1st July 2019 Our Ref: 179403

Joanna Bakopanos
Team Leader, Industry Assessments
Department of Planning & Environment
GPO Box 39 Sydney 2001

RE: Qantas Flight Training Centre (SSD 10154)

Dear Ms Bakopanos,

Thank you for notifying Sydney Water of the development application involving the construction and operation of a flight training centre, including a flight training hall, emergency procedures hall, teaching and training rooms and office space, demolition works, construction of a multi-level car park and associated internal road works and landscaping. We have reviewed the application based on the information supplied and provide the following comments to assist in planning the servicing needs of the proposed development.

Sydney Water Servicing

- Preliminary investigations show that there is sufficient capacity for water and wastewater for your development proposal.
- For drinking water, the existing private 250mm watermain located in Kent Street is available to service the development.
- For wastewater, the existing 200/225mm main in Kent Street is available to service the development.

Stormwater

- The development is adjacent to Sydney Water stormwater assets. Sydney Water's guidelines for building over or adjacent to stormwater assets outline the process and design requirements for such activities. Please see Attachment 1 for stormwater requirements.

This advice is not a formal approval of our servicing requirements. Detailed requirements, including any potential extensions or amplifications, will be provided once the development is referred to Sydney Water for a Section 73 application. More information about the Section 73 application process is available on our web page in the Land Development Manual.

Further advice and requirements for this proposal are in attachments 1~3. If you require any further information, please contact the Growth Planning team on 8849 6073 or email urbangrowth@sydneywater.com.au.

Yours sincerely,

Cassie Loughlin
Manager, Growth Planning

Attachment 1

Building over or adjacent to stormwater assets

Sydney Water's guidelines for building over or adjacent to stormwater assets outline the process and design requirements for such activities. As per the guidelines, the applicant is advised of the following:

- No building or permanent structure is to be proposed over the stormwater channel /pipe or within 1m from the outside wall of the stormwater asset or within Sydney Water easement whichever is larger. Permanent structures include (but are not limited to) basement car park, hanging balcony, roof eves, hanging stairs, stormwater pits, stormwater pipes, elevated driveway, basement access or similar structures. This clearance requirement would apply for unlimited depth and height.

- The applicant is required to submit the elevation drawings with the stormwater channel/ pipe, to ensure that the proposed buildings and permanent structures are 1m away from the outside face of the stormwater channel and away from the Sydney Water easement.

Please refer to the relevant guidelines for further detail on requirements and the process for approval.

Locating the Exact Position of the Stormwater Channel

Exact position of the stormwater channel is to be identified using the pot holes or any other acceptable survey method. Location of the easement position should not be used as location of the stormwater channel.

Fence Along the Sydney Water's Stormwater Channel

The proponent is required to provide the fencing arrangement along the Sydney Water's stormwater assets. Any fence other than 1.2m high pool fencing, 1.8m high colour bond fencing or equivalent should be located at least 1m away from the outside face of the stormwater channel/ asset and supported on piers and piers are to be extended at least 1m below the invert level of the stormwater channel or 1m below the zone of influence of the stormwater channel.

Fencing along/ across the stormwater channel/ pipe/ asset is to be such a way that the flood water and stormwater overland flow are to be able to flow across the fence on both directions. No permission would be given for brick fence, masonry fence or similar along the Sydney Water's stormwater channel/ pipe/ asset, which will prevent the flood water and stormwater overland flow being able to flow across the fence.

Dilapidation Survey Report

The proponent is required to undertake a dilapidation survey report / CCTV report of the Sydney Water's stormwater channel/ pipe prior to commencement of any work on the site. This report should extent at least 10m upstream and downstream from the property boundary. A copy of this dilapidation report is to be provided to Sydney Water.

This dilapidation survey report/ CCTV Report is to be carried out again upon completion of the all construction work and need to provide an assessment report, confirming that no

damage has occurred to Sydney Water's stormwater assets during construction.

Bond Money

Bond money may be required for the proposed work adjacent to Sydney Water's stormwater assets. The amount of bond money is determined upon review of the pre-construction CCTV inspection/ dilapidation survey report and likely risk to the Sydney Water's stormwater assets based on the proposed development and its proximity to Sydney Water's stormwater assets.

Constructing an access bridge over stormwater assets

Sydney Water's building bridge over Sydney Water's open stormwater channel outline the process and design requirements for such activities. *Please refer to the relevant guidelines for further detail on requirements and the process for approval.*

Positive Covenant for bridge

You are required to create a Positive Covenant for Building bridges over Sydney Water's open Stormwater channels. The Positive Covenant must follow the rules laid out in Sydney Water's Policy and Guidelines on the "Documentation Standards for Building bridges over Sydney Water's open Stormwater channels guide".

You should contact Sydney Water's Group Property to get the specific details via email acquisitions@sydneywater.com.au or Ph: 02 8849 6223 or 02 8849 4532

Stormwater connections to Sydney Water's Stormwater Channel

If you have intention to make direct stormwater connection to Sydney Water's stormwater system, then the connection is to be carried out according to the Asset Adjustment and Protection Manual. Further details regarding this process can be obtained from your Water Servicing Coordinator. The applicant is advised of the following:

- For pipes with a diameter 300mm or more the connection angle is to be no greater than 30 degrees in the direction of the channel flow.
- Proposed connections that are 300mm or more in diameter require a qualified structural engineer to design the connection. A structural engineer's certificate is to be attached with the design drawings.
- Proposed connections that are less than 300mm in diameter can use Sydney Water's standard drawings to design the connection drawings.
- All drawings are to be submitted in AutoCad to the Water Servicing Coordinator. Water Servicing Coordinator is required to transfer these drawings on to the Sydney Water's template prior to submit as design drawing.
- The title of the drawings shall be as follows:

Case No. ***[#######]*** SW

[LGA] Drainage
[Sub-Catchment Name] SWC ***[##]***
Drains to **[Catchment Name]** SWC **[##]**
Connection / Deviation / Adjustment

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Flood Impact Assessment (FIA)

The applicant is required to submit a Flood Impact Assessment report based on a current flood model for the proposed development and identify flood hazards. The FIA must:

- demonstrate that there are no potential adverse flood impacts offsite due to the development; and
- evaluate the impacts of flooding on the proposed development.

For State significant developments the applicant is also required to submit a Flood Hazard Management Plan as per Floodplain Development Manual. The flood models need to assess 5, 20, 100 and 100 year plus climate change year storm events.

Sydney Water requires the models to be 1D/2D models. Models should be simple and easy to read illustrating in maps:

- Flood levels
- Velocities
- Hazards

Sydney Water needs to ensure that developments do not adversely impact on people, properties and infrastructure.

On-site Stormwater Detention (OSD)

Sydney Water's guidelines for on-site stormwater detention (OSD) outline the circumstances when a development is required or exempted from providing an OSD system and its design specifications. As per the guidelines, the applicant is advised of the following:

The proposed activity / development will require an OSD system to offset stormwater run-off. To determine the required On-Site Detention and Permissible Site Discharge (PSD), the following site specific information is required to be submitted:

- Address in which the development will occur
- Total site area (m2)
- Existing pre-development impervious area (m2)
- Proposed post-development impervious area (m2)

If a percentage of the site area does not drain into the OSD system, the rate of discharge from the OSD storage must be restricted so that the total flow from the site (from the OSD storage and free runoff) does not exceed the specified PSD.

On Site Detention is to be designed according to the Sydney Water's values and the details of the On-Site Detention are to be submitted to Sydney Water for review and approval.

The following details are to be included in your submission for On Site Detention approval:

- Location of the On-Site Detention in relation to the development
- Location of the On-Site Detention in relation to overall stormwater network of the property
- Plan and Elevation of the On-Site Detention tank with all dimensions
- Orifice plate calculation

Sydney WATER

Positive Covenant for On-site Stormwater detention

You are required to create a Positive Covenant over the On-site Stormwater Detention. The Positive Covenant must follow the rules laid out in Sydney Water's Policy and Guidelines on the "Documentation Standards for On-site stormwater detention guide".

You should contact Sydney Water's Group Property to get the specific details via email acquisitions@sydneywater.com.au or Ph: 02 8849 6223 or 02 8849 4532

Discharged Stormwater Quality Targets

Stormwater run-off from the site should be of appropriate quality before discharged into a Sydney Water asset or system. Developments must demonstrate stormwater quality improvement measures that meet the following specified stormwater pollutant reductions:

Pollutant	Pollutant load reduction objective (%)
Gross Pollutants (>5mm)	90
Total Suspended Solids	85
Total Phosphorus	65
Total Nitrogen	45

You may use our tool, through the website below, to determine whether your development is Deemed to Comply. In some cases though, we may request an eWater MUSIC model before approving your connection: **https://stormwater.flowmatters.com.au/_/#/**

Easements

The applicant's proposed activity / development may impact an existing Sydney Water easement. Sydney Water's guidelines for easements outline the restrictions and obligations set on works within stormwater easement boundaries.

Please refer to the relevant guidelines for further detail on requirements and process for approval.

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Attachment 2

Sydney Water Servicing

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water.

The proponent is advised to make an early application for the certificate, as there may be water and wastewater pipes to be built that can take some time. This can also impact on other services and buildings, driveways or landscape designs.

Applications must be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Land development or telephone 13 20 92.

Building Plan Approval

The approved plans must be submitted to the Sydney Water Tap in™ online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

The Sydney Water Tap in™ online self-service replaces our Quick Check Agents as of 30 November 2015.

The Tap in™ service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's Tap in™ online service is available at: https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm

Sydney WATER

Attachment 3

Requirements for **Business Customers for Commercial and Industrial Property Developments.**

Trade Wastewater Requirements

If this development is going to generate trade wastewater, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. You must obtain Sydney Water approval for this permit before any business activities can commence. It is illegal to discharge Trade Wastewater into the Sydney Water sewerage system without permission.

The permit application should be emailed to Sydney Water's Business Customer Services at businesscustomers@sydneywater.com.au

A Boundary Trap is required for all developments that discharge trade wastewater where arrestors and special units are installed for trade wastewater pre-treatment.

If the property development is for Industrial operations, the wastewater may discharge into a sewerage area that is subject to wastewater reuse. Find out from Business Customer Services if this is applicable to your development.

Backflow Prevention Requirements

Backflow is when there is unintentional flow of water in the wrong direction from a potentially polluted source into the drinking water supply.

All properties connected to Sydney Water's supply must install a testable Backflow Prevention Containment Device appropriate to the property's hazard rating. Property with a high or medium hazard rating must have the backflow prevention containment device tested annually. Properties identified as having a low hazard rating must install a non-testable device, as a minimum.

Separate hydrant and sprinkler fire services on non-residential properties, require the installation of a testable double check detector assembly. The device is to be located at the boundary of the property.

Before you install a backflow prevention device:

1. Get your hydraulic consultant or plumber to check the available water pressure versus the property's required pressure and flow requirements.
2. Conduct a site assessment to confirm the hazard rating of the property and its services. Contact PIAS at NSW Fair Trading on 1300 889 099.

For installation you will need to engage a licensed plumber with backflow accreditation who can be found on the Sydney Water website:
http://www.sydneywater.com.au/Plumbing/BackflowPrevention/

Sydney WATER

Water Efficiency Recommendations

Water is our most precious resource and every customer can play a role in its conservation. By working together with Sydney Water, business customers are able to reduce their water consumption. This will help your business save money, improve productivity and protect the environment.

Some water efficiency measures that can be easily implemented in your business are:

- Install water efficiency fixtures to help increase your water efficiency, refer to WELS (Water Efficiency Labelling and Standards (WELS) Scheme, http://www.waterrating.gov.au/
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Refer to http://www.sydneywater.com.au/Water4Life/InYourBusiness/RWTCalculator.cfm
- Install water-monitoring devices on your meter to identify water usage patterns and leaks.
- Develop a water efficiency plan for your business.

It is cheaper to install water efficiency appliances while you are developing than retrofitting them later.

Contingency Plan Recommendations

Under Sydney Water's customer contract Sydney Water aims to provide Business Customers with a continuous supply of clean water at a minimum pressure of 15meters head at the main tap. This is equivalent to 146.8kpa or 21.29psi to meet reasonable business usage needs.

Sometimes Sydney Water may need to interrupt, postpone or limit the supply of water services to your property for maintenance or other reasons. These interruptions can be planned or unplanned.

Water supply is critical to some businesses and Sydney Water will treat vulnerable customers, such as hospitals, as a high priority.

Have you thought about a contingency plan for your business? Your Business Customer Representative will help you to develop a plan that is tailored to your business and minimises productivity losses in the event of a water service disruption.

For further information please visit the Sydney Water website at: http://www.sydneywater.com.au/OurSystemsandOperations/TradeWaste/ or contact Business Customer Services on 1300 985 227 or businesscustomers@sydneywater.com.au.