

**PROVISION OF 9 No. ROOF MOUNTED AIR TO AIR COOLING UNITS,
PROVISION OF LOUVRED WALL AND LOUVRED ROOF- TOP
ENCLOSURE FOR VENTILATION OF STAND-BY GENERATING
PLANT, INSTALLATION OF 1 No. STAND-BY DIESEL POWERED GENERATOR
ASSOCIATED WITH FITTING OUT OF PART OF BUILDING 5000
TO FORM PHASE 2 OF A DATA CENTRE**

For

PEER 1

At

**BUILDING 5000 LANGSTONE TECHNOLOGY PARK
HAVANT, PO9 1SA**

DESIGN AND ACCESS STATEMENT

Head Roberts & Associates
No 1 Station Terrace
Shawford
Winchester
Hants, SO52 9DY

Tel: 01962 711111
Email: mark.head@headroberts.co.uk

1. Introduction

This statement provides supplementary information required as part of the application for planning permission made on behalf of Peer 1 in connection with the second phase of alterations and fitting out works of Building 5000 at Langstone Technology Park, to extend the capacity of their data centre, the first phase of which was occupied in the autumn of 2011.

Planning consent was granted on 4th October 2011 for the first phase of the data centre fit-out (Planning reference APP/11/01298)

The current application represents further utilisation of the 5,240m² floor space within Building 5000 at Langstone Technology Park under lease to Peer 1 and will bring 50% of the planned data capacity of the site into use.

The programme for implementing future phases of the installation is subject to future commercial demand for data storage under the Peer 1 brand.

This application is for permission for development in connection with Phase 2 of the fitting out which is to include plant and service installation to support 1 no. additional data room containing approximately 120 frames.

A separate planning application is to be submitted in due course for further phases of the fitting out works.

The key components of the Phase 2 installation are as follows:

- A. Generation of stand-by electricity in the event of grid supply failure.
- Ai. Supply of combustion air and exhaust to 1 no. stand-by generator located to Building 5000
This is to be provided via an attenuated louvred external wall to the western end of Building 5000 and an attenuated louvred, roof top housing located above the proposed generator room. Both enclosures will replicate those constructed under the Phase 1 fit-out albeit in relation to one rather than two generators.
- B Cooling & Ventilation Plant
- Bi Cooling Plant for Temperature Control Within the Data Rooms
Provided by 9 no. roof mounted low energy air to air heat exchanger cooling units with either air ducted vertically into sub floor and ceiling void plenums or cooling provided by chilled water.

Stand-By Generators

In this second phase of the development it is proposed to install 1 no. diesel powered electrical stand-by generators. The generator is identical to that installed under the Phase 1 Fit-Out and is designed to provide electrical power to the ICT equipment and cooling plant that are to be installed in the second phase of the installation and will

only operate in the event of failure of the mains supply. A battery back-up (UPS) is also to be installed in support of the data storage equipment.

By definition the stand-by diesel generators will only come into service during prolonged periods of failure of the mains power supply.

The testing regime is that each generator in turn is to be started up and run for a period of 1 hour once per month.

Cooling and Ventilation Plant

The installation is to include 3 no. air-to-air Excool indirect air side economisers (IASE) and 6 no. fan cooled condensor units to control temperatures within the data rooms.

2. Use

The proposal is within the existing B1(a)/B1(b) business use of the Langstone Technology Park Site, and as described above involves the provision of cooling and ventilation plant and of stand-by electrical generating plant.

3. Amount

The proposal results in a total of 8.5m² of additional floor space to be incorporated into the stand-by generator hall in the form of attenuating louvre and approximately 88m² of cooling plant housing and air intake housing located at roof level.

4. Layout

The proposed louvred wall serving 1 no. additional stand-by generator is located centrally on the Western elevation of Building 5000 and will provide an exhaust outlet.. An extension to the roof top louvred housing located to the western end of Building 5000 provides combustion air and general ventilation to the new stand-by generator beneath. We believe that the proposed location for the emergency power generation plant at the western end of the building is in keeping with the current site strategy which concentrates service activities to this end of the campus. The staff amenity areas serving the proposed data centre are to be located at the eastern end of Building 5000.

5. Scale

Building 5000 is some 139 m long, 15.7 m high and 58m wide. The data centre and ancillary supporting functions are eventually to occupy 65% of the total floor space within the unit. The top of the roof top plant housing is to project some 2.8m above the parapet of the existing building and is spread across the central area of the block.

The addition of the plant at both ground floor level and at roof level is modest in scale relative to the mass of the existing structure.

6. Noise

The applicant has commissioned a noise report by Ian Sharland Ltd. acoustic consultants which forms part of the application documentation.

The noise impact assessment uses data from the ambient noise survey carried out in connection with the first phase of the development.

As a result of a noise modelling exercise the report establishes that noise levels arising for each item of plant selected by the applicant is within the established limit at the residential properties within Brookside Road.

Internal walls separating the generator room from the remainder of the building were constructed during the previous phase of the fit out using sound reducing stud walling system comprised of metal studs, Rock wool acoustic batts between studs and two layers of plasterboard each side to give a sound reduction of approximately 50dB.

7. Landscaping

There is no soft or hard landscaping proposed in connection with this application.

8. Appearance

The roof top cooling units and chiller plant are not insignificant in height above existing parapet level, however visibility from public areas is very limited. Building 5000 is screened from view from the north (A27) both by a broad belt of trees and by other buildings within the campus. Likewise from the public areas to the east (Langstone Road) the existing building and proposed plant would be screened from view by other buildings within the campus. The roof top plant will be visible from within the Langstone Technology Park site from the south and west, however the location is very much heartland industrial use and roof top plant is very much a feature of the Langstone Technology Park campus. It is proposed that the plant housings will be coloured in a pale grey to reduce visual impact against the back ground sky.

The louvers proposed for both the louvred wall and the roof top housing are to be pressed metal or extruded aluminium and powder coated in a dark bronze colour to match the exposed metal structures of the existing building and other roof top structures elsewhere within the campus.

9. Access

The existing pedestrian and vehicular access to the Data Centre is unaltered as a result of the current proposals with pedestrians entering the centre via Buildings 4000 and the main staff entrance and via Building 6000 where passenger lifts are available to provide access for disabled persons.

Service access will continue to be provided via the service apron and a single dock leveller to the western end of the building

10. Parking

No additional staff will be employed as a result of the current proposals and parking for existing staff is maintained within the Langstone Technology Park Campus.