



**MODIFICATION REQUEST:
GLOBAL SWITCH SYDNEY 2 DATA CENTRE
273 PYRMONT STREET, ULTIMO**

MP 08_0222 MOD 2



Director General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

March 2012

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1. BACKGROUND

1.1 The Site

The site is located at 273 Pymont Street, Ultimo within the City of Sydney Local Government Area. The site is bounded to the north by the Western Distributor, to the east by Pymont Street and to the south by Quarry Street. The site adjoins the existing Global Switch Sydney 1 data centre at 400 Harris Street. The subject site is shown below in **Figure 1**.

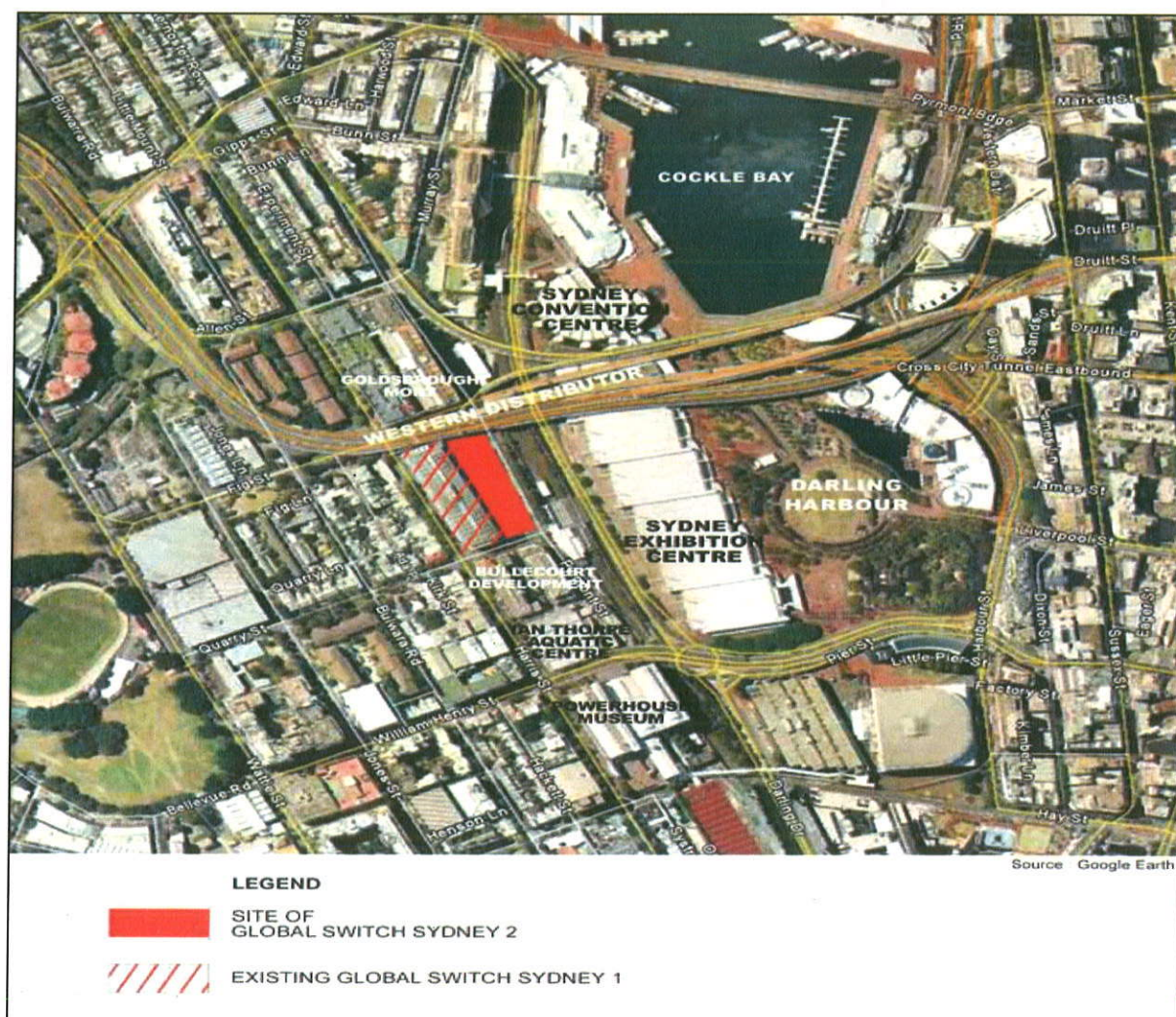


Figure 1: Aerial view of the subject site

1.2 Major Project Application

On 16 November 2010, the Deputy Director General, Development Assessment and Systems Performance approved a Project Application (MP 08_0222) for a data centre comprising:

- the construction of a purpose built, six storey data centre building above 3 sub-ground levels containing approximately 22,285 m² of technical area and 15,227 m² of plant area;
- a total of 12 car spaces at the Pymont Street grade level on the northern boundary of the site, with vehicular access being directly off Pymont Street; and
- landscaping, street upgrade works and building identification signage.

1.3 Previous Modification

MP 08_0222 (MOD 1) was approved by the then Director of Government Lands and Social Projects, as delegate of the Minister of Planning on 1 December 2010, to amend the 'Land' description of the subject site as detailed under Schedule 1 of the Project Approval from Lot 3 and 13 in DP 632526, Lot 10 in DP 840467, Lot 1 DP 109652 to being Lot 3 and 12 in DP 632526, Lot 10 in DP 840467 and Lot 1 in DP 109652.

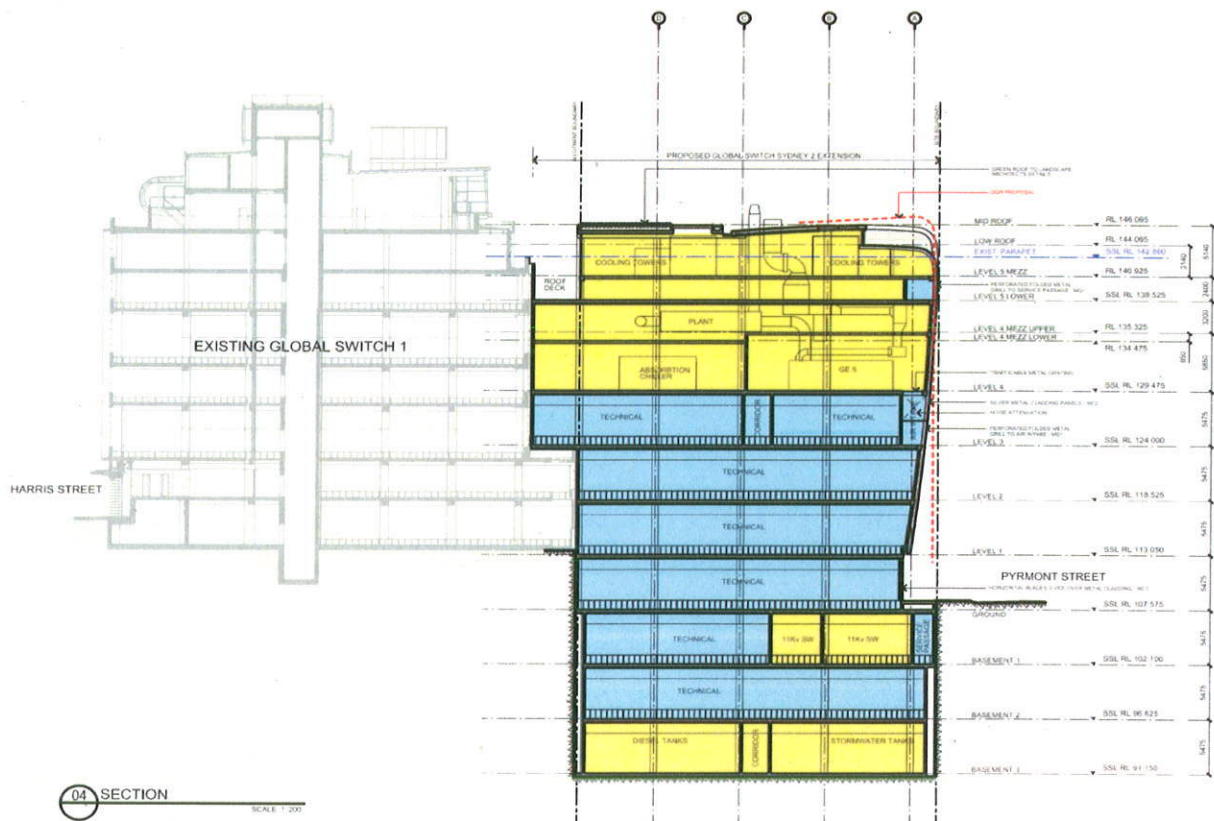
2. PROPOSED MODIFICATION

Modification 2 seeks to modify the approved Global Switch 2 Data Centre by:

- deleting the two lower basement levels and reducing the size of the remaining basement level;
- reducing the Gross Floor Area of the building from 22,285m² to 18,175m² and plant machinery area from 15,227m² to 7,615m²;
- re-configuring the floor levels and space allocation of the plant rooms;
- undertaking the development in two main building stages, including staged payment of Section 94 Contributions;
- replacing the co-generation for the first stage of the development by drawing power from the existing Global Switch 1 electrical supply;
- introducing an energy efficient free cooling air conditioning system to offset the deletion of the original proposed tri-generation system;
- removing the gas engines from the upper levels; and
- relocating the roof level breakout area to the north of the building to coincide with the new position of the lift core.

The approved plans and proposed modifications are shown in **Figure 2** and **Figure 3**.

Figure 2: Approved Cross Section



Architectural floor plan of the proposed Global Switch Sydney 2 extension. The plan shows the existing building on the left and the new extension on the right. The extension includes a ground floor with water tanks and a reception area, and upper floors with technical rooms and switch rooms. The plan is oriented with Harris Street to the left and Pyrmont Street to the right. Key features include cooling towers, diesel generators, and various technical rooms. The plan also shows the proposed global switch Sydney 2 extension and the existing global switch 1.

EXISTING GLOBAL SWITCH 1

PROPOSED GLOBAL SWITCH SYDNEY 2 EXTENSION

HARRIS STREET

PYRMONT STREET

COOLING TOWERS

DIESEL GENERATORS

UPS & SWITCH ROOM

IP & SWITCH ROOM

TECHNICAL

WATER TANKS

RAINFALL TANKS

RECEPTION

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

LEVEL 5

LEVEL 6

LEVEL 7

LEVEL 8

LEVEL 9

LEVEL 10

LEVEL 11

LEVEL 12

LEVEL 13

LEVEL 14

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3.1 Continuing Operation of Part 3A to Modify the Project Approval

Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or delegate) may approve or disapprove the modification of the project under section 75W of the Act.

The modification application has been lodged with the Director General pursuant to s75W of the Act. Section 75W provides for the modification of a Minister's approval including *"revoking varying a condition of the approval or imposing an additional condition of the approval"*. The Minister's approval is not required as the proposed modification will be consistent with the existing approval. Therefore, the modification can be determined under delegated authority.

No additional environmental assessment requirements, pursuant to s75W (3) of the Act, were issued with respect to the proposed modification, as sufficient information has been provided to the Department in order to consider the application and the issues raised remain consistent with the key assessment requirements addressed in the original DGR's.

3.4 Delegation Authority

On 14 September 2011, the Minister for Planning and Infrastructure delegated his powers and functions under Section 75W of the Act to the Directors in the Major Projects Assessment Branch where:

- the relevant local council has not made an objection;
- no reportable political donation has been declared; and
- less than 10 objections were made on the application.

Council has not objected to the proposed modification; no political disclosure statement has been made; and the Department did not receive any public submissions. Accordingly the application is able to be determined by the Acting Director of Metropolitan and Regional Projects South, under delegation.

4. CONSULTATION AND SUBMISSIONS

Under Section 75X of the Act, a request for a modification of an approval does not require public exhibition. However, under Section 75X (2) (f) of the Act, the Director General is to make publicly available requests for modifications of approval given by the Minister. In accordance with Clause 8G of the *Environmental Planning and Assessment Regulation 2000*, the application to modify the approval was placed on the Department's website.

The modification application was referred to the City of Sydney Council (Council); Transport for NSW; Ausgrid; RailCorp; Sydney Water; Roads and Maritime Services (RMS); and Office of Environment and Heritage (OEH).

The Department received submissions from Council, Ausgrid, Sydney Water, RMS and the Environment Protection Authority (EPA) as a division of OEH. The comments are summarised as follows:

City of Sydney Council

Council raised no objection to the modification as there will be no alteration to the overall height, building envelope, external elevations and building materials.

Ausgrid

Ausgrid reviewed the proposal and noted the following:

- Ausgrid owns electrical infrastructure located within the premises being developed that will be affected by the proposal;
- there are additional high voltage and pilot cables located in the footpath and the roadway surrounding the site that may be affected by the proposed building and/or construction; and
- the 33kV substation which is located in the existing Global Switch 1 building will not be affected.

On 14 February 2012, the proponent indicated via email that Global Switch has been working with Ausgrid on the relocation of assets within the site and have received a certified design for these works. The proponent has progressed to the construction and relocation of these assets with Ausgrid accordingly.

The Department is satisfied that the proponent is working together with Ausgrid to effectively manage the relocation of electrical infrastructure.

Sydney Water

Sydney Water raised no objection to the proposed modifications. Sydney Water will assess the impact of development on the site when the proponent applies for a Section 73 Certificate.

Roads and Maritime Services

The Roads and Maritime Services raised no objection to the application as the proposed modification will not have a significant traffic impact on the classified state road network.

Environmental Protection Authority (EPA)

The EPA initially requested clarification regarding the deletion of the tri-generation system and requested details of the alternate air conditioning system.

In response the proponent clarified that the tri-generation system is proposed to be replaced with a conventional electrical grid supply for power and the use of high efficiency electric chillers and free cooling for the mechanical/cooling aspect.

On 14 February 2012, EPA advised the Department that after having reviewed the additional information submitted by the proponent, it does not object to the proposal. EPA indicated that as a result of the removal of the tri-generation system, an Environment Protection Licence under the provisions of the Protection of the Environment Operations Act 1997 will not be required and therefore the EPA will require no further involvement in this project.

No submissions were received from the public.

5. ASSESSMENT

The Department considers the key issues associated with this modification to be:

- visual impact
- air quality
- noise impact
- access, parking and loading
- construction impacts

5.1 Visual impact

The project approval provided for a data centre facility which included a total gross floor area of 22,285 m² with an additional 15,227 m² of dedicated plant and machinery, totalling 37,512 m².

The revised gross floor area is now 18,175 m² and the total plant area is 7,615 m². The overall floor area totals 25,790m². Consequently, the revised floor space is significantly less than the approved project (30% overall reduction).

The proposed modification does not alter the overall height of the building and the approved building envelope (above ground level), external elevations and materials/finishes remain unchanged. Therefore, the Department is satisfied that the proposed modification will not have adverse impacts on visual amenity.

5.2 Air quality

The applicant has advised that the proposal no longer involves a tri-generation system and that it has been replaced by conventional grid supply electricity, and that electric chillers and free cooling will be used for mechanical cooling. The application also proposes the removal of the gas engines from the building.

The modification application has been considered in conjunction with an Air Quality and Greenhouse Gas Impact Assessment prepared by Parsons Brinckerhoff Australia Pty Limited dated February 2010. This report assessed the combined impact of tri-generation systems, gas and diesel engines and concluded that the Global Switch proposal would result in acceptable air quality impacts within the study area.

The tri-generation system for the development will be replaced by utilising power from the existing Global Switch 1 Data Centre electrical supply. The change in power source is considered to be an efficient use of resources with minor environmental impacts, therefore the Department is satisfied that the alternative power source will not adversely impact upon air quality.

A free cooling air conditioning system and electric chillers has been proposed to offset the originally proposed tri-generation system. Cooling towers have been proposed as an energy and cost efficient way to remove heat from various sources such as machinery or heated process material. The Department supports the implementation of energy efficient cooling towers as they will adequately offset the removal of the tri-generation system.

Emergency diesel engines will be installed to provide emergency power in the event of electrical network failure and during periodic generator testing. Emissions from the engines are expected to include oxides of nitrogen, sulphur dioxide, carbon monoxide and air toxics. However, the engines will only be operational during a major power shortage or during monthly testing. The then Department of Environment, Climate Change and Water (DECCW) reviewed the original application and indicated that air quality impacts have been generally addressed by the proponent. DECCW also imposed a number of licensing requirements to address potential air quality impacts. Therefore, the Department considers that the diesel engines will not adversely impact on air quality.

The Department has reviewed the original Air Quality and Greenhouse Gas Impact Assessment and is satisfied that air quality impacts have been adequately addressed. As the application no longer proposes the use of a tri-generation system an Environment Protection Licence under the provisions of the *Protection of the Environment Operations Act 1997* will not be required.

5.3 Noise impact

The proposed modification does not involve any increase in the building's operating capacity or changes to the existing construction or operating hours. Therefore, it is expected that there will be no change to noise and vibration levels, as previously approved.

The proponent also sought clarification on Condition E7 – Mechanical Ventilation as to whether the words “not be audible” reflected a quantifiable measurement point to prove compliance against. The Department has noted this concern and has amended Condition E7 to clarify a quantifiable measurement point for operational noise caused by the mechanical ventilation system.

Consideration has been given to the original Acoustic Report and Construction Management Plan and the Department is satisfied that the current conditions regulating noise, particularly D9, F3 and F4 are adequate in addressing potential noise impacts.

5.4 Access, parking and loading

The original consent approved 12 secured car spaces, including one disabled space and a separate loading dock area. The modified application proposes no changes to these arrangements. Both the quantity and location of onsite parking remains unchanged as part of this modified application.

The Department has considered the modified Access Report and BCA Significant Issues and Constraints Report and is satisfied that the access, parking and loading arrangements are acceptable.

5.5 Construction impacts

The modification application proposes to reduce the number of basement levels from three to one which will reduce the extent of excavation and bulk earthworks. The reduction in excavation will result in reduced environmental impacts and decrease the scale of construction.

The proposal seeks to re-configure the floor levels and relocate the roof level breakout area to the north of the building to coincide with the new position of the lift core. As the proposed structural changes do not alter the existing building envelope, height or footprint, the Department is satisfied that the modification will not adversely impact on the environment.

The proponent also seeks to clarify Condition C2 which relates to the staging of the development. The proponent has indicated that the development will be constructed in 2 main building stages with internal fit outs of each stage undertaken, completed and occupied progressively. The final details of the main building, progressive fit outs and building occupation will be provided to the Certifying Authority for approval prior to the release of the relevant staged Construction Certificate. The Department supports the staged development as proposed and considers that it will not result in adverse environmental impacts.

The Department notes that a Construction Management Plan has been provided and is satisfied that it will effectively mitigate any construction impacts.

6. CONCLUSION AND RECOMMENDATION

Global Switch Sydney 2 Data Centre provides an opportunity to attract major investment to Sydney and help address the shortage of data storage facilities in Sydney's CBD. The Department considers that the proposed modification is generally consistent with the relevant statutory and planning controls.

The Department has reviewed the submissions and considers that the potential impacts can be mitigated and managed appropriately through consent conditions.

The modified proposal remains generally consistent with the development as previously approved, and is considered to be acceptable. It is therefore recommended that the application be approved subject to conditions.

It is recommended that the A/Director, Metropolitan & Regional Projects South:

- (a) **Consider** the findings and recommendations in this report;
- (b) **Approve** the modification request under delegated authority, subject to conditions; and
- (c) **Sign** the attached Instrument of Modification for MP 08_0222 MOD 2.

Prepared by

 8-3-2012

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Endorsed by

 12/3/2012

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APPENDIX A MODIFICATION REQUEST

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5128

APPENDIX B SUBMISSIONS

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5128

APPENDIX C RECOMMENDED MODIFYING INSTRUMENT
