

DATA CENTRE DEVELOPMENT – REAL ESTATE, SECURITY AND POWER

In this climate of growing demand for digital infrastructure, driven by ever increasing data generation and heightened connectivity requirements, it is not surprising that data centres, unglamorous buildings by some standards, are taking centre stage. The roll-out of 5G and associated technologies, ranging from the Internet of Things to artificial intelligence is expected further to increase demand. And on the horizon "6G" is already being whispered. All of this has attracted new potential investors and developers into the sector and further raised the profile of data centres as an increasingly popular asset class.

Data centre investment requires a deep knowledge of real estate, construction, market dynamics and the underlying operational business and technology. It also requires an understanding of interlocking areas of law and regulation, including site and infrastructure access, energy and environmental issues, real estate, antitrust, data protection and cybersecurity.

In this briefing, our second in a series on data centres development we briefly consider some of the real estate and related issues of security and power supply that arise.

LOCATION, LOCATION, LOCATION

It might seem trite to describe location as important to a real estate asset, but data centres carry their own unique location requirements. The choice of location for data centres will often be dictated by two important factors:

- a. *connectivity* – the nearer data centres are to major peering points within the cable network, the better their connectivity is likely to be;
- b. *power* – a good power supply, and where possible more than one connection, will be very important to a business which is entirely reliant on power.

Key issues

- Data centre developments require deep knowledge and understanding of a complex web of issues
- Securing connectivity and power supply will require early investigation
- On-site and off-site security is critical to a data centre operator's business
- As significant consumers of power, managing the power supply is critical to a data centre operator's business

For developments, these factors mean that ensuring the data centre has all necessary rights to access power and carrier networks is critical. Sometimes, this may be relatively straightforward, but data centres are often built on business estates or areas with complex ownership structures. That can mean it is necessary to carry out a careful legal due diligence of the surrounding land and negotiating appropriate easements and wayleaves to connect over neighbouring land, such as through common parts of the wider business estate.

The process can be slow, especially if the owner of the estate is a management company, and negotiations with carriers can be difficult. As such, with future customers requiring connectivity, it is important to start those negotiations as early in the development process as practicable.

SECURITY

In a digital world, cybersecurity is a hot topic, but not one for this blog (for more information on cybersecurity, please see [here](#)). For data centre operators, not only do they need to consider cybersecurity, they also need to ensure physical security. Where a data centre developer intends to operate the data centre itself, much of their focus during development will be on the security of the data centre perimeter and checking any third party rights over the development property, where possible negotiating for these rights to be removed or moved to assist development.

However, particularly where the development is on an estate, data centre operators will also need to consider the security of their connections with the carrier networks outside the property demise. For developments where the developer intends to lease the data centre site to an operator, further consideration will also need to be given to the nature of any landlord rights to enter and inspect the property – these rights are therefore likely to be more restricted than landlords may see in a more traditional lease of commercial property. Similarly, data centre operators will need to consider what rights they can offer their landlords which will not be an issue in their customer contracts..

MANAGING POWER SUPPLY

Keeping with the security theme, security of electricity supply is a critical issue for data centre operators. Data centres are significant consumers of power and, by extension, have traditionally been large consumers of carbon. For data centre developments, this power has typically been procured through a physical connection to the local electricity grid (with all that entails including ensuring the necessary easements for the cable route and the potential for grid outages) and an electricity supply agreement with a utility. The risk of grid outages has meant the use of backup generators, which gives rise to its own set of issues (in addition to the real estate issues of locating electricity generating equipment on or near a data centre site). These issues include increasing environmental restrictions on the use of diesel generators and potential liabilities under emissions trading and other similar schemes, which are often overlooked.

As data centre operators are increasingly seeking to press their green credentials in addition to managing security of supply and price risks, we are seeing the use of renewables technology (particular rooftop solar photovoltaic cells coupled with energy storage) and innovative corporate power purchase agreement structures involving renewable generators and utilities (also flagged in our previous article on data centre construction). Of course, the closer the data centre is to the site of production of green energy, the better.

Going forward, we expect to see further technological developments in this space, including the increasing use of hydrogen fuel cells to power data centres.

Data Centre expertise at Clifford Chance

We advise on a broad range of data centre related issues drawing together specialists in real estate, construction, environment and planning, as well as finance, projects, energy, technology, regulatory and antitrust teams to create a one stop shop for our clients.

Further resources

In our previous article "[Data Centres take centre stage](#)", we considered some of the construction issues around data centre development.

In our next article in this series on data centres we will consider some of the key issues to be aware of when negotiating customer contracts/service level agreements.

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