

Case Study

Brisbane Supreme Court

Securing justice for all.





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When it first opened in August 2012, Brisbane's Supreme and District Courts (Queen Elizabeth II Law Courts) featured 45 courtrooms and accommodated 68 judges. As those in the legal profession would attest to, courtrooms are synonymous with paperwork – and plenty of it. This is particularly true for the Queen Elizabeth II Law Court complex, which is the largest in the country and spans 19 glass-paned levels of floor space.

According to Director of Capital Works for the Queensland Department of Justice and Attorney General, Nick Dower despite the significant advancements in technology, court proceedings still remain a predominantly paper-based activity.

"Countless sheets of typed and handwritten paper are created in the courts each year, all of which are essential to thousands and thousands of cases involving Queenslanders," explained Dower.

It's a legislative requirement in Queensland that all court papers filed on a matter must be held on-site until the case is complete and all appeals processes exhausted. With 20,000 new files being opened each

year and many matters taking more than a year to complete, the result is an ever-growing repository of critical documents that need to be sorted, stored, retrieved and preserved.

According to Dower, the security and accessibility of these documents is absolutely critical to the dispensation of justice in the state.

"Most of the old courthouses were built in the 1970s and 1980s and so do not meet modern requirements. Records and files are often kept in areas that are poorly ventilated and poorly lit. Sometimes, they're even stored in vacant jail cells. While staff do their best in the circumstances, inefficiencies inevitably flow from a system that stores records according to available space, rather than an orderly system," noted Dower.

"That's a key reason why the Queen Elizabeth II Law Courts project was such an important one, not just for Brisbane, but for the state," added Dower.

Construction of the \$570 million dollar complex commenced in October 2008.



All involved were confident that the Eclipse Compactus® would deliver a winning solution.

Unique to the building was its glass design, which according to Queensland judge, Chief Justice Paul de Jersey reflected the transparency of contemporary justice.

Today, the Queen Elizabeth II Law Courts represent a new generation of courtroom aesthetics – one that is marked by high ceilings, openness and abundant light. This starkly contrasts to the cramped and enclosed environment of the previous courtrooms.

To complement these new look courtrooms, the Queen Department of Justice enlisted the help of leading storage and materials handling specialist, Dexion to revolutionise what was an out-dated storage system. The solution offered by Dexion not only reflected the changing needs of a contemporary courtroom; it also addressed the issue of capacity in future proofing.

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Dexion assisted the architects and the Department of Justice and Attorney General in establishing a storage solution for the projected requirements. All involved were confident that the Eclipse Compactus® would deliver a winning solution.

Mounted on anti-tilt tracks, this automated high-density mobile storage system is as easy to use as an elevator. With the simple press of a large green button, the intelligent carriage system parts at the selected aisle. A red button is pressed to halt the system in case of an emergency. Frequently accessed aisles can be configured into the system for easy entry – this is particularly beneficial when long running court cases require frequent file access.

According to Dexion's National Sales Manager, Michael Cumner the Dexion Eclipse Compactus® was the obvious storage solution for the Queen Elizabeth II Law Courts.

“Fitted with Dexion Ultima® shelving, Eclipse provides the flexibility required. Whilst most of the units store standard sized documents, others need to store oversized evidence such as firearms. We could adjust the



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height, width and number of bays to suit specific locations,” said Cumner.

The basement, where most of the Court’s storage is located, features a mix of twelve tandem and triple carriage width Eclipse units. To accommodate items of different sizes, each unit contains between 12 and 84 bays of Ultima® shelving, spaced over five or six levels per unit. Being a basement, natural light is limited, so the programmable integrated lights turn themselves on as a particular aisle is opened and a person enters. The light then switches off when they exit and the unit is automatically closed. This resource efficient lighting system is an important contributor to the Courts’ 5-star sustainability rating.

The Eclipse also features ‘Works in a Drawer’, which discreetly houses the control centre of the systems technology in the front dress panel allowing easy access for service or programming.

Cumner explained that the safety features of the Eclipse were also vitally important to the Department.

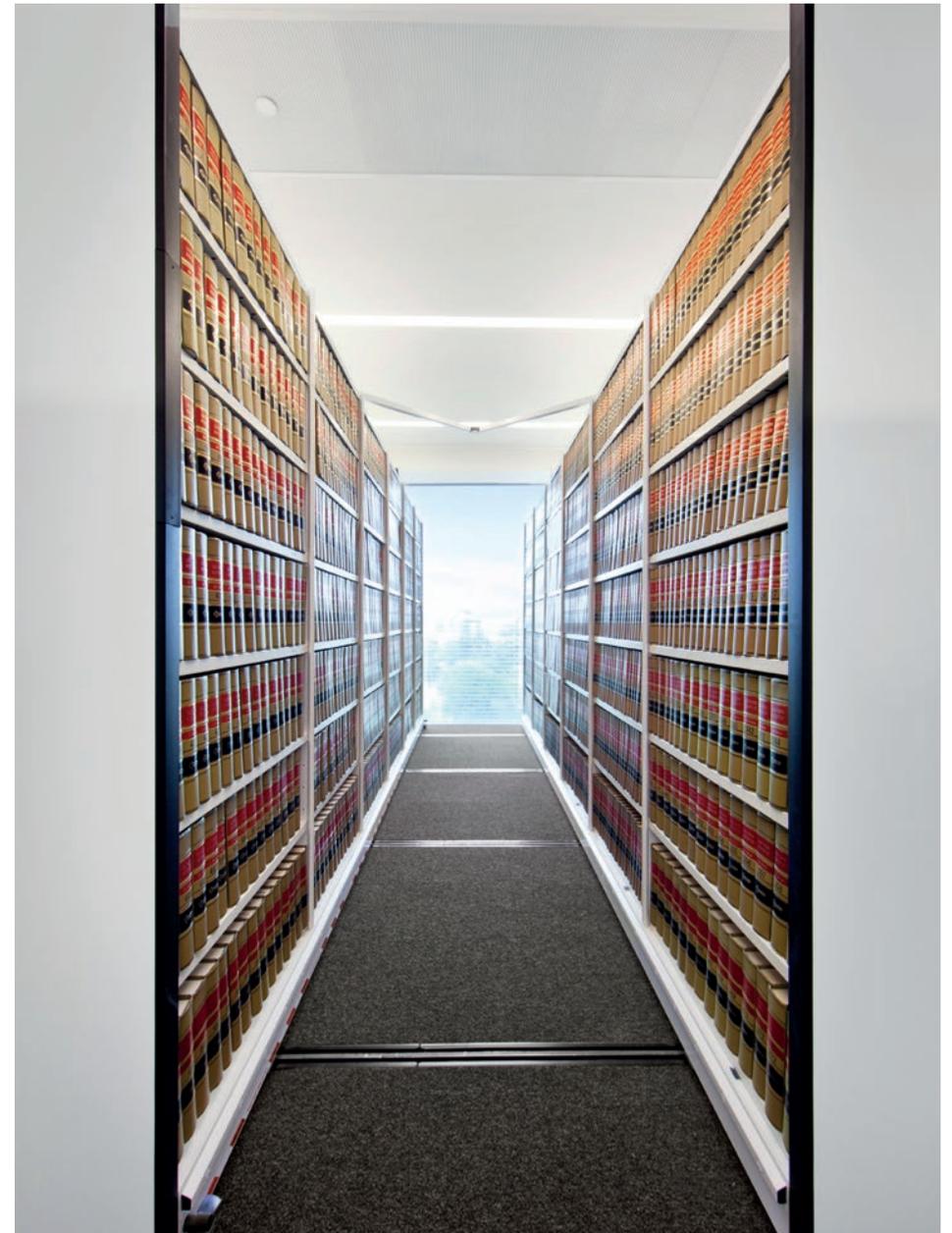
“The Eclipse offers significant OH&S benefits to court staff that standard mobile

shelving systems do not. The ‘Light-immune photo sweep’, located at ankle height, provides a safety system via an infrared beam which runs the full length of each carriage. A secondary safety system, ‘Zero Force Sensor’ projects multiple light immune infrared beams across an open aisle to detect any human movement in closing aisles, automatically locking down the Compactus® until the aisle is cleared,” explained Cumner.

“These sensors, which are installed in mobile shelving installations that span thousands of metres of floor space ensure the safety of all staff utilising the system,” added Cumner.

Reaching 19 storeys high, the building that comprises the Queen Elizabeth II Law Courts is fitted with Dexion storage solutions throughout. An additional three Dexion Eclipse Compactus® units have been installed on the ground, first and second floors.

Levels 10 and 11 are home to the court files, the Supreme Court Library, seven Eclipse units, and five Mechanical Assist units. The installation of the Eclipse units in



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these levels posed challenges for Dexion and the project's managing contractor, Lend Lease.

According to Lend Lease's Senior Design Manager, Frank Way, the building was designed with the aim that every courtroom would have access to the latest technologies.

“Witnesses need to be able to give evidence via video link from other rooms in the building, as well as from locations outside of the courtroom (including from overseas). Jurors are equipped with personal screens to examine and review evidence. Information that once would have to be sourced painstakingly from archive boxes is now available at the touch of a screen,” noted Way.

Additionally, the high vaulted ceilings and soaring glass panes of the building's signature design meant that each floor was essentially built ‘upside-down’ – that is, facilities such as air-conditioning run through the floor rather than the ceiling.

“Queensland can get extremely warm, especially in summer. It would be impossible

to cool the large, airy rooms with a conventional ‘top-down’ air-conditioning system. To improve efficiency, air-conditioning cools the air at the ground level, allowing hot air to rise to the top,” explained Way.

The building's cabling and hosing requirements means that many floors are ‘access floors’ i.e., they have an 800mm cavity between the visible timber floor above and the concrete structural floor below. A single Dexion Eclipse unit has a carrying capacity of 1,500kg per lineal metre and the Compactus® anti-tilt tracks must stand at the full height of the access floor cavity to bear the weight. Mapping out grids to ensure that the Compactus® rails didn't compromise other functions of the building meant close communication and co-ordination between Dexion and other contractors on site.

According to Dexion's Project Manager, Glen Rider the team encountered some inherent challenges as a result of the sheer scale of the project.

“The task of installing so many units, often up to eleven and twelve stories high,



provided the greatest challenge for us. The building had 19 storeys, many with restricted access and strict unloading schedules. With careful planning and effective communication, Dexion worked collaboratively with the Lend Lease team, completing the project on schedule and on budget,” said Rider.

When the building plans for the Queen Elizabeth II Law Courts were announced in 2008, Queensland's Premier at the time, Peter Beattie declared:

“...The new complex will transform the capacity of our courts to meet the special needs of children, vulnerable witnesses, victims of crime and other Queenslanders who deserve our support, in a way that just

isn't possible with the current facilities... The (new building's) design also allows sufficient structural capacity to accommodate further technical advances... over the next half-century.”

Dower agrees.

“Together with the Queensland Department of Justice, we have set the benchmark for court building standards in Brisbane – open, transparent and delivering justice to all Queenslanders. As both a Queensland and a Dexion staff member, it feels terrific to have provided Brisbane's courts with Australia's leading powered Compactus system’,” concluded Cumner.