

> Utilities



Bankstown Airport

Master Plan
2004/05



22.1 Overview

Bankstown Airport is currently served by a range of utilities including power, water supply, sewerage and telecommunications. These utilities service the requirements of both BAL and its users/tenants.

As aviation traffic grows in line with forecasts and as various development take place across the airport, utilities will be provided to some areas for the first time, while in other areas, they will need to be upgraded accordingly.

Set out below is a description of the current situation and working estimates of the upgrades required for the following utilities:

- power;
- water supply;
- sewer;
- gas; and
- telecommunications.

The way in which BAL proposes to address flooding and stormwater drainage issues is also assessed.

22.2 Power

22.2.1 Existing services

High voltage electricity at 11 kV is supplied to the site by Energy Australia, from two metering points. Metering point No.1 is located at Marion Street near Airport Avenue, and metering point No.2 is at Henry Lawson Drive, between Milperra Road and Tower Road. High voltage electricity is then distributed throughout the airport precinct via various substations. These are networked to allow substations to feed from either the Marion Street or Henry Lawson electricity supply grids, in the event of a failure of supply. The power reticulation system at Bankstown Airport is owned and managed by BAL.

22.2.2 Upgrade Required

Over the 20 year planning period, total power demand is forecast to increase. To meet this demand, a number of options are under consideration and BAL has been consulting with Energy Australia on these options.

From a supply perspective, Energy Australia have advised that the provision of sufficient power to meet demand will require taking high voltage from Energy Australia's Milperra Zone Substation via underground cabling and constructing a Zone Substation within the Airport boundary, with distribution system throughout the site to substations adjacent to the load centres.

BAL is also monitoring the feasibility of incorporating alternate supply options such as co-generation into major developments.

BAL proposes to work with development proponents to ensure energy efficiency principles are incorporated into developments to the maximum extent practicable.

22.3 Water Supply

22.3.1 Existing services

Bankstown Airport's water supply comes from the Milperra Zone Reservoir, with the Airport precinct being served by two water supply mains – a 250mm water main from Rabaul Road through to Airport Avenue via an easement, and a 450mm water main from Milperra Road and across the airport. A 450mm water main that runs north south and crossing the existing runways has been disconnected. Within the Airport boundary, a network of Bankstown Airport controlled water supply pipelines exist that provide sufficient pressure and capacity for current domestic and fire fighting service needs.

22.3.2 Upgrade Required

Over the planning period, increased development over the site is likely to increase demand for water supply. Subject to a Sydney Water detailed modelling investigation of the existing water supply network adjacent to the site, it is anticipated that sufficient capacity within the surrounding external water supply exists to accommodate the expected demand. BAL will consider constructing the new water supply mains within the verge area of the proposed ring road and other secondary roads and secondly, design compliance with Sydney Water design standards for the new internal water supply network. The new mains would provide adequate provisions for emergency and fire fighting requirements for all areas of the Airport.

BAL recognise the significant potential stormwater runoff from both the developed and undeveloped portions of the site could provide in terms of minimising demand on Sydney Water potable water supply and the potential for inherent cost savings. Therefore Bankstown Airport will incorporate, to the extent practicable, re-use options, such as, the reuse of clean stormwater (roof water and surface runoff from “clean” areas) for irrigation as well as water conservation strategies for all new developments.

22.4 Sewerage

22.4.1 Existing services

An internal gravity sewer network services all the current developed areas that discharge into various pump stations located within the site. These internal sewerage pump stations feed into a large Sydney Water 2.5m diameter trunk main that traverses the northeast / southeast portions of the site. This trunk main discharges into the Malabar Sewerage Treatment Plant southeast of the airport site.

22.4.2 Upgrade Required

Subject to Sydney Water completing a sewer model investigation of their surrounding catchment area network, it is anticipated that the external Sydney Water sewer infrastructure has adequate capacity to accommodate the expected demand. New internal sewers which may include gravity sewers, pump stations and rising mains will be connected into the Sydney Water network system at points to be determined. BAL will consider Sydney Water design standards when designing the new internal sewer network. BAL recognises the significant potential for water saving measures in terms of minimising the demands on potable water supplies by investigating water recycling opportunities and will investigate the potential for reuse options in conjunction with Sydney Water as part of final investigations into infrastructure provisions.

22.5 Telecommunications

22.5.1 Existing services

The area that surrounds the Bankstown Airport contains optical fibre and conventional cabling. Over the planning period, demand for communication services will increase. Sufficient capacity exists in the network to accommodate the expected demand.

22.5.2 Upgrade Required

New communication ducting will be laid within the verge areas of the ring road and other roads connected at points to be determined.

22.6 Gas

22.6.1 Existing services

Medium pressure networks exist in the north and to the east of the site, with a secondary main situated on the southern side of Milperra Road.

22.6.2 Upgrade Required

Depending on the level and nature of demand BAL will consider the provision of gas supply from either the medium or high pressure systems. The infrastructure for this supply will be laid within the verge areas of the ring road and other roads connected at points to be determined.

22.7 Flooding & Stormwater

22.7.1 Flood Management – Georges River Flooding

Bankstown Airport falls within the Georges River catchment and as a result, a portion of Bankstown Airport is within the floodplain of the Georges River. BAL will ensure that future developments at Bankstown Airport have regard to localised impacts on flooding from the Georges River. As detailed planning for the development areas identified in the MP gets underway, BAL will conduct further flood studies.

The DMP commits BAL to undertaking these studies taking into consideration the guiding principles of the NSW Floodplain Management Manual. BAL will utilise the Georges River Flood Management Committee flood model and will undertake to share the results of flood modelling with BCC and the Georges River Flood Management Committee

Assessment of proposed development will include consideration of the guiding principles within Bankstown City Council's relevant Development Control Plans (DCPs) and the NSW Floodplain Management Manual. In addition, it is proposed that the following guiding principles will apply to the development:

- floor levels for all structures shall have 300mm freeboard above the estimated 1 in 100 year flood level;
- landfill outside the building footprint will be landscaped to allow the free passage of floodwaters, thus reducing impact on flood velocity in the areas adjoining the development;
- the levels of facilities such as roads, car parks and landscape areas will be reduced to provide flood storage capacity, thus reducing impact on flood levels in adjoining areas; and
- landscaping will replicate existing flow paths so that as far as practicable, properties downstream do not experience any change in flood liability or flood regime.

The internal roads will be designed to provide for evacuation to high land on the northern side of the site in the event of a flood occurrence larger than a 100 year event. A general emergency and evacuation plan will be developed after consultation with the relevant offices of the State Emergency Services and all operators on the site will be encouraged to have specific emergency plans that address all risks, including flooding.

22.7.2 Airport Stormwater Drainage Catchments

The development of the site may change the existing hydrologic catchments regime. The Bankstown Airport stormwater drainage system provides for some stormwater flows from external catchments to the north through the airport land and BAL recognises that these stormwater flowpaths and existing drainage systems are to be maintained.

To address any changes (taking into account Bankstown Council's relevant DCP clauses), BAL will consider the application of the following guidelines when assessing development:

- adoption, for both the broad scale and individual blocks, of the "Water Sensitive Urban Design – Technical Guidelines for Western Sydney", recently published by the Upper Parramatta River Catchment Trust, together with the Principles and Guidelines laid down in the NSW Floodplain Management Manual;
- a major/minor drainage system will be established, utilising the roads, carparking area and landscaped open areas for the major drainage flow paths. The design of the overall drainage system will generally retain the existing drainage/overland flow regime so that as far as practicable, the resulting system will reduce adverse impact on downstream properties;
- stormwater detention systems will be incorporated into landscaped open areas, carparking area and buildings to reduce runoff peaks and volumes to existing conditions. These detention systems will be designed to allow for water utilisation after the rainfall; and
- water quality measures would be incorporated throughout the drainage network to address aspects of water quality, to determine that to the extent practicable, the receiving streams are not significantly adversely affected.