of links; this was the approach taken by Pinkerton^[23] in the first web crawler of the early days of the Web. Diligenti *et al.*^[24] propose using the complete content of the pages already visited to infer the similarity between the driving query and the pages that have not been visited yet. The performance of a focused crawling depends mostly on the richness of links in the specific topic being searched, and a focused crawling usually relies on a general Web search engine for providing starting points.

Academic focused crawler

[[edit](#)]

An example of the [focused crawlers](#) are academic crawlers, which crawls free-access academic related documents, such as the *citeseerxbot*, which is the crawler of [CiteSeer^X](#) search engine. Other academic search engines are [Google Scholar](#) and [Microsoft Academic Search](#) etc. Because most academic papers are published in **PDF** formats, such kind of crawler is particularly interested in crawling PDF, **PostScript** files, **Microsoft Word** including their **zipped** formats. Because of this, general open-source crawlers, such as [Heritrix](#), must be customized to

filter out other **MIME types**, or a **middleware** is used to extract these documents out and import them to the focused crawl database and repository.[25] Identifying whether these documents are academic or not is challenging and can add a significant overhead to the crawling process, so this is performed as a post crawling process using **machine learning** or **regular expression** algorithms. These academic documents are usually obtained from home pages of faculties and students or from publication page of research institutes. Because academic documents make up only a small fraction of all web pages, a good seed selection is important in boosting the efficiencies of these web crawlers.[26] Other academic crawlers may download plain text and **HTML** files, that contains **metadata** of academic papers, such as titles, papers, and abstracts. This increases the overall number of papers, but a significant fraction may not provide free PDF downloads.

Semantic focused crawler

[[edit](#)]

Another type of focused crawlers is semantic focused crawler, which makes use of **domain ontologies** to represent topical maps and link Web pages with relevant ontological concepts for the selection and categorization purposes.[27] In addition, ontologies can be automatically updated in the crawling process. Dong et al.[28] introduced such an ontology-learning-based crawler using a **support-vector machine** to update the content of ontological concepts when crawling Web pages.

Re-visit policy

[[edit](#)]

The Web has a very dynamic nature, and crawling a fraction of the Web can take weeks or months. By the time a Web crawler has finished its crawl, many events could have happened, including creations, updates, and deletions.

From the search engine's point of view, there is a cost associated with not detecting an event, and thus having an outdated copy of a resource. The most-used cost functions are freshness and age.[29]

Freshness: This is a binary measure that indicates whether the local copy is accurate or not. The freshness of a page p in the repository at time t is defined as:

$$F_p(t) = \begin{cases} 1 & \text{if } p \text{ is equal to the local copy at time } t \\ 0 & \text{otherwise} \end{cases}$$

Image not found or type unknown

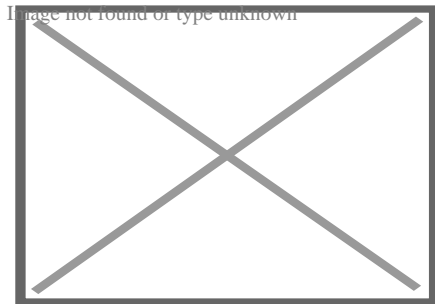
Age: This is a measure that indicates how outdated the local copy is. The age of a page p in the repository, at time t is defined as:

$$A_p(t) = \begin{cases} 0 & \text{if } p \text{ is not modified at time } t \\ t - \text{modification time} & \text{otherwise} \end{cases}$$

Image not found or type unknown

Coffman et al. worked with a definition of the objective of a Web crawler that is equivalent to freshness, but use a different wording: they propose that a crawler must minimize the fraction of time pages remain outdated. They also noted that the problem of Web crawling can be modeled as a multiple-queue, single-server polling system, on which the Web crawler is the server and the Web sites are the queues. Page modifications are the arrival of the customers, and switch-over times are the interval between page accesses to a single Web site. Under this model, mean waiting time for a customer in the polling system is equivalent to the average age for the Web crawler.[\[30\]](#)

The objective of the crawler is to keep the average freshness of pages in its collection as high as possible, or to keep the average age of pages as low as possible. These objectives are not equivalent: in the first case, the crawler is just concerned with how many pages are outdated, while in the second case, the crawler is concerned with how old the local copies of pages are.



Evolution of Freshness and Age in a web crawler

Two simple re-visiting policies were studied by Cho and Garcia-Molina:[\[31\]](#)

- Uniform policy: This involves re-visiting all pages in the collection with the same frequency, regardless of their rates of change.
- Proportional policy: This involves re-visiting more often the pages that change more frequently. The visiting frequency is directly proportional to the (estimated) change frequency.

In both cases, the repeated crawling order of pages can be done either in a random or a fixed order.

Cho and Garcia-Molina proved the surprising result that, in terms of average freshness, the uniform policy outperforms the proportional policy in both a simulated Web and a real Web crawl. Intuitively, the reasoning is that, as web crawlers have a limit to how many pages they can crawl in a given time frame, (1) they will allocate too many new crawls to rapidly changing pages at the expense of less frequently updating pages, and (2) the freshness of rapidly

changing pages lasts for shorter period than that of less frequently changing pages. In other words, a proportional policy allocates more resources to crawling frequently updating pages, but experiences less overall freshness time from them.

To improve freshness, the crawler should penalize the elements that change too often.[32] The optimal re-visiting policy is neither the uniform policy nor the proportional policy. The optimal method for keeping average freshness high includes ignoring the pages that change too often, and the optimal for keeping average age low is to use access frequencies that monotonically (and sub-linearly) increase with the rate of change of each page. In both cases, the optimal is closer to the uniform policy than to the proportional policy: as [Coffman et al.](#) note, "in order to minimize the expected obsolescence time, the accesses to any particular page should be kept as evenly spaced as possible".[30] Explicit formulas for the re-visit policy are not attainable in general, but they are obtained numerically, as they depend on the distribution of page changes. Cho and Garcia-Molina show that the exponential distribution is a good fit for describing page changes,[32] while [Ipeirotis et al.](#) show how to use statistical tools to discover parameters that affect this distribution.[33] The re-visiting policies considered here regard all pages as homogeneous in terms of quality ("all pages on the Web are worth the same"), something that is not a realistic scenario, so further information about the Web page quality should be included to achieve a better crawling policy.

Politeness policy

[edit]

Crawlers can retrieve data much quicker and in greater depth than human searchers, so they can have a crippling impact on the performance of a site. If a single crawler is performing multiple requests per second and/or downloading large files, a server can have a hard time keeping up with requests from multiple crawlers.

As noted by Koster, the use of Web crawlers is useful for a number of tasks, but comes with a price for the general community.[34] The costs of using Web crawlers include:

- network resources, as crawlers require considerable bandwidth and operate with a high degree of parallelism during a long period of time;
- server overload, especially if the frequency of accesses to a given server is too high;
- poorly written crawlers, which can crash servers or routers, or which download pages they cannot handle; and
- personal crawlers that, if deployed by too many users, can disrupt networks and Web servers.

A partial solution to these problems is the [robots exclusion protocol](#), also known as the robots.txt protocol that is a standard for administrators to indicate which parts of their Web servers should not be accessed by crawlers.[35] This standard does not include a suggestion for the interval of

visits to the same server, even though this interval is the most effective way of avoiding server overload. Recently commercial search engines like [Google](#), [Ask Jeeves](#), [MSN](#) and [Yahoo! Search](#) are able to use an extra "Crawl-delay:" parameter in the [robots.txt](#) file to indicate the number of seconds to delay between requests.

The first proposed interval between successive pageloads was 60 seconds.[\[36\]](#) However, if pages were downloaded at this rate from a website with more than 100,000 pages over a perfect connection with zero latency and infinite bandwidth, it would take more than 2 months to download only that entire Web site; also, only a fraction of the resources from that Web server would be used.

Cho uses 10 seconds as an interval for accesses,[\[31\]](#) and the WIRE crawler uses 15 seconds as the default.[\[37\]](#) The MercatorWeb crawler follows an adaptive politeness policy: if it took t seconds to download a document from a given server, the crawler waits for $10t$ seconds before downloading the next page.[\[38\]](#) Dill *et al.* use 1 second.[\[39\]](#)

For those using Web crawlers for research purposes, a more detailed cost-benefit analysis is needed and ethical considerations should be taken into account when deciding where to crawl and how fast to crawl.[\[40\]](#)

Anecdotal evidence from access logs shows that access intervals from known crawlers vary between 20 seconds and 3–4 minutes. It is worth noticing that even when being very polite, and taking all the safeguards to avoid overloading Web servers, some complaints from Web server administrators are received. [Sergey Brin](#) and [Larry Page](#) noted in 1998, "... running a crawler which connects to more than half a million servers ... generates a fair amount of e-mail and phone calls. Because of the vast number of people coming on line, there are always those who do not know what a crawler is, because this is the first one they have seen."[\[41\]](#)

Parallelization policy

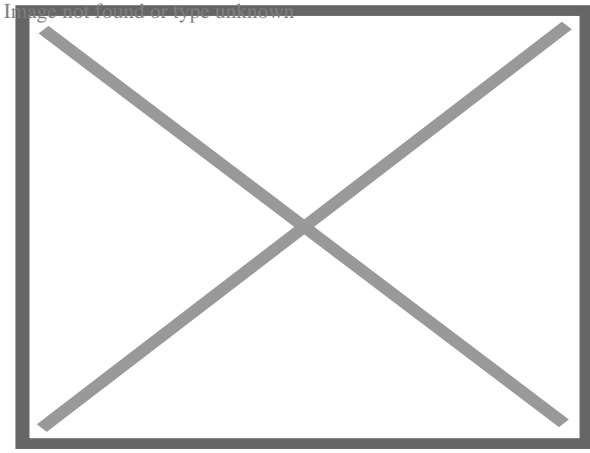
[\[edit\]](#)

Main article: [Distributed web crawling](#)

A [parallel](#) crawler is a crawler that runs multiple processes in parallel. The goal is to maximize the download rate while minimizing the overhead from parallelization and to avoid repeated downloads of the same page. To avoid downloading the same page more than once, the crawling system requires a policy for assigning the new URLs discovered during the crawling process, as the same URL can be found by two different crawling processes.

Architectures

[\[edit\]](#)



High-level architecture of a standard Web crawler

A crawler must not only have a good crawling strategy, as noted in the previous sections, but it should also have a highly optimized architecture.

Shkapenyuk and Suel noted that:[42]

While it is fairly easy to build a slow crawler that downloads a few pages per second for a short period of time, building a high-performance system that can download hundreds of millions of pages over several weeks presents a number of challenges in system design, I/O and network efficiency, and robustness and manageability.

Web crawlers are a central part of search engines, and details on their algorithms and architecture are kept as business secrets. When crawler designs are published, there is often an important lack of detail that prevents others from reproducing the work. There are also emerging concerns about "[search engine spamming](#)", which prevent major search engines from publishing their ranking algorithms.

Security

[[edit](#)]

While most of the website owners are keen to have their pages indexed as broadly as possible to have strong presence in [search engines](#), web crawling can also have [unintended consequences](#) and lead to a [compromise](#) or [data breach](#) if a search engine indexes resources that should not be publicly available, or pages revealing potentially vulnerable versions of software.

Main article: [Google hacking](#)

Apart from standard [web application security](#) recommendations website owners can reduce their exposure to opportunistic hacking by only allowing search engines to index the public parts of their websites (with [robots.txt](#)) and explicitly blocking them from indexing transactional parts (login pages, private pages, etc.).

Crawler identification

[[edit](#)]

Web crawlers typically identify themselves to a Web server by using the **User-agent** field of an **HTTP** request. Web site administrators typically examine their **Web servers'** log and use the user agent field to determine which crawlers have visited the web server and how often. The user agent field may include a **URL** where the Web site administrator may find out more information about the crawler. Examining Web server log is tedious task, and therefore some administrators use tools to identify, track and verify Web crawlers. **Spambots** and other malicious Web crawlers are unlikely to place identifying information in the user agent field, or they may mask their identity as a browser or other well-known crawler.

Web site administrators prefer Web crawlers to identify themselves so that they can contact the owner if needed. In some cases, crawlers may be accidentally trapped in a **crawler trap** or they may be overloading a Web server with requests, and the owner needs to stop the crawler. Identification is also useful for administrators that are interested in knowing when they may expect their Web pages to be indexed by a particular **search engine**.

Crawling the deep web

[[edit](#)]

A vast amount of web pages lie in the **deep or invisible web**.^[43] These pages are typically only accessible by submitting queries to a database, and regular crawlers are unable to find these pages if there are no links that point to them. Google's **Sitemaps** protocol and **mod oai**^[44] are intended to allow discovery of these **deep-Web** resources.

Deep web crawling also multiplies the number of web links to be crawled. Some crawlers only take some of the URLs in `` form. In some cases, such as the **Googlebot**, Web crawling is done on all text contained inside the hypertext content, tags, or text.

Strategic approaches may be taken to target deep Web content. With a technique called **screen scraping**, specialized software may be customized to automatically and repeatedly query a given Web form with the intention of aggregating the resulting data. Such software can be used to span multiple Web forms across multiple Websites. Data extracted from the results of one Web form submission can be taken and applied as input to another Web form thus establishing continuity across the Deep Web in a way not possible with traditional web crawlers.^[45]

Pages built on **AJAX** are among those causing problems to web crawlers. **Google** has proposed a format of AJAX calls that their bot can recognize and index.^[46]

Visual vs programmatic crawlers

[[edit](#)]

There are a number of "visual web scraper/crawler" products available on the web which will crawl pages and structure data into columns and rows based on the users requirements. One of the main difference between a classic and a visual crawler is the level of programming ability required to set up a crawler. The latest generation of "visual scrapers" remove the majority of the programming skill needed to be able to program and start a crawl to scrape web data.

The visual scraping/crawling method relies on the user "teaching" a piece of crawler technology, which then follows patterns in semi-structured data sources. The dominant method for teaching a visual crawler is by highlighting data in a browser and training columns and rows. While the technology is not new, for example it was the basis of Needlebase which has been bought by Google (as part of a larger acquisition of ITA Labs^[47]), there is continued growth and investment in this area by investors and end-users.^[citation needed]

List of web crawlers

[edit]

Further information: [List of search engine software](#)

The following is a list of published crawler architectures for general-purpose crawlers (excluding focused web crawlers), with a brief description that includes the names given to the different components and outstanding features:

Historical web crawlers

[edit]

- **WolfBot** was a massively multi threaded crawler built in 2001 by Mani Singh a Civil Engineering graduate from the University of California at Davis.
- **World Wide Web Worm** was a crawler used to build a simple index of document titles and URLs. The index could be searched by using the **grep Unix** command.
- Yahoo! Slurp was the name of the **Yahoo!** Search crawler until Yahoo! contracted with **Microsoft** to use **Bingbot** instead.

In-house web crawlers

[edit]

- Applebot is **Apple's** web crawler. It supports **Siri** and other products.^[48]
- **Bingbot** is the name of Microsoft's **Bing** webcrawler. It replaced **Msnbot**.
- Baiduspider is **Baidu's** web crawler.

- DuckDuckBot is [DuckDuckGo](#)'s web crawler.
- [Googlebot](#) is described in some detail, but the reference is only about an early version of its architecture, which was written in C++ and [Python](#). The crawler was integrated with the indexing process, because text parsing was done for full-text indexing and also for URL extraction. There is a URL server that sends lists of URLs to be fetched by several crawling processes. During parsing, the URLs found were passed to a URL server that checked if the URL have been previously seen. If not, the URL was added to the queue of the URL server.
- [WebCrawler](#) was used to build the first publicly available full-text index of a subset of the Web. It was based on [lib-WWW](#) to download pages, and another program to parse and order URLs for breadth-first exploration of the Web graph. It also included a real-time crawler that followed links based on the similarity of the anchor text with the provided query.
- [WebFountain](#) is a distributed, modular crawler similar to Mercator but written in C++.
- [Xenon](#) is a web crawler used by government tax authorities to detect fraud.[\[49\]](#)[\[50\]](#)

Commercial web crawlers

[\[edit\]](#)

The following web crawlers are available, for a price::

- [Diffbot](#) - programmatic general web crawler, available as an [API](#)
- [SortSite](#) - crawler for analyzing websites, available for [Windows](#) and [Mac OS](#)
- Swiftbot - [Swifttype](#)'s web crawler, available as [software as a service](#)
- Aleph Search - web crawler allowing massive collection with high scalability

Open-source crawlers

[\[edit\]](#)

- [Apache Nutch](#) is a highly extensible and scalable web crawler written in Java and released under an [Apache License](#). It is based on [Apache Hadoop](#) and can be used with [Apache Solr](#) or [Elasticsearch](#).
- [Grub](#) was an open source distributed search crawler that [Wikia Search](#) used to crawl the web.
- [Heritrix](#) is the [Internet Archive](#)'s archival-quality crawler, designed for archiving periodic snapshots of a large portion of the Web. It was written in [Java](#).
- [ht://Dig](#) includes a Web crawler in its indexing engine.

- **HTTrack** uses a Web crawler to create a mirror of a web site for off-line viewing. It is written in **C** and released under the GPL.
- Norconex Web Crawler is a highly extensible Web Crawler written in **Java** and released under an **Apache License**. It can be used with many repositories such as **Apache Solr**, **Elasticsearch**, **Microsoft Azure Cognitive Search**, **Amazon CloudSearch** and more.
- **mnoGoSearch** is a crawler, indexer and a search engine written in C and licensed under the GPL (*NIX machines only)
- **Open Search Server** is a search engine and web crawler software release under the GPL.
- **Scrapy**, an open source webcrawler framework, written in python (licensed under **BSD**).
- **Seeks**, a free distributed search engine (licensed under **AGPL**).
- **StormCrawler**, a collection of resources for building low-latency, scalable web crawlers on **Apache Storm** (Apache License).
- **tkWWW Robot**, a crawler based on the **tkWWW** web browser (licensed under GPL).
- **GNU Wget** is a **command-line**-operated crawler written in **C** and released under the **GPL**. It is typically used to mirror Web and FTP sites.
- **YaCy**, a free distributed search engine, built on principles of peer-to-peer networks (licensed under GPL).

See also

[[edit](#)]

- [Automatic indexing](#)
- [Gnutella crawler](#)
- [Web archiving](#)
- [Webgraph](#)
- [Website mirroring software](#)
- [Search Engine Scraping](#)
- [Web scraping](#)

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Further reading

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- **v**
- **t**
- **e**

Internet search

Types

- Web search engine (List)
- Metasearch engine
- Multimedia search
- Collaborative search engine
- Cross-language search
- Local search
- Vertical search
- Social search
- Image search
- Audio search
- Video search engine
- Enterprise search
- Semantic search
- Natural language search engine
- Voice search

Tools

- Cross-language information retrieval
- Search by sound
- Search engine marketing
- Search engine optimization
- Evaluation measures
- Search oriented architecture
- Selection-based search
- Document retrieval
- Text mining
- Web crawler
- Multisearch
- Federated search
- Search aggregator
- Index/Web indexing
- Focused crawler
- Spider trap
- Robots exclusion standard
- Distributed web crawling
- Web archiving
- Website mirroring software
- Web query
- Web query classification

Protocols and standards	○ Z39.50
	○ Search/Retrieve Web Service
	○ Search/Retrieve via URL
	○ OpenSearch
	○ Representational State Transfer
	○ Wide area information server

See also	○ Search engine
	○ Desktop search
	○ Online search

- [v](#)
- [t](#)
- [e](#)

Web crawlers

Internet bots designed for [Web crawling](#) and [Web indexing](#)

Active	○ 80legs
	○ bingbot
	○ Crawljax
	○ Fetcher
	○ Googlebot
	○ Heritrix
	○ HTTrack
	○ PowerMapper
	○ Wget

Discontinued	○ FAST Crawler
	○ msnbot
	○ RBSE
	○ TkWWW robot
	○ Twiceler

Types	○ Distributed web crawler
	○ Focused crawler

Authority control databases: **National** Image not found or type unknown
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About Sydney

This article is about the Australian city. For the greater metropolitan area, see **Greater Sydney**. For the local government area, see **City of Sydney**. For other uses, see **Sydney (disambiguation)**.

Sydney

New South Wales

Sydney Opera House and Harbour I

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Sydney Opera House and Harbour I
Bridge
Queen Victoria B

Image not found or type unk

Queen Victoria
Building
University of Sydn

Image not found or type unkr

University of
Sydney
Bondi Beach

Image not found or type unki

Bondi Beach
Archibald Fountai

Image not found or type unki

Archibald
Fountain and St
Mary's Cathedral
Sydney central business district

Image not found or type unknown

Sydney central business district

Map of the Sydney metropolitan area

Image not found or type unknown

Map of the Sydney metropolitan area

Sydney is located in Australia

Image not found or type unknown

Sydney

Coordinates	33°52′S 151°12′E﻿ / ﻿33.867°S 151.200°E
Population	5,450,496 (2023) ^[1] (1st)
• Density	441/km ² (1,140/sq mi) (2023) ^[1]
Established	26 January 1788; 237 years ago
Area	12,367.7 km ² (4,775.2 sq mi)(GCCSA) ^[2]
Time zone	AEST (UTC+10)
• Summer (DST)	AEDT (UTC+11)
Location	<div><div><div>○ 287 km (178 mi) NE of Canberra</div><div>○ 877 km (545 mi) NE of Melbourne</div><div>○ 923 km (574 mi) S of Brisbane</div><div>○ 1,404 km (872 mi) E of Adelaide</div><div>○ 3,936 km (2,446 mi) E of Perth</div></div></div>
LGA(s)	Various (33)
County	Cumberland ^[3]

State electorate(s) Various (49)

Federal division(s) Various (24)

Mean max temp[4]	Mean min temp[4]	Annual rainfall[4]
22.8 °C 73 °F	14.7 °C 58 °F	1,149.7 mm 45.3 in

Sydney is the **capital city** of the **state** of **New South Wales** and the **most populous city in Australia**. Located on Australia's east coast, the metropolis surrounds **Sydney Harbour** and extends about 80 km (50 mi) from the **Pacific Ocean** in the east to the **Blue Mountains** in the west, and about 80 km (50 mi) from **Ku-ring-gai Chase National Park** and the **Hawkesbury River** in the north and north-west, to the **Royal National Park** and **Macarthur** in the south and south-west.[5] Greater Sydney consists of 658 suburbs, spread across 33 local government areas. Residents of the city are colloquially known as "Sydneyiders".[6] The estimated population in June 2023 was 5,450,496,[1] which is about 66% of the state's population.[7] The city's nicknames include the **Emerald City** and the **Harbour City**.[8]

There is evidence that **Aboriginal Australians** inhabited the **Greater Sydney** region at least 30,000 years ago, and **their engravings** and cultural sites are common. The **traditional custodians** of the land on which modern Sydney stands are the clans of the **Darug**, **Dharawal** and **Eora**.[9] During his **first Pacific voyage** in 1770, **James Cook** charted the eastern coast of Australia, making landfall at **Botany Bay**. In 1788, the **First Fleet** of **convicts**, led by **Arthur Phillip**, founded Sydney as a British **penal colony**, the first European settlement in Australia.[10] After **World War II**, Sydney experienced mass migration and by 2021 over 40 per cent of the population was born overseas. Foreign countries of birth with the greatest representation are mainland China, India, the United Kingdom, Vietnam and the Philippines.[11]

Despite being one of the most expensive cities in the world,[12][13] Sydney frequently ranks in the top ten **most liveable cities**.[14][15][16] It is classified as an **Alpha+ city** by the **Globalization and World Cities Research Network**, indicating its influence in the region and throughout the world.[17][18] Ranked eleventh in the world for economic opportunity,[19] Sydney has an advanced market economy with strengths in education, finance, manufacturing and **tourism**.[20][21] The **University of Sydney** and the **University of New South Wales** are ranked 18th and 19th in the world respectively.[22]

Sydney has hosted major international sporting events such as the **2000 Summer Olympics**, the **2003 Rugby World Cup Final**, and the **2023 FIFA Women's World Cup Final**. The city is among the top fifteen most-visited,[23] with millions of tourists coming each year to see the city's landmarks.[24] The city has over 1,000,000 ha (2,500,000 acres) of **nature reserves and parks**,[25] and its **notable natural features** include **Sydney Harbour** and **Royal National Park**. The **Sydney Harbour Bridge** and the World Heritage-listed **Sydney Opera House** are major tourist attractions. **Central Station** is the hub of Sydney's suburban train, metro and light rail networks and longer-distance services. The main passenger airport serving the city is **Kingsford Smith**

Airport, one of the world's oldest continually operating airports.^[26]

Toponymy

^[edit]

In 1788, Captain **Arthur Phillip**, the first governor of New South Wales, named the cove where the first British settlement was established **Sydney Cove** after Home Secretary **Thomas Townshend, 1st Viscount Sydney**.^[27] The cove was called *Warrane* by the Aboriginal inhabitants.^[28] Phillip considered naming the settlement **Albion**, but this name was never officially used.^[27] By 1790 Phillip and other officials were regularly calling the township Sydney.^[29] Sydney was declared a city in 1842.^[30]

The **Gadigal** (Cadigal) clan, whose territory stretches along the southern shore of **Port Jackson** from **South Head** to **Darling Harbour**, are the traditional owners of the land on which the British settlement was initially established, and call their territory *Gadi* (*Cadi*). Aboriginal clan names within the Sydney region were often formed by adding the suffix "-gal" to a word denoting the name for their territory, a specific place in their territory, a food source, or totem. Greater Sydney covers the traditional lands of 28 known Aboriginal clans.^[31]

History

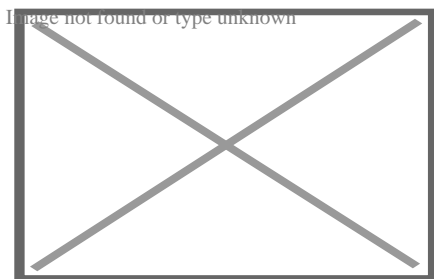
^[edit]

Main article: **History of Sydney**

For a chronological guide, see **Timeline of Sydney**.

First inhabitants of the region

^[edit]



Charcoal drawing of kangaroos in **Heathcote National Park**

The first people to inhabit the area now known as Sydney were **Aboriginal Australians** who had migrated from southeast Asia via northern Australia.^[32] Flaked pebbles found in Western Sydney's gravel sediments might indicate human occupation from 45,000 to 50,000 years ago,^[33] while **radiocarbon dating** has shown evidence of human activity in the region from around

30,000 years ago.[34] Prior to the arrival of the British, there were 4,000 to 8,000 Aboriginal people in the greater Sydney region.[35][9]

The inhabitants subsisted on fishing, hunting, and gathering plants and shellfish. The diet of the coastal clans was more reliant on seafood whereas hinterland clans ate more forest animals and plants. The clans had distinctive equipment and weapons mostly made of stone, wood, plant materials, bone and shell. They also differed in their body decorations, hairstyles, songs and dances. Aboriginal clans had a rich ceremonial life, part of a belief system centring on ancestral, totemic and supernatural beings. People from different clans and language groups came together to participate in initiation and other ceremonies. These occasions fostered trade, marriages and clan alliances.[36]

The earliest British settlers recorded the word 'Eora' as an Aboriginal term meaning either 'people' or 'from this place'. [37][9] The clans of the Sydney area occupied land with traditional boundaries. There is debate, however, about which group or nation these clans belonged to, and the extent of differences in language and rites. The major groups were the coastal Eora people, the Dharug (Darug) occupying the inland area from Parramatta to the Blue Mountains, and the Dharawal people south of Botany Bay.[9] Darginung and Gundungurra languages were spoken on the fringes of the Sydney area.[38]

Aboriginal clans of Sydney area, as recorded by early British settlers

Clan	Territory name	Location
Bediagal	Not recorded	Probably north-west of Parramatta
Birrabirragal	Birrabirra	Lower Sydney Harbour around Sow and Pigs reef
Boolbainora	Boolbainmatta	Parramatta area
Borogegal	Booragy	Probably Bradleys Head and surrounding area
Boromedegal	Not recorded	Parramatta
Buruberongal	Not recorded	North-west of Parramatta
Darramurragal	Not recorded	Turramarra area
Gadigal	Cadi (Gadi)	South side of Port Jackson, from South Head to Darling Harbour
Gahbrogal	Not recorded	Liverpool and Cabramatta area
Gamaragal	Cammeray	North shore of Port Jackson
Gameygal	Kamay	Botany Bay
Gannemegal	Warmul	Parramatta area
Garigal	Not recorded	Broken Bay area
Gayamaygal	Kayeemy	Manly Cove
Gweagal	Gwea	Southern shore of Botany Bay
Wallumedegal	Wallumede	North shore of Port Jackson, opposite Sydney Cove

Wangal

Wann

South side of Port Jackson, from Darling Harbour to Rose Hill

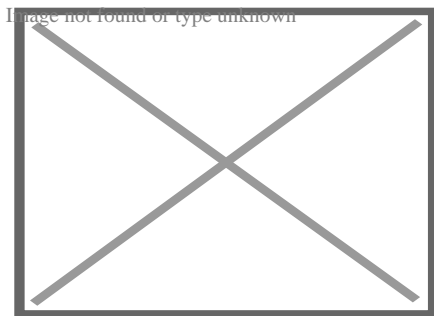
Clans of the Sydney region whose territory wasn't reliably recorded are: the Domaragal, Doogagal, Gannalgal, Gomerigal, Gooneeowlgal, Goorunggurregal, Gorualgal, Murrooredial, Noronggerragal, Oryangsoora and Wandandegal.

Note: The names and territory boundaries do not always correspond with those used by contemporary Aboriginal groups of the greater Sydney area.[38][39][40]

The first meeting between Aboriginals and British explorers occurred on 29 April 1770 when Lieutenant James Cook landed at **Botany Bay** (Kamay[41]) and encountered the **Gweagal** clan.[42] Two Gweagal men opposed the landing party and one was shot and wounded.[43][44] Cook and his crew stayed at Botany Bay for a week, collecting water, timber, fodder and botanical specimens and exploring the surrounding area. Cook sought to establish relations with the Aboriginal population without success.[45]

Convict town (1788–1840)

[edit]



*The Founding of Australia, 26 January 1788, by Captain **Arthur Phillip** R.N., Sydney Cove. Painting by **Algernon Talmage**.*

Britain had been sending convicts to its American colonies for most of the eighteenth century, and the loss of these colonies in 1783 was the impetus to establish a penal colony at Botany Bay. Proponents of colonisation also pointed to the strategic importance of a new base in the Asia-Pacific region and its potential to provide much-needed timber and flax for the navy.[46]

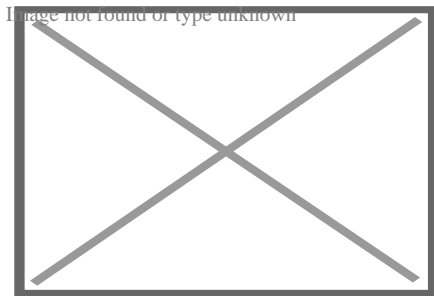
The **First Fleet** of 11 ships under the command of Captain **Arthur Phillip** arrived in Botany Bay in January 1788. It comprised more than a thousand settlers, including 736 convicts.[47] The fleet soon moved to the more suitable **Port Jackson** where a settlement was established at **Sydney Cove** on 26 January 1788.[48] The colony of New South Wales was formally proclaimed by Governor Phillip on 7 February 1788. Sydney Cove offered a fresh water supply and a safe harbour, which Philip described as "the finest Harbour in the World ... Here a Thousand Sail of

the Line may ride in the most perfect Security".[49]

The settlement was planned to be a self-sufficient penal colony based on subsistence agriculture. Trade and shipbuilding were banned in order to keep the convicts isolated. However, the soil around the settlement proved poor and the first crops failed, leading to several years of hunger and strict rationing. The food crisis was relieved with the arrival of the **Second Fleet** in mid-1790 and the **Third Fleet** in 1791.[50] Former convicts received small grants of land, and government and private farms spread to the more fertile lands around **Parramatta**, **Windsor** and **Camden** on the **Cumberland Plain**. By 1804, the colony was self-sufficient in food.[51]

A smallpox epidemic in April 1789 killed about half the region's Indigenous population.[9][52] In November 1790 **Bennelong** led a group of survivors of the Sydney clans into the settlement, establishing a continuous presence of Aboriginal Australians in settled Sydney.[53]

Phillip had been given no instructions for urban development, but in July 1788 submitted a plan for the new town at **Sydney Cove**. It included a wide central avenue, a permanent Government House, law courts, hospital and other public buildings, but no provision for warehouses, shops, or other commercial buildings. Phillip promptly ignored his own plan, and unplanned development became a feature of Sydney's topography.[54][55]

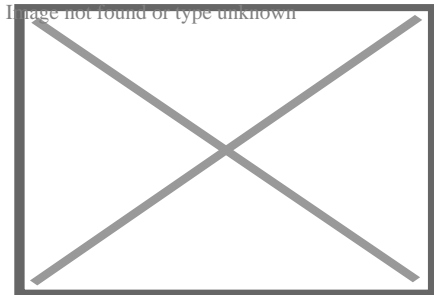


Thomas Watling's *View of Sydney Cove*, c. 1794–1796

After Phillip's departure in December 1792, the colony's military officers began acquiring land and importing consumer goods from visiting ships. Former convicts engaged in trade and opened small businesses. Soldiers and former convicts built houses on Crown land, with or without official permission, in what was now commonly called Sydney town. Governor **William Bligh** (1806–08) imposed restrictions on commerce and ordered the demolition of buildings erected on Crown land, including some owned by past and serving military officers. The resulting conflict culminated in the **Rum Rebellion** of 1808, in which Bligh was deposed by the **New South Wales Corps**. [56][57]

Governor **Lachlan Macquarie** (1810–1821) played a leading role in the development of Sydney and New South Wales, establishing a bank, a currency and a hospital. He employed a planner to design the street layout of Sydney and commissioned the construction of roads, wharves, churches, and public buildings. **Parramatta Road**, linking Sydney and Parramatta, was opened in 1811,[58] and a road across the **Blue Mountains** was completed in 1815, opening the way for large-scale farming and grazing west of the **Great Dividing Range**. [59][60]

Following the departure of Macquarie, official policy encouraged the emigration of free British settlers to New South Wales. Immigration to the colony increased from 900 free settlers in 1826–30 to 29,000 in 1836–40, many of whom settled in Sydney.[61][62] By the 1840s Sydney exhibited a geographic divide between poor and working-class residents living west of the **Tank Stream** in areas such as **The Rocks**, and the more affluent residents living to its east.[62] Free settlers, free-born residents and former convicts now represented the vast majority of the population of Sydney, leading to increasing public agitation for responsible government and an end to transportation. Transportation to New South Wales ceased in 1840.[63]



The **Castle Hill convict rebellion** of 1804

Conflict on the Cumberland Plain

[edit]

In 1804, Irish convicts led around 300 rebels in the **Castle Hill Rebellion**, an attempt to march on Sydney, commandeer a ship, and sail to freedom.[64] Poorly armed, and with their leader Philip Cunningham captured, the main body of insurgents were routed by about 100 troops and volunteers at **Rouse Hill**. At least 39 convicts were killed in the uprising and subsequent executions.[65][66]

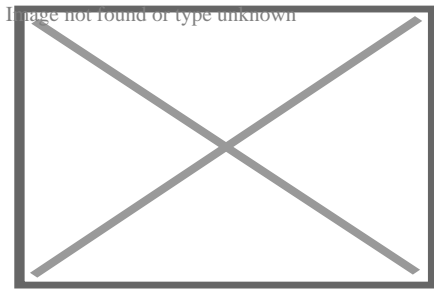
As the colony spread to the more fertile lands around the **Hawkesbury River**, north-west of Sydney, conflict between the settlers and the **Darug** people intensified, reaching a peak from 1794 to 1810. Bands of Darug people, led by **Pemulwuy** and later by his son **Tedbury**, burned crops, killed livestock and raided settler stores in a pattern of resistance that was to be repeated as the **colonial frontier expanded**. A military garrison was established on the Hawkesbury in 1795. The death toll from 1794 to 1800 was 26 settlers and up to 200 Darug.[67][68]

Conflict again erupted from 1814 to 1816 with the expansion of the colony into Dharawal country in the Nepean region south-west of Sydney. Following the deaths of several settlers, Governor Macquarie dispatched three military detachments into Dharawal lands, culminating in the **Appin massacre** (April 1816) in which at least 14 Aboriginal people were killed.[69][70]

Colonial city (1841–1900)

[\[edit\]](#)

The New South Wales Legislative Council became a semi-elected body in 1842. Sydney was declared a city the same year, and a governing council established, elected on a restrictive property franchise.[\[63\]](#)



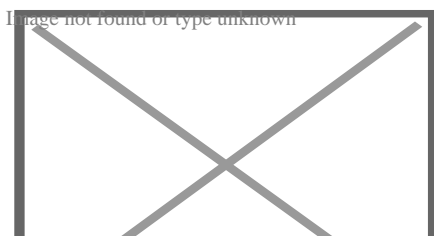
Aerial illustration of Sydney, 1888

The discovery of gold in New South Wales and Victoria in 1851 initially caused economic disruption as men moved to the goldfields. Melbourne soon overtook Sydney as Australia's largest city, leading to an enduring rivalry between the two. However, increased immigration from overseas and wealth from gold exports increased demand for housing, consumer goods, services and urban amenities.[\[71\]](#) The New South Wales government also stimulated growth by investing heavily in railways, trams, roads, ports, telegraph, schools and urban services.[\[72\]](#) The population of Sydney and its suburbs grew from 95,600 in 1861 to 386,900 in 1891.[\[73\]](#) The city developed many of its characteristic features. The growing population packed into rows of terrace houses in narrow streets. New public buildings of sandstone abounded, including at the [University of Sydney](#) (1854–61),[\[74\]](#) the [Australian Museum](#) (1858–66),[\[75\]](#) the Town Hall (1868–88),[\[76\]](#) and the [General Post Office](#) (1866–92).[\[77\]](#) Elaborate [coffee palaces](#) and hotels were erected.[\[78\]](#) Daylight bathing at Sydney's beaches was banned, but segregated bathing at designated ocean baths was popular.[\[79\]](#)

Drought, the winding down of public works and a financial crisis led to economic depression in Sydney throughout most of the 1890s. Meanwhile, the Sydney-based premier of New South Wales, [George Reid](#), became a key figure in the process of federation.[\[80\]](#)

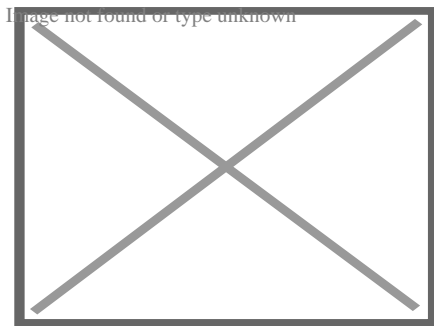
State capital (1901–present)

[\[edit\]](#)



A tramcar on George Street in 1920. Sydney once had one of the largest tram networks in the British Empire.

When the six colonies federated on 1 January 1901, Sydney became the capital of the State of New South Wales. The spread of bubonic plague in 1900 prompted the state government to modernise the wharves and demolish inner-city slums. The outbreak of the First World War in 1914 saw more Sydney males volunteer for the armed forces than the Commonwealth authorities could process, and helped reduce unemployment. Those returning from the war in 1918 were promised "homes fit for heroes" in new suburbs such as Daceyville and Matraville. "Garden suburbs" and mixed industrial and residential developments also grew along the rail and tram corridors.[62] The population reached one million in 1926, after Sydney had regained its position as the most populous city in Australia.[81] The government created jobs with massive public projects such as the electrification of the Sydney rail network and building the Sydney Harbour Bridge.[82]



Sydney Harbour Bridge opening day, 19 March 1932

Sydney was more severely affected by the Great Depression of the 1930s than regional New South Wales or Melbourne.[83] New building almost came to a standstill, and by 1933 the unemployment rate for male workers was 28 per cent, but over 40 per cent in working class areas such as Alexandria and Redfern. Many families were evicted from their homes and shanty towns grew along coastal Sydney and Botany Bay, the largest being "Happy Valley" at La Perouse.[84] The Depression also exacerbated political divisions. In March 1932, when populist Labor premier Jack Lang attempted to open the Sydney Harbour Bridge he was upstaged by Francis de Groot of the far-right New Guard, who slashed the ribbon with a sabre.[85]

In January 1938, Sydney celebrated the Empire Games and the sesquicentenary of European settlement in Australia. One journalist wrote, "Golden beaches. Sun tanned men and maidens....Red-roofed villas terraced above the blue waters of the harbour...Even Melbourne seems like some grey and stately city of Northern Europe compared with Sydney's sub-tropical splendours." A congress of the "Aborigines of Australia" declared 26 January "A Day of Mourning" for "the whiteman's seizure of our country." [86]

With the outbreak of Second World War in 1939, Sydney experienced a surge in industrial development. Unemployment virtually disappeared and women moved into jobs previously typically reserved for males. Sydney was attacked by Japanese submarines in May and June 1942 with 21 killed. Households built air raid shelters and performed drills.[87] Military

establishments in response to [World War II in Australia](#) included the [Garden Island Tunnel System](#), the only [tunnel warfare](#) complex in Sydney, and the heritage-listed military [fortification](#) systems [Bradleys Head Fortification Complex](#) and [Middle Head Fortifications](#), which were part of a total [defence system for Sydney Harbour](#).^[88]

A post-war immigration and baby boom saw a rapid increase in Sydney's population and the spread of low-density housing in suburbs throughout the Cumberland Plain. Immigrants—mostly from Britain and continental Europe—and their children accounted for over three-quarters of Sydney's population growth between 1947 and 1971.^[89] The newly created Cumberland County Council oversaw low-density residential developments, the largest at [Green Valley](#) and [Mount Druitt](#). Older residential centres such as Parramatta, [Bankstown](#) and [Liverpool](#) became suburbs of the metropolis.^[90] Manufacturing, protected by high tariffs, employed over a third of the workforce from 1945 to the 1960s. However, as the long post-war economic boom progressed, retail and other service industries became the main source of new jobs.^[91]

An estimated one million onlookers, most of the city's population, watched [Queen Elizabeth II](#) land in 1954 at Farm Cove where Captain Phillip had raised the Union Jack 165 years earlier, commencing her [Australian Royal Tour](#). It was the first time a reigning monarch stepped onto Australian soil.^[92]

Increasing high-rise development in Sydney and the expansion of suburbs beyond the "green belt" envisaged by the planners of the 1950s resulted in community protests. In the early 1970s, trade unions and resident action groups imposed [green bans](#) on development projects in historic areas such as The Rocks. Federal, State and local governments introduced heritage and environmental legislation.^[62] The Sydney Opera House was also controversial for its cost and disputes between architect [Jørn Utzon](#) and government officials. However, soon after it opened in 1973 it became a major tourist attraction and symbol of the city.^[93] The progressive reduction in tariff protection from 1974 began the transformation of Sydney from a manufacturing centre to a "world city".^[94] From the 1980s, [overseas immigration](#) grew rapidly, with Asia, the Middle East and Africa becoming major sources. By 2021, the population of Sydney was over 5.2 million, with 40% of the population born overseas. China and India overtook England as the largest source countries for overseas-born residents.^[95]

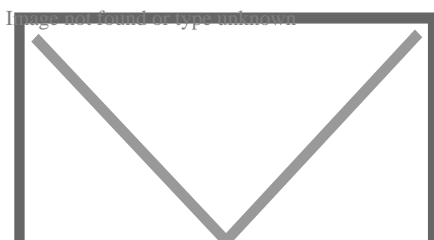
Geography

^{[[edit](#)]}

Main article: [Geography of Sydney](#)

Topography

^{[[edit](#)]}



Sydney lies on a **submergent coastline** where the ocean level has risen to flood deep **rias**.

Sydney is a coastal basin with the **Tasman Sea** to the east, the **Blue Mountains** to the west, the Hawkesbury River to the north, and the **Woronora Plateau** to the south.

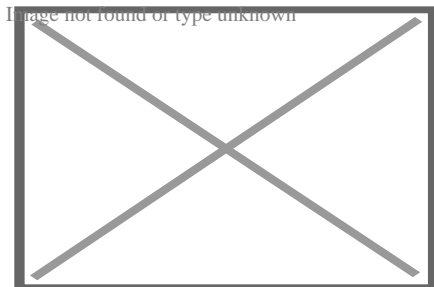
Sydney spans two geographic regions. The **Cumberland Plain** lies to the south and west of the Harbour and is relatively flat. The **Hornsby Plateau** is located to the north and is dissected by steep valleys. The flat areas of the south were the first to be developed; it was not until the construction of the Sydney Harbour Bridge that the northern reaches became more heavily populated. **Seventy surf beaches** can be found along its coastline, with Bondi Beach being the most famous.

The **Nepean River** wraps around the western edge of the city and becomes the Hawkesbury River before reaching **Broken Bay**. Most of Sydney's water storages can be found on tributaries of the Nepean River. The **Parramatta River** is mostly industrial and drains a large area of Sydney's western suburbs into Port Jackson. The southern parts of the city are drained by the **Georges River** and the **Cooks River** into Botany Bay.

There is no single definition of the boundaries of Sydney. The Australian Statistical Geography Standard definition of Greater Sydney covers 12,369 km² (4,776 sq mi) and includes the local government areas of **Central Coast** in the north, **Hawkesbury** in the north-west, **Blue Mountains** in the west, **Sutherland Shire** in the south, and **Wollondilly** in the south-west.[96] The local government area of the **City of Sydney** covers about 26 square kilometres from **Garden island** in the east to Bicentennial Park in the west, and south to the suburbs of Alexandria and **Rosebery**. [97]

Geology

[edit]



Almost all of the exposed rocks around Sydney are **Sydney sandstone**.

Sydney is made up of mostly **Triassic** rock with some recent **igneous** dykes and **volcanic** necks (typically found in the **Prospect dolerite intrusion**, west of Sydney).[98] The **Sydney Basin** was formed in the early Triassic period.[99] The sand that was to become the sandstone of today

was laid down between 360 and 200 million years ago. The sandstone has **shale** lenses and fossil riverbeds.[99] The **continental shelf** of **Australia** is only 25.9 km (16.1 mi) away from the coast of Sydney, and that is where the **Tasman Abyssal Plain** lies.[100][101]

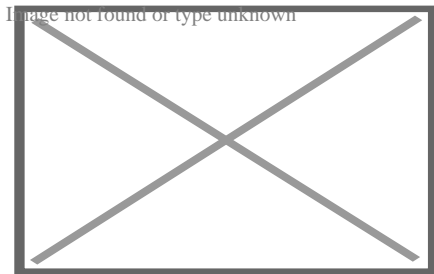
The **Sydney Basin** bioregion includes coastal features of cliffs, beaches, and estuaries. Deep river valleys known as **rias** were carved during the Triassic period in the **Hawkesbury sandstone** of the coastal region. The rising sea level between 18,000 and 6,000 years ago flooded the rias to form estuaries and deep harbours.[99] Port Jackson, better known as Sydney Harbour, is one such **ria**.^[102] Sydney features two major soil types: **sandy soils** (which originate from the Hawkesbury sandstone) and **clay** (which are from shales and **volcanic rocks**), though some soils may be a mixture of the two.^[103]

Directly overlying the older Hawkesbury sandstone is the **Wianamatta shale**, a geological feature found in western Sydney that was deposited in connection with a large **river delta** during the **Middle Triassic**. The Wianamatta shale generally comprises fine grained **sedimentary rocks** such as shales, **mudstones**, **ironstones**, **siltstones** and **laminites**, with less common sandstone units.^[104] The Wianamatta Group is made up of **Bringelly Shale**, **Minchinbury Sandstone** and **Ashfield Shale**.^[105]

Ecology

[[edit](#)]

Further information: **Ecology of Sydney**



Typical **grassy** woodland in the Sydney metropolitan area

The most prevalent **plant communities** in the Sydney region are grassy woodlands (i.e. **savannas**)^[106] and some pockets of dry **sclerophyll** forests,^[107] which consist of **eucalyptus** trees, **casuarinas**, **melaleucas**, **corymbias** and **angophoras**, with shrubs (typically **wattles**, **callistemons**, **grevilleas** and **banksias**), and a semi-continuous grass in the **understory**.^[108] The plants in this community tend to have rough, spiky leaves due to low **soil fertility**. Sydney also features a few areas of wet sclerophyll forests in the wetter, elevated areas in the **north** and **northeast**. These forests are defined by straight, tall tree **canopies** with a moist understory of soft-leaved shrubs, **tree ferns** and herbs.^[109]

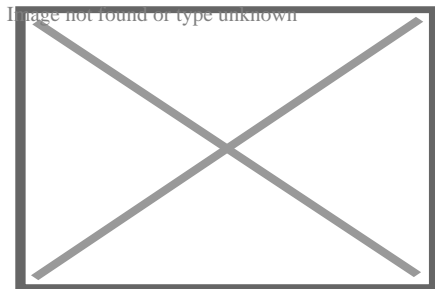
The predominant vegetation community in Sydney is the [Cumberland Plain Woodland](#) in [Western Sydney \(Cumberland Plain\)](#),^[110] followed by the [Sydney Turpentine-Ironbark Forest](#) in the Inner West and [Northern Sydney](#),^[111] the [Eastern Suburbs Banksia Scrub](#) in the coastline and the [Blue Gum High Forest](#) scantily present in the North Shore – all of which are critically endangered.^{[112][113]} The city also includes the [Sydney Sandstone Ridgetop Woodland](#) found in [Ku-ring-gai Chase National Park](#) on the [Hornsby Plateau](#) to the north.^[114]

Sydney is home to dozens of [bird](#) species,^[115] which commonly include the [Australian raven](#), [Australian magpie](#), [crested pigeon](#), [noisy miner](#) and the [pied currawong](#). Introduced bird species ubiquitously found in Sydney are the [common myna](#), [common starling](#), [house sparrow](#) and the [spotted dove](#).^[116] [Reptile](#) species are also numerous and predominantly include [skinks](#).^{[117][118]} Sydney has a few [mammal](#) and [spider](#) species, such as the [grey-headed flying fox](#) and the [Sydney funnel-web](#), respectively,^{[119][120]} and has a huge diversity of [marine species](#) inhabiting its harbour and beaches.^[121]

Climate

[\[edit\]](#)

Main articles: [Climate of Sydney](#) and [Severe weather events in Sydney](#)



A summer storm over Sydney Harbour

Under the [Köppen–Geiger classification](#), Sydney has a [humid subtropical climate](#) (*Cfa*)^[122] with "warm, sometimes hot" summers and "generally mild",^{[123][124][125]} to "cool" winters.^[126] The [El Niño–Southern Oscillation](#), the [Indian Ocean Dipole](#) and the [Southern Annular Mode](#)^{[127][128]} play an important role in determining Sydney's weather patterns: [drought](#) and [bushfire](#) on the one hand, and storms and flooding on the other, associated with the opposite [phases of the oscillation in Australia](#). The weather is [moderated](#) by proximity to the ocean, and more extreme temperatures are recorded in the inland western suburbs because Sydney CBD is more affected by the [oceanic climate](#) drivers than the western suburbs.^{[129][130]}

At Sydney's primary weather station at [Observatory Hill](#), extreme temperatures have ranged from 45.8 °C (114.4 °F) on 18 [January 2013](#) to 2.1 °C (35.8 °F) on 22 June 1932.^{[131][132][133]} An average of 14.9 days a year have temperatures at or above 30 °C (86 °F) in the central business district (CBD).^[130] In contrast, the metropolitan area averages between 35 and 65 days, depending on the suburb.^[134] The hottest day in the metropolitan area occurred in

Penrith on 4 January 2020, where a high of 48.9 °C (120.0 °F) was recorded.[135] The average annual temperature of the sea ranges from 18.5 °C (65.3 °F) in September to 23.7 °C (74.7 °F) in February.[136] Sydney has an average of 7.2 hours of sunshine per day[137] and 109.5 clear days annually.[4] Due to the inland location, frost is recorded early in the morning in Western Sydney a few times in winter. Autumn and spring are the transitional seasons, with spring showing a larger temperature variation than autumn.[138]

Sydney experiences an urban heat island effect.[139] This makes certain parts of the city more vulnerable to extreme heat, including coastal suburbs.[139][140] In late spring and summer, temperatures over 35 °C (95 °F) are not uncommon,[141] though hot, dry conditions are usually ended by a southerly buster,[142] a powerful southerly that brings gale winds and a rapid fall in temperature.[143] Since Sydney is downwind of the Great Dividing Range, it occasionally experiences dry, westerly foehn winds typically in winter and early spring (which are the reason for its warm maximum temperatures).[144][145][146] Westerly winds are intense when the Roaring Forties (or the Southern Annular Mode) shift towards southeastern Australia,[147] where they may damage homes and affect flights, in addition to making the temperature seem colder than it actually is.[148][149]

Rainfall has a moderate to low variability and has historically been fairly uniform throughout the year, although in recent years it has been more summer-dominant and erratic.[150][151][152][153] Precipitation is usually higher in summer through to autumn,[124] and lower in late winter to early spring.[127][154][130][155] In late autumn and winter, east coast lows may bring large amounts of rainfall, especially in the CBD.[156] In the warm season black nor'easters are usually the cause of heavy rain events, though other forms of low-pressure areas, including remnants of ex-cyclones, may also bring heavy deluge and afternoon thunderstorms.[157][158] 'Snow' was last alleged in 1836, more than likely a fall of graupel, or soft hail; and in July 2008 the Upper North Shore saw a fall of graupel that was mistaken by many for 'snow'.[159] In 2009, dry conditions brought a severe dust storm towards the city.[160][161]

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Climate data for Sydney (Observatory Hill) 1991–2020 averages, 1861–present extremes

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	45.8 (114.4)	42.1 (107.8)	39.8 (103.6)	35.4 (95.7)	30.0 (86.0)	26.9 (80.4)	26.5 (79.7)	31.3 (88.3)	34.6 (94.3)	38.2 (100.8)	41.8 (107.2)	42.2 (108.0)	45.8 (114.4)
Mean maximum °C (°F)	36.8 (98.2)	34.1 (93.4)	32.2 (90.0)	29.7 (85.5)	26.2 (79.2)	22.3 (72.1)	22.9 (73.2)	25.4 (77.7)	29.9 (85.8)	33.6 (92.5)	34.1 (93.4)	34.4 (93.9)	38.2 (100.8)
Mean daily maximum °C (°F)	27.0 (80.6)	26.8 (80.2)	25.7 (78.3)	23.6 (74.5)	20.9 (69.6)	18.3 (64.9)	17.9 (64.2)	19.3 (66.7)	21.6 (70.9)	23.2 (73.8)	24.2 (75.6)	25.7 (78.3)	22.9 (73.2)

Daily mean °C (°F)	23.5 (74.3)	23.4 (74.1)	22.1 (71.8)	19.5 (67.1)	16.6 (61.9)	14.2 (57.6)	13.4 (56.1)	14.5 (58.1)	17.0 (62.6)	18.9 (66.0)	20.4 (68.7)	22.1 (71.8)	18.9 (66.0)
Mean daily minimum °C (°F)	20.0 (68.0)	19.9 (67.8)	18.4 (65.1)	15.3 (59.5)	12.3 (54.1)	10.0 (50.0)	8.9 (48.0)	9.7 (49.5)	12.3 (54.1)	14.6 (58.3)	16.6 (61.9)	18.4 (65.1)	14.6 (58.3)
Mean minimum °C (°F)	16.1 (61.0)	16.1 (61.0)	14.2 (57.6)	11.0 (51.8)	8.3 (46.9)	6.5 (43.7)	5.7 (42.3)	6.1 (43.0)	8.0 (46.4)	9.8 (49.6)	12.0 (53.6)	13.9 (57.0)	5.7 (42.3)
Record low °C (°F)	10.6 (51.1)	9.6 (49.3)	9.3 (48.7)	7.0 (44.6)	4.4 (39.9)	2.1 (35.8)	2.2 (36.0)	2.7 (36.9)	4.9 (40.8)	5.7 (42.3)	7.7 (45.9)	9.1 (48.4)	2.1 (35.8)
Average rainfall mm (inches)	91.1 (3.59)	131.5 (5.18)	117.5 (4.63)	114.1 (4.49)	100.8 (3.97)	142.0 (5.59)	80.3 (3.16)	75.1 (2.96)	63.4 (2.50)	67.7 (2.67)	90.6 (3.57)	73.0 (2.87)	1,141.5 (45.2)
Average rainy days (? 1 mm)	8.2	9.0	10.1	7.9	7.9	9.3	7.2	5.6	5.8	7.6	8.7	7.9	95.2
Average afternoon relative humidity (%)	60	62	59	58	58	56	52	47	49	53	57	58	56
Average dew point °C (°F)	16.5 (61.7)	17.2 (63.0)	15.4 (59.7)	12.7 (54.9)	10.3 (50.5)	7.8 (46.0)	6.1 (43.0)	5.4 (41.7)	7.8 (46.0)	10.2 (50.4)	12.6 (54.7)	14.6 (58.3)	11.7 (52.9)
Mean monthly sunshine hours	232.5	205.9	210.8	213.0	204.6	171.0	207.7	248.0	243.0	244.9	222.0	235.6	2,630.0
Percentage possible sunshine	53	54	55	63	63	57	66	72	67	61	55	55	60

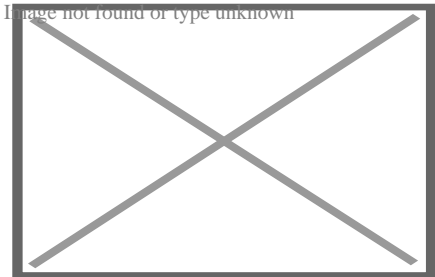
Source 1: [Bureau of Meteorology](#)^{[162][163][164][165]}

Source 2: [Bureau of Meteorology, Sydney Airport](#) (sunshine hours)^[166]

Regions

[\[edit\]](#)

Main article: [Regions of Sydney](#)

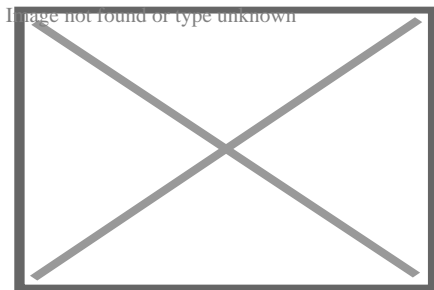


Sydney area at night, facing west. **Wollongong** is bottom left, and the **Central Coast** is at the far right.

The **Greater Sydney Commission** divides Sydney into three "cities" and five "districts" based on the 33 LGAs in the metropolitan area. The "metropolis of three cities" comprises *Eastern Harbour City*, *Central River City* and *Western Parkland City*.^[167] The Australian Bureau of Statistics also includes City of Central Coast (the former Gosford City and Wyong Shire) as part of Greater Sydney for population counts,^[168] adding 330,000 people.^[169]

Inner suburbs

[\[edit\]](#)



Historical buildings in **Millers Point**, an inner suburb north of the CBD

The **CBD** extends about 3 km (1.9 mi) south from **Sydney Cove**. It is bordered by **Farm Cove** within the **Royal Botanic Garden** to the east and **Darling Harbour** to the west. Suburbs surrounding the CBD include **Woolloomooloo** and **Potts Point** to the east, **Surry Hills** and **Darlinghurst** to the south, **Pymont** and **Ultimo** to the west, and **Millers Point** and **The Rocks** to the north. Most of these suburbs measure less than 1 km² (0.4 sq mi) in area. The Sydney CBD is characterised by narrow streets and thoroughfares, created in its convict beginnings.^[170]

Several localities, distinct from suburbs, exist throughout Sydney's inner reaches. **Central** and **Circular Quay** are transport hubs with ferry, rail, and bus interchanges. **Chinatown**, Darling Harbour, and **Kings Cross** are important locations for culture, tourism, and recreation. The **Strand Arcade**, located between **Pitt Street Mall** and **George Street**, is a historical **Victorian-style** shopping **arcade**. Opened on 1 April 1892, its shop fronts are an exact replica of the original internal shopping facades.^[171] **Westfield Sydney**, located beneath the **Sydney Tower**, is the largest shopping centre by area in Sydney.^[172]

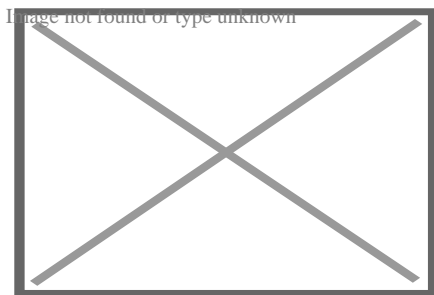
Since the late 20th century, there has been a trend of **gentrification** amongst Sydney's inner suburbs. Pymont, located on the harbour, was redeveloped from a centre of shipping and international trade to an area of **high density housing**, tourist accommodation, and gambling.^[173] Originally located well outside of the city, Darlinghurst is the location of the historic **Darlinghurst Gaol**, manufacturing, and mixed housing. For a period it was known as an area of prostitution. The terrace-style housing has largely been retained and Darlinghurst has

undergone significant gentrification since the 1980s.[174][175][176]

Green Square is a former industrial area of **Waterloo** which is undergoing urban renewal worth \$8 billion. On the city harbour edge, the historic suburb and wharves of Millers Point are being built up as the new area of **Barangaroo**.^{[177][178]} The suburb of **Paddington** is known for its restored **terrace houses**, **Victoria Barracks**, and shopping including the weekly Oxford Street markets.^[179]

Inner West

[[edit](#)]



Newtown, one of the inner-most parts of the Inner West, is one of the most complete **Victorian** and **Edwardian era** commercial precincts in Australia.

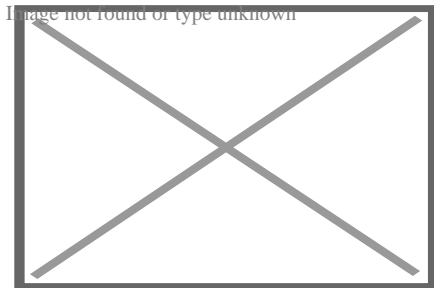
The **Inner West** generally includes the **Inner West Council**, **Municipality of Burwood**, **Municipality of Strathfield**, and **City of Canada Bay**. These span up to about 11 km west of the CBD. Historically, especially prior to the building of the Harbour Bridge,^[180] the outer suburbs of the Inner West such as **Strathfield** were the location of "country" estates for the colony's elites. By contrast, the inner suburbs in the Inner West, being close to transport and industry, have historically housed working-class industrial workers. These areas have undergone gentrification in the late 20th century, and many parts are now highly valued residential suburbs.^[181] As of 2021, an Inner West suburb (Strathfield) remained one of the 20 most expensive postcodes in Australia by median house price (the others were all in metropolitan Sydney, all in Northern Sydney or the Eastern Suburbs).^[182] The **University of Sydney** is located in this area, as well as the **University of Technology, Sydney** and a campus of the **Australian Catholic University**. The Anzac Bridge spans Johnstons Bay and connects **Rozelle** to **Pymont** and the city, forming part of the **Western Distributor**.

The Inner West is today well known as the location of village commercial centres with cosmopolitan flavours, such as the "Little Italy" commercial centres of Leichardt, Five Dock and Haberfield,^[183] "Little Portugal" in Petersham,^[184] "Little Korea" in Strathfield^[185] or "Little Shanghai" in Ashfield.^[186] Large-scale shopping centres in the area include **Westfield Burwood**, **DFO Homebush** and **Birkenhead Point Outlet Centre**. There is a large cosmopolitan community and nightlife hub on **King Street, Newtown**.

The area is serviced by [Sydney Trains' T1, T2 and T3 services](#), including the [Main Suburban Line](#), which was the first to be constructed in New South Wales. [Strathfield railway station](#) is a secondary railway hub within Sydney, and major station on the Suburban and [Northern](#) lines. It was constructed in 1876.^[187] The future [Sydney Metro West](#) will also connect this area with the City and Parramatta. The area is also serviced by the [Parramatta River services](#) of [Sydney Ferries](#),^[188] numerous bus routes and cycleways.^[189]

Eastern suburbs

[\[edit\]](#)



Residences in [Bellevue Hill](#). Sydney's eastern suburbs are made up of some of the most expensive real estate in the country^[190]

The Eastern Suburbs encompass the [Municipality of Woollahra](#), the [City of Randwick](#), the [Waverley Municipal Council](#), and parts of the [Bayside Council](#). They include some of the most affluent and advantaged areas in the country, with some streets being amongst the most expensive in the world. As at 2014, [Wolseley Road](#), [Point Piper](#), had a top price of \$20,900 per square metre, making it the ninth-most expensive street in the world.^[191] More than 75% of neighbourhoods in the [Electoral District of Wentworth](#) fall under the top decile of SEIFA advantage, making it the least disadvantaged area in the country.^[192] As of 2021, of the 20 most expensive postcodes in Australia by median house price, nine were in the Eastern Suburbs.^[182]

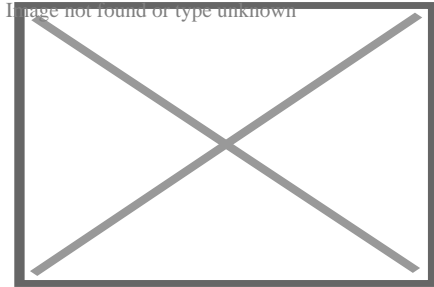
Major landmarks include [Bondi Beach](#), which was added to the [Australian National Heritage List](#) in 2008;^[193] and [Bondi Junction](#), featuring a [Westfield shopping centre](#) and an estimated office workforce of 6,400 by 2035,^[194] as well as a [railway station](#) on the [T4 Eastern Suburbs Line](#). The suburb of [Randwick](#) contains [Randwick Racecourse](#), the [Royal Hospital for Women](#), the [Prince of Wales Hospital](#), [Sydney Children's Hospital](#), and [University of New South Wales Kensington Campus](#).^[195]

Construction of the [CBD and South East Light Rail](#) was completed in April 2020.^[196] The project aims to provide reliable and high-capacity tram services to residents in the City and South-East.

Major shopping centres in the area include [Westfield Bondi Junction](#) and [Westfield Eastgardens](#).

Southern Sydney

[[edit](#)]



[Kurnell](#), [La Perouse](#), and [Cronulla](#), along with various other suburbs, face Botany Bay.

The Southern district of Sydney includes the suburbs in the [local government areas](#) of the [Georges River Council](#) (collectively known as [St George](#)) and the [Sutherland Shire](#) (colloquially known as 'The Shire'), on the southern banks of the [Georges River](#).

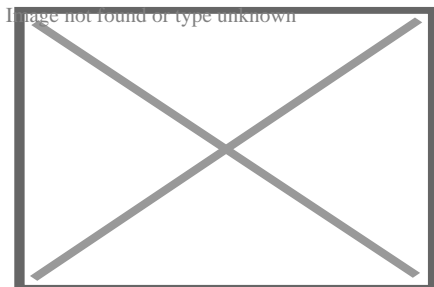
The [Kurnell peninsula](#), near [Botany Bay](#), is the site of the first landfall on the eastern coastline made by James Cook in 1770. [La Perouse](#), a historic suburb named after the French navigator [Jean-François de Galaup, comte de Lapérouse](#), is notable for its old military outpost at [Bare Island](#) and the [Botany Bay National Park](#).

The suburb of [Cronulla](#) in [southern Sydney](#) is close to Royal National Park, Australia's oldest national park. Hurstville, a large suburb with commercial and high-rise residential buildings dominating the skyline, has become a CBD for the southern suburbs.^[197]

Northern Sydney

[[edit](#)]

Further information: [Northern Sydney](#)



[Chatswood](#) is a major commercial district.

'Northern Sydney' includes the suburbs in the Upper North Shore, Lower North Shore and the Northern Beaches.

The Northern Suburbs include several landmarks – Macquarie University, Gladesville Bridge, Ryde Bridge, Macquarie Centre and Curzon Hall in Marsfield. This area includes suburbs in the local government areas of Hornsby Shire, Ku-ring-gai Council, City of Ryde, the Municipality of Hunter's Hill and parts of the City of Parramatta.

The North Shore includes the commercial centres of North Sydney and Chatswood. North Sydney itself consists of a large commercial centre, which contains the second largest concentration of high-rise buildings in Sydney after the CBD. North Sydney is dominated by advertising, marketing and associated trades, with many large corporations holding offices.

The Northern Beaches area includes Manly, one of Sydney's most popular holiday destinations. The region also features Sydney Heads, a series of headlands which form the entrance to Sydney Harbour. The Northern Beaches area extends south to the entrance of Port Jackson (Sydney Harbour), west to Middle Harbour and north to the entrance of Broken Bay.[198] The 2021 Australian census found the Northern Beaches to have, in comparison with the rest of Sydney, a large British diaspora and high concentration of people with European ancestry.[199]

As of the end of 2021, half of the 20 most expensive postcodes in Australia (by median house price) were in Northern Sydney, including four on the Northern Beaches, two on the Lower North Shore, three on the Upper North Shore, and one straddling Hunters Hill and Woolwich.[182]

Hills district

[edit]

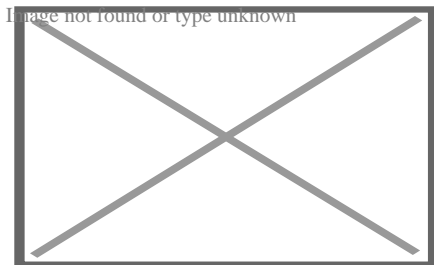
The Hills district generally refers to the suburbs in north-western Sydney including the local government areas of The Hills Shire, parts of the City of Parramatta Council and Hornsby Shire. Actual suburbs and localities that are considered to be in the Hills District can be somewhat amorphous. For example, the Hills District Historical Society restricts its definition to the Hills Shire local government area, yet its study area extends from Parramatta to the Hawkesbury. The region is so named for its characteristically comparatively hilly topography as the Cumberland Plain lifts up, joining the Hornsby Plateau. Windsor and Old Windsor Roads are the second and third roads, respectively, laid in Australia.[200]

On 26 May 2019, The Sydney Metro Northwest, which went from Chatswood to Tallawong, opened, with a large portion running through the Hills District, which meant the Hills District, for the first time, started having heavy rail.[201] Before this, The Hills was served by Bus Rapid Transit.

Western suburbs

[edit]

Further information: [Greater Western Sydney](#)



[Parramatta](#), a major commercial centre of [Greater Western Sydney](#), is often referred to as Sydney's "second [CBD](#)"

The greater western suburbs encompasses the areas of Parramatta, the sixth largest business district in Australia, settled the same year as the harbour-side colony,^[202] [Bankstown](#), [Liverpool](#), [Penrith](#), and [Fairfield](#). Covering 5,800 km² (2,200 sq mi) and having an estimated population as at 2017 of 2,288,554, western Sydney has the most [multicultural suburbs](#) in the country – [Cabramatta](#) has earned the nickname "[Little Saigon](#)" due to its [Vietnamese](#) population, Fairfield has been named "[Little Assyria](#)" for its predominant [Assyrian](#) population and [Harris Park](#) is known as "[Little India](#)" with its plurality of [Indian](#) and [Hindu population](#).^[203]^[204]^[205]^[206] The population is predominantly of a [working class](#) background, with major employment in the [heavy industries](#) and [vocational](#) trade.^[207] [Toongabbie](#) is noted for being the third mainland settlement (after Sydney and Parramatta) set up after British colonisation began in 1788, although the site of the settlement is actually in the separate suburb of [Old Toongabbie](#).^[208]

The western suburb of [Prospect](#), in the [City of Blacktown](#), is home to [Raging Waters](#), a [water park](#) operated by [Parques Reunidos](#).^[209] [Auburn Botanic Gardens](#), a botanical garden in [Auburn](#), attracts thousands of visitors each year, including many from outside Australia.^[210] The greater west also includes [Sydney Olympic Park](#), a suburb created to host the 2000 Summer Olympics, and [Sydney Motorsport Park](#), a [circuit](#) in [Eastern Creek](#).^[211] [Prospect Hill](#), a historically significant ridge in the west and the only area in Sydney with ancient [volcanic activity](#),^[212] is also listed on the State Heritage Register.^[213]

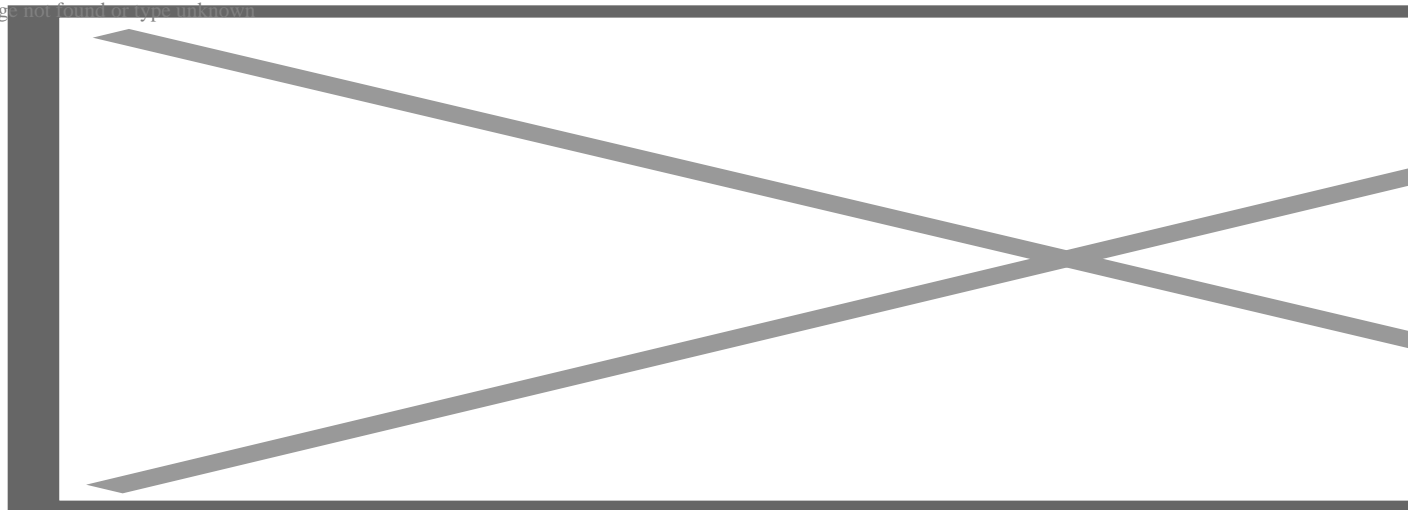
To the northwest, [Featherdale Wildlife Park](#), a zoo in [Doonside](#), near [Blacktown](#), is a major [tourist attraction](#).^[214] [Sydney Zoo](#), opened in 2019, is another prominent zoo situated in [Bungaribee](#).^[215] Established in 1799, the [Old Government House](#), a [historic house museum](#) and [tourist spot](#) in Parramatta, was included in the [Australian National Heritage List](#) on 1 August 2007 and [World Heritage List](#) in 2010 (as part of the 11 penal sites constituting the [Australian Convict Sites](#)), making it the only site in greater western Sydney to be featured in such lists.^[216] The house is Australia's oldest surviving public building.^[217]

Further to the southwest is the region of Macarthur and the city of [Campbelltown](#), a significant population centre until the 1990s considered a region separate to Sydney proper. [Macarthur Square](#), a shopping complex in Campbelltown, has become one of the largest shopping complexes in Sydney.^[218] The southwest also features [Bankstown Reservoir](#), the oldest elevated reservoir constructed in [reinforced concrete](#) that is still in use and is listed on the State Heritage Register.^[219] The southwest is home to one of Sydney's oldest trees, the [Bland Oak](#), which was planted in the 1840s by [William Bland](#) in [Carramar](#).^[220]

Urban structure

[\[edit\]](#)

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The [Sydney CBD](#) with the [Opera House](#) and [Harbour Bridge](#). Sydney is home to the most high-rise buildings in the nation.^[221]

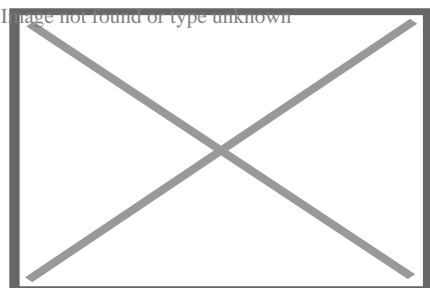
Architecture

[\[edit\]](#)

See also: [Architecture of Sydney](#), [List of heritage houses in Sydney](#), and [List of tallest buildings in Sydney](#)

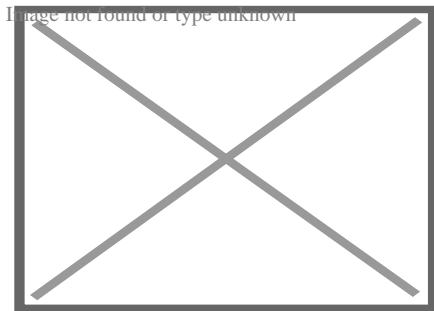
The earliest structures in the colony were built to the bare minimum of standards. Governor Macquarie set ambitious targets for the design of new construction projects. The city now has a world heritage listed building, several national heritage listed buildings, and dozens of Commonwealth heritage listed buildings as evidence of the survival of Macquarie's ideals.^[222]^[223]^[224]

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York Street is an example of a city street in Sydney with an array of intact Victorian heritage architecture.

In 1814, the Governor called on a convict named **Francis Greenway** to design **Macquarie Lighthouse**.^[225] The lighthouse's **Classical** design earned Greenway a pardon from Macquarie in 1818 and introduced a culture of refined architecture that remains to this day.^[226] Greenway went on to design the **Hyde Park Barracks** in 1819 and the **Georgian** style **St James's Church** in 1824.^{[227][228]} **Gothic-inspired architecture** became more popular from the 1830s. **John Verge**'s **Elizabeth Bay House** and **St Philip's Church** of 1856 were built in **Gothic Revival** style along with **Edward Blore**'s **Government House** of 1845.^{[229][230]} **Kirribilli House**, completed in 1858, and **St Andrew's Cathedral**, Australia's oldest cathedral,^[231] are rare examples of **Victorian Gothic** construction.^{[229][232]}

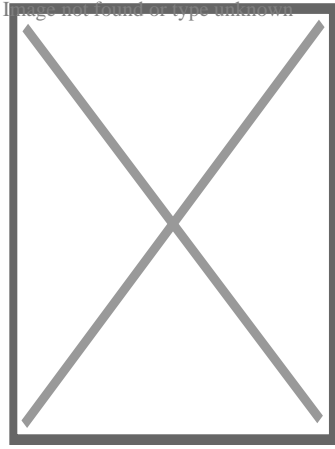


General Post Office

From the late 1850s there was a shift towards Classical architecture. **Mortimer Lewis** designed the **Australian Museum** in 1857.^[233] The **General Post Office**, completed in 1891 in **Victorian Free Classical** style, was designed by **James Barnett**.^[234] Barnett also oversaw the 1883 reconstruction of Greenway's Macquarie Lighthouse.^{[225][226]} **Customs House** was built in 1844.^[235] The neo-Classical and **French Second Empire** style **Town Hall** was completed in 1889.^{[236][237]} **Romanesque** designs gained favour from the early 1890s. **Sydney Technical College** was completed in 1893 using both Romanesque Revival and **Queen Anne** approaches.^[238] The **Queen Victoria Building** was designed in Romanesque Revival fashion by **George McRae**; completed in 1898,^[239] it accommodates 200 shops across its three storeys.^[240]

As the wealth of the settlement increased and Sydney developed into a metropolis after Federation in 1901, its buildings became taller. Sydney's first tower was Culwulla Chambers which topped out at 50 m (160 ft) making 12 floors. The Commercial Traveller's Club, built in 1908, was of similar height at 10 floors. It was built in a brick stone veneer and demolished in 1972.^[241] This heralded a change in Sydney's cityscape and with the lifting of height restrictions in the 1960s there came a surge of high-rise construction.^[242]

The Great Depression had a tangible influence on Sydney's architecture. New structures became more restrained with far less ornamentation. The most notable architectural feat of this period is the Harbour Bridge. Its steel arch was designed by **John Bradfield** and completed in 1932. A total of 39,000 tonnes of structural steel span the 503 m (1,650 ft) between Milsons Point and **Dawes Point**.^{[243][244]}



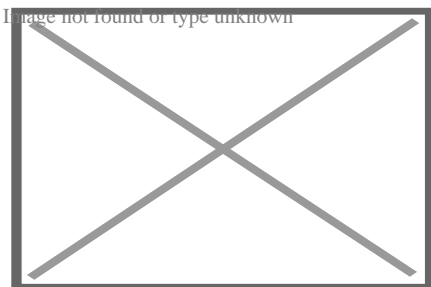
Frank Gehry's Dr Chau Chak Wing Building

Modern and International architecture came to Sydney from the 1940s. Since its completion in 1973 the city's Opera House has become a World Heritage Site and one of the world's most renowned pieces of Modern design. Jørn Utzon was awarded the Pritzker Prize in 2003 for his work on the Opera House.[245] Sydney is home to Australia's first building by renowned Canadian-American architect Frank Gehry, the Dr Chau Chak Wing Building (2015). An entrance from The Goods Line—a pedestrian pathway and former railway line—is located on the eastern border of the site.

Contemporary buildings in the CBD include Citigroup Centre,[246] Aurora Place,[247] Chifley Tower,[248][249] the Reserve Bank building,[250] Deutsche Bank Place,[251] MLC Centre,[252] and Capita Centre.[253] The tallest structure is Sydney Tower, designed by Donald Crone and completed in 1981.[254] Due to the proximity of Sydney Airport, a maximum height restriction was imposed, now sitting at 330 metres (1083 feet).[255] Green bans and heritage overlays have been in place since at least 1977 to protect Sydney's heritage after controversial demolitions in the 1970s.[256]

Housing

[edit]



Terraces in Kirribilli

Sydney surpasses both [New York City](#) and [Paris](#) real estate prices, having some of the most expensive in the world.^{[257][258]} The city remains Australia's most expensive housing market, with the median house price at \$1,595,310 as of December 2023^[259]

There were 1.83 million dwellings in Sydney in 2021 including 900,000 (54%) detached houses, 218,000 (13%) semi-detached terrace houses and 550,000 (33%) units and apartments.^[260] Whilst terrace houses are common in the inner city areas, detached houses dominate the landscape in the outer suburbs. Due to environmental and economic pressures, there has been a noted trend towards denser housing, with a 30% increase in the number of apartments between 1996 and 2006.^[261] Public housing in Sydney is managed by the [Government of New South Wales](#).^[262] Suburbs with large concentrations of public housing include [Claymore](#), [Macquarie Fields](#), [Waterloo](#), and [Mount Druitt](#).

A range of heritage housing styles can be found throughout Sydney. Terrace houses are found in the inner suburbs such as [Paddington](#), [The Rocks](#), [Potts Point](#) and [Balmain](#), many of which have been the subject of [gentrification](#).^{[263][264]} These terraces, particularly those in suburbs such as The Rocks, were historically home to Sydney's miners and labourers. In the present day, terrace houses now make up some of the most valuable real estate in the city.^[265] Surviving large mansions from the Victorian era are mostly found in the oldest suburbs, such as [Double Bay](#), [Darling Point](#), [Rose Bay](#) and [Strathfield](#).^[266]

[Federation](#) homes, constructed around the time of Federation in 1901, are located in a large number of suburbs that developed thanks to the arrival of railways in the late 19th century, such as [Penshurst](#) and [Turramurra](#), and in large-scale planned "garden suburbs" such as [Haberfield](#). Workers cottages are found in [Surry Hills](#), [Redfern](#), and [Balmain](#). [California bungalows](#) are common in [Ashfield](#), [Concord](#), and [Beecroft](#). Larger modern homes are predominantly found in the outer suburbs, such as [Stanhope Gardens](#), [Kellyville Ridge](#), [Bella Vista](#) to the northwest, [Bossley Park](#), [Abbotsbury](#), and [Cecil Hills](#) to the west, and [Hoxton Park](#), [Harrington Park](#), and [Oran Park](#) to the southwest.^[267]

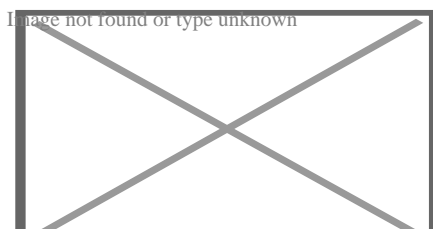
Parks and open spaces

^{[[edit](#)]}

Main article: [Parks in Sydney](#)

The [Anzac War Memorial](#) in [Hyde Park](#) is a public memorial dedicated to the [Australian Imperial Force](#) of [World War I](#).

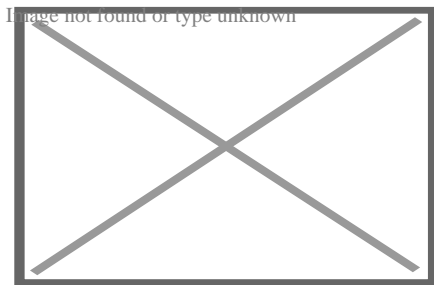
The [Royal Botanic Garden](#) is the most iconic green space in the region, hosting both scientific and leisure activities.^[268] There are 15 separate parks under the City administration.^[269] Parks within the city centre include [Hyde Park](#), [The Domain](#) and [Prince Alfred Park](#).



The **Centennial Parklands** is the largest park in the City of Sydney, comprising 189 ha (470 acres).[270]

The **Centennial Parklands** is the largest park in the City of Sydney, comprising 189 ha (470 acres).

The inner suburbs include **Centennial Park** and **Moore Park** in the east (both within the City of Sydney local government area), while the outer suburbs contain **Sydney Park** and Royal National Park in the south, **Ku-ring-gai Chase National Park** in the north, and **Western Sydney Parklands** in the west, which is **one of the largest urban parks** in the world. The Royal National Park was proclaimed in 1879 and with 13,200 ha (51 sq mi) is the second oldest national park in the world.[271]



The **Anzac War Memorial** in **Hyde Park** is a public memorial dedicated to the achievement of the **Australian Imperial Force** of **World War I**. [272]

Hyde Park is the oldest parkland in the country.[273] The largest park in the Sydney metropolitan area is Ku-ring-gai Chase National Park, established in 1894 with an area of 15,400 ha (59 sq mi).[274] It is regarded for its well-preserved records of indigenous habitation – more than 800 rock engravings, cave drawings and middens.[275]

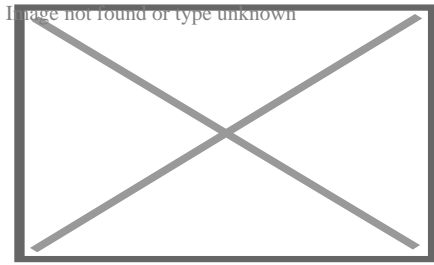
The area now known as The Domain was set aside by Governor Arthur Phillip in 1788 as his private reserve.[276] Under the orders of Macquarie the land to the immediate north of The Domain became the Royal Botanic Garden in 1816. This makes them the oldest botanic garden in Australia.[276] The Gardens host scientific research with herbarium collections, a library and laboratories.[277] The two parks have a total area of 64 ha (0.2 sq mi) with 8,900 individual plant species and receive over 3.5 million annual visits.[278]

To the south of The Domain is Hyde Park, the oldest public parkland in Australia which measures 16.2 ha (0.1 sq mi).[279] Its location was used for both relaxation and **grazing** of animals from the earliest days of the colony.[280] Macquarie dedicated it in 1810 for the "recreation and amusement of the inhabitants of the town" and named it in honour of **Hyde Park** in **London**.

Economy

[edit]

Main article: **Economy of Sydney**



The **central business district**. Sydney is the financial and economic centre of Australia, having the largest economy and contributing a quarter of Australia's total GDP.[281]

Researchers from **Loughborough University** have ranked Sydney amongst the top ten world cities that are highly integrated into the global economy.[282] The Global Economic Power Index ranks Sydney eleventh in the world.[283] The Global Cities Index recognises it as fourteenth in the world based on global engagement.[284] There is a significant concentration of foreign banks and multinational corporations in Sydney and the city is promoted as Australia's financial capital and one of **Asia Pacific's** leading financial hubs.[285][286]

The prevailing economic theory during early colonial days was **mercantilism**, as it was throughout most of Western Europe.[287] The economy struggled at first due to difficulties in cultivating the land and the lack of a stable monetary system. Governor Macquarie created **two coins** from every **Spanish silver dollar** in circulation.[287] The economy was **capitalist** in nature by the 1840s as the proportion of free settlers increased, the maritime and wool industries flourished, and the powers of the **East India Company** were curtailed.[287]

Wheat, gold, and other minerals became export industries towards the end of the 1800s.[287] Significant capital began to flow into the city from the 1870s to finance roads, railways, bridges, docks, courthouses, schools and hospitals. **Protectionist** policies after **federation** allowed for the creation of a manufacturing industry which became the city's largest employer by the 1920s.[287] These same policies helped to relieve the effects of the Great Depression during which the unemployment rate in New South Wales reached as high as 32%.[287] From the 1960s onwards Parramatta gained recognition as the city's second CBD and finance and tourism became major industries and sources of employment.[287]

Sydney's nominal gross domestic product was AU\$400.9 billion and AU\$80,000 per capita[288] in 2015.[289][286] Its gross domestic product was AU\$337 billion in 2013, the largest in Australia.[289] The financial and insurance services industry accounts for 18.1% of gross product, ahead of professional services with 9% and manufacturing with 7.2%. The creative and technology sectors are also focus industries for the City of Sydney and represented 9% and 11% of its economic output in 2012.[290][291]

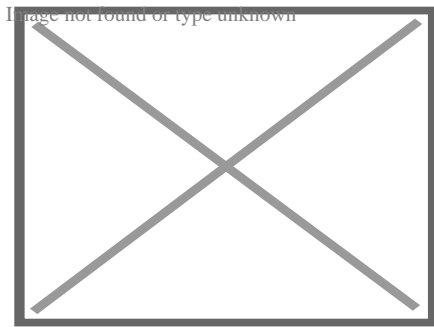
Businesses

[edit]

There were 451,000 businesses based in Sydney in 2011, including 48% of the top 500 companies in Australia and two-thirds of the regional headquarters of multinational corporations. [292] Global companies are attracted to the city in part because its time zone spans the closing of business in North America and the opening of business in Europe. Most foreign companies in Sydney maintain significant sales and service functions but comparably less production, research, and development capabilities. [293] There are 283 multinational companies with regional offices in Sydney. [294]

Domestic economics

[edit]



Pitt Street, a major street in the **CBD**, runs from **Circular Quay** in the north to **Waterloo** in the south, and is home to many large high-end retailers. [295]

Sydney has been ranked between the fifteenth and the fifth most expensive city in the world and is the most expensive city in Australia. [296] Of the 15 categories only measured by UBS in 2012, workers receive the seventh highest wage levels of 77 cities in the world. [296] Working residents of Sydney work an average of 1,846 hours per annum with 15 days of leave. [296]

The labour force of Greater Sydney Region in 2016 was 2,272,722 with a participation rate of 61.6%. [297] It comprised 61.2% full-time workers, 30.9% part-time workers, and 6.0% unemployed individuals. [260][298] The largest reported occupations are professionals, clerical and administrative workers, managers, technicians and trades workers, and community and personal service workers. [260] The largest industries by employment across Greater Sydney are Health Care and Social Assistance (11.6%), Professional Services (9.8%), Retail Trade (9.3%), Construction (8.2%), Education and Training (8.0%), Accommodation and Food Services (6.7%), and Financial and Insurance Services (6.6%). [2] The Professional Services and Financial and Insurance Services industries account for 25.4% of employment within the City of Sydney. [299]

In 2016, 57.6% of working-age residents had a weekly income of less than \$1,000 and 14.4% had a weekly income of \$1,750 or more. [300] The median weekly income for the same period

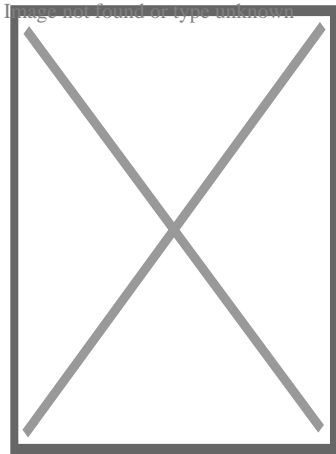
was \$719 for individuals, \$1,988 for families, and \$1,750 for households.[301]

Unemployment in the City of Sydney averaged 4.6% for the decade to 2013, much lower than the current rate of unemployment in Western Sydney of 7.3%.[286][302] Western Sydney continues to struggle to create jobs to meet its population growth despite the development of commercial centres like Parramatta. Each day about 200,000 commuters travel from Western Sydney to the CBD and suburbs in the east and north of the city.[302]

Home ownership in Sydney was less common than renting prior to the Second World War but this trend has since reversed.[261] Median house prices have increased by an average of 8.6% per annum since 1970.[303][304] The median house price in March 2014 was \$630,000.[305] The primary cause of rising prices is the increasing cost of land and scarcity.[306] 31.6% of dwellings in Sydney are rented, 30.4% are owned outright and 34.8% are owned with a mortgage.[260] 11.8% of mortgagees in 2011 had monthly loan repayments of less than \$1,000 and 82.9% had monthly repayments of \$1,000 or more.[2] 44.9% of renters for the same period had weekly rent of less than \$350 whilst 51.7% had weekly rent of \$350 or more. The median weekly rent in Sydney in 2011 was \$450.[2]

Financial services

[edit]



State Savings Bank

Macquarie gave a charter in 1817 to form the first bank in Australia, the **Bank of New South Wales**.[307] New private banks opened throughout the 1800s but the financial system was unstable. Bank collapses were frequent and a crisis point was reached in 1893 when 12 banks failed.[307]

The Bank of New South Wales exists to this day as **Westpac**.[308] The Commonwealth Bank of Australia was formed in Sydney in 1911 and began to issue notes backed by the resources of the nation. It was replaced in this role in 1959 by the **Reserve Bank of Australia**, also based in

Sydney.^[307] The **Australian Securities Exchange** began operating in 1987 and with a market capitalisation of \$1.6 trillion is now one of the ten largest exchanges in the world.^[309]

The Financial and Insurance Services industry now constitutes 43% of the economic product of the City of Sydney.^[285] Sydney makes up half of Australia's finance sector and has been promoted by consecutive Commonwealth Governments as **Asia Pacific's** leading financial centre.^{[20][21][310]} In the 2017 **Global Financial Centres Index**, Sydney was ranked as having the eighth most competitive financial centre in the world.^[311]

In 1985 the Federal Government granted 16 banking licences to foreign banks and now 40 of the 43 foreign banks operating in Australia are based in Sydney, including the **People's Bank of China**, **Bank of America**, **Citigroup**, **UBS**, **Mizuho Bank**, **Bank of China**, **Banco Santander**, **Credit Suisse**, **Standard Chartered**, **State Street**, **HSBC**, **Deutsche Bank**, **Barclays**, **Royal Bank of Canada**, **Société Générale**, **Royal Bank of Scotland**, **Sumitomo Mitsui**, **ING Group**, **BNP Paribas**, and **Investec**.^{[285][307][312][313]}

Manufacturing

^[edit]

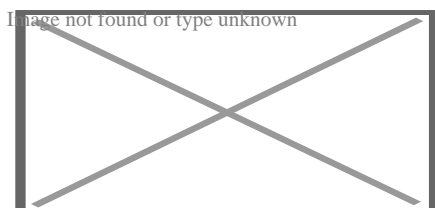
Main article: **Manufacturing in Australia**

Sydney has been a manufacturing city since the 1920s. By 1961 the industry accounted for 39% of all employment and by 1970 over 30% of all Australian manufacturing jobs were in Sydney.^[314] Its status has declined in recent decades, making up 12.6% of employment in 2001 and 8.5% in 2011.^{[2][314]} Between 1970 and 1985 there was a loss of 180,000 manufacturing jobs.^[314] Despite this, Sydney still overtook Melbourne as the largest manufacturing centre in Australia in the 2010s,^[315] with a manufacturing output of \$21.7 billion in 2013.^[316] Observers have credited Sydney's focus on the domestic market and high-tech manufacturing for its resilience against the high **Australian dollar** of the early 2010s.^[316] The *Smithfield-Wetherill Park Industrial Estate* in **Western Sydney** is the largest **industrial estate** in the Southern Hemisphere and is the centre of manufacturing and distribution in the region.^[317]

Tourism and international education

^[edit]

Main article: **Tourism in Sydney**



Darling Harbour is a major entertainment and tourism precinct.

Sydney is a gateway to Australia for many international visitors and ranks among the top sixty most visited cities in the world.[318] It has hosted over 2.8 million international visitors in 2013, or nearly half of all international visits to Australia. These visitors spent 59 million nights in the city and a total of \$5.9 billion.[24] The countries of origin in descending order were China, New Zealand, the United Kingdom, the United States, South Korea, Japan, Singapore, Germany, Hong Kong, and India.[319]

The city also received 8.3 million domestic overnight visitors in 2013 who spent a total of \$6 billion.[319] 26,700 workers in the City of Sydney were directly employed by tourism in 2011.[320] There were 480,000 visitors and 27,500 people staying overnight each day in 2012.[320] On average, the tourism industry contributes \$36 million to the city's economy per day[320]

Popular destinations include the Sydney Opera House, the Sydney Harbour Bridge, **Watsons Bay**, **The Rocks**, Sydney Tower, **Darling Harbour**, the Royal Botanic Garden, the **Australian Museum**, the **Museum of Contemporary Art**, the **Art Gallery of New South Wales**, the **Queen Victoria Building**, **Sea Life Sydney Aquarium**, **Taronga Zoo**, **Bondi Beach**, **Luna Park** and **Sydney Olympic Park**.[321]

Major developmental projects designed to increase Sydney's tourism sector include a **casino and hotel** at Barangaroo and the redevelopment of **East Darling Harbour**, which involves a new **exhibition and convention centre**, now Australia's largest.[322][323][324]

Sydney is the highest-ranking city in the world for international students. More than 50,000 international students study at the city's universities and a further 50,000 study at its **vocational** and English language schools.[284][325] International education contributes \$1.6 billion to the local economy and creates demand for 4,000 local jobs each year.[326]

Housing affordability

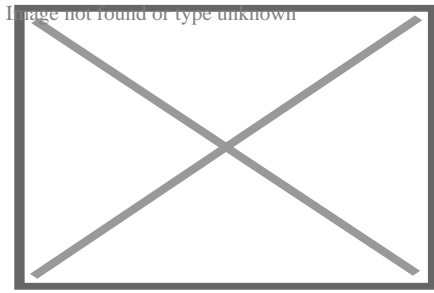
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In 2023, Sydney was ranked the least affordable city to buy a house in Australia and the second least affordable city in the world, after Hong Kong,[327] with the average Sydney house price in late 2023 costing A\$1.59 million, and the average unit price costing A\$795,000.[328] As of early 2024, Sydney is often described in the media as having a housing shortage, or suffering a housing crisis.[329][330]

Demographics

[[edit](#)]

Main article: **Demographics of Sydney**



Chinese New Year celebrations in Chinatown. Sydney is home to the nation's largest population of Chinese Australians.[331]

The population of Sydney in 1788 was less than 1,000.[332] With convict transportation it almost tripled in ten years to 2,953.[333] For each decade since 1961 the population has increased by more than 250,000.[334] The 2021 census recorded the population of Greater Sydney as 5,231,150.[1] The Australian Treasury expects the population will grow to 6.5 million in 2033–34.[335] The four most densely populated suburbs in Australia are located in Sydney with each having more than 13,000 residents per square kilometre (33,700 residents per square mile).[336] Between 1971 and 2018, Sydney experienced a net loss of 716,832 people to the rest of Australia, but its population grew due to overseas arrivals and a healthy birth rate.[337]

The median age of Sydney residents is 37 and 14.8% of people are 65 or older.[260] 48.6% of Sydney's population is married whilst 36.7% have never been married.[260] 49.0% of families are couples with children, 34.4% are couples without children, and 14.8% are single-parent families.[260]

Ancestry and immigration

[edit]

Country of birth (2021)[11]

Birthplace[N 1]	Population
Australia	2,970,737
Mainland China	238,316
India	187,810
England	153,052
Vietnam	93,778
Philippines	91,339
New Zealand	85,493
Lebanon	61,620
Nepal	59,055
Iraq	52,604
South Korea	50,702

At the 2021 census, the most common ancestries were:[11]

- o English (21.8%)
- o Australian (20.4%)[N 2]
- o Chinese (11.6%)
- o Irish (7.2%)
- o Scottish (5.6%)
- o Indian (4.9%)
- o Italian (4.3%)
- o Lebanese (3.5%)
- o Filipino (2.7%)
- o Greek (2.6%)
- o Vietnamese (2.5%)
- o German (2.2%)
- o Korean (1.4%)
- o Nepalese (1.4%)
- o Australian Aboriginal (1.4%)[339]
- o Maltese (1.1%)

Hong Kong SAR	46,182
South Africa	39,564
Italy	38,762
Indonesia	35,413
Malaysia	35,002
Fiji	34,197
Pakistan	31,025

At the 2021 census, 40.5% of Sydney's population was born overseas. Foreign countries of birth with the greatest representation are mainland China, India, England, Vietnam, Philippines and New Zealand.[11]

At the 2021 census, 1.7% of Sydney's population identified as being Indigenous — Aboriginal Australians and Torres Strait Islanders.[N 3][340]

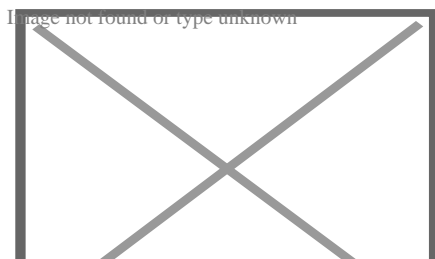
Language

[edit]

42% of households in Sydney use a language other than English, with the most common being Mandarin (5%), Arabic (4.2%), Cantonese (2.8%), Vietnamese (2.2%) and Hindi (1.5%).[340]

Religion

[edit]



St Mary's Cathedral is the **cathedral** church of the **Roman Catholic Archdiocese of Sydney**.

In 2021, **Christianity** was the largest religious affiliation at 46%, the largest denominations of which were **Catholicism** at 23.1% and **Anglicanism** at 9.2%. 30.3% of Sydney residents identified as having no religion. The most common non-Christian religious affiliations were **Islam** (6.3%), **Hinduism** (4.8%), **Buddhism** (3.8%), **Sikhism** (0.7%), and **Judaism** (0.7%). About 500 people identified with traditional Aboriginal religions.^[11]

The **Church of England** was the only recognised church before Governor Macquarie appointed official Catholic chaplains in 1820.^[341] Macquarie also ordered the construction of **churches** such as St Matthew's, St Luke's, St James's, and St Andrew's. Religious groups, alongside secular institutions, have played a significant role in education, health and charitable services throughout Sydney's history.^[342]

Crime

^[edit]

Main article: **Crime in Sydney**

Crime in Sydney is low, with *The Independent* ranking Sydney as the fifth safest city in the world in 2019.^[343] However, drug use is a significant problem. Methamphetamine is heavily consumed compared to other countries, while heroin is less common.^[344] One of the biggest crime-related issues in recent times was the introduction of **lockout laws** in February 2014,^[345] in an attempt to curb alcohol-fuelled violence. Patrons could not enter clubs or bars in the inner-city after 1:30am, and last drinks were called at 3am. The lockout laws were removed in January 2020.^[346]

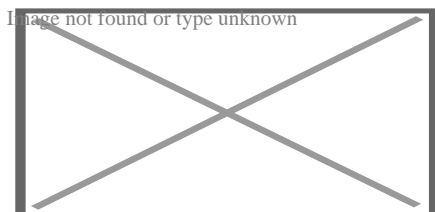
Culture

^[edit]

Main article: **Culture of Sydney**

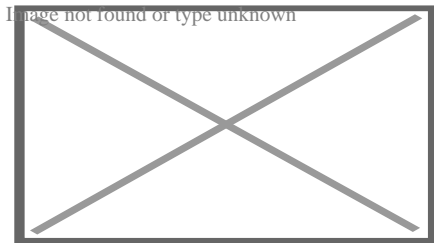
Science, art, and history

^[edit]



The **Art Gallery of New South Wales**, located in **The Domain**, is the fourth largest public gallery in Australia.

Ku-ring-gai Chase National Park is rich in **Indigenous Australian** heritage, containing around 1,500 pieces of **Aboriginal rock art** – the largest cluster of Indigenous sites in Australia. The park's indigenous sites include **petroglyphs**, art sites, **burial sites**, **caves**, marriage areas, birthing areas, **midden** sites, and tool manufacturing locations, which are dated to be around 5,000 years old. The inhabitants of the area were the **Garigal** people.[347][348] Other **rock art sites** exist in the Sydney region, such as in **Terrey Hills** and **Bondi**, although the locations of most are not publicised to prevent damage by vandalism, and to retain their quality, as they are still regarded as sacred sites by Indigenous Australians.[349]



The **State Library of New South Wales** holds the oldest library collections in Australia.

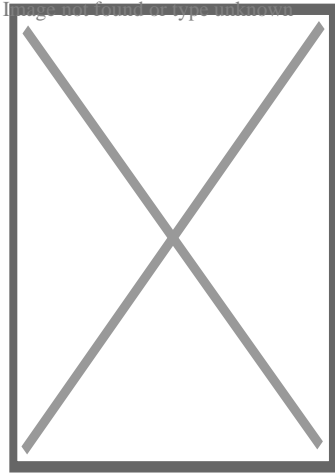
The **Australian Museum** opened in Sydney in 1827 with the purpose of collecting and displaying the natural wealth of the colony.[350] It remains Australia's oldest natural history museum. In 1995 the **Museum of Sydney** opened on the site of the first **Government House**. It recounts the story of the city's development.[351] Other museums include the **Powerhouse Museum** and the **Australian National Maritime Museum**. [352][353]

The **State Library of New South Wales** holds the oldest library collections in Australia, being established as the **Australian Subscription Library** in 1826.[354] The **Royal Society of New South Wales**, formed in 1866, encourages "studies and investigations in science, art, literature, and philosophy". It is based in a terrace house in **Darlington** owned by the **University of Sydney**. [355] The **Sydney Observatory** building was constructed in 1859 and used for astronomy and meteorology research until 1982 before being converted into a museum.[356]

The **Museum of Contemporary Art** was opened in 1991 and occupies an **Art Deco** building in **Circular Quay**. Its collection was founded in the 1940s by artist and art collector John Power and has been maintained by the University of Sydney.[357] Sydney's other significant art institution is the **Art Gallery of New South Wales** which coordinates the **Archibald Prize** for portraiture.[358] Sydney is also home to contemporary art gallery **Artspace**, housed in the historic **Gunnery Building** in **Woolloomooloo**, fronting **Sydney Harbour**. [359]

Entertainment

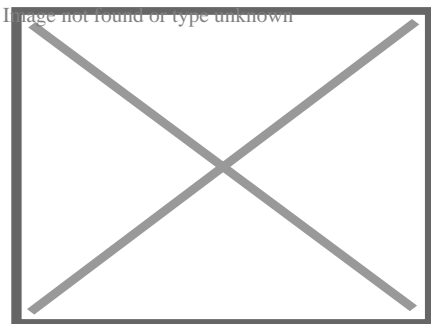
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The **State Theatre** on **Market Street** was opened in 1929.

Sydney's first commercial theatre opened in 1832 and nine more had commenced performances by the late 1920s. The live medium lost much of its popularity to the cinema during the Great Depression before experiencing a revival after World War II.[360] Prominent theatres in the city today include **State Theatre**, **Theatre Royal**, **Sydney Theatre**, **The Wharf Theatre**, and **Capitol Theatre**. **Sydney Theatre Company** maintains a roster of local, classical, and international plays. It occasionally features Australian theatre icons such as **David Williamson**, **Hugo Weaving**, and **Geoffrey Rush**. The city's other prominent theatre companies are **New Theatre**, **Belvoir**, and **Griffin Theatre Company**. Sydney is also home to **Event Cinemas**' first theatre, which opened on **George St** in 1913, under its former Greater Union brand; the theatre currently operates, and is regarded as one of Australia's busiest cinema locations.

The Sydney Opera House is the home of **Opera Australia** and **Sydney Symphony**. It has staged over 100,000 performances and received 100 million visitors since opening in 1973.[245] Two other important performance venues in Sydney are **Town Hall** and the **City Recital Hall**. The **Sydney Conservatorium of Music** is located adjacent to the Royal Botanic Garden and serves the Australian music community through education and its biannual **Australian Music Examinations Board** exams.[361]



A concert at the **Sydney Opera House**

Many writers have originated in and set their work in Sydney. Others have visited the city and commented on it. Some of them are commemorated in the **Sydney Writers Walk** at Circular Quay. The city was the headquarters for Australia's first published newspaper, the **Sydney**

Gazette.^[362] Watkin Tench's *A Narrative of the Expedition to Botany Bay* (1789) and *A Complete Account of the Settlement at Port Jackson in New South Wales* (1793) have remained the best-known accounts of life in early Sydney.^[363] Since the infancy of the establishment, much of the literature set in Sydney were concerned with life in the city's slums and working-class communities, notably William Lane's *The Working Man's Paradise* (1892), Christina Stead's *Seven Poor Men of Sydney* (1934) and Ruth Park's *The Harp in the South* (1948).^[364] The first Australian-born female novelist, Louisa Atkinson, set several novels in Sydney.^[365] Contemporary writers, such as Elizabeth Harrower, were born in the city and set most of their work there—Harrower's debut novel *Down in the City* (1957) was mostly set in a King's Cross apartment.^[366]^[367]^[368] Well known contemporary novels set in the city include Melina Marchetta's *Looking for Alibrandi* (1992), Peter Carey's *30 Days in Sydney: A Wildly Distorted Account* (1999), J. M. Coetzee's *Diary of a Bad Year* (2007) and Kate Grenville's *The Secret River* (2010). The Sydney Writers' Festival is held annually between April and May.^[369]

Filmmaking in Sydney was prolific until the 1920s when spoken films were introduced and American productions gained dominance.^[370] The Australian New Wave saw a resurgence in film production, with many notable features shot in the city between the 1970s and 80s, helmed by directors such as Bruce Beresford, Peter Weir and Gillian Armstrong.^[371] Fox Studios Australia commenced production in Sydney in 1998. Successful films shot in Sydney since then include *The Matrix*, *Lantana*, *Mission: Impossible 2*, *Moulin Rouge!*, *Star Wars: Episode II – Attack of the Clones*, *Australia*, *Superman Returns*, *The Great Gatsby* and *Anyone but You*. The National Institute of Dramatic Art is based in Sydney and has several famous alumni such as Mel Gibson, Judy Davis, Baz Luhrmann, Cate Blanchett, Hugo Weaving and Jacqueline McKenzie.^[372]

Sydney hosts several festivals throughout the year. The city's New Year's Eve celebrations are the largest in Australia.^[373] The Royal Easter Show is held every year at Sydney Olympic Park. Sydney Festival is Australia's largest arts festival.^[374] The travelling rock music festival Big Day Out originated in Sydney. The city's two largest film festivals are Sydney Film Festival and Tropfest. Vivid Sydney is an annual outdoor exhibition of art installations, light projections, and music. In 2015, Sydney was ranked the 13th top fashion capital in the world.^[375] It hosts the Australian Fashion Week in autumn. Sydney Mardi Gras has commenced each February since 1979.

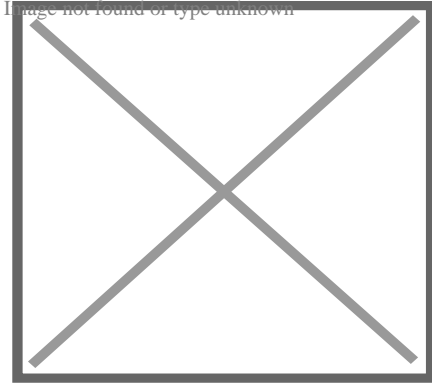
Sydney's Chinatown has had numerous locations since the 1850s. It moved from George Street to Campbell Street to its current setting in Dixon Street in 1980.^[376] Little Italy is located in Stanley Street.^[287]

Restaurants, bars and nightclubs can be found in the entertainment hubs in the Sydney CBD (Darling Harbour, Barangaroo, The Rocks and George Street), Oxford Street, Surry Hills, Newtown and Parramatta.^[377]^[378] Kings Cross was previously considered the red-light district. The Star is the city's casino and is situated next to Darling Harbour while the new Crown Sydney resort is in nearby Barangaroo.^[379]

Media

[[edit](#)]

Main article: [Media in Sydney](#)



Australia's national broadcaster, the [ABC](#), is headquartered in [Ultimo](#).

The *[Sydney Morning Herald](#)* is Australia's oldest newspaper still in print; it has been published continuously since 1831.^[380] Its competitor is *[The Daily Telegraph](#)*, in print since 1879.^[381] Both papers have Sunday tabloid editions called *[The Sun-Herald](#)* and *[The Sunday Telegraph](#)* respectively. *[The Bulletin](#)* was founded in Sydney in 1880 and became Australia's longest running magazine. It closed after 128 years of continuous publication.^[382] Sydney heralded Australia's first newspaper, the *[Sydney Gazette](#)*, published until 1842.

Each of Australia's three commercial television networks and two public broadcasters is headquartered in Sydney. [Nine's](#) offices and news studios are in [North Sydney](#), [Ten](#) is based in [Pyrmont](#), and [Seven](#) is based in [South Eveleigh](#) in [Redfern](#).^{[383][384][385][386]} The [Australian Broadcasting Corporation](#) is located in [Ultimo](#),^[387] and the [Special Broadcasting Service](#) is based in [Artarmon](#).^[388] Multiple digital channels have been provided by all five networks since 2000. [Foxtel](#) is based in [North Ryde](#) and sells subscription cable television to most of the urban area.^[389] Sydney's first [radio stations](#) commenced broadcasting in the 1920s. Radio has managed to survive despite the introduction of television and the Internet.^[390] [2UE](#) was founded in 1925 and under the ownership of Nine Entertainment is the oldest station still broadcasting.^[390] Competing stations include the more popular [2GB](#), [ABC Radio Sydney](#), [KIIS 106.5](#), [Triple M](#), [Nova 96.9](#) and [2Day FM](#).^[391]

Sport and outdoor activities

[[edit](#)]

Main article: [Sport in Sydney](#)

Sydney's earliest migrants brought with them a passion for sport but were restricted by the lack of facilities and equipment. The first organised sports were [boxing](#), [wrestling](#), and horse racing

from 1810 in [Hyde Park](#).^[392] Horse racing remains popular and events such as the [Golden Slipper Stakes](#) attract widespread attention. The first cricket club was formed in 1826 and matches were played within Hyde Park throughout the 1830s and 1840s.^[392] Cricket is a favoured sport in summer and big matches have been held at the [Sydney Cricket Ground](#) since 1878. The [New South Wales Blues](#) compete in the [Sheffield Shield](#) league and the [Sydney Sixers](#) and [Sydney Thunder](#) contest the national [Big Bash Twenty20](#) competition.

First played in Sydney in 1865, rugby grew to be the city's most popular football code by the 1880s. One-tenth of the state's population attended a New South Wales versus New Zealand rugby match in 1907.^[392] Rugby league separated from rugby union in 1908. The [New South Wales Waratahs](#) contest the [Super Rugby](#) competition, while the [Sydney Rays](#) represent the city in the [National Rugby Championship](#). The national [Wallabies](#) rugby union team competes in Sydney in international matches such as the [Bledisloe Cup](#), [Rugby Championship](#), and [World Cup](#). Sydney is home to nine of the seventeen teams in the [National Rugby League](#) competition: [Canterbury-Bankstown Bulldogs](#), [Cronulla-Sutherland Sharks](#), [Manly-Warringah Sea Eagles](#), [Penrith Panthers](#), [Parramatta Eels](#), [South Sydney Rabbitohs](#), [St George Illawarra Dragons](#), [Sydney Roosters](#), and [Wests Tigers](#). [New South Wales](#) contests the annual [State of Origin](#) series against [Queensland](#).

[Sydney FC](#) and the [Western Sydney Wanderers](#) compete in the [A-League Men](#) and [A-League Women](#) competitions. The [Sydney Swans](#) and [Greater Western Sydney Giants](#) are local [Australian rules football](#) clubs that play in the [Australian Football League](#) and the [AFL Women's](#). The [Sydney Kings](#) compete in the [National Basketball League](#). The [Sydney Uni Flames](#) play in the [Women's National Basketball League](#). The [Sydney Blue Sox](#) contest the [Australian Baseball League](#). The [NSW Pride](#) are a member of the [Hockey One League](#). The [Sydney Bears](#) and [Sydney Ice Dogs](#) play in the [Australian Ice Hockey League](#). The [Swifts](#) are competitors in the national women's netball league.

Major sporting venues

[\[edit\]](#)

[Stadium Australia](#)

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[Stadium Australia](#)

Sydney Cricket Ground

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Sydney Cricket Ground Western Sydney Stadium

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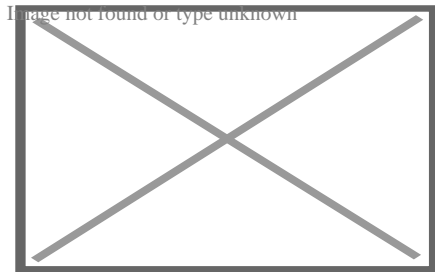
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Western Sydney Stadium Sydney Football Stadium

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Sydney Football Stadium

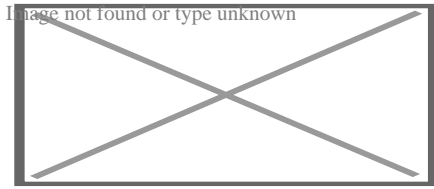


Sailing on Sydney Harbour

Women were first allowed to participate in recreational swimming when separate baths were opened at **Woolloomooloo Bay** in the 1830s. From being illegal at the beginning of the century, sea bathing gained immense popularity during the early 1900s and the first **surf lifesaving** club was established at **Bondi Beach**.^{[392][393]} **Disputes about appropriate clothing** for surf bathing surfaced occasionally and concerned men as well as women. The **City2Surf** is an annual 14 km (8.7 mi) running race from the CBD to Bondi Beach and has been held since 1971. In 2010, 80,000 runners participated which made it the largest run of its kind in the world.^[394]

Sailing races have been held on **Sydney Harbour** since 1827.^[395] Yachting has been popular amongst wealthier residents since the 1840s and the **Royal Sydney Yacht Squadron** was founded in 1862. The **Sydney to Hobart Yacht Race** is a 1,170 km (727 mi) event that starts

from Sydney Harbour on Boxing Day.[396] Since its inception in 1945 it has been recognised as one of the most difficult yacht races in the world.[397] Six sailors died and 71 vessels of 115 failed to finish in the 1998 edition.[398]



Sydney Olympic Park was built for the **2000 Olympics** and has become a major sporting and recreational precinct.

The **Royal Sydney Golf Club** is based in **Rose Bay** and since its opening in 1893 has hosted the **Australian Open** on 13 occasions.[392] **Royal Randwick Racecourse** opened in 1833 and holds several major cups throughout the year.[399]

Sydney benefitted from the construction of significant sporting infrastructure in preparation for its hosting of the 2000 Summer Olympics. The Sydney Olympic Park accommodates athletics, aquatics, tennis, hockey, archery, baseball, cycling, equestrian, and rowing facilities. It also includes the high capacity **Stadium Australia** used for rugby, soccer, and Australian rules football. The **Sydney Football Stadium** was completed in 1988 and was used for rugby and soccer matches. Sydney Cricket Ground was opened in 1878 and is used for both cricket and Australian rules football fixtures.[392]

Sydney was one of the host cities during the **2023 FIFA Women's World Cup**. Sydney Football Stadium and Stadium Australia were selected as venues, with the later hosting the **final**.[400]

The **Sydney International** tennis tournament is held here at the beginning of each year as the warm-up for **the Grand Slam in Melbourne**. Two of the most successful **tennis** players in history (**Ken Rosewall** and **Todd Woodbridge**) were born in and live in the city.

Sydney co-hosted the **FIBA Oceania Championship** in 1979, 1985, 1989, 1995, 2007, 2009 and 2011.

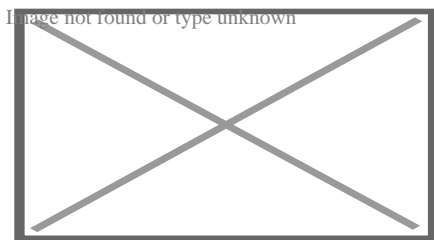
Government

[[edit](#)]

See also: **Local government areas of New South Wales**

Historical governance

[[edit](#)]



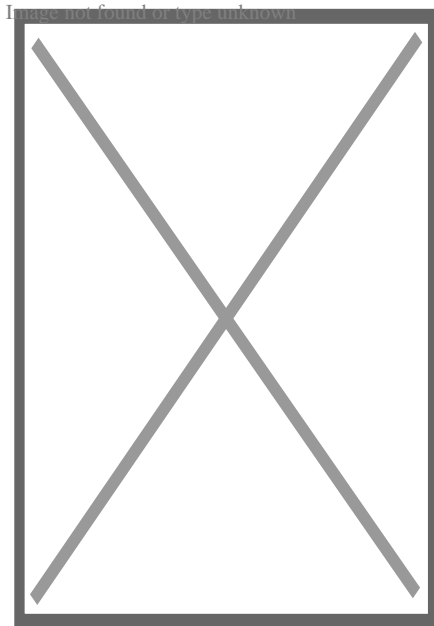
Parliament House holds the **Government of New South Wales** and is the oldest public building in Australia.

The first five governors had near autocratic power in the colony of New South Wales, subject only to the laws of England and the supervision of the Colonial Office in London. Sydney was the seat of government for the colony which encompassed over half the Australian continent.[401] The first Legislative Council met in 1826,[402] and in 1842, the imperial parliament expanded and reformed the council, making it partly elected.[403] In the same year, the town of Sydney officially became a city and an elected municipal council was established.[404][405] The council had limited powers, mostly relating to services such as street lighting and drainage.[406] Its boundaries were restricted to an area of 11.6 square kilometres, taking in the city centre and the modern suburbs of **Woolloomooloo**, **Surry Hills**, **Chippendale**, and **Pymont**. [63] As Sydney grew, other municipal councils were formed to provide local administration.[407]

In 1856, New South Wales achieved responsible government with the introduction of a bicameral parliament, based in Sydney, comprising a directly elected **Legislative Assembly** and a nominated **Legislative Council**. [408] With the federation of the Australian colonies in 1901, Sydney became the capital of the state of New South Wales and its administration was divided between the Commonwealth, State and constituent local governments.[408]

Government in the present

[edit]

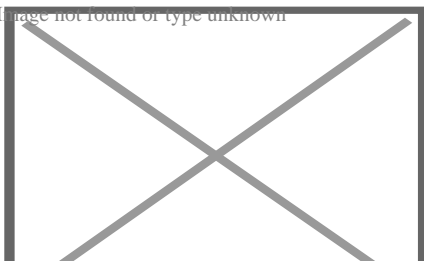


The **Sydney Town Hall** is the seat of the **City of Sydney**; the oldest **local government** in the city

In common with other Australian capital cities, Sydney has no single local government covering its whole area. **Local government areas** have responsibilities such as local roads, libraries, child care, community services and waste collection, whereas the state government retains responsibility for main roads, traffic control, public transport, policing, education, and major infrastructure project.[409] There are 33 local government areas which are wholly or mostly within Greater Sydney as defined by the Australian Statistical Geography Standard.[96][410]

- Bayside
- Canterbury-Bankstown
- Blacktown
- Blue Mountains
- Burwood
- Camden
- Campbelltown
- Canada Bay
- Central Coast
- Cumberland
- Fairfield
- Georges River
- Hawkesbury
- The Hills
- Hornsby
- Hunter's Hill
- Inner West
- Ku-ring-gai
- Lane Cove
- Liverpool
- Mosman
- North Sydney
- Northern Beaches
- Parramatta
- Penrith
- Randwick
- Ryde
- Strathfield
- Sutherland
- Sydney
- Waverley
- Willoughby
- Wollondilly
- Woollahra

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Government House is the official residence of the **Governor of New South Wales**

Sydney is the location of the secondary official residences of the **Governor-General** and **Prime Minister** – **Admiralty House** and **Kirribilli House** respectively.[411] The **Parliament of New South Wales** sits in **Parliament House** on **Macquarie Street**. This building was completed in 1816 and first served as a hospital. The Legislative Council moved into its northern wing in 1829 and by 1852 had entirely supplanted the surgeons from their quarters.[412] Several additions have been made as the Parliament has expanded, but it retains its original **Georgian** façade.[413] **Government House** was completed in 1845 and has served as the home of 25 Governors and 5 Governors-General.[414] The **Cabinet of Australia** also **meets** in Sydney when needed.

The highest court in the state is the Supreme Court of New South Wales, located in Queen's Square.[415] The city is also the home of numerous branches of the intermediate **District Court of New South Wales** and the lower **Local Court of New South Wales**.[416]

In the past, the state has tended to resist amalgamating Sydney's more populated local government areas as merged councils could pose a threat to its governmental power.[417] Established in 1842, the City of Sydney is one such local government area and includes the CBD and some adjoining inner suburbs.[418] It is responsible for fostering development in the local area, providing local services (waste collection and recycling, libraries, parks, sporting facilities), promoting the interests of residents, supporting organisations that target the local community, and attracting and providing infrastructure for commerce, tourism, and industry.[419] The City of Sydney is led by an elected Council and **Lord Mayor**.[420]

In federal politics, Sydney was initially considered as a **possibility for Australia's capital city**; the newly created city of **Canberra** ultimately filled this role.[421] Seven Australian **Prime Ministers have been born in** Sydney, more than any other city, including first Prime Minister **Edmund Barton** and current Prime Minister **Anthony Albanese**.

Essential public emergency services are provided and managed by the State Government. Greater Sydney is served by:

- **New South Wales Police Force**
- **New South Wales Ambulance**
- **Fire and Rescue NSW**

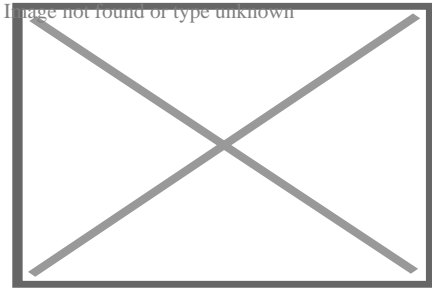
Infrastructure

[[edit](#)]

Education

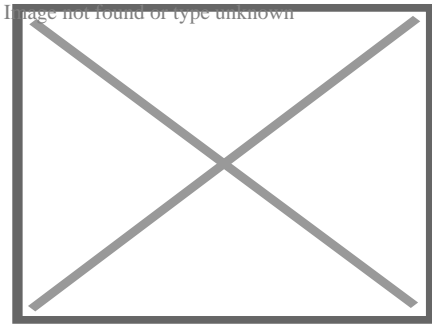
[[edit](#)]

Main article: **Education in Sydney**



The [University of Sydney](#)

Education became a focus for the colony from the 1870s when public schools began to form and schooling became compulsory.[422] By 2011, 90% of working age residents had completed some schooling and 57% had completed the highest level of school.[2] 1,390,703 people were enrolled in an educational institution in 2011 with 45.1% of these attending school and 16.5% studying at a university.[260] Undergraduate or postgraduate qualifications are held by 22.5% of working age Sydney residents and 40.2% of working age residents of the City of Sydney [2][423] The most common fields of tertiary qualification are commerce (22.8%), engineering (13.4%), society and culture (10.8%), health (7.8%), and education (6.6%).[2]



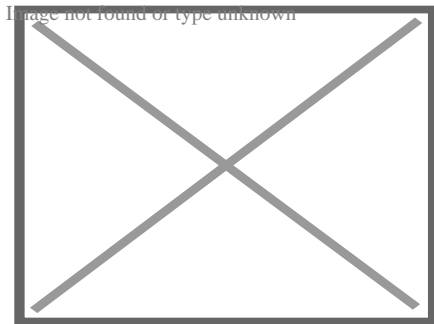
The [University of Technology Sydney](#)

There are six public universities based in Sydney: The [University of Sydney](#), [University of New South Wales](#), [University of Technology Sydney](#), [Macquarie University](#), [Western Sydney University](#), and [Australian Catholic University](#). Five public universities maintain secondary campuses in the city: the [University of Notre Dame Australia](#), [Central Queensland University](#), [Victoria University](#), [University of Wollongong](#), and [University of Newcastle](#). [Charles Sturt University](#) and [Southern Cross University](#) operate secondary campuses only designated for international students. In addition, four public universities offer programs in Sydney through third-party providers: [University of the Sunshine Coast](#), [La Trobe University](#), [Federation University Australia](#) and [Charles Darwin University](#). 5.2% of residents of Sydney are attending a university.[424] The University of New South Wales and the University of Sydney are ranked equal 19th in the world,[425] the University of Technology Sydney is ranked in the top 100,[425] while Macquarie University is ranked 237, and Western Sydney University is ranked 474.[426] Sydney has public, denominational, and independent schools. 7.8% of Sydney residents are attending primary school and 6.4% are enrolled in secondary school.[424] There are 935 public preschool, primary, and secondary schools in Sydney that are administered by the [New South Wales Department of Education](#). [427] 14 of the 17 selective secondary schools in New South Wales are based in Sydney.[428]

Public vocational education and training in Sydney are run by [TAFE New South Wales](#) and began with the opening of the [Sydney Technical College](#) in 1878.^[238] The college became the [Sydney Institute](#) in 1992 and now operates alongside its sister TAFE facilities across the Sydney metropolitan area, namely the [Northern Sydney Institute](#), the [Western Sydney Institute](#), and the [South Western Sydney Institute](#). At the 2011 census, 2.4% of Sydney residents are enrolled in a TAFE course.^[424]

Health

[\[edit\]](#)



The [Sydney Hospital](#), completed in 1816

The first hospital in the new colony was a collection of tents at [The Rocks](#). Many of the convicts that survived the trip suffered from [dysentery](#), smallpox, [scurvy](#), and [typhoid](#). Healthcare facilities remained inadequate despite the arrival of a prefabricated hospital with the [Second Fleet](#) and the construction of new hospitals at Parramatta, [Windsor](#), and [Liverpool](#) in the 1790s.^[429]

Governor Macquarie arranged for the construction of [Sydney Hospital](#), completed in 1816.^[429] Parts of the facility have been repurposed for use as [Parliament House](#) but the hospital itself still operates. The city's first emergency department was established at Sydney Hospital in 1870. Demand for emergency medical care increased from 1895 with the introduction of an ambulance service.^[429] The Sydney Hospital also housed Australia's first teaching facility for nurses, the Nightingale Wing, established with the input of [Florence Nightingale](#) in 1868.^[430]

Healthcare was recognised as a right in the early 1900s and Sydney's public hospitals came under the oversight of the Government of New South Wales.^[429] The administration of healthcare across Sydney is handled by eight local health districts: Central Coast, Illawarra Shoalhaven, Sydney, Nepean Blue Mountains, Northern Sydney, South Eastern Sydney, South Western Sydney, and Western Sydney.^[431] The [Prince of Wales Hospital](#) was established in 1852 and became the first of several major hospitals to be opened.^[432] [St Vincent's Hospital](#) was founded in 1857,^[176] followed by [Royal Alexandra Hospital for Children](#) in 1880,^[433] the [Prince Henry Hospital](#) in 1881,^[434] the [Royal Prince Alfred Hospital](#) in 1882,^[435] the [Royal North Shore Hospital](#) in 1885,^[436] the [St George Hospital](#) in 1894,^[437] and the [Nepean](#)

Hospital in 1895.[438] Westmead Hospital in 1978 was the last major facility to open.[439]

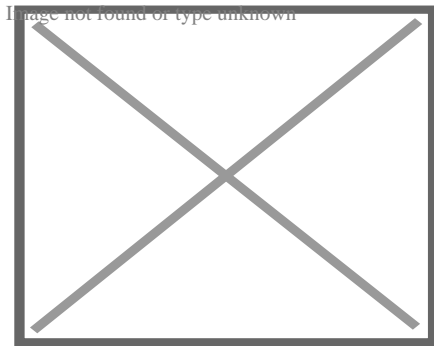
Transport

[edit]

Main article: [Transport in Sydney](#)

Roads

[edit]



[Light Horse Interchange](#), the largest of its kind in Australia

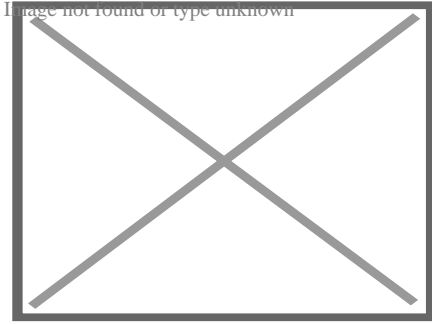
The motor vehicle, more than any other factor, has determined the pattern of Sydney's urban development since [World War II](#).^[440] The growth of low-density housing in the city's outer suburbs has made car ownership necessary for hundreds of thousands of households. The percentage of trips taken by car has increased from 13% in 1947 to 50% in 1960 and 70% in 1971.^[440] The most important roads in Sydney were the nine [Metroads](#), including the 110 km (68 mi) [Sydney Orbital Network](#). Sydney's reliance on motor vehicles and its sprawling road network has been criticised by proponents of mass public transport and high-density housing^{[441][442][443]} The [Light Horse Interchange](#) in western Sydney is the largest in the southern hemisphere.^[444]

There can be up to 350,000 cars using Sydney's roads simultaneously during peak hour, leading to significant traffic congestion.^[440] 84.9% of Sydney households own a motor vehicle and 46.5% own two or more.^[260] With a rate of 26.3% in 2014, Sydney has the highest utilisation of public transport for travel to work of any Australian capital.^[445] In contrast, in 2014 only 25.2% of working residents in the City of Sydney use a car, whilst 15.8% take a train, 13.3% use a bus, and 25.3% walk.^[446] Several significant infrastructure projects have been completed since. The CBD features a [series of alleyways and lanes](#) that provide [off-street](#) vehicular access to city buildings and as well as pedestrian routes through city buildings.^[447]

Suburban trains

[\[edit\]](#)

Main article: [Sydney Trains](#)



Central station is the busiest railway station in Australia, and the city's main public transport hub.

Established in 1906, **Central station** is the largest and busiest railway station in the state and is the main hub of the city's **rail network**.^[448] **Sydney Trains** is the **suburban rail** service. Its tracks form part of the New South Wales railway network. It serves 168 stations across the city and had an annual ridership of 302 million passenger journeys in 2023–24.^[449] Sydney's railway was first constructed in 1854 with progressive extension to the network to serve both freight and passengers. The main station is the **Central railway station** in the southern part of the CBD. In the 1850s and 1860s, the railway reached areas that are now outer suburbs of Sydney.^[440]

Metro

[\[edit\]](#)

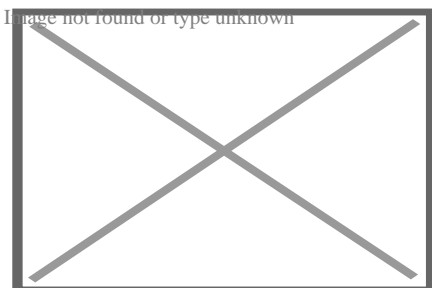
Main article: [Sydney Metro](#)

Sydney Metro, a driverless **rapid transit** system separate from the suburban commuter network, commenced operation in May 2019 and was extended through the city to Sydenham on 19 August 2024. This line will be extended to Bankstown in 2025 and a new line through the inner west to Parramatta is planned to be built by 2030.^[450]^[451] It currently serves 21 stations. A line to serve the greater west is planned for 2026 and will include a station for the **second international airport**.

Light rail

[\[edit\]](#)

Main article: [Light rail in Sydney](#)



The **CBD and South East Light Rail** connects Sydney's CBD with the Eastern Suburbs.

Sydney once had one of the **largest tram networks** in the British Empire after London.^[452] It served routes covering 291 km (181 mi). The internal combustion engine made buses more flexible than trams and consequently more popular, leading to the progressive closure of the network with the final tram operating in 1961.^[440] From 1930 there were 612 buses across Sydney carrying 90 million passengers per annum.^[453]

In 1997, the **Inner West Light Rail** opened between Central station and **Wentworth Park**. It was extended to **Lilyfield** in 2000 and then **Dulwich Hill** in 2014. It links the **Inner West** and **Darling Harbour** with **Central station** and facilitated 9.1 million journeys in the 2016–17 financial year.^[454] A second, the **CBD and South East Light Rail** 12 km (7.5 mi) line serving the CBD and Eastern Suburbs opened in 2019–2020.^[455] A **light rail line** serving Western Sydney opened in 2024.

Buses

^[edit]

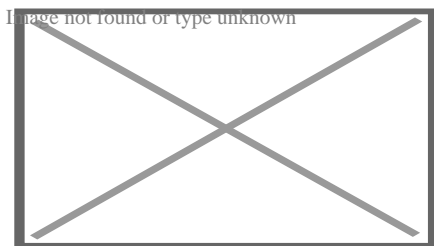
Main article: **Buses in Sydney**

Bus services are conducted by private operators under contract to **Transport for NSW**. Integrated tickets called **Opal cards** operate on bus routes. In total, nearly 225 million boardings were recorded across the bus network.^[456] **NightRide** is a nightly bus service that operate between midnight and 5am.

Ferries

^[edit]

Main articles: **Sydney Ferries**, **List of Sydney Harbour ferries**, and **Timeline of Sydney Harbour ferries**



A **Freshwater-class ferry** Departing **Circular Quay** to Manly

At the time the Sydney Harbour Bridge opened in 1932, the city's **ferry service** was the largest in the world.^[457] Patronage declined from 37 million passengers in 1945 to 11 million in 1963 but has recovered somewhat in recent years.^[440] From its hub at **Circular Quay**, the **ferry network**

extends from **Manly** to **Parramatta**.^[457] Ferries in Sydney are operated by **Transdev Sydney Ferries** and operates 10 routes.

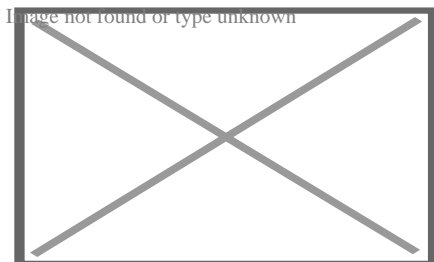
Airports

[\[edit\]](#)

Sydney Airport, officially "Sydney Kingsford-Smith Airport", is located in **Mascot**. It services 46 international and 23 domestic destinations.^[26] As the busiest airport in Australia, it handled 37.9 million passengers in 2013 and 530,000 tonnes of freight in 2011.^[26] A second airport, **Western Sydney Airport**, is under construction at **Badgerys Creek** and will open in late 2026,^[458] at a cost of \$2.5 billion.^[459] Notably, it will not feature a **curfew**, unlike Sydney Kingsford-Smith Airport, which imposes a suspension of all aircraft operations between 11 pm and 6 am. **Bankstown Airport** is Sydney's second busiest airport, and serves general aviation, charter and some scheduled cargo flights. Bankstown is also the fourth busiest airport in Australia by number of aircraft movements.^[460] **Port Botany** has surpassed Port Jackson as the city's major shipping port. Cruise ship terminals are located at **Sydney Cove** and **White Bay**.

Utilities

[\[edit\]](#)



Warragamba Dam is Sydney's largest water supply dam.

Obtaining sufficient fresh water was difficult during early colonial times. A catchment called the **Tank Stream** sourced water from what is now the CBD but was little more than an open sewer by the end of the 1700s.^[461] The Botany Swamps Scheme was one of several ventures during the mid-1800s that saw the construction of wells, tunnels, steam pumping stations, and small dams to service Sydney's growing population.^[461]

The **Upper Nepean Scheme** came into operation in 1886. It transports water 100 km (62 mi) from the **Nepean**, **Cataract**, and **Cordeaux** rivers and continues to service about 15% of Sydney's water needs.^[461] Dams were built on these three rivers between 1907 and 1935.^[461] In 1977 the **Shoalhaven Scheme** brought several more dams into service.^[462]

The state-owned corporation [WaterNSW](#) now manages eleven major dams: [Warragamba](#), one of the largest domestic water supply dams in the world,^[463] [Woronora](#), [Cataract](#), [Cordeaux](#), [Nepean](#), [Avon](#), [Wingecarribee Reservoir](#), [Fitzroy Falls Reservoir](#), [Tallowa](#), the [Blue Mountains Dams](#), and [Prospect Reservoir](#).^[464] Water is collected from five catchment areas covering 16,000 km² (6,178 sq mi) and total storage amounts to 2.6 TL (0.6 cu mi).^[464] The [Sydney Desalination Plant](#) came into operation in 2010.^[461] WaterNSW supplies bulk water to [Sydney Water](#), a state-owned corporation that operates water distribution, sewerage and storm water management services.

Sydney's electricity infrastructure is maintained by [Ausgrid](#) and [Endeavour Energy](#).^[465]^[466] Their combined networks include over 815,000 poles and 83,000 km (52,000 mi) of cables. [Submarine communications cable](#) systems in Sydney include the [Australia–Japan Cable](#), [Telstra Endeavour](#) and the [Southern Cross Cable](#), which link Australia and countries in the Pacific.^[467]^[468]^[469]

Environmental issues and pollution reduction

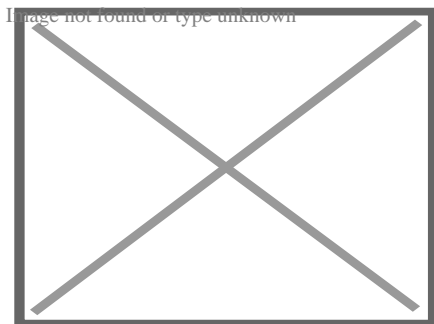
[\[edit\]](#)

Main article: [Environmental issues in Australia](#)

Further information: [Climate change in Australia](#) and [Renewable energy in Australia](#)

Air quality

[\[edit\]](#)



[George Street](#) and bushfire smoke in December 2019

As [climate change](#), [greenhouse gas emissions](#) and pollution have become a major issue for Australia, Sydney has in the past been criticised for its lack of focus on reducing pollution and emissions and maintaining [water quality](#).^[470] The release of the Metropolitan Air Quality Scheme (MAQS) led to a broader understanding of the causation of pollution in Sydney, allowing the government to form appropriate responses.^[471]

The [2019–20 Australian bushfire season](#) significantly impacted outer Sydney and dramatically reduced air quality, leading to a smoky haze that lingered for days. The [air quality](#) was 11 times

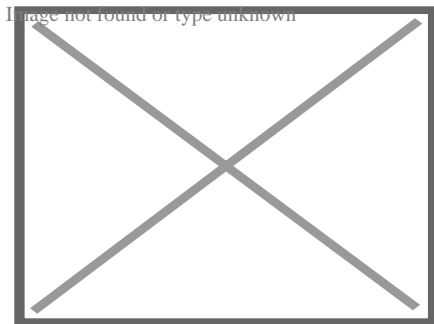
the **hazardous** level in some days,[472][473] worse than **New Delhi's**;^[474] it was compared to "smoking 32 cigarettes" by Brian Oliver, a respiratory diseases scientist at the **University of Technology Sydney**.^[475] Since Sydney is surrounded by bushland and forest,^[476] bushfires can ring the region in a **natural phenomena** that is labelled "ring of fire".^{[477][478][479][480][481]}

The City of Sydney became the first council in Australia to achieve formal certification as **carbon-neutral** in 2008.^{[482][483]} The city has reduced its 2007 carbon emissions by 6% and since 2006 has reduced carbon emissions from city buildings by up to 20%.^{[484][485]} The *Sustainable Sydney 2030* program presented a guide to reducing energy in homes and offices by 30%.^{[484][486]} Reductions in energy consumption have slashed energy bills by \$30 million a year.^[487] **Solar panels** have been established on many CBD buildings to minimise carbon pollution by around 3,000 tonnes a year.^[488]

The city also has an "**urban forest** growth strategy", in which it aims to regularly increase the **tree coverage** in the city by frequently planting trees with strong leaf density and **vegetation** to provide cleaner air and create moisture during hot weather, thus lowering city temperatures.^[489] Sydney has also become a leader in the development of **green office buildings** and enforcing the requirement of all building proposals to be energy-efficient. The **One Central Park** development, completed in 2013, is an example of this implementation.^{[490][491][492][493]}

Car-dependency

[**edit**]



Traffic congestion on the Warringah Freeway, Milsons Point

Australian cities are some of the most **car-dependent** cities in the world,^[494] especially by world city standards, although Sydney's is the lowest of Australia's major cities at 66%.^[495] Sydney also has the **highest usage of public transport** in an Australian city, at 27%—comparable with New York City, Shanghai and Berlin. Despite its high ranking for an Australian city, Sydney has a low level of mass-transit services, with a historically low-density layout and significant **urban sprawl**, thus increasing the likelihood of car dependency.^{[496][497]}

Strategies have been implemented to reduce private **vehicle pollution** by encouraging **mass** and **public transit**,^[498] initiating the development of high density housing and introducing a fleet of

10 new **electric cars**, the largest order of the pollution-free vehicle in Australia.^[499] Electric cars do not produce carbon monoxide and **nitrous oxide**, which contribute to climate change.^[500]^[501] **Cycling trips** increased by 113% across Sydney's inner-city from 2010 to 2015, at which point about 2,000 bikes were passing through top peak-hour intersections on an average weekday.^[484] Transport developments in the **north-west** and east of the city have been designed to encourage use of the expanding public transportation system.

Sister cities

^[edit]

Sister cities of Sydney include:

- **San Francisco, United States of America**
- **Wellington, New Zealand**
- **Florence, Italy**
- **Nagoya, Japan**
- **Portsmouth, United Kingdom**

See also

^[edit]

- **flag New South Wales portal**
- **List of museums in Sydney**
- **List of people from Sydney**
- **List of public art in the City of Sydney**
- **List of songs about Sydney**
- **Outline of Sydney**

Notes

^[edit]

- [^] In accordance with the Australian Bureau of Statistics source, **England**, **Scotland**, **Mainland China** and the Special Administrative Regions of **Hong Kong** and **Macau** are listed separately.
- [^] The Australian Bureau of Statistics has stated that most who nominate "Australian" as their ancestry are part of the **Anglo-Celtic** group.^[338]
- [^] Indigenous identification is separate to the ancestry question on the Australian Census and persons identifying as Aboriginal or Torres Strait Islander may identify any ancestry.

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External links


[[edit](#)]

- [Official Sydney, NSW government site](#)
- [Official Sydney tourism site](#)
- [Historical film clips of Sydney](#) on the [National Film and Sound Archive](#) of Australia's [australianscreen online](#)
- [Qantas Farewell Flight B747-400 Queen of the Skies – Sydney Final Flight QF747](#) on [YouTube](#) – includes a low-level joyflight around Sydney showing various aspects of the city on 13 July 2020 (starts at 05:20)
-  [Geographic data related to Sydney](#) at [OpenStreetMap](#)
- [Dictionary of Sydney – the history of Sydney](#) (Archived 24 March 2019 at the [Wayback Machine](#))
- [Sydney Official History Archives](#)
- [State Records New South Wales](#)
- [National Archives of Australia](#)
- [Understanding Society Through its Records – John Curtin Library](#)
- [Directory of Archives in Australia](#)

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Sydney

- [Outline](#)
- [History](#)
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- [Geography](#)
- [Climate](#)
 - [Severe weather](#)
- [Demographics](#)
- [Ecology](#)
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- [Culture](#)
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Links to related articles

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[Regions of Sydney, New South Wales, Australia](#)

- Canterbury-Bankstown
- Central Business District
- Eastern Suburbs
- Forest District
- Greater Western Sydney
- Hills District
- Inner West
- Macarthur
- Northern Beaches
- Northern Suburbs
- North Shore
- Southern Sydney
- South Western Sydney
- St George

Local government areas of Sydney

- Bayside
- Blacktown
- Burwood
- Camden
- Canterbury Bankstown
- Canada Bay
- Cumberland
- Fairfield
- Georges River
- Hawkesbury
- The Hills
- Hornsby
- Hunter's Hill
- Inner West
- Ku-ring-gai
- Lane Cove
- Liverpool
- Mosman
- North Sydney
- Northern Beaches
- Parramatta
- Penrith
- Randwick
- Ryde
- Strathfield
- Sutherland
- City of Sydney
- Waverley
- Willoughby
- Woollahra

List of Sydney suburbs

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Sydney landmarks

Buildings / structures

- Admiralty House
- Archibald Fountain
- Australia Square
- Bankstown Reservoir
- Boothtown Aqueduct
- Cadmans Cottage
- Campbell's Stores
- The Cenotaph
- Central station
- Chifley Tower
- Citigroup Centre
- International Convention Centre
- Deutsche Bank Place
- Dr Chau Chak Wing Building
- El Alamein Fountain
- Finger Wharf
- General Post Office (No. 1 Martin Place)
- Government House
- Governor Phillip Tower
- Hong Kong House
- Hyde Park Barracks
- King Street Wharf
- Kirribilli House
- Long Bay
- Macquarie Lighthouse
- Mint
- Observatory
- Old Government House
- Old Mining Museum Building
- Opera House
- Overseas Passenger Terminal
- Parliament House
- Parramatta Gaol
- Regimental Square
- The Ribbon
 - IMAX Sydney
- Queen Victoria Building
- St Andrew's Cathedral
- St Mary's Cathedral
- Sydney Airport
- Sydney Tower
- The Toaster
- Town Hall
- War Memorial
- Warragamba Dam
- White Bay Cruise Terminal
- World Square
- World Tower

Bridges

- Anzac
- Captain Cook
- Gladesville
- *Glebe Island* (disused)
- Harbour
- Pyrmont
- Roseville
- Spit
- Tom Uglys

Major centres and localities

- Central Business District
- Chatswood
- Chinatown
- Kings Cross
- North Sydney
- Parramatta
- Pitt Street Mall
- The Rocks

Urban renewal projects

- Barangaroo
- Bays Precinct
- Central Park
- Darling Harbour
- Green Square
- Sydney Olympic Park
- Waterloo

Parks and nature

- Auburn Botanic Gardens
- Balaka Falls
- Balls Head Reserve
- Bents Basin
- Berowra Valley National Park
- Bicentennial Park
- Bland Oak
- Blue Mountains National Park
- Centennial Parklands
- Central Gardens Nature Reserve
- Chinese Garden of Friendship
- Cronulla sand dunes
- Cumberland State Forest
- Farm Cove
- Featherdale Wildlife Park
- Garigal National Park
- Garawarra Conservation Area
- Georges River National Park
- Heathcote National Park
- Hyde Park
- Kamay Botany Bay National Park
- Ku-ring-gai Chase
- Lane Cove National Park
- Macquarie Place
- Paddington Reservoir
- Parramatta Park
- Prospect dolerite intrusion
- Prospect Hill
- Prospect Nature Reserve
- Royal Botanic Garden
- Royal National Park
- Sydney Harbour National Park
- Sydney Park
- The Domain
- Western Sydney Parklands
 - Western Sydney Regional Park

Cultural institutions

- Art Gallery of New South Wales
- Australian Museum
- Australian National Maritime Museum
- Chau Chak Wing Museum
- Harry's Cafe de Wheels
- Manly Art Gallery and Museum
- Museum of Contemporary Art
- Museum of Sydney
- Justice and Police Museum
- Powerhouse Museum
- Sea Life Sydney Aquarium
- State Library
- Sydney Conservatorium of Music
- Sydney Zoo
- Taronga Zoo

Sport

- Australian Golf Club
- Canterbury Park Racecourse
- Dunc Gray Velodrome
- Lakes Golf Club
- Macquarie Ice Rink
- Randwick Racecourse
- Rosehill Gardens Racecourse
- Royal Sydney Golf Club
- Stadium Australia
- State Sports Centre
- Sydney Cricket Ground
- Sydney Football Stadium
- Sydney International Regatta Centre
- Sydney Motorsport Park
- Sydney Olympic Park
 - Athletic Centre
 - Aquatic Centre
 - Hockey Centre
 - Tennis Centre
 - Sydney Showground Stadium
- Warwick Farm Racecourse
- Wentworth Park
- Western Sydney International Dragway
- Western Sydney Stadium

Entertainment

- Capitol Theatre
- Crown Sydney
- Disney Studios Australia
- Entertainment Quarter
- Luna Park
- Lyric Theatre
- Plaza Theatre
- Raging Waters
- Roslyn Packer Theatre
- The Star
- State Theatre
- Sydney SuperDome
- Theatre Royal

Beaches

- Bondi
- Cronulla
- Manly
- Palm

Islands

- Bare
- Clark
- Cockatoo
- Fort Denison
- Garden
- Goat
- Rodd
- Shark
- Snapper
- Spectacle

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Theatre in Sydney

Central Sydney

- Belvoir Street Theatre
 - Belvoir
- Capitol Theatre
- Genesian Theatre
- Roslyn Packer Theatre
- Seymour Centre
- State Theatre
- Sydney Lyric
 - Foundry Theatre
- Sydney Opera House
- Theatre Royal
- Wharf Theatre

Inner West

- Carriageworks
- New Theatre
- PACT Theatre

Western Suburbs

- Riverside Theatres Parramatta
- Sydney Coliseum Theatre

North Shore

- Ensemble Theatre
- Independent Theatre
- Marian Street Theatre
- The Concourse, Chatswood

Northern Beaches

- Glen Street Theatre

Eastern Suburbs

- Darlinghurst Theatre
- Hayes Theatre
- Old Fitz Theatre
- Parade Theatre
- Stables Theatre (Griffin Theatre Company)

Former theatres

- Criterion Theatre
- Garrick Theatre
- Her Majesty's Theatre
- Minerva Theatre
- Palace Theatre
- Paris Theatre
- Phillip Street Theatre
- Plaza Theatre
- Regent Theatre
- Tivoli Theatre

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Sports teams based in **Sydney**

Australian rules football

AFL

- Sydney Swans
- Greater Western Sydney Giants

AFLW

- Sydney Swans
- Greater Western Sydney Giants

Baseball

ABL

- Sydney Blue Sox

Claxton Shield

- New South Wales Patriots

Basketball

NBL

- Sydney Kings

WNBL

- Sydney Flames

Cricket	Sheffield Shield Matador BBQs One Day Cup	<ul style="list-style-type: none"> ○ New South Wales Blues
	WNCL	<ul style="list-style-type: none"> ○ New South Wales Breakers
	Big Bash League	<ul style="list-style-type: none"> ○ Sydney Sixers ○ Sydney Thunder
	Women's Big Bash League	<ul style="list-style-type: none"> ○ Sydney Sixers ○ Sydney Thunder
Field hockey	AHL	<ul style="list-style-type: none"> ○ New South Wales Waratahs
	WAHL	<ul style="list-style-type: none"> ○ New South Wales Arrows
	Hockey One	<ul style="list-style-type: none"> ○ NSW Pride
Futsal (F-League)		<ul style="list-style-type: none"> ○ Dural Warriors ○ East Coast Heat F.C. ○ Sydney Scorpions
Handball		<ul style="list-style-type: none"> ○ Sydney University Handball Club
Ice hockey	AIHL	<ul style="list-style-type: none"> ○ Sydney Bears ○ Sydney Ice Dogs
	AWIL	<ul style="list-style-type: none"> ○ Sydney Sirens

Netball	SSN	<ul style="list-style-type: none"> Giants Netball NSW Swifts
	ANL	<ul style="list-style-type: none"> Giants Netball Academy NNSW Waratahs
Rugby league	NRL	<ul style="list-style-type: none"> Canterbury-Bankstown Bulldogs Cronulla-Sutherland Sharks Manly Warringah Sea Eagles Parramatta Eels Penrith Panthers St. George Illawarra Dragons South Sydney Rabbitohs Sydney Roosters Wests Tigers
	NRLW	<ul style="list-style-type: none"> Canterbury-Bankstown Bulldogs Cronulla-Sutherland Sharks Parramatta Eels St. George Illawarra Dragons Sydney Roosters Wests Tigers
Rugby union	Super Rugby	<ul style="list-style-type: none"> New South Wales Waratahs
	Super W	<ul style="list-style-type: none"> New South Wales Waratahs
	NRC	<ul style="list-style-type: none"> Greater Sydney Rams Sydney Rays

Soccer

A-League Men

- Macarthur FC
- Sydney FC
- Western Sydney Wanderers

A-League Women

- Sydney FC
- Western Sydney Wanderers

Water polo (ANWPL)

- Balmain Water Polo Club
- Cronulla Sharks Water Polo Club
- Drummoyne Devils
- Sydney Uni Water Polo Club
- UNSW Wests Magpies

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New South Wales

General

- Economy
- Energy
- Flag
- Geography
- Geology
- Government
- History
- Local Government
- Parliament
- Police
- Politics
- People
- Rail transport
- Regions
- Sport
 - Australian rules football
 - Cricket
 - Rugby league
 - Rugby union
 - Soccer
- Symbols

New South Wales

Image not found or type unknown

Sydney

- Canterbury-Bankstown
- Central Business District
- Eastern Suburbs
- Forest District
- Greater Western Sydney
- Hills District
- Inner West
- Macarthur
- Northern Beaches
- Northern Sydney
- North Shore
- Southern Sydney
- South Western Sydney
- St George

Regions

- Central Coast
- Central Tablelands
- Central West
- Far West
- Greater Blue Mountains
- Hunter
- Illawarra
- Mid North Coast
- Monaro
- New England
- North West Slopes
- Northern Rivers
- Northern Tablelands
- Orana
- Riverina
- South Coast
- South Western Slopes
- Southern Highlands
- Southern Tablelands
- Upper Hunter

Rest of state

- Sydney
- Albury
- Armidale
- Bathurst
- Blue Mountains
- Broken Hill
- Cessnock
- Coffs Harbour
- Dubbo
- Gosford
- Goulburn
- Grafton
- Griffith
- Hawkesbury
- Lake Macquarie
- Lismore
- Lithgow
- Maitland
- Newcastle
- Orange
- Queanbeyan
- Shellharbour
- Shoalhaven
- Tamworth
- Taree
- Wagga Wagga
- Wollongong

Cities

Image 14 from desktop version
New South Wales portal

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Capital cities of Australia

National and ACT
Canberra

NSW
Sydney

NT
Darwin

List of cities in Australia

- **v**
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Cities of Australia

Australian Capital Territory Canberra (*national capital*)

- Albury
- Armidale
- Bathurst
- Broken Hill
- Cessnock
- Coffs Harbour
- Dubbo
- Gosford
- Goulburn
- Grafton
- Griffith
- Lake Macquarie
- Lismore
- Lithgow
- Maitland
- Newcastle
- Orange
- Port Macquarie
- Queanbeyan
- **Sydney**
- Tamworth
- Wagga Wagga
- Wollongong

New South Wales

Northern Territory

- **Darwin**
- Palmerston

Queensland

- **Brisbane**
- Bundaberg
- Cairns
- Caloundra
- Gladstone
- Gold Coast
- Gympie
- Hervey Bay
- Ipswich
- Mackay
- Maryborough
- Mount Isa
- Rockhampton
- Sunshine Coast
- Toowoomba
- Townsville

South Australia

- **Adelaide**
- Mount Gambier
- Murray Bridge
- Port Augusta
- Port Lincoln
- Port Pirie
- Victor Harbor
- Whyalla

Tasmania

- Burnie
- Devonport
- **Hobart**
- Launceston

Victoria

- Ararat
- Bairnsdale
- Ballarat
- Benalla
- Bendigo
- Castlemaine
- Colac
- Geelong
- Hamilton
- Horsham
- **Melbourne**
- Mildura
- Moe
- Morwell
- Portland
- Sale
- Seymour
- Shepparton
- Stawell
- Swan Hill
- Traralgon
- Wangaratta
- Warragul
- Warrnambool
- Wodonga

Western Australia

- Albany
- Bunbury
- Busselton
- Geraldton
- Kalgoorlie-Boulder
- Mandurah
- **Perth**

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Summer Olympic Games host cities

- o 1896: ~~Greece Athens~~ Image not found or type unknown
- o 1900: ~~France Paris~~ Image not found or type unknown
- o 1904: ~~United States St. Louis~~ Image not found or type unknown
- o 1908: ~~United Kingdom London~~ Image not found or type unknown
- o 1912: ~~Sweden Stockholm~~ Image not found or type unknown
- o 1916: ~~None~~ [c1]
- o 1920: ~~Belgium Antwerp~~ Image not found or type unknown
- o 1924: ~~France Paris~~ Image not found or type unknown
- o 1928: ~~Netherlands Amsterdam~~ Image not found or type unknown
- o 1932: ~~United States Los Angeles~~ Image not found or type unknown
- o 1936: ~~Germany Berlin~~ Image not found or type unknown
- o 1940: ~~None~~ [c2]
- o 1944: ~~None~~ [c2]
- o 1948: ~~United Kingdom London~~ Image not found or type unknown
- o 1952: ~~Finland Helsinki~~ Image not found or type unknown
- o 1956: ~~Australia Melbourne~~ Image not found or type unknown
- o 1960: ~~Italy Rome~~ Image not found or type unknown
- o 1964: ~~Japan Tokyo~~ Image not found or type unknown
- o 1968: ~~Mexico Mexico City~~ Image not found or type unknown
- o 1972: ~~West Germany Munich~~ Image not found or type unknown
- o 1976: ~~Canada Montreal~~ Image not found or type unknown
- o 1980: ~~Soviet Union Moscow~~ Image not found or type unknown
- o 1984: ~~United States Los Angeles~~ Image not found or type unknown
- o 1988: ~~South Korea Seoul~~ Image not found or type unknown
- o 1992: ~~Spain Barcelona~~ Image not found or type unknown
- o 1996: ~~United States Atlanta~~ Image not found or type unknown
- o 2000: ~~Australia Sydney~~ Image not found or type unknown
- o 2004: ~~Greece Athens~~ Image not found or type unknown
- o 2008: ~~China Beijing~~ Image not found or type unknown
- o 2012: ~~United Kingdom London~~ Image not found or type unknown
- o 2016: ~~Brazil Rio de Janeiro~~ Image not found or type unknown
- o 2020: ~~Japan Tokyo~~ [c3]
- o 2024: ~~France Paris~~ Image not found or type unknown
- o 2028: ~~United States Los Angeles~~ Image not found or type unknown
- o 2032: ~~Australia Brisbane~~ Image not found or type unknown

[c1] Cancelled due to World War I; [c2] Cancelled due to World War II; [c3] Postponed to 2021 due to the COVID-19 pandemic

- o v
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Summer Paralympic Games host cities

- **1960:** **Italy** **Rome**
- **1964:** **Japan** **Tokyo**
- **1968:** **Israel** **Arliv**
- **1972:** **West Germany** **West Berlin**
- **1976:** **Canada** **Toronto**
- **1980:** **Netherlands** **Arnhem**
- **1984:** **United States** **New York City / United Kingdom** **Mandelville**
- **1988:** **South Korea** **Seoul**
- **1992:** **Spain** **Barcelona** / **Spain** **Madrid**
- **1996:** **United States** **Atlanta**
- **2000:** **Australia** **Sydney**
- **2004:** **Greece** **Athens**
- **2008:** **China** **Beijing**
- **2012:** **United Kingdom** **London**

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Commonwealth Games host cities

- **1930:** **Canada** **Wilton**
- **1934:** **England** **London**
- **1938:** **Australia** **Bey**
- **1950:** **New Zealand** **Christchurch**
- **1954:** **Canada** **Ottawa**
- **1958:** **Wales** **Gallif**
- **1962:** **Australia** **Brisbane**
- **1966:** **Jamaica** **Kingston**
- **1970:** **Scotland** **Edinburgh**
- **1974:** **New Zealand** **Christchurch**
- **1978:** **Canada** **Ottawa**
- **1982:** **Australia** **Brisbane**
- **1986:** **Scotland** **Edinburgh**
- **1990:** **New Zealand** **Christchurch**
- **1994:** **Canada** **Calgary**
- **1998:** **Malaysia** **Kuala Lumpur**
- **2002:** **England** **Manchester**
- **2006:** **Australia** **Melbourne**
- **2010:** **India** **Delhi**
- **2014:** **Scotland** **Glasgow**

Portals:

- **flag** **New South Wales**
- **flag** **Australia**

Sydney at Wikipedia's sister projects:

- **Definitions** from Wiktionary
- **Media** from Commons
- **News** from Wikinews
- **Quotations** from Wikiquote
- **Texts** from Wikisource
- **Textbooks** from Wikibooks
- **Resources** from Wikiversity
- **Travel guides** from Wikivoyage
- **Data** from Wikidata

Authority control databases **Edit this at Wikidata**

International	<ul style="list-style-type: none"> ○ VIAF ○ FAST ○ WorldCat
National	<ul style="list-style-type: none"> ○ Germany ○ United States ○ France ○ BnF data ○ Japan ○ Czech Republic ○ Spain ○ Croatia ○ Sweden ○ Israel ○ Catalonia
Geographic	<ul style="list-style-type: none"> ○ MusicBrainz area
Other	<ul style="list-style-type: none"> ○ IdRef ○ NARA

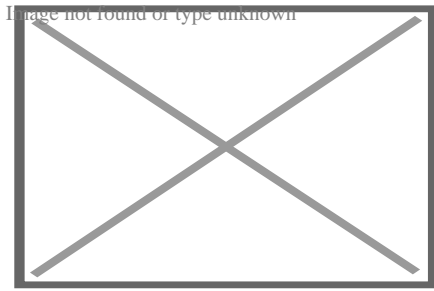
About Web design

Web design encompasses many different skills and disciplines in the production and maintenance of **websites**. The different areas of web design include web graphic design; **user interface design** (UI design); authoring, including standardised code and **proprietary software**; **user experience design** (UX design); and **search engine optimization**. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all.^[1] The term "web design" is normally used to describe the design process relating to the front-end (client side) design of a website including writing **markup**. Web design partially overlaps **web engineering** in the broader scope of **web development**. Web designers are expected to have an awareness of **usability** and be up to date with **web accessibility** guidelines.

History

[edit]

See also: [History of the World Wide Web](#)



Web design books in a store

1988–2001

[\[edit\]](#)

Although web design has a fairly recent history, it can be linked to other areas such as graphic design, user experience, and multimedia arts, but is more aptly seen from a technological standpoint. It has become a large part of people's everyday lives. It is hard to imagine the Internet without animated graphics, different styles of [typography](#), backgrounds, videos and music. The web was announced on August 6, 1991; in November 1992, [CERN](#) was the first website to go live on the World Wide Web. During this period, websites were structured by using the `<table>` tag which created numbers on the website. Eventually, web designers were able to find their way around it to create more structures and formats. In early history, the structure of the websites was fragile and hard to contain, so it became very difficult to use them. In November 1993, [ALIWEB](#) was the first ever search engine to be created (Archie Like Indexing for the WEB).[\[2\]](#)

The start of the web and web design

[\[edit\]](#)

In 1989, whilst working at [CERN](#) in Switzerland, British scientist [Tim Berners-Lee](#) proposed to create a global [hypertext](#) project, which later became known as the [World Wide Web](#). From 1991 to 1993 the World Wide Web was born. [Text-only HTML](#) pages could be viewed using a simple line-mode [web browser](#).[\[3\]](#) In 1993 [Marc Andreessen](#) and [Eric Bina](#), created the [Mosaic browser](#). At the time there were multiple browsers, however the majority of them were Unix-based and naturally text-heavy. There had been no integrated approach to [graphic design](#) elements such as [images](#) or [sounds](#). The [Mosaic browser](#) broke this mould.[\[4\]](#) The [W3C](#) was created in October 1994 to "lead the World Wide Web to its full potential by developing common [protocols](#) that promote its evolution and ensure its [interoperability](#)."[\[5\]](#) This discouraged any one company from monopolizing a proprietary browser and [programming language](#), which could

have altered the effect of the World Wide Web as a whole. The W3C continues to set standards, which can today be seen with [JavaScript](#) and other languages. In 1994 Andreessen formed Mosaic Communications Corp. that later became known as [Netscape Communications](#), the [Netscape 0.9 browser](#). Netscape created its HTML tags without regard to the traditional standards process. For example, Netscape 1.1 included tags for changing background colours and formatting text with [tables](#) on web pages. From 1996 to 1999 the [browser wars](#) began, as [Microsoft](#) and [Netscape](#) fought for ultimate browser dominance. During this time there were many new technologies in the field, notably [Cascading Style Sheets](#), [JavaScript](#), and [Dynamic HTML](#). On the whole, the browser competition did lead to many positive creations and helped web design evolve at a rapid pace.^[6]

Evolution of web design

[\[edit\]](#)

In 1996, Microsoft released its first competitive browser, which was complete with its features and HTML tags. It was also the first browser to support style sheets, which at the time was seen as an obscure authoring technique and is today an important aspect of web design.^[6] The [HTML markup](#) for [tables](#) was originally intended for displaying tabular data. However, designers quickly realized the potential of using HTML tables for creating complex, multi-column layouts that were otherwise not possible. At this time, as design and good aesthetics seemed to take precedence over good markup structure, little attention was paid to semantics and [web accessibility](#). HTML sites were limited in their design options, even more so with earlier versions of HTML. To create complex designs, many web designers had to use complicated table structures or even use blank [spacer .GIF](#) images to stop empty table cells from collapsing.^[7] [CSS](#) was introduced in December 1996 by the [W3C](#) to support presentation and layout. This allowed [HTML](#) code to be semantic rather than both semantic and presentational and improved web accessibility, see [tableless web design](#).

In 1996, [Flash](#) (originally known as FutureSplash) was developed. At the time, the Flash content development tool was relatively simple compared to now, using basic layout and drawing tools, a limited precursor to [ActionScript](#), and a timeline, but it enabled web designers to go beyond the point of HTML, [animated GIFs](#) and [JavaScript](#). However, because Flash required a [plug-in](#), many web developers avoided using it for fear of limiting their market share due to lack of compatibility. Instead, designers reverted to [GIF](#) animations (if they did not forego using [motion graphics](#) altogether) and JavaScript for [widgets](#). But the benefits of Flash made it popular enough among specific target markets to eventually work its way to the vast majority of browsers, and powerful enough to be used to develop entire sites.^[7]

End of the first browser wars

[\[edit\]](#)

Further information: [Browser wars § First Browser War \(1995–2001\)](#)

In 1998, Netscape released Netscape Communicator code under an [open-source licence](#), enabling thousands of developers to participate in improving the software. However, these developers decided to start a standard for the web from scratch, which guided the development of the open-source browser and soon expanded to a complete application platform.^[6] The [Web Standards Project](#) was formed and promoted browser compliance with [HTML](#) and [CSS](#) standards. Programs like [Acid1](#), [Acid2](#), and [Acid3](#) were created in order to test browsers for compliance with web standards. In 2000, Internet Explorer was released for Mac, which was the first browser that fully supported HTML 4.01 and CSS 1. It was also the first browser to fully support the [PNG](#) image format.^[6] By 2001, after a campaign by Microsoft to popularize Internet Explorer, Internet Explorer had reached 96% of [web browser usage share](#), which signified the end of the first browser wars as Internet Explorer had no real competition.^[8]

2001–2012

[\[edit\]](#)

Since the start of the 21st century, the web has become more and more integrated into people's lives. As this has happened the technology of the web has also moved on. There have also been significant changes in the way people use and access the web, and this has changed how sites are designed.

Since the end of the [browsers wars](#)^{[[when?](#)]} new browsers have been released. Many of these are [open source](#), meaning that they tend to have faster development and are more supportive of new standards. The new options are considered by many^{[[weasel words](#)]} to be better than Microsoft's [Internet Explorer](#).

The [W3C](#) has released new standards for HTML ([HTML5](#)) and CSS ([CSS3](#)), as well as new [JavaScript APIs](#), each as a new but individual standard.^{[[when?](#)]} While the term HTML5 is only used to refer to the new version of HTML and *some* of the JavaScript APIs, it has become common to use it to refer to the entire suite of new standards (HTML5, CSS3 and JavaScript).

2012 and later

[\[edit\]](#)

With the advancements in [3G](#) and [LTE](#) internet coverage, a significant portion of website traffic shifted to mobile devices. This shift influenced the web design industry, steering it towards a minimalist, lighter, and more simplistic style. The "mobile first" approach emerged as a result, emphasizing the creation of website designs that prioritize mobile-oriented layouts first, before adapting them to larger screen dimensions.

Tools and technologies

[\[edit\]](#)

Web designers use a variety of different tools depending on what part of the production process they are involved in. These tools are updated over time by newer standards and software but the principles behind them remain the same. Web designers use both **vector** and **raster** graphics editors to create web-formatted imagery or design prototypes. A website can be created using **WYSIWYG website builder** software or a **content management system**, or the individual web pages can be **hand-coded** in just the same manner as the first web pages were created. Other tools web designers might use include markup **validators**[\[9\]](#) and other testing tools for usability and accessibility to ensure their websites meet web accessibility guidelines.[\[10\]](#)

UX Design

[\[edit\]](#)

One popular tool in web design is UX Design, a type of art that designs products to perform an accurate user background. UX design is very deep. UX is more than the web, it is very independent, and its fundamentals can be applied to many other browsers or apps. Web design is mostly based on web-based things. UX can overlap both web design and design. UX design mostly focuses on products that are less web-based.[\[11\]](#)

Skills and techniques

[\[edit\]](#)

Marketing and communication design

[\[edit\]](#)

Marketing and communication design on a website may identify what works for its target market. This can be an age group or particular strand of culture; thus the designer may understand the trends of its audience. Designers may also understand the type of website they are designing, meaning, for example, that (B2B) **business-to-business** website design considerations might differ greatly from a consumer-targeted website such as a **retail** or entertainment website. Careful consideration might be made to ensure that the aesthetics or overall design of a site do not clash with the clarity and accuracy of the content or the ease of **web navigation**,[\[12\]](#) especially on a B2B website. Designers may also consider the reputation of the owner or business the site is representing to make sure they are portrayed favorably. Web designers

normally oversee all the websites that are made on how they work or operate on things. They constantly are updating and changing everything on websites behind the scenes. All the elements they do are text, photos, graphics, and layout of the web. Before beginning work on a website, web designers normally set an appointment with their clients to discuss layout, colour, graphics, and design. Web designers spend the majority of their time designing websites and making sure the speed is right. Web designers typically engage in testing and working, marketing, and communicating with other designers about laying out the websites and finding the right elements for the websites.[13]

User experience design and interactive design

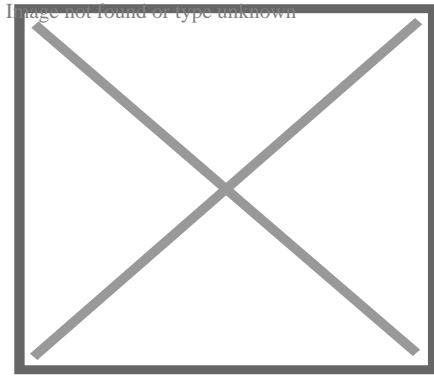
[edit]

User understanding of the content of a website often depends on user understanding of how the website works. This is part of the **user experience design**. User experience is related to layout, clear instructions, and labeling on a website. How well a user understands how they can interact on a site may also depend on the **interactive design** of the site. If a user perceives the usefulness of the website, they are more likely to continue using it. Users who are skilled and well versed in website use may find a more distinctive, yet less intuitive or less **user-friendly** website interface useful nonetheless. However, users with less experience are less likely to see the advantages or usefulness of a less intuitive website interface. This drives the trend for a more universal user experience and ease of access to accommodate as many users as possible regardless of user skill.[14] Much of the user experience design and interactive design are considered in the **user interface design**.

Advanced interactive functions may require **plug-ins** if not advanced coding language skills. Choosing whether or not to use interactivity that requires plug-ins is a critical decision in user experience design. If the plug-in doesn't come pre-installed with most browsers, there's a risk that the user will have neither the know-how nor the patience to install a plug-in just to access the content. If the function requires advanced coding language skills, it may be too costly in either time or money to code compared to the amount of enhancement the function will add to the user experience. There's also a risk that advanced interactivity may be incompatible with older browsers or hardware configurations. Publishing a function that doesn't work reliably is potentially worse for the user experience than making no attempt. It depends on the target audience if it's likely to be needed or worth any risks.

Progressive enhancement

[edit]



The order of progressive enhancement

Main article: [Progressive enhancement](#)

Progressive enhancement is a strategy in web design that puts emphasis on **web content** first, allowing **everyone to access** the basic content and functionality of a web page, whilst **users** with additional browser features or faster Internet access receive the enhanced version instead.

In practice, this means serving content through **HTML** and applying styling and animation through **CSS** to the technically possible extent, then applying further enhancements through **JavaScript**. Pages' text is loaded immediately through the HTML source code rather than having to wait for JavaScript to initiate and load the content subsequently, which allows content to be readable with minimum loading time and bandwidth, and through **text-based browsers**, and maximizes **backwards compatibility**.^[15]

As an example, **MediaWiki**-based sites including Wikipedia use progressive enhancement, as they remain usable while JavaScript and even CSS is deactivated, as pages' content is included in the page's HTML source code, whereas counter-example **Everipedia** relies on JavaScript to load pages' content subsequently; a blank page appears with JavaScript deactivated.

Page layout

[\[edit\]](#)

Part of the user interface design is affected by the quality of the **page layout**. For example, a designer may consider whether the site's page layout should remain consistent on different pages when designing the layout. Page pixel width may also be considered vital for aligning objects in the layout design. The most popular fixed-width websites generally have the same set width to match the current most popular browser window, at the current most popular screen resolution, on the current most popular monitor size. Most pages are also center-aligned for concerns of **aesthetics** on larger screens.

Fluid layouts increased in popularity around 2000 to allow the browser to make user-specific layout adjustments to fluid layouts based on the details of the reader's screen (window size, font

size relative to window, etc.). They grew as an alternative to HTML-table-based layouts and **grid-based design** in both page layout design principles and in coding technique but were very slow to be adopted.^[note 1] This was due to considerations of **screen reading devices** and varying windows sizes which designers have no control over. Accordingly, a design may be broken down into units (sidebars, content blocks, **embedded advertising** areas, navigation areas) that are sent to the browser and which will be fitted into the display window by the browser, as best it can. Although such a display may often change the relative position of major content units, sidebars may be displaced below **body text** rather than to the side of it. This is a more flexible display than a hard-coded grid-based layout that doesn't fit the device window. In particular, the relative position of content blocks may change while leaving the content within the block unaffected. This also minimizes the user's need to horizontally scroll the page.

Responsive web design is a newer approach, based on CSS3, and a deeper level of per-device specification within the page's style sheet through an enhanced use of the CSS @media rule. In March 2018 Google announced they would be rolling out mobile-first indexing.^[16] Sites using responsive design are well placed to ensure they meet this new approach.

Typography

^[edit]

Main article: **typography**

Web designers may choose to limit the variety of website typefaces to only a few which are of a similar style, instead of using a wide range of **typefaces** or **type styles**. Most browsers recognize a specific number of safe fonts, which designers mainly use in order to avoid complications.

Font downloading was later included in the CSS3 fonts module and has since been implemented in Safari 3.1, **Opera 10**, and **Mozilla Firefox 3.5**. This has subsequently increased interest in **web typography**, as well as the usage of font downloading.

Most site layouts incorporate negative space to break the text up into paragraphs and also avoid center-aligned text.^[17]

Motion graphics

^[edit]

The page layout and user interface may also be affected by the use of motion graphics. The choice of whether or not to use motion graphics may depend on the target market for the website. Motion graphics may be expected or at least better received with an entertainment-

oriented website. However, a website target audience with a more serious or formal interest (such as business, community, or government) might find animations unnecessary and distracting if only for entertainment or decoration purposes. This doesn't mean that more serious content couldn't be enhanced with animated or video presentations that is relevant to the content. In either case, **motion graphic design** may make the difference between more effective visuals or distracting visuals.

Motion graphics that are not initiated by the site visitor can produce accessibility issues. The World Wide Web consortium accessibility standards require that site visitors be able to disable the animations.^[18]

Quality of code

^[edit]

Website designers may consider it to be good practice to conform to standards. This is usually done via a description specifying what the element is doing. Failure to conform to standards may not make a website unusable or error-prone, but standards can relate to the correct layout of pages for readability as well as making sure coded elements are closed appropriately. This includes errors in code, a more organized layout for code, and making sure IDs and classes are identified properly. Poorly coded pages are sometimes colloquially called **tag soup**. **Validating via W3C**^[9] can only be done when a correct DOCTYPE declaration is made, which is used to highlight errors in code. The system identifies the errors and areas that do not conform to web design standards. This information can then be corrected by the user.^[19]

Generated content

^[edit]

There are two ways websites are generated: statically or dynamically.

Static websites

^[edit]

Main article: **Static web page**

A static website stores a unique file for every page of a static website. Each time that page is requested, the same content is returned. This content is created once, during the design of the website. It is usually manually authored, although some sites use an automated creation

process, similar to a dynamic website, whose results are stored long-term as completed pages. These automatically created static sites became more popular around 2015, with generators such as [Jekyll](#) and [Adobe Muse](#).^[20]

The benefits of a static website are that they were simpler to host, as their server only needed to serve static content, not execute server-side scripts. This required less server administration and had less chance of exposing security holes. They could also serve pages more quickly, on low-cost server hardware. This advantage became less important as cheap web hosting expanded to also offer dynamic features, and [virtual servers](#) offered high performance for short intervals at low cost.

Almost all websites have some static content, as supporting assets such as images and style sheets are usually static, even on a website with highly dynamic pages.

Dynamic websites

[\[edit\]](#)

Main article: [Dynamic web page](#)

Dynamic websites are generated on the fly and use server-side technology to generate web pages. They typically extract their content from one or more back-end databases: some are database queries across a relational database to query a catalog or to summarise numeric information, and others may use a [document database](#) such as [MongoDB](#) or [NoSQL](#) to store larger units of content, such as blog posts or wiki articles.

In the design process, dynamic pages are often mocked-up or [wireframed](#) using static pages. The skillset needed to develop dynamic web pages is much broader than for a static page, involving server-side and database coding as well as client-side interface design. Even medium-sized dynamic projects are thus almost always a team effort.

When dynamic web pages first developed, they were typically coded directly in languages such as [Perl](#), [PHP](#) or [ASP](#). Some of these, notably PHP and ASP, used a 'template' approach where a server-side page resembled the structure of the completed client-side page, and data was inserted into places defined by 'tags'. This was a quicker means of development than coding in a purely procedural coding language such as Perl.

Both of these approaches have now been supplanted for many websites by higher-level application-focused tools such as [content management systems](#). These build on top of general-purpose coding platforms and assume that a website exists to offer content according to one of several well-recognised models, such as a time-sequenced [blog](#), a thematic magazine or news site, a wiki, or a user forum. These tools make the implementation of such a site very easy, and a purely organizational and design-based task, without requiring any coding.

Editing the content itself (as well as the template page) can be done both by means of the site itself and with the use of third-party software. The ability to edit all pages is provided only to a

specific category of users (for example, administrators, or registered users). In some cases, anonymous users are allowed to edit certain web content, which is less frequent (for example, on forums - adding messages). An example of a site with an anonymous change is [Wikipedia](#).

Homepage design

[\[edit\]](#)

Usability experts, including [Jakob Nielsen](#) and Kyle Soucy, have often emphasised homepage design for website success and asserted that the homepage is the most important page on a website.^[21] *Nielsen, Jakob; Tahir, Marie (October 2001), [Homepage Usability: 50 Websites Deconstructed](#), New Riders Publishing, ISBN 978-0-7357-1102-0*^{[22][23]} However practitioners into the 2000s were starting to find that a growing number of website traffic was bypassing the homepage, going directly to internal content pages through search engines, e-newsletters and RSS feeds.^[24] This led many practitioners to argue that homepages are less important than most people think.^{[25][26][27][28]} Jared Spool argued in 2007 that a site's homepage was actually the least important page on a website.^[29]

In 2012 and 2013, carousels (also called 'sliders' and 'rotating banners') have become an extremely popular design element on homepages, often used to showcase featured or recent content in a confined space.^[30] Many practitioners argue that carousels are an ineffective design element and hurt a website's search engine optimisation and usability.^{[30][31][32]}

Occupations

[\[edit\]](#)

There are two primary jobs involved in creating a website: the web designer and [web developer](#), who often work closely together on a website.^[33] The web designers are responsible for the visual aspect, which includes the layout, colouring, and typography of a web page. Web designers will also have a working knowledge of [markup languages](#) such as HTML and CSS, although the extent of their knowledge will differ from one web designer to another. Particularly in smaller organizations, one person will need the necessary skills for designing and programming the full web page, while larger organizations may have a web designer responsible for the visual aspect alone.

Further jobs which may become involved in the creation of a website include:

- [Graphic designers](#) to create visuals for the site such as logos, layouts, and buttons
- Internet marketing specialists to help maintain web presence through strategic solutions on targeting viewers to the site, by using marketing and promotional techniques on the internet
- SEO writers to research and recommend the correct words to be incorporated into a particular website and make the website more accessible and found on numerous search engines

- Internet copywriter to create the written content of the page to appeal to the targeted viewers of the site^[1]
- User experience (UX) designer incorporates aspects of user-focused design considerations which include information architecture, user-centred design, user testing, interaction design, and occasionally visual design.

Artificial intelligence and web design

^[edit]

Chat GPT and other AI models are being used to write and code websites making it faster and easier to create websites. There are still discussions about the ethical implications on using artificial intelligence for design as the world becomes more familiar with using AI for time-consuming tasks used in design processes.^[34]

See also

^[edit]

- ^{icon} Internet portal
- Image not found or has been moved to unknown

- | | | |
|-------------------------------------|---|-----------------------------|
| ◦ Aesthetics | ◦ Graphic art software | ◦ Style guide |
| ◦ Color theory | ◦ Graphic design occupations | ◦ Web 2.0 |
| ◦ Composition (visual arts) | ◦ Graphics | ◦ Web colors |
| ◦ Cross-browser | ◦ Information graphics | ◦ Web safe fonts |
| ◦ Design education | ◦ List of graphic design institutions | ◦ Web usability |
| ◦ Drawing | ◦ List of notable graphic designers | ◦ Web application framework |
| ◦ Dark pattern | ◦ Logotype | ◦ Website builder |
| ◦ European Design Awards | ◦ Outline of web design and web development | ◦ Website wireframe |
| ◦ First Things First 2000 manifesto | ◦ Progressive Enhancement | |

Related disciplines

^[edit]

- Communication design
- Copywriting
- Desktop publishing
- Digital illustration
- Graphic design
- Interaction design
- Information design
- Light-on-dark color scheme
- Marketing communications
- Motion graphic design
- New media
- Search engine optimization (SEO)
- Technical Writer
- Typography
- User experience
- User interface design
- Web development
- Web animations

Notes

[edit]

1. ^ <table>-based markup and **spacer** .GIF images

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[edit]

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External links

[edit]

- W3C consortium for web standards

Web design at Wikipedia's sister projects:

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Design

- Outline
- Designer

Disciplines

Communication design

- Advertising
- Book design
- Brand design
- Exhibit design
- Film title design
- Graphic design
 - Motion
 - Postage stamp design
 - Print design
- Illustration
- Information design
- Instructional design
- News design
- Photography
- Retail design
- Signage / Traffic sign design
- Typography / Type design
- Video design
- Visual merchandising

Environmental design

- Architecture
- Architectural lighting design
- Building design
 - Passive solar
- Ecological design
- Environmental impact design
- Garden design
 - Computer-aided
- Healthy community design
- Hotel design
- Interior architecture
- Interior design
 - EID
- Keyline design
- Landscape architecture
 - Sustainable
- Landscape design
- Spatial design
- Urban design

- Automotive design
- Automotive suspension design
- CMF design
- Corrugated box design

Approaches

- Active
- Activity-centered
- Adaptive web
- Affective
- Brainstorming
- By committee
- By contract
- C-K theory
- Closure
- Co-design
- Concept-oriented
- Configuration
- Contextual
- Continuous
- Cradle-to-cradle
- Creative problem-solving
- Creativity techniques
- Critical
 - Design fiction
- Defensive
- Design–bid–build
- Design–build
 - architect-led
- Diffuse
- Domain-driven
- Ecological design
- Energy neutral
- Engineering design process
 - Probabilistic design
- Ergonomic
- Error-tolerant
- Evidence-based
- Fault-tolerant
- Framework-oriented
- For assembly
- For behaviour change
- For manufacturability
- For Six Sigma
- For testing
- For the environment
- For X
- Functional
- Generative
- Geodesign
- HCD
- High-level

- **Tools**
- **Intellectual property**
- **Organizations**
- **Awards**

Tools

- AAD
- Architectural model
- Blueprint
- Comprehensive layout
- CAD
 - CAID
 - Virtual home design software
- CAutoD
- Design quality indicator
- Electronic design automation
- Flowchart
- Mockup
- Design specification
- Prototype
- Sketch
- Storyboard
- Technical drawing
- HTML editor
- Website wireframe

Intellectual property

- Clean-room design
- Community design
- Design around
- Design infringement
- Design patent
- Fashion design copyright
- *Geschmacksmuster*
- Industrial design rights
 - European Union

Organizations

- American Institute of Graphic Arts
- Chartered Society of Designers
- Design and Industries Association
- Design Council
- International Forum Design
- Design Research Society
- European Design Award

Related topics

- Agile
- Concept art
- Conceptual design
- Creative industries
- Cultural icon
- .design
- Dominant design
- Enterprise architecture
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- Futures studies
- Indie design
- Innovation management
- Intelligent design
- Lean startup
- New product development
- OODA loop
- Philosophy of design
- Process simulation
- Reference design
- Slow design
- STEAM fields
- Unintelligent design
- Visualization
- Wicked problem
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Frequently Asked Questions

What should I expect from SEO agencies in Sydney?

SEO agencies in Sydney typically offer comprehensive services such as keyword research, technical audits, on-page and off-page optimization, content creation, and performance tracking. Their goal is to increase your site's search engine rankings and drive more targeted traffic to your website.

Why is keyword research important for SEO?

Keyword research helps identify the terms and phrases that potential customers are using to search for products or services. By targeting these keywords in your content, you can improve your visibility in search engine results, attract more qualified leads, and drive higher conversion rates.

What sets SEO specialists in Sydney apart?

SEO specialists in Sydney often have deep expertise in the local market. They understand the competitive landscape, know which keywords resonate with Sydney-based audiences, and are skilled at optimizing websites to rank well in local search results.

What is SEO?

SEO, or search engine optimisation, is the practice of improving a website's visibility on search engines like Google. It involves optimizing various elements of a site such as keywords, content, meta tags, and technical structure to help it rank higher in search results.

How can a digital agency in Sydney help with SEO?

A digital agency in Sydney can offer a comprehensive approach, combining SEO with other marketing strategies like social media, PPC, and content marketing. By integrating these services, they help you achieve a stronger online presence and better ROI.

SEO service Sydney

SEO Sydney

Phone : 1300 684 339

City : Sydney

State : NSW

Zip : 2000

[Google Business Profile](#)

[Google Business Website](#)

Company Website : <https://sydney.website/seo-sydney/>

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