<table>
<thead>
<tr>
<th>Introduction</th>
<th>Architects’ Biographies</th>
<th>Congregation</th>
<th>Clarity</th>
<th>Mass</th>
<th>Reflection</th>
<th>Revelation</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>22—27</td>
<td>22—27</td>
<td>62—67</td>
<td>102—107</td>
<td>140—147</td>
<td>184—189</td>
</tr>
<tr>
<td></td>
<td>Cardboard Cathedral</td>
<td>Meise No Mori Municipal</td>
<td>Jewish Community Centre, Synagogue and Museum</td>
<td>Prayer and Meditation Pavilion</td>
<td>Sunset Chapel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shigeru Ban</td>
<td>Funeral Hall</td>
<td>Wandel Hoefer Lorch Architekten</td>
<td>studio tamassociati</td>
<td>BNKR Arquitectura</td>
<td></td>
</tr>
<tr>
<td>24—39</td>
<td>Kärsämäki Shingle Church</td>
<td>68—73</td>
<td>74—79</td>
<td>114—119</td>
<td>148–153</td>
<td>190–195</td>
</tr>
<tr>
<td></td>
<td>Office for Peripheral Architecture</td>
<td>Chandgaon Mosque</td>
<td>St Moritz Church</td>
<td>Rituals Crematorium</td>
<td>Islamic Cemetery</td>
<td>Pope John Paul II Hall</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kaschef Chowdhury</td>
<td>John Pawson</td>
<td>+udeh arquitectos</td>
<td>Bernardo Bader Architekten</td>
<td>Randić Turato</td>
</tr>
<tr>
<td>34—39</td>
<td>Wooden Church</td>
<td>80—85</td>
<td>120—125</td>
<td>154—159</td>
<td>192–201</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beton</td>
<td>White Chapel</td>
<td>Dutch Reformed Church</td>
<td>Gubbio Cemetery</td>
<td>Chushin-Ji Temple Priest’s</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jun Aoki &amp; Associates</td>
<td>Claus van Wageningen Architekten</td>
<td>Andrea Dragoni Architetto</td>
<td>Quarters</td>
<td></td>
</tr>
<tr>
<td>40—45</td>
<td>De La Piedra Chapel</td>
<td>86—91</td>
<td>126–131</td>
<td>160–165</td>
<td>202–207</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nómena Arquitectos + Ximena Alvarez</td>
<td>Buddhist Meditation Centre</td>
<td>Brother Klaus Field Chapel</td>
<td>Water-Moon Monastery</td>
<td>Pilgrim Route Shelters</td>
<td></td>
</tr>
<tr>
<td>224</td>
<td>Church of Seed</td>
<td>92—97</td>
<td>126–131</td>
<td>166–173</td>
<td>208–213</td>
<td></td>
</tr>
<tr>
<td></td>
<td>O Studio Architects</td>
<td>Church of Water and Light</td>
<td>Brother Klaus Field Chapel</td>
<td>Ingelheim Funeral Chapel</td>
<td>Capilla del Retiro</td>
<td></td>
</tr>
<tr>
<td>236</td>
<td></td>
<td>Itami Jun Architects</td>
<td>Peter Zumthor</td>
<td>Eayer &amp; Strobel Architekten</td>
<td>Undurraga Deves Arquitectos</td>
<td></td>
</tr>
<tr>
<td>52—57</td>
<td>Shrine of the Virgin of La Antigua</td>
<td>92—97</td>
<td>132–137</td>
<td>174–179</td>
<td>214–221</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Otxotorena Arquitectos</td>
<td>Church of Water and Light</td>
<td>Igj Synagogue</td>
<td>Crematorium for GKD</td>
<td>Kudikkala Church</td>
<td>Office for Peripheral Architecture</td>
</tr>
</tbody>
</table>
Such is the association of cathedrals with solidity that the notion of building one from cardboard seems almost absurd. We think of cathedrals as places of permanence: the places through which generations upon generations will pass, the rocks upon which the church of the people is built. In Britain, the possession of a cathedral has long been synonymous with the notion of a city, a role of Henry VIII’s creation of six dioceses in sixteenth-century England and his granting each of these sees city status. The idea of a less-than-permanent cathedral then is surely a radical proposal. But that is exactly what Shigeru Ban proposed and built in the New Zealand city of Christchurch.

Located in a geologically volatile city, the 131-year-old Christchurch Cathedral was ripped apart in February 2011 by an earthquake measuring 6.3 on the Richter scale. The quake devastated the city, killing 185 people and toppling Christchurch’s cathedral spire, and inflicting major structural damage. Subsequent earthquakes in the June and December of the same year ruined its rose window and after extensive surveys it was decided not to restore the cathedral. It was deconsecrated and demolition began, ending the days of the first Christchurch Cathedral, initially designed in the 1860s, from England, by the British architect Sir George Gilbert Scott, who never visited the site.

Shigeru Ban became involved while he was working on the recovery efforts of another disaster – the March 11, 2011 earthquake that hit the coast of Japan, triggering a tsunami and a nuclear accident, just a month after the tragedy in New Zealand. Solidarity between the two countries was strong – forty-eight Japanese nationals had died in the Christchurch earthquake and Japan had sent a search-and-rescue team to comb the city’s debris in the aftermath of the tremors. After being contacted by the diocese about plans to construct a temporary venue, Ban agreed, offered to work for free, and plans unfolded for a temporary cathedral, to be built two blocks southeast of the original site.

Ban’s approach was radical, but it built upon work he had done over a number of decades in disaster zones, beginning with his work in Vietnam after the 1995 Kobe earthquake and his subsequent efforts in storm-torn India, Taiwan and Haiti. Using unconventional building methods he is able to quickly fashion habitable shelters for the dispossessed, suffering in the wake of natural disasters. The Christchurch building is made from paper, cardboard tubes, timber and steel shipping containers, a tried-and-tested palette which Ban had used in his disaster relief projects. The cathedral’s walls are made from shipping containers, which host ancillary functions, and above these a 21 metre (69 foot) high A-frame made from ninety-eight equally sized cardboard tubes, reinforced with laminated timber beams, creates the nave. The nave tapers slightly towards the altar, creating a teardrop plan. Triangular sheets of coloured stained glass nod to the rose window of the 1868 Gilbert Scott cathedral. A polycarbonate roof, coated with waterproof polyurethane and flame-retardants, keeps the rain out, and stops it from impregnating the cardboard.

Unlike concrete, this combination of timber and paper performs well under earthquake conditions and the building is thought to be one of the safest, most earthquake-proof buildings in Christchurch. The cathedral is just one building in Shigeru Ban’s back catalogue which helped the Japanese architect win the Pritzker Architecture Prize in 2014. Expected to have a life of approximately fifty years, the new cathedral seats 700 people and has quickly become a well-loved Christchurch icon.
The steeply pitched A-frame roof of the cathedral is clad in clear polycarbonate sheeting while shipping containers have been placed on the two long sides to accommodate ancillary functions.

A view of the interior looking down the nave towards the altar underneath the steeply pitched cardboard tube-lined ceiling.

Floor plan: The cathedral tapers from the entrance to the nave, drawing worshippers into the space.

Detail view of the stained glass windows which, along with strips of the clear polycarbonate roof sheeting, bring natural light into the cathedral and reference the rose window of the earlier Gilbert Scott cathedral.

Section: The cathedral’s structural A-frame is formed of ninety-eight cardboard tubes, reinforced with laminated timber beams, which stand twenty-one metres high and form the nave.

The view from the altar looking back towards the entrance. Simple white curtains screen access to the shipping containers adjacent.

The entrance to the cathedral is through a modified shipping container, over which a large section of the cardboard tube structure stands, set with triangles of stained glass.
Its pilotis, sun-bleached concrete and asymmetric elevations bring to mind the classic Brazilian mid-century Modernism of Oscar Niemeyer, yet this elegant little hillside chapel was built in 2009 by the Pamplona-based architect Juan M. Otxotorena. It is a chapel dedicated to the Virgin Mary, the mother of Christ, sometimes referred to as la Virgen de la Antigua in Spanish. For centuries the Virgin Mary has been a popular devotional figure within the Christian, and more specifically Roman Catholic, faith, especially in Latin countries.

Located in the hills of La Rioja, in the north of Spain, the chapel serves the people of Alberite, a town of approximately 2,500 inhabitants, south of nearby Logroño, an important stop on the Camino de Santiago. This pilgrimage route, terminating in Santiago de Compostela, was popular in medieval times and has recently enjoyed a resurgence among modern-day pilgrims, who take to foot or bicycle to complete it, staying in modest hostels along the way. The site for the shrine was a gift to the parish by the town council. The building was intended to be able to accommodate both private, devotional use by individuals or very small groups as well as large influxes of pilgrims. It also had to cater for visitors who would come to worship and celebrate on the many Roman Catholic feast days that punctuate the liturgical calendar.

It's a long, low building on top of the plateau of a hillside that overlooks a ravine, and the parish which commissioned it. The chapel is fundamentally a series of outdoor rooms, with the visitor approaching it via a concrete pathway, entering under a piloti over which a flat concrete roof extends above the edge of the path beneath. Once under the canopy, the visitor encounters a remnant of a previous building: a preserved series of stone arches that run parallel with the new concrete elevation, which greets the visitor as they approach the building. This archway structure was rescued by the villagers of Alberite from a building that was being demolished, and the brief stipulated that the new chapel should incorporate the ruins of the old. The long archway in part dictated the dimensions of the chapel and the concrete walls and roof – which share similarities in colour and texture to the stone of the archways – was conceived as a protective wrap around the building. Meanwhile, the anteroom, reached before the chapel proper, helps to shelter visitors from the rain and the sun and to frame the views of the surrounding mountains, from which visitors can take spiritual — or just geographical — solace.

Visitors walk from the ante room beneath the canopy along a colonnade created by the archway and the new concrete addition. This takes the visitor to a small chapel with four simple pews. Once inside the chapel, the space opens up somewhat, an extra volume placed along the path-side elevation of the building giving the chapel a much more generous floor-to-ceiling height than the colonnade which leads to it. This play between compression and release helps establish a feeling of peace and space within the chapel. Vertical concrete fins, articulated on the exterior path-facing facade, bring light into the chapel, casting rays of sunlight on to the concrete walls and floor. Exterior decoration is sparse: a simple concrete cross standing proud of the roof and a single church bell are the only hints of the structure's ecclesiastical nature. Using only one building material, and keeping the shrine low to the ground, helps it to sit easily within its surroundings, and to work with, rather than dominate, the natural beauty of the environment in which it stands.

SHRINE OF THE VIRGIN OF LA ANTIGUA
Otxotorena Arquitectos | Alberite, La Rioja, Spain, 2009
The shelter brings together new colonnades and concrete forms with an existing arched stone wall, which was recovered by the villagers of Alberite.

Cross section: The transition in height leads visitors from the compressed space of the existing colonnade to the main chapel, its expanse highlighted by clerestory light that enters through the colonnade of concrete fins.

Long section: The shrine is arranged to accommodate a range of uses, including large influxes of pilgrims, small groups, private devotion, and celebrations of Roman Catholic feast days.

Floor plan: Protected by the concrete canopy, visitors pass from the ante room into a small chapel with four simple pews.

The long colonnade of the concrete shelter shares a similar colour palette with the original stone walls and roof, and is conceived of as a protective layer that wraps the building.
Thanks in part to the Islamic faith’s belief that mankind and animals should not be represented in figurative art in a religious context, the decoration of the majority of both traditional and contemporary mosques involves the use of abstract and decorative patterns, and we have come to be familiar with richly patterned mosques as the norm. In this project in the suburbs of the busy Bangladesh port city of Chittagong, architect Kashef Chowdhury of URBANA has shunned a noisy decorative style and created a calm and contemporary mosque that uses a minimalist design vocabulary to create an understated place of serenity. Chowdhury was born in Dhaka, Bangladesh, the son of a civil engineer, and graduated in architecture from the Bangladesh University of Engineering and Technology before attending the Glenn Murcutt Master Class in Sydney, Australia. In his practice, he insists on a simplicity of approach to create buildings that work in concordance with nature. Writing in the Architectural Review, critic Catharine Slessor described the way in which, until recently, such was Chowdhury’s respect for time, that he deliberately resisted using any artificial light in his studio, forcing him and his staff to work within daylight hours, helping to create a natural pattern to the working day and discouraging working excessively long hours. This purity of approach and desire to bring the outside elements into his buildings is reflected in the design of the Chandgaon Mosque. As well as using minimal surface decorations, the functional spaces have been stripped back to the minimum. This typological back-to-basics approach took the practice of mosque-building, which has developed over a millennium and a half, and pared it down to a contemporary reading of what its fundamentals should be. The mosque is intended to be both a meeting place for the community and a place of worship. These are the two essential elements that are simply expressed in the monolithic and spare mosque, simplified to simple geometries.

Once inside the complex, which is separated from the surrounding scrub land by a low white wall, a sloping path leads the faithful to two identical square volumes that sit squatly within the tree-lined boundaries of the site. The cuboid volumes lack any ornamental detail and only the large rectangular apertures that allow exterior views break their plain, whitewashed facades. These two blocks are identical in size and both have heavy masonry walls. The eastern volume is punctuated by low, wide openings onto the surrounding landscape and accommodates a courtyard gathering space, dominated by a large glazed oculus that opens the space to the elements. The light thrown by this oculus moves across the interior as the sun moves through the sky, tracking the passage of time between prayer sessions over the white walls and stone floors. The western block accommodates the prayer space. Here, the circular language set up by the oculus in the courtyard is repeated, but in this case features a dome, whose large aperture allows indirect light into the room, illuminating the mihrab wall. In both the spaces, supporting columns are kept to the perimeter of each volume, creating a sort of interior cloister, the large span allowing for the uninterrupted gathering of a large number of worshippers. While the apertures give a sense of openness and draw in light and ventilation by day, by night they allow light to shine out of the mosque, creating the effect of a lantern. Marble flooring helps cool the space and gives a sense of understated opulence that evokes tradition without stooping to pastiche.
This mosque on the suburban periphery of the port of Chittagong in Bangladesh seeks to fulfil the traditional role of a mosque as both a place of spirituality and as a gathering place for the community.

The western volume is punctuated by wide, low openings to the surrounding landscape and is dominated by a large oculus that opens the space to the elements, tracking the passage of time between prayer sessions as the sun passes overhead.

Floor plan: Both eastern and western volumes are essential rectilinear spaces in which supporting columns are restricted to the perimeter, creating an expansive internal cloister in each.

Long section: Mirroring each other in height and materiality, the arched apertures of the eastern volume house a sheltered prayer hall and provide a counterpoint to the eastern volume, which is arranged as an open court.

Cross-section: The roof apertures give a sense of openness and draw in light and ventilation by day; by night they allow light to shine out of the mosque like a lantern.

This contemporary interpretation of a millennium-old architectural tradition has resulted in a monolithic and spare mosque, pared down to two identical cuboid structures constructed from white-washed masonry with accents of cool white marble.

A sheltered courtyard adjacent the eastern volume includes planting and a small pond, which aids in cooling and references vegetation of surrounding scrub lands.
The volcanic Jeju Island is a popular destination for Korean couples to go on honeymoon, drawn in by its warm climes, tropical beaches and historically risqué reputation as a destination for Korean newlyweds. Its bevy of eccentric museums includes a park of erotic sculptures as well as the Trick Art Museum, where optical illusions and tromp l’oeil are used to rework Old Masters paintings, to the delight of selfie-snapping tourists. Nearby, at the southwest of the island, is the significantly more sober Biotopia housing complex by Japanese practice Itami Jun Architects, part of the expansion of the Seojopu district. This low-lying cluster of over one hundred residential units is set in a rolling landscape, on a site that had suffered from degraded soil conditions and required rehabilitation. The project took its inspiration from a project in Germany that made rejuvenation and soil remediation of a former brownfield site central to its landscaping strategy. As part of these residential clusters, Itami Jun Architects also built four cultural buildings, the Water, Wind, Stone and Land art galleries. The Church of Water and Light adds to this civic ensemble and similarly aims to sit calmly within its landscape.

The church is a long building, with a pitched roof, slung low across its footprint, that doesn’t interrupt the views of the gently rolling hills that surround it. The pitched roof has a distinctive tiling pattern which is made up of triangular tiles in different shades of teal, greys and blues. These were chosen by the architect as a means of echoing the dappled light caused by the sun piercing nearby trees and the constantly changing skies experienced above the tropical island. The Tokyo-based practice describe trying to create a ‘sky architecture’ in their structure, one that would reflect and not work against the spectacular and often changing skies of the locale.

Another starting point for the architects was the theme of a boat upon water. This evolved into the approach of having the church surrounded by a small moat, out of which the walls appear to rise. The church is accessed by walkways that cross the water, both at the rear of the church and at the middle. One side is a cloistered walkway that runs the length of the building, and through glass windows, brings light into the building’s lobby and mediates between inside and out. The Church of Water and Light is characterised by an intriguing mix of traditional formal approaches and materials with more contemporary tropes in the materiality and detailing. This is most obviously articulated in the roof with its bright patterned tiles, as well as in its structure. The church deviates from the classic form of the long barn by a gable end that is larger in section at the end than it is in the middle, thus creating a sort of contemporary hip-roof that expands towards its end. In the middle is a chamfered chimney stack. This mix of traditional and new is also expressed in the structure. While timber is used to clad the church, the structure is of a steel frame made of square sections. The columns and beams were then wrapped in a wood veneer. The interiors are also timber lined, and the majority of the church is given over to a nave that runs the length of the barn, top lit by a lantern providing a dim light and atmospheric mood. The church was built using a high quality specification for materials, detailing and construction and is hoped to be a lasting and durable addition to the Seojopu new town.

CHURCH OF WATER AND LIGHT
Itami Jun Architects | Seojopu, Jeju Island, South Korea, 2009
Surrounded by a small moat, the church is thought of as sitting upon water (drawing a biblical analogy), it is esteemed by many as being a little island.

A steeply pitched, glazed gable that is larger in section than the rest of the building differentiates it from usual barn typology. The expansive wall contains a nave that occupies the full width and admits natural light within.

The long, low building sits calmly within the landscape. Surrounded by a shallow pond, it is accessed by walkways that cross the shallow pond. An articulated entry on the west side allows light to enter the nave and mediates between inside and out.

Ground floor plan: Arranged in a cruciform shape, visitors enter the church at the central point beneath a chamfered chimney: the space for worship occupies the large raked space (left) while parish offices are contained in the lower volume facing it (right).

Lower floor plan: Accessed from the central stairwell, ancillary areas house a large refectory, kitchen, pantry, installations and a parish hall.

The pitched roof has a distinctive tiling pattern that is composed of triangular tiles in different shades of teal, grey, and silver, which recall the dappled light of sunshine in tree canopies nearby.
In the hills of the Colombian department of Antioquia, is the town of Guarne, which lies to the north of the capital Bogotá and to the east of Medellín, the country’s second largest city. Architect Felipe Uribe de Bedout and his practice +udeb have created a striking crematorium complex. A large, cuboid building rises out of the hillside, neighboured by a smaller, sculptural outpost, part of a complex interlinked by tunnels, bridges and a series of public and semi-public squares. The crematorium is reached via a bridge edged in Cor-Ten steel and paved with local stone, a materials palette which is used throughout for both buildings and landscape. This bridge crossing marks the first threshold that mourners pass over, a strong transitional marker in contrast with some of the softer thresholds elsewhere in the complex. Once over this cut in the landscape, the mourner walks up the pathway to a small square, which includes a seating area and space to gather, the back of which is defined by a large monolithic sculpture in Cor-Ten steel. Beneath this square is the crematorium building, which houses the furnaces and preparation rooms. This level is reached by a sloping ramp that takes the deceased from the car park in front of the most to the basement of the crematorium building.

Mourners pass from this open square through a pathway cut into the sloped hillside to the principal building, the temple. Roughly square in plan, cuboid in mass, this is an imposing building with a reassuring solidity. Its otherwise windowless elevations, built in local stone, are broken up by T-sections of Cor-Ten casing, with the horizontal bar of the T making up the parapet of the facade. The gap established between the stone elevation and Cor-Ten parapet-cum-soffit is glazed, and allows illumination of the temple via light wells. On the elevation, these T-sections are placed asymmetrically, spaced out equally on all four sides. On the sides and rear of the building the bases of these Cor-Ten sections are glazed, letting some natural light into the building, which is largely artificially illuminated.

The temple is arranged around the central congregation space which has ten banks of pews oriented towards the lectern and the platform on which the deceased body lies. The pews are positioned at right angles to the axis set up by the entrance to the temple, which sits approximately southwest in orientation. Surrounding the gathering space are support and ancillary areas: on the front wall a stair runs up to the first floor gallery and down to the basement, and on the back and side walls, private safes for storing ashes and the priest’s office. On the first floor a balcony runs around the perimeter of the room, with space for a choir to gather above and to the rear of the congregation. Lights, hung from the roof in a grid that helps demarcate the place where the congregation sits, lean down to the level of the first storey, helping to create an intimate mood in what is actually a significantly large volume. The temple has a stone floor, with elegant hardwood timber detailing in the handrails, window frames and soffit, and the walls are washed with a pale amber colouring, which, combined with the timber and soft lighting, create a warm, muted atmosphere. A dark, floor-lit, underground passageway that follows the same route as the sloped walkway from crematorium building to the temple joins the two buildings. It is here that the coffin can pass from the temple down into the cremation room, and to one of the three furnaces that await.