



23 October 2012

Heather Warton
Director Metropolitan and Regional Projects North
Department of Planning & Infrastructure
23-33 Bridge Street
SYDNEY NSW 2000

Attn: Stuart Withington, Team Leader

Dear Heather,

DEXUS ESTATE INDUSTRIAL PARK PROJECT (MP 08_0259) – FUJITSU DATA CENTRE FACILITY – AMENDED LAYOUT

1 Introduction

On 8 November 2009, the then Minister for Planning approved a proposal from DEXUS Funds Management Limited (DEXUS) under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), for the DEXUS Estate Industrial Park Project within the Greystanes Southern Employment Lands.

The approval allows the development of the DEXUS Estate comprising a range of warehouse and distribution facilities across the site. The originally approved masterplan for the estate is shown on **Figure 1**.

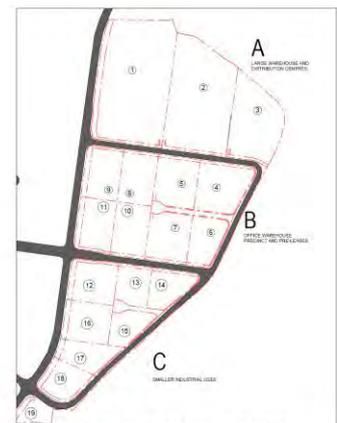


Figure 1: DEXUS Estate Masterplan – As Originally Approved

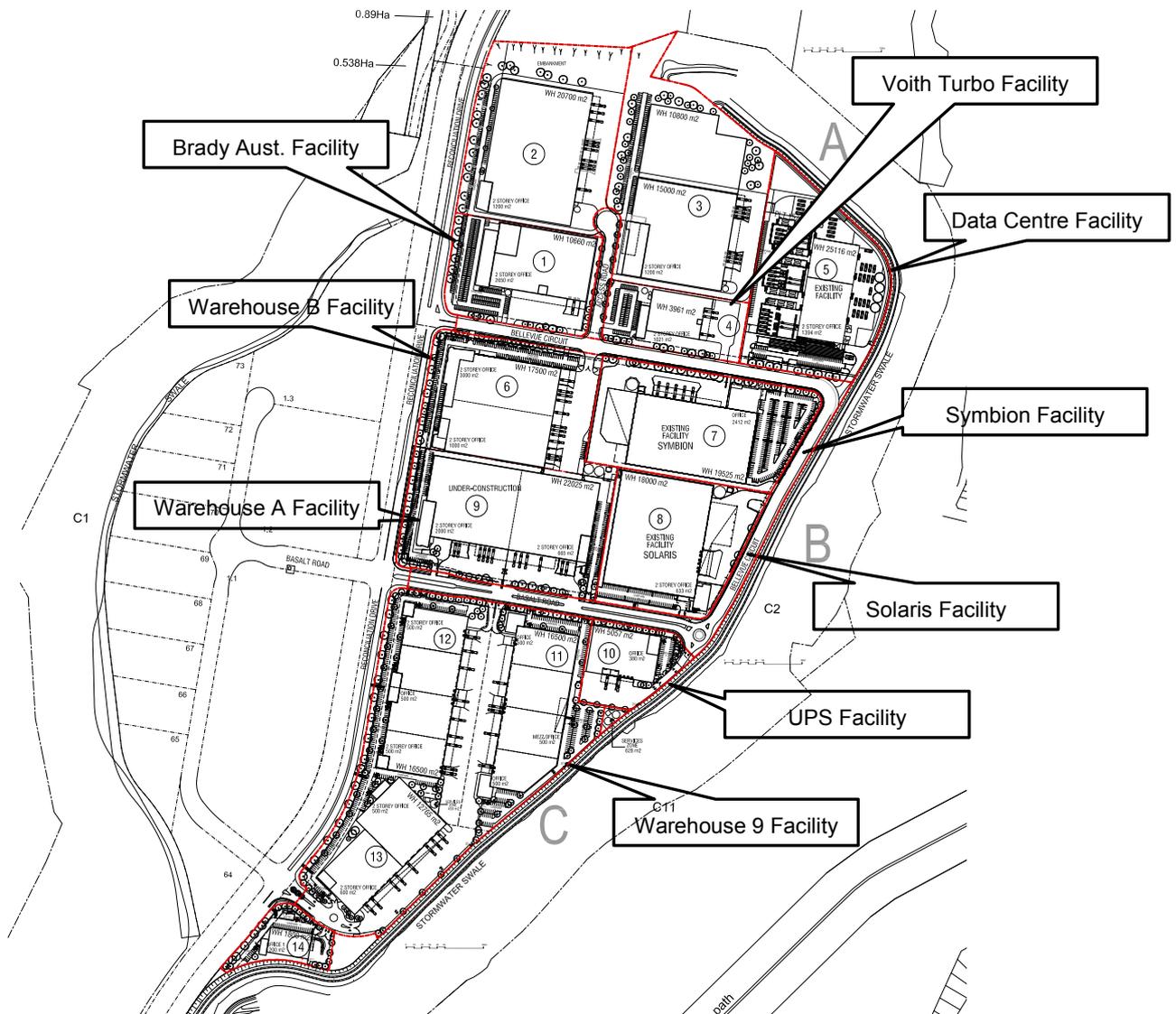


Figure 2: DEXUS Estate Masterplan – As Approved in MOD 3

The estate is to be developed on a staged basis in line with the securing of end-users for the facilities and/or market demand.

The approval has been tailored in accordance with this staged development approach, and includes a number of conditions requiring certain matters to be completed to the satisfaction of the Director-General of the Department of Planning & Infrastructure (or other authorities) prior to the commencement of construction of each facility. These conditions are detailed below.

To date, 9 end-user facilities have been approved by the Department, namely the (listed in order of approval):

- Solaris Paper Facility in Superlot B;
- Symbion Health Facility in Superlot B;



- DEXUS Estate Data Centre Facility (now known as the Fujitsu Data Centre Facility) in Superlot A;
- Warehouse A and Warehouse B in Superlot B;
- Warehouse 8 (UPS Facility) and Warehouse 9 in Superlot C; and
- Brady Australia and Voith Turbo Facilities in Superlot A.

The project approval has been modified three times to accommodate these facilities, including:

- MOD 1 – approved by the Department on 20 August 2010. This modification allowed the Solaris Paper Facility to undertake manufacturing uses in the facility;
- MOD 2 – approved by the Department on 14 March 2012. This modification involved a change to the masterplan layout of Superlot C, including deletion of the southern portion of Bellevue Circuit on the eastern side of the superlot; and
- MOD 3 – approved by the Department on 4 May 2012. This modification involved a change to the masterplan layout of Superlot A, including subdividing 2 lots into 4 lots, and addition of an access road to service the additional lots, as well as allowing light industrial use in the Brady and Voith Turbo Facilities.

The amended masterplan for the DEXUS Estate, based on these modifications and the facilities approved to date, is shown on **Figure 2**.

2 Approved Fujitsu Data Centre Facility

On 6 July 2010, the Department approved the necessary pre-construction deliverables for the Fujitsu Data Centre Facility in Superlot A, in accordance with the project approval for the DEXUS Estate. The location of the Data Centre Facility is shown on **Figure 2**.

On 1 March 2011, the Department subsequently approved a minor amendment to the Data Centre Facility. The amendment involved relocation of the fire water tanks for the facility's sprinkler system, and consolidation of the number of tanks from 7 to 4.

The approved Data Centre Facility (as amended) is shown on **Figure 3**. In summary, the Data Centre Facility as approved comprises the following main elements:

- a 3-level data storage hall warehouse, with 5 data halls on each level¹. The data storage halls are the central component of the facility, housing computers, servers and equipment for storage and distribution of electronic data;
- 3 levels of uninterruptible power supply (UPS) plant, servicing each data hall. The UPS plant ensures an uninterruptible power supply is available to the data hall, and includes a range of power supply infrastructure including diesel generators, diesel rotary UPS units (ie. DRUPS), transformers, power distribution units and switch rooms;
- a 2-level ancillary office, including storage areas, reception, meeting rooms, plant and switch rooms, and loading docks; and
- external chiller plant.

Land provision has also been made for a tri-generation plant at the northern end of the site.

The facility was approved to be constructed in stages, as indicated on **Figure 4**. To date, only Stage 1 has been constructed and is operational.

¹ Although there are 5 main physical data halls on each level, some of these have been split further into smaller data halls.

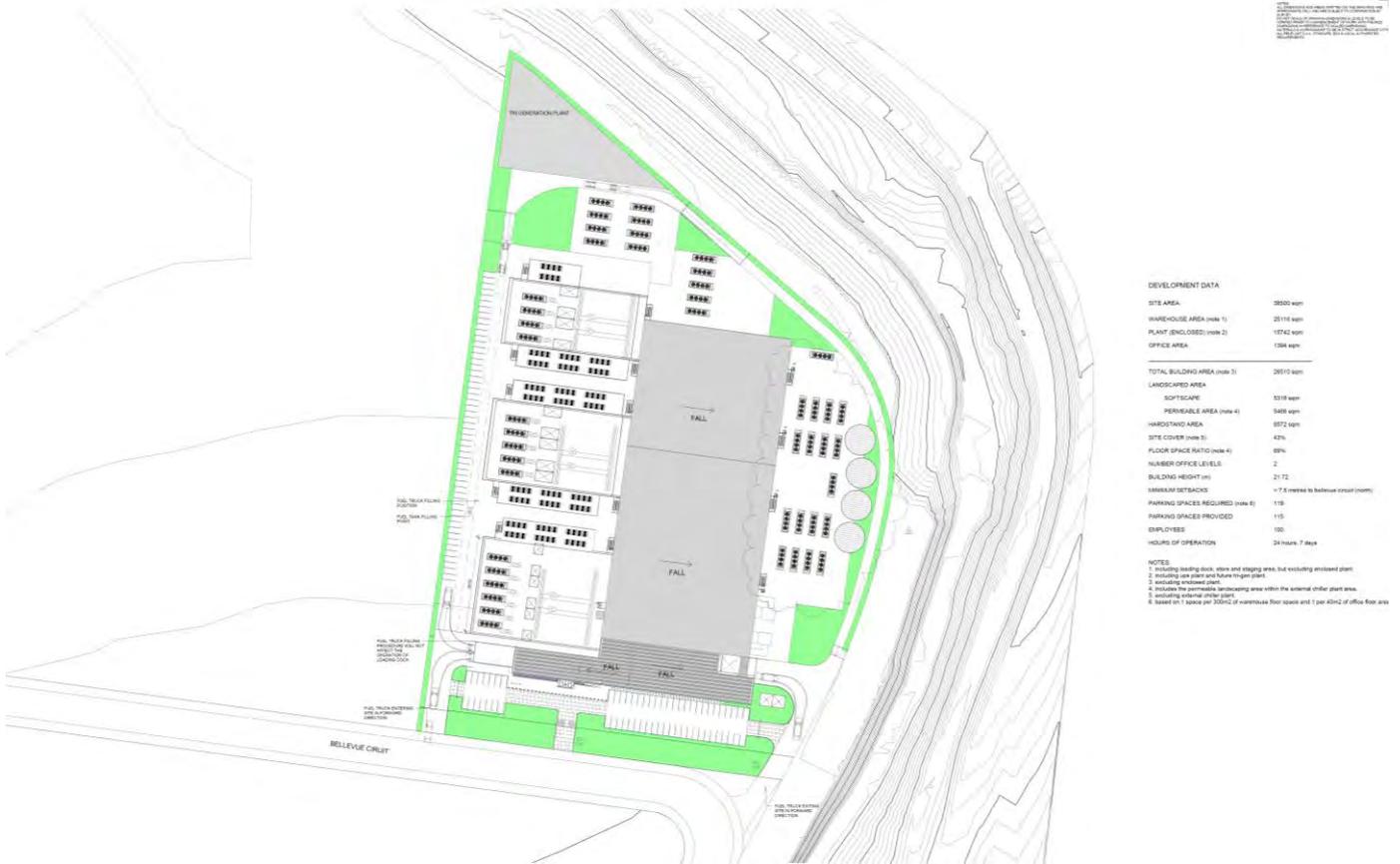


Figure 3: Data Centre Facility Site Plan – As Approved



Figure 4: Data Centre Facility Staging Plan



3 Planned Changes to Approved Fujitsu Data Centre Facility

Following construction and commissioning of Stage 1 of the Data Centre Facility, Fujitsu has continued to undertake detailed design planning for the facility in accordance with the solid growth in demand for data storage services in recent years. This planning has identified the need for additional data storage capacity in the facility beyond that provided for in the approved facility.

To meet the growing demand, Fujitsu is proposing to expand the Data Centre Facility. The planned changes involve:

- relocation of the Stages 2-3 data hall warehouse to the west of the approved location, and expansion to 4 levels, with 3 data halls on each level;
- relocation of the UPS plant buildings², with:
 - a 3-level plant building attached to the eastern side of the existing Stage 1 data hall warehouse; and
 - a 5-level plant building attached to the northern side of the relocated Stages 2-3 data hall warehouse;
- expansion of the ancillary office to 3 levels; and
- relocation and augmentation of external plant, ancillary services and equipment, including:
 - a loading/storage/staging building attached to the southern side of the relocated Stages 2-3 data hall warehouse;
 - a single level detached switchroom building to the north of the relocated Stages 2-3 data hall warehouse;
 - consolidation of the fire water tanks (from 4 to 2); and
 - provision of additional car parking spaces and localised changes to the internal access roadways.

The revised layout of the Data Centre Facility is shown on the architectural plans attached as **Appendix A**. Development details of the facility are outlined in **Table 1**. The table includes a comparison against the approved Data Centre Facility, detail on the revised cumulative development of Superlot A, as well as the total approved development 'envelope' of Superlot A.

² Identified as MEP (Mechanical, Electrical, Plumbing) buildings on the plans.



Table 1: Revised Data Centre Facility Details

Aspect	Data Centre Site Detail		Cumulative Superlot A Detail – As Proposed	Total Masterplan Superlot A Detail¹
	As Approved	As Proposed		
End User	Fujitsu	No change	Brady, Voith Turbo, Fujitsu	Not defined
Proposed Use	Warehousing and distribution of electronic data, with ancillary office	No change	Warehousing and distribution / light industry, with ancillary office	Warehousing and distribution / light industry, with ancillary office
Areas (m²)				
- Site Area	38,500	No change	78,140	177,604
- Warehouse Area	25,116	34,530	49,151	87,367
- Plant (enclosed)	15,742	20,446	20,446	15,742
- Office Area	1,394 (5%)	2,384 (6%)	6,055 (15% av.)	8,765 (9%)
- Total Building Area	26,510	40,091	58,383	96,132
- Awning Area	0	No change	1,438	3,850
- Hardstand Area	9,995	9,606	22,890	41,810
- Landscaping Area	5,318 (14%)	7,106 (18%)	15,555 (22%)	27,250 (15%)
Site Cover (inc. awning)	43%	54%	49% (average)	56%
Floor Space Ratio	69%	103%	64% (average)	54%
No. office levels	2	3	1-3	1-2
Building Height (m)	22	33.7	33.7 (max)	40 (max.)
Minimum Setbacks	>7.5 metres to Bellevue Ct (north)	No change	>7.5m to Bellevue Ct >15m to Reconciliation Dr	7.5m to Bellevue Ct 15m to Reconciliation Dr
Parking Spaces Required ²	119	175	356	563
Parking Spaces Provided	115	175	458	611
Employees	100	148	423	Not Defined
Hours of Operation	24 hours, 7 days	No change	24 hours, 7 days	24 hours, 7 days

1 Based on areas as approved in MOD 3

2 Based on 1 space per 300m² of warehouse floor space and 1 per 40m² of office floor space.

The revised Data Centre Facility has been designed to a high standard by Genton in accordance with the requirements of condition 2 of schedule 3 of the project approval. The architect's design statement for the revised facility is reproduced below.

The revised data centre facility retains the same building elements, warehouse, plant, office as per the approved facility for the storage and distribution of electronic information. In this regard, the proposal retains a similar language and character to the approved facility with attractive facades that complement the existing structures.

Pre-cast painted concrete with expressed control joints, polycarbonate panels, sheet metal roofing, louvre screens and glass create a quality, long-life building system.



Typically simple building forms have been arranged in plan to create articulation by announcing entry points and circulation corridors. The building form has retained the same boundary setback from the adjoining western neighbours as per the approved facility. The arrangement of forms allows for good circulation throughout the site and ease of maintenance for the removal and replacement of equipment. In elevation the building form is articulated once again by pronounced entry points and circulation corridors, facades have been broken down through the use of different materials, external gantries add horizontal lines to the facade reducing building bulk. The form of each building can be linked to individual functions.

The proposal locates bulk form to the rear of site, new data halls, plant and loading docks are screened from view by the existing metal façade, complementary timber columns and glazing to ensure the same visual impact is retained when driving along Bellevue circuit as per the approved facility.

Roof top plant and equipment to be screened from view. Solar panels have been added to façade and roof areas to collect solar energy. Tri-generation provision remains at the northern end of the site.

Finishes have been selected to achieve a subtle colour palette of natural shades and tones designed to disappear into the surrounding quarry backdrop.

The site grounds retain the existing high level of security, car parking has been designed to allow uninterrupted flow around the proposal for employees and maintenance, landscaping remains the same to Bellevue circuit with landscape and permeable surfaces to the rear.

The facility has been designed to be developed in stages. Once completed the facility would represent a quality development suited to the designated zoning while creating an attractive environment to house critical electronic storage equipment.

4 Consistency with Approved Project

In 2010, prior to submission of the approved plans for the Data Centre Facility, DEXUS consulted with the Department regarding the consistency of the data centre proposal with the approved DEXUS Estate project.

On 5 May 2010, based on the preliminary information provided in the letter dated 22 April 2010, the Department advised that the planned Data Centre Facility *'is generally consistent with the approval [for the DEXUS Estate Project] and therefore does not require a formal modification'*.

The Department did note that there are *'several variations to the approved development standards being sought including an increase in floor space ratio and site coverage'*, but went on to state that *'the Department raises no objection to the lodgement of the data centre facility on Lot 3 [now Lot 5] given its discrete position adjacent the quarry wall and its low traffic generation'*.

It is considered that the revised Data Centre Facility remains generally consistent with the approved facility in this regard, in that it does not involve any change to the approved use, and is generally consistent with the building envelope approved in the estate masterplan.



The main departures from the approved project associated with the revised Data Centre Facility remain similar to those identified for the facility when it was originally approved – in particular, floor space ratio and building height. A re-consideration of these main departures is presented below.

Consistency with Approved Masterplan

The main variations to the approved masterplan include:

- the floor space ratio of the revised facility (ie. 103%) is higher than the approved Data Centre Facility (ie. 69%), which was also higher than the approved masterplan at the time it was approved; and
- the height of the revised facility (ie. 33.7 metres) is higher than the approved facility (ie. 22 metres), but is still less than the allowable height for the applicable lot (ie. 40 metres) on the masterplan (see **Figure 5**).

It is noted that the floor space ratio figure indicated in Table 1 excludes the main plant rooms (including the internal UPS plant rooms, switchrooms and the future tri-generation plant). Such exclusions are consistent with the definition of floor space ratio under the Major Development SEPP (which relies on the definitions in the *Standard Instrument (Local Environmental Plans) Order 2006*).

The floor space ratio exceedance is largely the result of the multi-level warehouse layout (ie. the 3 and 4-storey data halls), which effectively multiplies the floor area of the 'warehouse'.

However, as discussed in the application for the approved Data Centre Facility it is considered that the floor space ratio is a largely academic consideration for the facility, given that:

- the facility complies with the site cover standard and is well below the allowable height limit, and thus the facility is consistent with the scale and bulk (or building envelope) of the approved masterplan; and
- a large portion of the floor area would be used for ancillary plant and equipment, and therefore the high nominal floor space ratio does not affect the density of the proposed use.

Notwithstanding, to minimise the scale and bulk of the revised Data Centre Facility:

- the higher components of the facility (including the 4-level Stages 3A-3B data hall warehouse and the 5-level UPS plant building) have been located toward the rear of the site, well set back from Bellevue Circuit;
- the layout of the facility has been designed with a high level of articulation to 'break up' the facility on the site (see perspectives in **Appendix A**); and
- the facades of the data hall warehouse and associated plant buildings have been designed to a high quality, including a mix of materials and finishes.

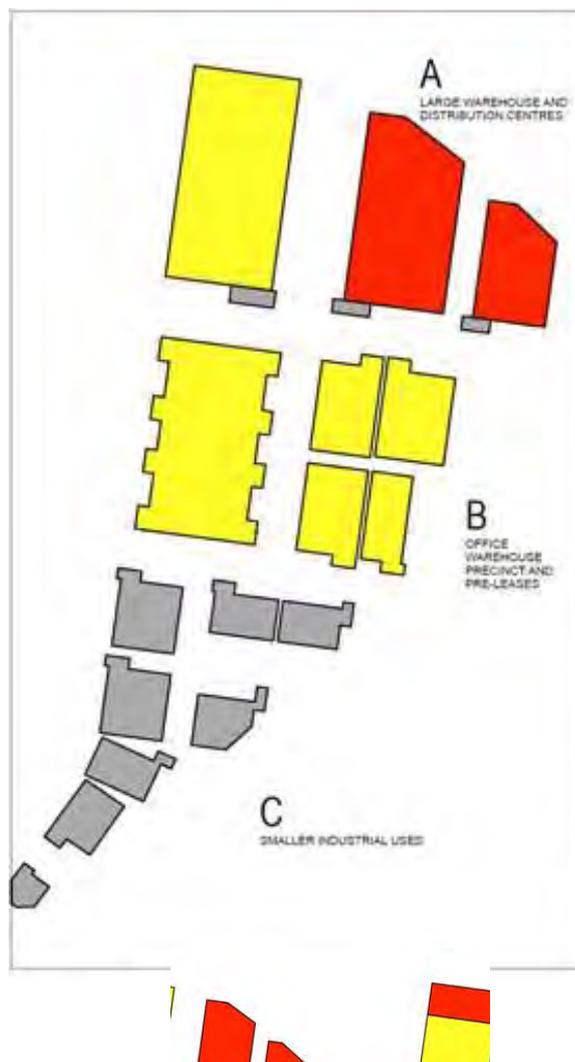


Figure 5: Approved Building Heights Plan

Environmental Issues

It is expected that the environmental impacts associated with the revised Data Centre Facility would be generally consistent with those considered for the approved facility. The main differences would include:

- the demand on electrical supplies would be marginally greater than that assumed for the approved facility. In this regard, an Energy Management Plan has been prepared and approved for the facility, as outlined in Section 5 below;
- noise emissions associated with additional plant would be nominally higher, however it is noted that more plant is located internally than for the approved facility and therefore external noise emissions would not be expected to increase. Further, it is noted that the noise assessment for the Greystanes SEL was conservatively based on heavy industry across the site, and as such the noise levels are expected to be able to comply with the relevant criteria for the estate; and
- traffic levels would be marginally higher than the approved facility given the additional employees, however traffic would remain much lower than that assumed for the



originally-approved masterplan (based on traditional warehousing and distribution), given that the data centre does not involve storage and distribution of physical goods.

5 Pre-Construction Requirements

The project approval includes a number of conditions that are required to be completed to the satisfaction of the Director-General prior to the commencement of construction of each element of the DEXUS Estate.

These conditions, and DEXUS' response to each in relation to the revised Data Centre Facility, are summarised in the following table. The revised plans are attached for the Department's review and approval. The plans have been prepared to replace the corresponding previously-approved plans in Appendix H of the DEXUS Estate Environmental Management Strategy, a copy of which is held by the Department.

Table 2: Revised Data Centre Facility Pre-Construction Approval Requirements

Sch.	Condition	Requirement	Consultation	Comment
2	6	Dilapidation Report	Council	No change to previously-approved report required.
3	2	Architectural Design Plans	Council	Attached for review and approval (see Appendix H1). It is noted that the revised plans have been forwarded to Council for review. Any comments received will be forwarded to the Department once received.
3	3	Landscape Plans	Council	The southern part of the site fronting Bellevue Circuit and associated areas has already been landscaped in accordance with the approved facility. Given the minimal changes to this part of the site, it is considered that no change to the previously-approved landscape plan is required. The rear part of the site will be landscaped in accordance with the principles of the approved landscape plan.
3	8	Construction & Operation Traffic Management Plan	Council	No change to previously-approved plan required.
3	14	Erosion and Sediment Control Plan	-	Attached for review and approval (see Appendix H2).
3	16	Stormwater Management Plan	-	Attached for review and approval (see Appendix H3).
3	18	Site Audit Statement	-	No change to previously-approved statement required.
3	24	Energy Management Plan	-	No change to previously-approved plan required.
3	27	Preliminary Hazards Analysis	-	No change to previously approved dangerous goods storage.



Sch.	Condition	Requirement	Consultation	Comment
4	1	Environmental Management Strategy	-	No change to previously-approved plan required.

6 Conclusion

It is respectfully requested that the Department:

- confirms that the revised Data Centre Facility remains generally consistent with the approved project; and
- reviews and approves the attached revised architectural plans, erosion and sediment control plan and stormwater management plan relating to the Data Centre Facility.

Should you have any enquiries in relation to this matter, please do not hesitate to contact me on 0400 392 861.

Yours faithfully,

PJEP – Environmental Planning

Phil Jones

Principal Environmental Planner

Cc: Genton, Fujitsu, DEXUS
Attachments: Revised Data Centre Facility specific plans (to replace the corresponding plans in Appendix H of the DEXUS Estate Environmental Management Strategy, a copy of which is held by the Department), including:
Appendix H1 Revised Architectural Design Plans
Appendix H2 Revised Erosion and Sediment Control Plan
Appendix H3 Revised Stormwater Management Plan



APPENDIX H1



APPENDIX H2



APPENDIX H3