Hopkins Architects
Sustainable by Design
‘Hopkins’ architectural sophistication has dovetailed seamlessly with superior environmental performance’

Hopkins Architects commitment to environmentally advanced design is remarkable, and deeply rooted in strategic commitments made more than a decade ago. They are unquestionably pioneers in this increasingly crucial aspect of architecture. The practice has recently completed their first LEED™ ‘Platinum’ building, which this year received the inaugural ‘Go Beyond’ Award from the International Institute for Sustainable Laboratories (l2SL) and R&D magazine. Work is also nearing completion on the carbon-neutral Kroon Building at Yale’s School of Forestry and Environmental Studies. In The United Kingdom, Hopkins were the first practice to achieve the BREEAM ‘Excellent’ rating for their Inland Revenue Centre, and continue to deliver projects in various sectors with high environmental ratings.

Crucially, Hopkins’ approach does not produce repetitive, off-the-shelf environmental design: each building is a specific expression of architectural composition, innovation, function, refined detail, materiality, and presence. In the United States, Hopkins have achieved exceptional degrees of finish and detail, not only in the Yale building, but in schemes at Princeton and Rice universities through high degrees of pre-fabrication; in The United Kingdom, one experiences these qualities in projects such as the Jubilee Campus at the University of Nottingham, the Forum information hub in Norwich, and Manchester Art Gallery. In every case, and in challenging settings, the quest for architectural sophistication dovetails seamlessly with superior environmental performance - and this ambitious fusion of design and performance has set Hopkins Architects apart.

Jay Merrick
Architecture Correspondent
The Independent

Cover: Inn The Park, St James’ Park, London, UK
The Kroon Building aims to unify the dispersed faculty buildings across Science Hill to create an internationally recognised centre for the study of sustainability on the University campus.

This project will not only continue Yale’s commitment to excellent architectural design, but will make a major public statement about their aspirations for greener buildings and their commitment to addressing global climate change.

It will be Yale’s greenest building and a symbol of the School’s “ideals and values; a powerful expression in beautiful form of its relationship to the environment. It will be an inspirational and instructional model of sustainable design.”

- Roof mounted photovoltaic panels
- Highly insulated and efficient building envelope
- Ground source heat pumps
- External solar shading
- Exposed thermal mass
- Extensive use of natural light
- Regeneration of courtyard spaces
- Use of local lumber for interior finishes
- Solar hot water collectors
- Storm water retention
- Target: LEED™ ‘Platinum’

Completion: 2009
Area: 6,500m²
Cost: not disclosed
Architect of Record: Centerbrook Architects
Engineer: Arup and Atelier Ten

A LEED™ ‘Platinum’, carbon neutral design, set to become the most cutting edge environmental academic building in America
New Chemistry Building, Princeton University, NJ

A chemistry research building aiming to set a new standard in energy efficient design.

The project is a low-energy use research laboratory and teaching facility that will meet the highest technical specifications, while providing an attractive working environment.

The new Chemistry Building is designed to integrate general teaching and high-level research, whilst also enhancing collaboration and creativity, with all communicating spaces designed to promote formal and casual interaction.

The building is organized around a central atrium space which is shaded by 10,000 sqft photovoltaic canopy.

- PV shading canopy over atrium
- Natural ventilation to offices
- Highly efficient fume hood specification
- Extensive use of natural light
- Recycled aluminium shading louvres
- Heat recovery
- Atrium used as buffer space
- Sustainable drainage systems
- Extensive off-site pre-fabrication

Completion: 2010
Area: 22,296m²
Cost: not disclosed
Architect of Record: Payette Associates
Engineer: Arup

One of the largest integrated PV arrays in the USA will contribute to the efficiency of this state of the art laboratory
North College Redevelopment, Rice University, TX

The campus is enriched with two new colleges

The Rice McMurtry College and Duncan College will comprise two 5-storey residential dormitories, each with approximately 115,000 total sq ft of accommodation. Both Colleges have their own dining hall, known as the Commons, as well as a 2-storey residence to house the Masters of the Colleges.

The proposed brick façades will reflect the rich character of existing buildings on the site, with the new development designed as two quadrangles and preserve and enhance the existing landscape. Pre-fabrication, such as factory made GRP toilet pods, recently featured in MOMA, allows a high specification within the cost and construction schedule constraints.

- Prefabricated structural components
- Solar shading on façades
- Exposed thermal mass
- Good use of natural light
- Roof top social spaces
- Handmade brick façades
- Prefabricated GRP bathroom modules
- External covered colonnades

Completion: 2009  
Area: 300,000m²  
Cost: $140m  
Architect of Record: Hanbury Evans Wright Vlattas  
Engineers: Haynes Whaley Associates / CHP

Off-site prefabrication will guarantee high standards of specification within an accelerated construction programme
An award winning university project that has set new standards for sustainability in this sector.

Earlier this year, The International Institute of Sustainable Laboratories (I2SL), and R&D Magazine awarded the ARD building the inaugural “Go Beyond Award” for new construction projects.

Mike Taylor of Hopkins Architects said: "Science and research are a critical part of the challenge in finding solutions to climate change. It is therefore essential that buildings in this sector demonstrate best practice to others around the world."

- A detention basin designed to mitigate seasonal flooding
- Over 20% of electricity supplied by an offsite PV array
- Building shape and orientation to capture winter sun
- Exposed thermal mass from the concrete structure
- Low pressure air distribution
- Automated building shading
- Reclaimed water used for toilets and landscape irrigation
- Recycled materials used for 1/3 of the building
- 92% of construction waste was diverted from landfill
- Connection to district heating scheme
- LEED™ ‘Platinum’

Completion: 2007
Area: 6,503m²
Cost: $13.6m
Architect of Record: Burns Wald Architects
Engineer: Arup and Schneider Structural

A research building with one of the highest ever LEED™ ‘Platinum’ ratings and reductions in energy use of 89% over a typical building
Cyprus Cultural Centre, Nicosia, Cyprus

A focal point for Cyprus' performing arts, showcasing national and international performances of music, dance, opera and theatre.

A Centre for Performing Arts to respond to the growing discerning regional audience and cultural tourism. The building will also play a strong role in the Capital's civic and educational life.

A major Civic Square and outdoor performance space will link the Cultural Centre to the proposed House of Representatives and the National Gallery and extend the nearby Pedieos River Linear Park into the site.

There are three main performance spaces - a 1,400 seat Concert Theatre, a 500 seat Recital Hall and a Rehearsal Hall. They are expressed as individual elements, within the building volume, linked to a generous foyer, which faces on to the new Civic Square. In addition a series of internal spaces and external courtyards house the support activities - Box Office, Galleries, Shops, Restaurants, Education and the administration.

- Ground source heat pumps
- Solar hot water collectors
- Photovoltaics
- Local stone cladding
- Natural ventilation in perimeter accommodation
- Exposed thermal mass
- Shared energy centre with adjoining projects

Completion: 2012
Area: 20,000m²
Cost: £56m / $95m approx

An inspirational Performing Arts Centre at the heart of the Capital's new Cultural Quarter
The Lawn Tennis Association’s National Tennis Centre, London, UK

A new centre in which to develop the skills of young British players for world class competition.

The site was part of the Bank of England’s sports ground, in South West London. It is metropolitan open land, and the design responds to its setting, preserving existing woodland and using the fall across the site to hide the bulk of the building. In parallel with the design, Hopkins and the LTA are developing a “green” transport plan to minimise impact on the neighbourhood.

- Maximised controlled natural daylighting
- External awareness throughout
- Mixed mode ventilation in offices
- High levels of insulation
- Incorporation of natural levels into site section
- External shading and balconies
- Retention of established trees
- FSC rated wood linings and ceilings
- Storm water retention system
- Heat recovery through thermal wheel

Completion: 2007
Area: 11,500m²
Cost: £21.5m / $37m approx
Engineer: Arup

A centre for sporting excellence in an historic landscaped setting, which is elegant, efficient and sustainable
Shin-Marunouchi Towers, Tokyo, Japan

A landmark development in a prestigious Tokyo location for the Mitsubishi Estate Group.

The Shin-Marunouchi building stands on a very important site in Japan, on the avenue leading to the Emperor's Palace, opposite Tokyo Station Plaza, known as the 'gateway to Japan'. The symbolic importance of the area has resulted in strict town planning and codes, which together with the commercial requirement to maximise floor space, have been strong factors influencing the design for the contemporary yet formal building.

The structure is divided into 3 sections - 2 towers on a podium base. There is an underground connection to Tokyo Station Plaza. The 6-storey podium will house shops and restaurants. The building’s West façade faces one of Tokyo’s most exclusive shopping streets.

- Seismic structural design
- Green roof top gardens
- Green wall to surrounding cycle sheds
- Open public colonnades
- Integrated public transport
- Solar panels on the roof
- Sun shade louvres with automatic tracking
- Street level planting to reduce heat island effect
- Rainwater captured for greywater purposes
- Completed 10 months ahead of schedule, minimising the impact of construction on the environment
- CASBEE - New construction rated

Completion: 2007
Area: 186,000m²
Cost: £500m / $850m approx
Architect of Record: Mitsubishi Jisho Sekkei

Low energy strategies, transport links and mixed uses in one of Japan’s most historically important locations
Bringing sunlight, views and social interaction into the heart of the hospital.

Like offices, hospitals demand efficient and flexible layouts, but casual social interaction is also important. So at Evelina, we broke with the typical layout of long corridors and bland wards, and planned a simple section of two long blocks flanking a central concourse, which rises the full height of the building.

The three lower levels house the Intensive Care unit, 3 operating theatres, imaging equipment and the outpatient departments. Above are three floors of wards overlooking a spacious conservatory, under a great, curved glazed roof.

The conservatory aids the sustainable servicing strategy of the building. It acts as a solar collector in winter and is naturally ventilated by stack effect in the summer. Throughout the building, partitions and services are flexible, allowing it to be adaptable in the future.

- External awareness / daylight to all areas
- Glazed atrium to create childrens’ area
- Non-institutional environment without corridors
- Natural stack effect ventilation
- Efficient deep plan floor plates
- Highly insulated terracotta clad façade
- Regeneration of “brownfield” site
- External solar shading

Completion: 2005
Area: 16,500m²
Cost: £41.5m / $70m approx
Engineer: Buro Happold

An attractive environment that raises the spirits of its patients and clinicians and becomes an intrinsic part of the healing process
Halley VI, British Antarctic Survey, Competition

A mobile base for the collection and interpretation of scientific data, to aid better understanding of the environment and climate change.

Inspired by Brunel’s concept of modular construction for military hospitals in the Crimea, our design proposes a series of pre-fabricated shipping containers, bolted together during the 10-12 week Antarctic summer. This form is wrapped in a “puffer jacket” of structural fabric pillows, which streamline the building aerodynamically and provide a first line of defence against the harsh climate.

Four pairs of articulated hydraulic legs and feet allow stepping above compacted snow and generate the forward walking movement necessary to relocate the buildings in order to counteract the gradual flow of the Ice Shelf. The form of the building, and its ground clearance have been deliberately engineered to manage snow drifting.

- Walking building to counteract glacial shift
- Prefabricated ISO container construction
- Highly efficient building envelope
- Autonomous energy systems
- Recycled waste systems
- Aerodynamic profile against polar winds
- Wind harvesting and hydrogen storage strategy

Completion: Competition 2005
Area: 5,000m²
Cost: £18m / $31m approx

Designed for the world's most extreme natural wilderness to allow scientists to monitor climate change
The Gibbs Building, Wellcome Trust, London, UK

A new Headquarters brings 600 staff together in an inspiring, comfortable and dynamic workspace.

This project for the Wellcome Trust on the Euston Road in London, consists of a new building, which had to reconcile the different scales and textures of its context and the renovation of their existing headquarters.

The building consists of 2 blocks of accommodation - one wider, of 8 stories, facing Euston Road to the north, and a narrower 4-storey parallel block to the south. Over both is a curving glazed roof, enveloping a generous atrium between. On the ground floor, through the main reception area, are large formal meeting rooms, linked by an internal street at the base of the atrium, within which the staff café, an information centre and informal meeting spaces fit.

Double skin, glazed façades create an environmental buffer between inside and out. translucent glazed stair towers articulate the internal space.

- Interior organised around interactive social spaces
- Efficient triple glazed cavity façades
- External solar shading
- Extensive use of natural light
- Air displacement ventilation
- Visual connection to city skyline and streets
- Efficient AHU's and air displacement ventilation
- BREEAM 'Excellent' rating

Completion: 2004
Area: 28,000m²
Cost: £90m / $155m approx
Engineer: WSP

Creating a stimulating low-energy working environment in a rugged London setting
Norwich Cathedral Refectory and Visitors Centre, Norwich, UK

An insertion within the Cathedral's cloister continues its centuries old evolution.

As the first of a two-phase project, the Refectory at Norwich Cathedral sets the standard for development plans currently proposed to help sustain the future life of this important ecclesiastical site.

The new building occupies the original refectory site next to the Cloisters, replicating the scale of the original building. The main intervention is a freestanding, single story timber box. The roof structure is then supported from and braced by the box on 9 pairs of oak columns set out in a series of structural bays. Roof lights along the library edge also maintain daylight through the original leaded windows.

- Respecting the original medieval construction
- English oak joinery
- Restoration of existing stone masonry
- External shading of windows
- Light airy interior
- Traditional craftsmanship and materials
- Longlife durable specification

Completion: 2004
Area: 991m²
Cost: £3.15m / $5.9m approx
Engineer: Buro Happold

Using hand crafted traditional materials to create a respectful yet contemporary design in an historic setting
The creative redevelopment of a complex for the visual Arts.

The new building unites the City Art Gallery with the adjacent Athenaeum, both designed by Sir Charles Barry, by infilling the final quarter of the site. This satisfactorily completes the city block, in the Georgian grid plan of central Manchester. The overall development forms a single Gallery precinct, using a glazed foyer space to create a cross axis, connecting the new and old buildings, while allowing them to retain their individual integrity.

Extensive pre-fabrication was used to speed up construction. The exposed pre-cast concrete frame expresses the volumes of the galleries within. Infill cladding panels are of locally quarried stone, set within bronze sub-frames, designed to compliment the stonework on the Athenaeum.

- Increasing public access to collection
- Conserving historic buildings
- Local stone cladding and materials
- Efficient H & V systems
- Exposed thermal mass in galleries
- Optimum use of natural light
- Low energy lighting
- Long life durable construction
- Integrated public art work

Completion: 2002
Area: 10,500m²
Cost: £35m / US $60m approx
Engineer: Arup

Adding new to old to create an exemplar, low energy, international gallery
The Forum, Norwich, UK

An architectural landmark and civic institution in the heart of Norwich; a centre of knowledge, information and learning, adding an extra dimension to the city’s modern cultural reputation.

After a fire in 1994 destroyed the Norwich Library, a Millennium project was initiated to re-house it, together with local visitor and business centres, a ‘Heritage’ exhibition and shop, bar and restaurant and the local BBC station - ‘Look East’.

The Forum is conceived as a covered piazza surrounded by a 3-storey, horseshoe-shaped accommodation block enclosed by a perimeter wall of loadbearing brickwork. The courtyard roof is supported by bow-string steel trusses forming leaf shaped panels, infilled with acoustically absorbent material and glazing. Light enters into the heart of the building, creating a dynamic public atrium.

The key sustainable strategy is the use of the building mass as a ‘passive’ environmental modifier and only introduce ‘active’ building engineering systems, to assist the fabric to recycle ambient energy.

- Regeneration of conservation area site
- Hand made brick façade
- Exposed thermal mass
- Heat recovery
- Facilitator of social interaction
- Optimum use of natural light
- Adjustable solar shading
- Underfloor heating
- Air displacement ventilation
- Visual connectivity with surrounding city

A vibrant, new Information Hub which has established itself as a natural focus for the city’s activities
Portcullis House, New Parliamentary Building, London, UK

A highly efficient, long life building on a World Heritage site.

Conceived in the tradition of a Thames-side palace facing the river, the building integrates the disparate buildings of the Parliamentary estate. The accommodation is arranged in a six storey rectangular block, around a central courtyard. Surrounded by restaurants and the library, with shady trees and tranquil pools, it has become a meeting place and focus for Parliamentary life.

The building structure had to be co-ordinated with the Westminster Underground Station below. The inner walls around the courtyard are supported on only six columns, tied by a transfer structure of concrete arches. Gullwing precast concrete floor units span onto the perimeter walls of sandstone piers. The chimneys are the terminals of a sophisticated, energy efficient ventilation system.

- Narrow Plan Form - 14m wide floor plates
- Exposed thermal mass: structure, slabs, partitions
- Night-time cooling of building structure
- Rotating hygroscopic thermal heat recovery wheel
- Bore hole water used for evaporative cooling
- Roof vent exhaust chimney
- High levels of insulation
- Integrated active window recovery with light-shield
- BMS controlled artificial lighting, H&V, shading
- Use of atria as buffer space and meeting place
- Low pressure drop ventilation system
- Long-life sustainable construction materials
- BREEAM "Excellent"

Top: Façade showing louvred window bays
Bottom: Ventilation and heat recovery diagram

Top: Internal courtyard at night
Bottom: Pre-fabricated chimney and thermal wheel

Completion: 2000
Area: 20,000m²
Cost: £165m / US $280m approx

Architectural sophistication and environmental efficiency for the British Parliament
Jubilee Campus, University of Nottingham, Nottingham, UK

An academic park for 2,500 students regenerates a former bicycle factory site.

Driven by a tight programme and cost constraints, the design kept the construction technology simple, the emphasis being on refinement and rationalisation of detail.

A low-pressure drop ventilation system uses corridors and stair towers as air plenums, reducing the energy needed to circulate air. Under normal conditions specially designed cowl increase adequate wind effect. During hot weather, photo-voltaic cells on the atrium roofs generate supplementary power for the fan driven ventilation.

- Landscaping for micro-climate control, amenity and water management
- Narrow Plan Form - 12m wide floor plates
- Exposed thermal mass
- Night time cooling of building structure
- Hygroscopic thermal heat recovery and evaporative cooling
- Rotating roof vent exhaust cowl to maximise wind pressure utilisation and reduce fan power
- High levels of insulation
- Integrated reflective louvres and window blinds
- BMS controlled artificial lighting, H/V, shading
- Photovoltaics used to balance fan power and provide shading
- Use of atria as buffer spaces and meeting places
- Sedum roof covering
- Sustainable construction materials and non-use of PVC
- BREEAM 'Excellent'

Completion: 1999
Area: 45,000m²
Cost: £30m / US $51m approx
Engineer: Arup

Achieving the UK Government’s 60% CO₂ reduction target in 1999
The Inland Revenue Centre, Nottingham, UK

The transformation of a brownfield site extends the character and urban grain of the city, to create accommodation space for 1,800 staff.

The Centre was a pioneering ‘Green’ project in the UK. At night the inherent thermal mass of the concrete is exploited and purged with fresh air to pre-cool the structure. At the corners of the buildings, the air within the glass block stair towers warms and rises on sunny days, giving extra drive to the ventilation system. Fabric umbrellas on the tops of the towers act as large dampers, lifting to exhaust hot air and closing, on cool days, to conserve heat.

- Site conceived as part of cityscape
- Narrow plan form - 13.6m wide floor plates
- Exposed thermal mass
- Night time cooling of building structure
- BMS control of local heating / ventilation units, roof vents and artificial lighting.
- Bucancy ventilation system via stack effect
- Integrated lightshelves, and window blinds
- District heating scheme
- Prefabricated components
- Durable materials
- Short construction programme
- BREEAM ‘Excellent’

Completion: 1994
Area: 39,000m²
Cost: £54m / US $92m approx
Engineer: Arup

The UK’s first BREEAM ‘Excellent’ building in 1994.
New government offices for 1,800 staff
Hopkins Architects have been at the forefront of British architecture since the practice was established in 1976. Our work has been widely acclaimed by both architects and the public alike and our projects have won most major architectural awards.

Our track record for delivering buildings of the highest architectural excellence, combining innovative design, craft, and environmental responsibility, has been the key to our continuing success. Apart from our large portfolio of buildings in the UK, in recent years our international works have increased rapidly with projects in Greece, Japan, Dubai, India and the USA.

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