



# Casey Australian Antarctic Division

66°16'54"S 110°31' 39"E

Type: Station

Operational period: Year-round

## Location

Casey is located on Bailey Peninsula in the Windmill Islands, Wilkes Land. The peninsula is on the west coast of Law Dome, an almost circular 200 km diameter ice cap that rises to a height of 1395 m. Operations are supported by Wilkins Aerodrome, ~70 km south-east of the station.

## Biodiversity and natural environment

The area's moss and lichen communities are the richest anywhere in Antarctica outside the Antarctic Peninsula. Various sites in the region, including in the station's immediate vicinity, have heightened protection as Antarctic Specially Protected Areas. Storm petrels, Snow petrels and Adélie petrels breed within 1.5 km of the station. Seals are present in small numbers.

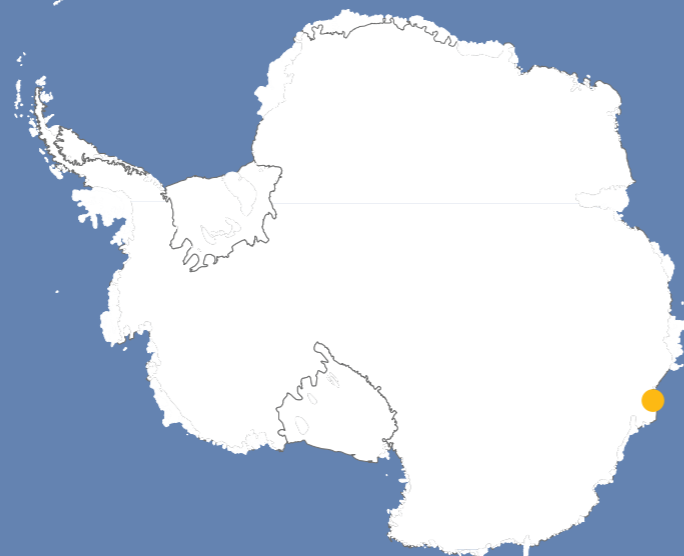
## History and facilities

The current research station, built in the 1990s and routinely modified since, replaces facilities established in 1969 at a site closer to the coast. The station is now a large and complex facility. It was named after Sir Richard Casey, an Australian Governor-General.

## General research and databases

Casey-collected data sets are lodged with the Australian Antarctic Data Centre (AADC). Data held in the AADC are qualified with metadata and discoverable through the Catalogue of Australian Antarctic and Subantarctic Metadata (CAASM – <http://data.aad.gov.au/aadc/metadata>). Some data are also delivered through customised applications on the AADC website – <http://data.aad.gov.au>.

CLIMATE	
Climate zone	Coastal Antarctica
Permafrost	Discontinuous
Mean annual wind speed (km/h)	25.2
Max wind speed (km/h)	291
Dominant wind direction	E
Sea Ice Break Up	December
Snow free period	None
Total annual precipitation (mm)	
Precipitation type	Snow
Mean annual temperature (°C)	-5.9
Mean temperature in February (°C)	-0.1
Mean temperature in July (°C)	-10.5
ENVIRONMENT	
Region	Continental Antarctica
Antarctic Environmental Domain: D – East Antarctic coastal geologic	
Antarctic Conservation Biogeographic Region: 7 East Antarctica	
Altitude of facility (m)	32
Type of surface facility built on	Ice-free ground
Long term monitoring	Yes
Waste management	Yes
Hazard(ous) management	Yes
Fuel spill response capability	Yes



## Features in the facility area

Bird colonies, Blue ice, Coast, Crevasse, Hill, Ice cap or glacier, Lake, Melt streams, Moraine, Nunatak, Other Biological, Permanent snowpatches, Rock, Sea, Sea ice, Seal colonies, Shoreline, Snow, Valley.

FACILITIES INFRASTRUCTURE	
Area under roof (m <sup>2</sup> )	8000
Area scientific laboratories (m <sup>2</sup> )	360
Type of scientific laboratories: Biology, Chemistry, Scientific diving	
Conference room (capacity)	
Logistic area (m <sup>2</sup> )	584
Number of beds	99
Showers	Yes
Laundry facilities	Yes
Power supply type	Fossil fuel, Renewable
Power supply (V)	240
Power supply (hours per day)	24
Hydroponics facilities	Yes
Number of staff on station (peak/summer season)	67
Number of scientists on station (peak/summer season)	32
Number of staff on station (off peak/winter season)	18
Number of scientists on station (off peak/winter season)	2
Max number of personnel at a time (staff, scientists and others)	99
Specific device/Scientific equipment: GPS, induction magnetometers, ionosonde, riometer, seismometers, tide gauges	
Scientific services possible: Dry and wet laboratories, electronics	
Long-term monitoring/observations: Ionosphere, geomagnetic and seismic, meteorology, sea birds, sea level and climate	
MEDICAL FACILITIES	
Area of medical facility (m <sup>2</sup> )	187
Staff with basic medical training or doctor (Summer)	2
Staff with basic medical training or doctor (Winter)	1
Capability: Basic, Dental, Surgery	

## Main science disciplines

Atmospheric chemistry and physics, Climate change, Climatology, Ecology, Environmental sciences, Geodesy, Geophysics, GIS, Glaciology, Human biology, Hydrology, Mapping, Marine biology, Medicine, Microbiology, Pollution, Soil science, Terrestrial biology.

Equipment: Aeromedical equipment, Altitude medicine, Anaesthesia, Biochemistry, Blood transfusion medicine, Diagnostic ultrasound, Diagnostic X-ray, Haematology, Laboratory diagnostics, Microbiology, Ophthalmology, Telemedicine	
Distance to hospital (km)	3430
Closest emergency facility in Antarctica (km)	1401
Closest emergency facility external (km)	3430
Medical research capabilities	Yes
Medical screening requirements	Yes
VEHICLES AT FACILITY	
Sea transportation:	
Land transportation: Wheeled and tracked	
WORKSHOP FACILITIES	
ICTS, Mechanical, Metal workshop, Plexiglas workshop, Wood workshop	
COMMUNICATIONS	
Computer, E-mail, Fax, Internet, Printer, Satellite phone, Scanner, Telephone, VHF	
TRANSPORT AND FREIGHT	
Access	Air, Sea
Transport to facility: Airplane, Ship.	
Number of airstrips	1
Length (m) of longest runway	3600
Width (m) of longest runway	45
Number of flight visits per year	20
Period of flight visits per year: January, February, March, November, December	
Helipad	Yes
Number of ship visits per year	3
Period of ship visits per year: January, February, March, November, December	
Ship landing facilities:	





Photos: Australian Antarctic Division

# Davis Australian Antarctic Division

68°34'35.8"S 77°58'02.6"E

Type: Station

Operational period: Year-round

## Location

Davis is on Broad Peninsula in the Vestfold Hills, Princess Elizabeth Land. The Vestfold Hills are an ice free region covering an area of ~400 km<sup>2</sup>.

## Biodiversity and natural environment

Various sites in the area have heightened protection as Antarctic Specially Protected Areas. The region's features include:

- hundreds of freshwater and saline lakes and waterbodies of outstanding and unique scenic variety and beauty, and intrinsic, scientific and educational value;
- hundreds of thousands of breeding birds, including populations/sites with international status;
- a palaeontological site of world significance.

## History and facilities

The first landing in the region was made in 1935. Davis was established in 1957, rebuilt in the 1990s and has been routinely modified since. The station is now a large and complex facility.

## General research and databases

Davis-collected data sets are lodged with the Australian Antarctic Data Centre (AADC). Data held in the AADC are qualified with metadata and discoverable through the Catalogue of Australian Antarctic and Subantarctic Metadata (CAASM – <http://data.aad.gov.au/aadc/metadata>). Some data are also delivered through customised applications on the AADC website – <http://data.aad.gov.au>.

CLIMATE	
Climate zone	Coastal Antarctica
Permafrost	Discontinuous
Mean annual wind speed (km/h)	19.6
Max wind speed (km/h)	206
Dominant wind direction	NE
Sea Ice Break Up	December
Snow free period	January, December
Total annual precipitation (mm)	
Precipitation type	Snow
Mean annual temperature (°C)	-7.3
Mean temperature in February (°C)	-0.2
Mean temperature in July (°C)	-14.3
ENVIRONMENT	
Region	Continental Antarctica
Antarctic Environmental Domain: D – East Antarctic coastal geologic	
Antarctic Conservation Biogeographic Region: 7 East Antarctica	
Altitude of facility (m)	27
Type of surface facility built on	Ice-free ground
Long term monitoring	Yes
Waste management	Yes
Hazard(ous) management	Yes
Fuel spill response capability	Yes



## Features in the facility area

Bird colonies, Coast, Crevasse, Fjord, Hill, Ice cap or glacier, Lake, Melt streams, Moraine, Other Biological, Permanent snowpatches, Plateau, Rivers, Rock, Sea, Sea ice, Seal colonies, Shoreline, Snow.

## Main science disciplines

Atmospheric chemistry and physics, Climate change, Climatology, Ecology, Environmental sciences, Geodesy, Geology, Geophysics, GIS, Glaciology, Human biology, Limnology, Mapping, Marine biology, Medicine, Microbiology, Oceanography, Paleocology, Pollution, Soil science, Terrestrial biology.



FACILITIES INFRASTRUCTURE	
Area under roof (m <sup>2</sup> )	8000
Area scientific laboratories (m <sup>2</sup> )	400
Type of scientific laboratories: Biology, Chemistry, Scientific diving	
Conference room (capacity)	
Logistic area (m <sup>2</sup> )	578
Number of beds	91
Showers	Yes
Laundry facilities	Yes
Power supply type	Fossil fuel
Power supply (V)	240
Power supply (hours per day)	24
Hydroponics facilities	Yes
Number of staff on station (peak/summer season)	62
Number of scientists on station (peak/summer season)	29
Number of staff on station (off peak/winter season)	15
Number of scientists on station (off peak/winter season)	2
Max number of personnel at a time (staff, scientists and others)	91
Specific device/Scientific equipment: All sky camera, cloud detector, GPS, Induction magnetometers, meteor radars, MFSA radar, MST radar, onosonde, riometers, scanning OH radiometer, spectrometers	
Scientific services possible: Dry and wet laboratories, electronics	
Long-term monitoring/observations: Geomagnetic, ionosphere, lower middle and upper atmosphere, meteorology, sea birds, sea level and climate	
MEDICAL FACILITIES	
Area of medical facility (m <sup>2</sup> )	191
Staff with basic medical training or doctor (Summer)	1
Staff with basic medical training or doctor (Winter)	1
Capability: Basic, Dental, Surgery	4826
Equipment: Aeromedical equipment, Altitude medicine, Anaesthesia, Biochemistry, Blood transfusion medicine, Diagnostic ultrasound, Diagnostic X-ray, Haematology, Laboratory diagnostics, Microbiology, Ophthalmology, Telemedicine	
Distance to hospital (km)	4826
Closest emergency facility in Antarctica (km)	109
Closest emergency facility external (km)	4826
Medical research capabilities	Yes
Medical screening requirements	Yes
VEHICLES AT FACILITY	
Sea transportation:	
Land transportation: Wheeled and tracked	
WORKSHOP FACILITIES	
ICTS, Mechanical, Metal workshop, Plexiglas workshop, Wood workshop	
COMMUNICATIONS	
Computer, E-mail, Fax, Internet, Printer, Satellite phone, Scanner, Telephone, VHF	
TRANSPORT AND FREIGHT	
Access	Air, Sea
Transport to facility: Airplane, Ship	
Number of airstrips	2
Length (m) of longest runway	2200
Width (m) of longest runway	50
Number of flight visits per year	20
Period of flight visits per year: January, February, March, November, December	
Helipad	Yes
Number of ship visits per year	3
Period of ship visits per year: January, February, March, November, December	
Ship landing facilities: None	



# Mawson Australian Antarctic Division

67°36'09.7"S 62°52'27.7"E

Type: Station

Operational period: Year-round

## Location

Mawson is located on the south-eastern shore of Horseshoe Harbour, a small ice-free rock outcrop ~ 900 m by 700 m on the edge of the continental ice cap. The coastline to both Mawson's east and west is mostly sheer ice cliffs, while the continental ice sheet behind it attains a height of some 1000 m within 35 km.

## Biodiversity and natural environment

The region around Mawson supports breeding colonies of Emperor and Adélie penguins, snow petrels, Antarctic petrels, Wilson's storm petrels, cape petrels, southern giant petrels, Antarctic fulmars and skuas. Weddell seals are common in the vicinity of the station – other species less so. Various sites in the station's vicinity have heightened protection as Antarctic Specially Protected Areas.

## History and facilities

The Australian flag was first raised at the Mawson station site on 13 February 1954 by a party led by Dr Phillip Law. A research station has continuously occupied the site since. It was named after Sir Douglas Mawson. The original station was replaced in the 1990s, some of the original buildings remain on site.

## General research and databases

Mawson-collected data sets are lodged with the Australian Antarctic Data Centre. Data held in the AADC are qualified with metadata and discoverable through the Catalogue of Australian Antarctic and Subantarctic Metadata (CAASM – <http://data.aad.gov.au/aadc/metadata>). Some data are also delivered through customised applications on the AADC website – <http://data.aad.gov.au>.

CLIMATE	
Climate zone	Coastal Antarctica
Permafrost	Discontinuous
Mean annual wind speed (km/h)	41
Max wind speed (km/h)	248
Dominant wind direction	SE
Sea Ice Break Up	January
Snow free period	None
Total annual precipitation (mm)	
Precipitation type	Snow
Mean annual temperature (°C)	-8.3
Mean temperature in February (°C)	-1.4
Mean temperature in July (°C)	-15
ENVIRONMENT	
Region	Continental Antarctica
Antarctic Environmental Domain: D – East Antarctic coastal geologic	
Antarctic Conservation Biogeographic Region: 7 East Antarctica	
Altitude of facility (m)	15
Type of surface facility built on	Ice-free ground
Long term monitoring	Yes
Waste management	Yes
Hazard(ous) management	Yes
Fuel spill response capability	Yes



## Features in the facility area

Bird colonies, Blue ice, Coast, Crevasse, Hill, Ice cap or glacier, Ice shelf, Melt streams, Moraine, Nunatak, Other Biological, Permanent snowpatches, Plateau, Rock, Sea, Sea ice, Seal colonies, Shoreline, Snow.

FACILITIES INFRASTRUCTURE	
Area under roof (m <sup>2</sup> )	6000
Area scientific laboratories (m <sup>2</sup> )	144
Type of scientific laboratories:	
Conference room (capacity)	
Logistic area (m <sup>2</sup> )	552
Number of beds	53
Showers	Yes
Laundry facilities	Yes
Power supply type	Fossil fuel, Renewable
Power supply (V)	240
Power supply (hours per day)	24
Hydroponics facilities	Yes
Number of staff on station (peak/summer season)	50
Number of scientists on station (peak/summer season)	3
Number of staff on station (off peak/winter season)	15
Number of scientists on station (off peak/winter season)	
Max number of personnel at a time (staff, scientists and others)	53
Specific device/Scientific equipment: Ionosonde, GPS, magnetometers, neutron detectors, riometers, seismometers, tide gauges	
Scientific services possible: Dry laboratory, electronics	
Long-term monitoring/observations: Cosmic ray, geomagnetic and seismic, ionosphere, meteorology, sea level and climate, sea birds	
MEDICAL FACILITIES	
Area of medical facility (m <sup>2</sup> )	184
Staff with basic medical training or doctor (Summer)	1
Staff with basic medical training or doctor (Winter)	1
Capability: Basic, Dental, Surgery	

## Main science disciplines

Atmospheric chemistry and physics, Climate change, Climatology, Ecology, Environmental sciences, Geodesy, Geophysics, GIS, Glaciology, Human biology, Mapping, Marine biology, Medicine, Pollution.

Equipment: Aeromedical equipment, Altitude medicine, Anaesthesia, Biochemistry, Blood transfusion medicine, Diagnostic ultrasound, Diagnostic X-ray, Haematology, Laboratory diagnostics, Microbiology, Ophthalmology, Telemedicine	
Distance to hospital (km)	4593
Closest emergency facility in Antarctica (km)	636
Closest emergency facility external (km)	4593
Medical research capabilities	Yes
Medical screening requirements	Yes
VEHICLES AT FACILITY	
Sea transportation:	
Land transportation: Wheeled and tracked	
WORKSHOP FACILITIES	
ICTS, Mechanical, Metal workshop, Plexiglas workshop, Wood workshop	
COMMUNICATIONS	
Computer, E-mail, Fax, Internet, Printer, Satellite phone, Scanner, Telephone, VHF	
TRANSPORT AND FREIGHT	
Access	Air, Sea
Transport to facility: Airplane, Ship	
Number of airstrips	2
Length (m) of longest runway	1620
Width (m) of longest runway	90
Number of flight visits per year	10
Period of flight visits per year: January, February, March, November, December	
Helipad	Yes
Number of ship visits per year	
Period of ship visits per year: January, February, March, November, December	
Ship landing facilities:	



Photos: Australian Antarctic Division