

DESIGN & ACCESS STATEMENT: Downsizing of the Convent of Mercy, Gravesend 30/08/2023

clay architecture



Site:

Convent of Mercy, Hillside Drive, Gravesend DA12 1NY

Proposal:

Works to existing Convent to include: proposed new entrance to Theydon: closing the party wall between Theydon and Hillside; proposed new staircase extension; proposed new first floor and wide dormer to add rooms within the chapel; proposed cladding, re-glazing, and reroofing to the 1950s block; and proposed internal reordering, including a new passenger lift, to enable the downsizing of the Convent of Mercy

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The Sisters of Mercy is a religious order and charitable organisation of Catholic women founded in 1831 in Dublin by Catherine McAuley. There are about 6,200 sisters organized into several independent congregations providing education and health care facilities around the world.

The Sisters of Mercy have been in Gravesend since 1860 and have resided at the Convent of Mercy on Hillside Drive since 1951. The Sisters ran the nearby St Joseph's Convent Preparatory School in Gravesend from 1957 to 2021. They support congregational members in their old age and provide social and pastoral care through local parish work and community-based programmes. This includes a local charity they set up called the House of Mercy, which provides shelter for the homeless.

Numbering over 50 nuns at their peak in the 1960s, the community has shrunk to a small number of elderly sisters.

The convent is now too large for their needs, and costly to run and maintain.

Working together with Clay Architecture, the sisters explored a number of options for downsizing the Convent, including moving out of Hillside Drive, before settling on their preferred option, which is to remain on Hillside Drive, and to reduce the Convent to approximately half its size.

The proposal involves adapting, improving and refurbishing the chapel, a 3-storey 1950s block, and one third of the mansion, to provide improved accessibility, comfort and amenity for the sisters, to enable them to continue to live and work independently on the site where they have lived for many years.

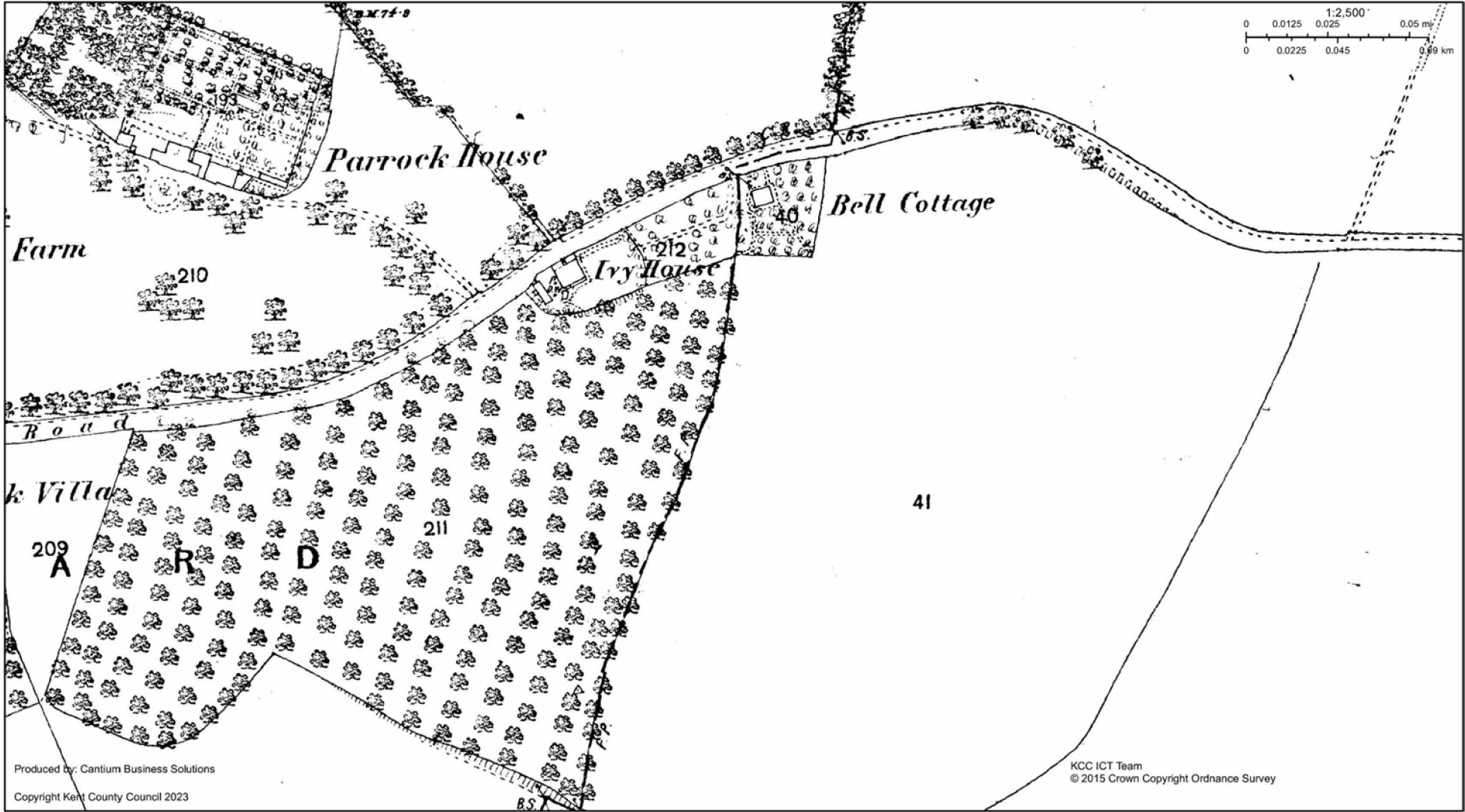
The refurbishment approach is designed to be simple, sustainable, and respectful of the existing buildings.

The purpose of this application is to obtain planning permission for this work.

The priority is to redevelop the downsized Convent for the sisters to move into as soon as possible. Plans for the surplus Convent buildings are still in the early stages of development and will be the subject of a separate planning application.

Heritage Maps1871 to 1890

June 22, 2023



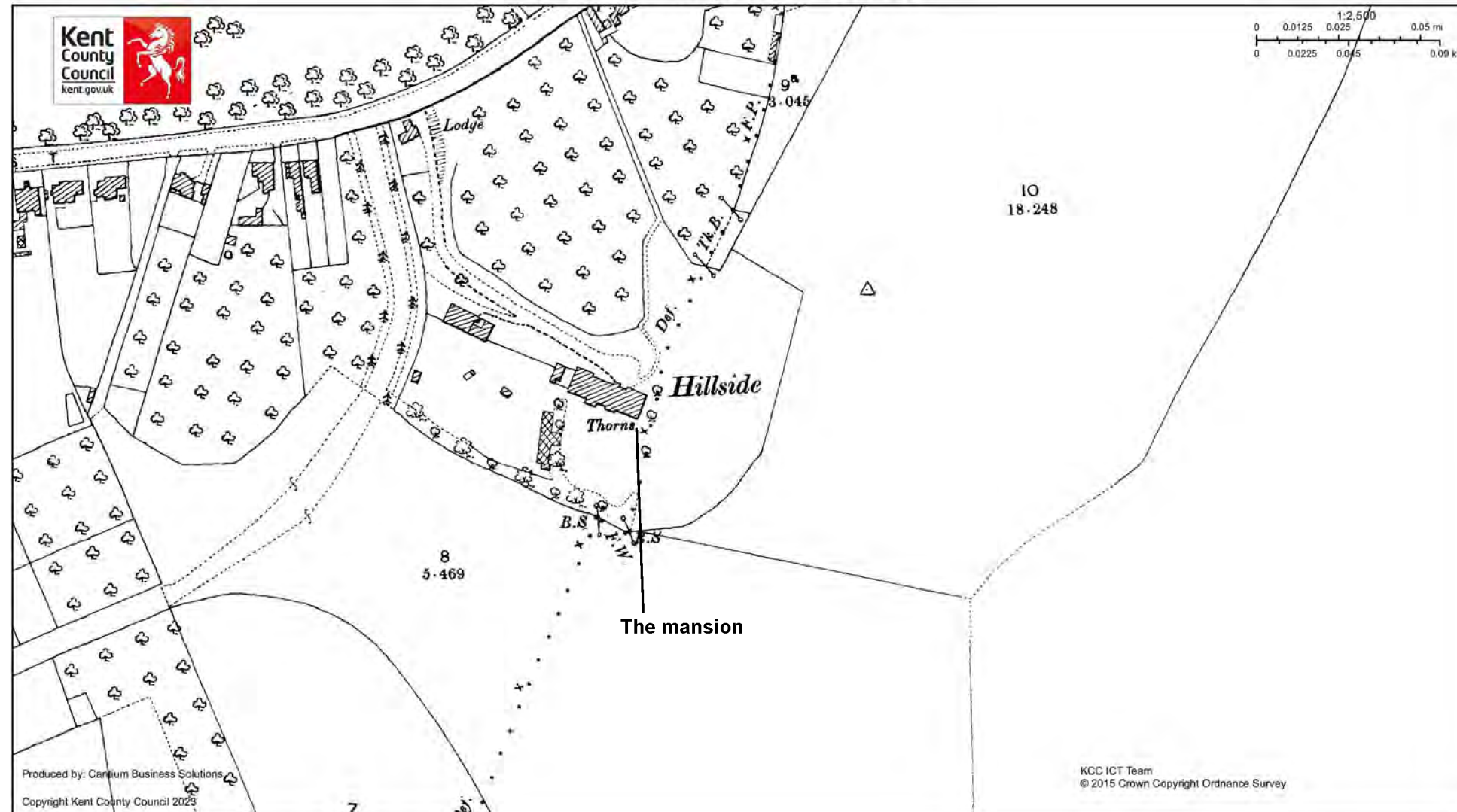
The Sisters of Mercy convent began in Gravesend in 1860, originally occupying 157 Milton Road and 1 Edwin Street, Gravesend.

Legend

The site before development

Heritage Maps 1897 to 1900

June 22, 2023



Legend

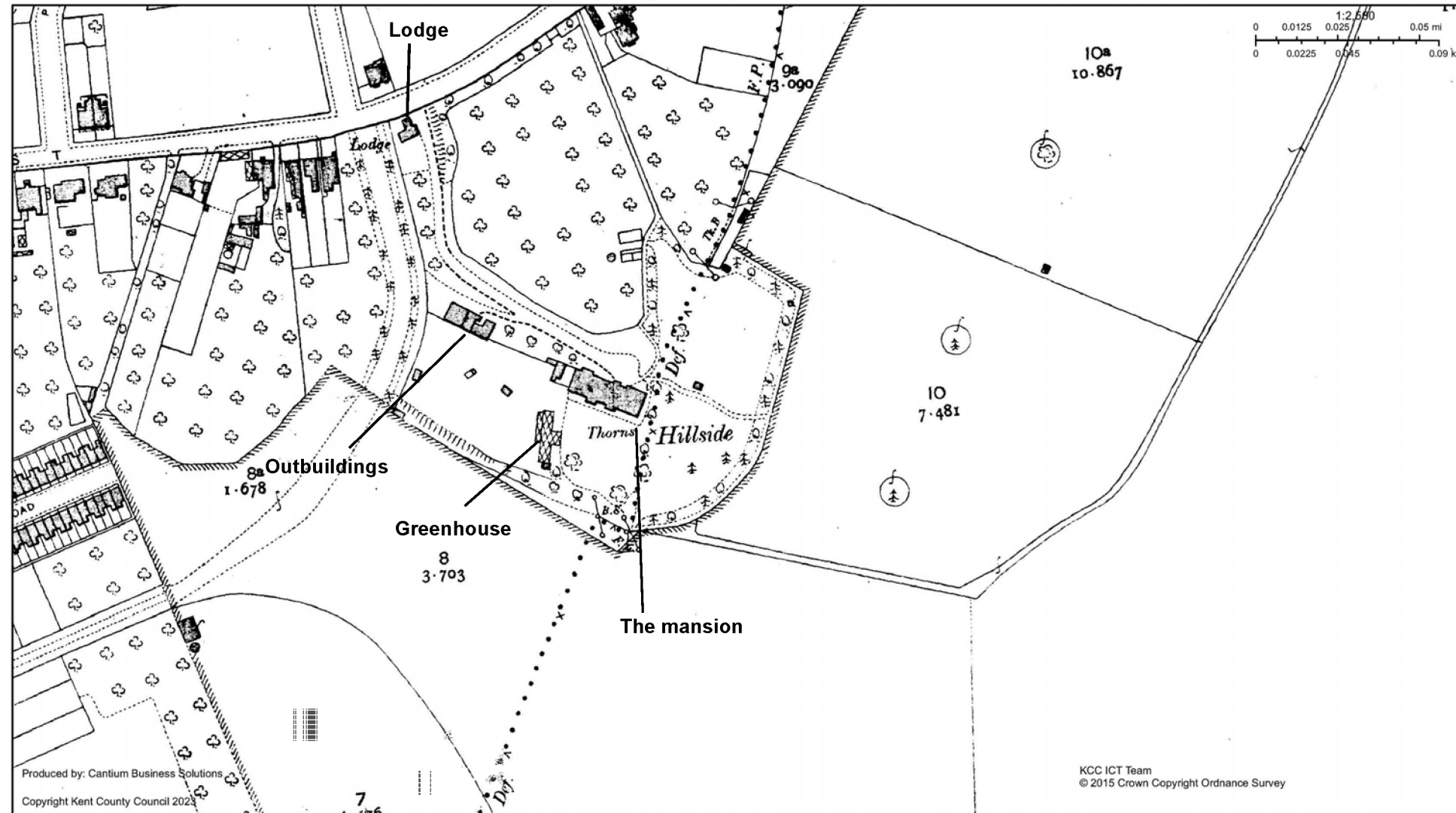
The mansion that forms the main building on Hillside Drive was built in 1895 by Lord John Russell, local brewer, and Gravesend mayor from 1876 – 1898. The land stretching to Old Road East was a single large plot of land known as Hillside.



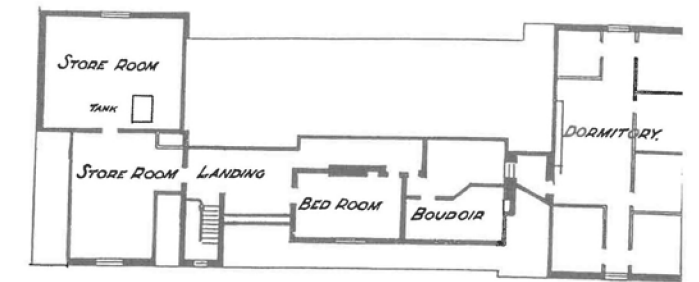
Lord John Russell, from Gravesham Borough Council collection

Heritage Maps 1907-1923

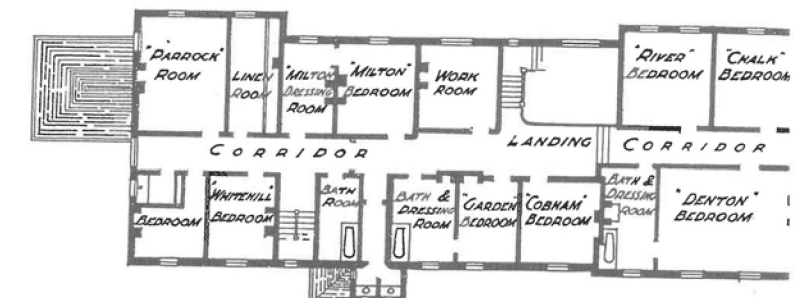
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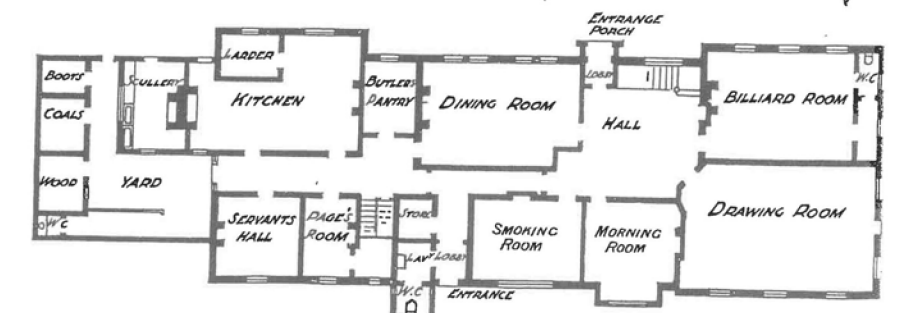
There was a Lodge at the entrance to the drive, and houses now known as no. 10 and 10a Hillside Drive. There also appears to have been a large greenhouse serving the mansion; by the 1929 to 1952 map, the greenhouse has been removed. The plot is surrounded by fields to the east, west, and south—the town is growing, and development in the form of housing is steadily creeping in from the west.



ROOF PLAN



FIRST FLOOR PLAN



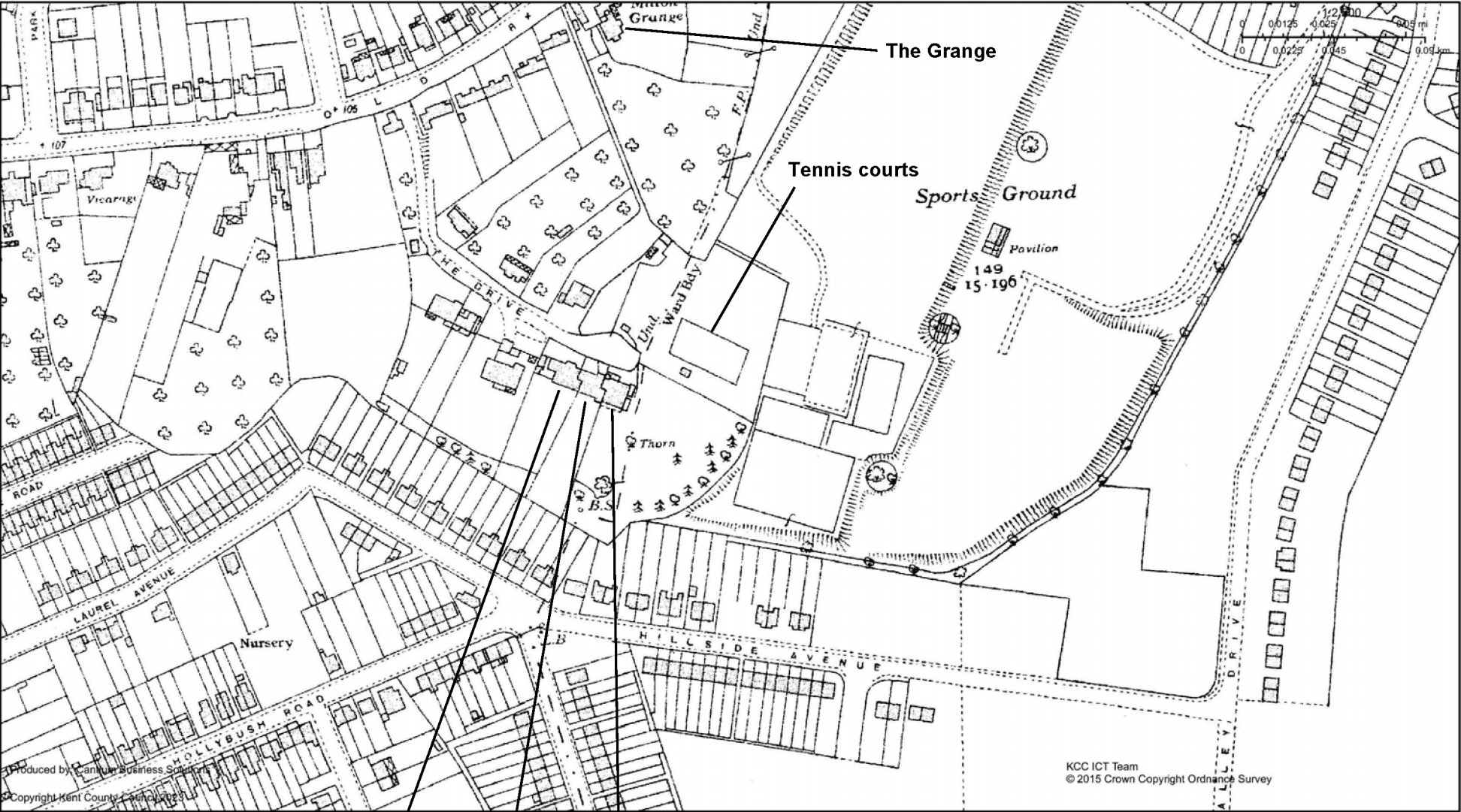
SCALE 20 FEET = 1 INCH

GROUND FLOOR PLAN

Original house plans from the Sister's archive

Heritage Maps1929-1952

June 22, 2023



By 1940, the mansion has been divided into 3 houses— Theydon, Hillside, and Rydal. Along Old Road East and along the drive, land has been parcelled up and developed into houses and gardens. The fields to the east have been developed into a Sports Ground.

The Sisters acquire and move into Theydon and Rydal in 1951, and later acquire the middle house, Hillside, sometime between 1959 and 1961.

Building of the nearby St Joseph's Preparatory School, run by the sisters, is completed. Before this the Sisters ran 2 temporary classrooms for the prep school in the Grange. These are moved into the completed school buildings in August 1957.

Legend

Rydal Hillside Theydon



The chapel was built between 1950 and 1951. The vestry extension, designed by the George Clay Partnership, was added after 1962.

The 3-storey slab block behind the mansion and the chapel was completed in 1959. The Sisters call it 'New' Block.



The site has remained relatively unchanged to the present day, though it is now completely surrounded by housing.

St Joseph's Preparatory School closed in August 2021.

Planning History

A search on the planning portal yielded no recent data on the site's planning history.

The Sisters have in their archives a drawing for the vestry extension to the chapel dated April 1962. It is possible that the last recorded planning application for the Convent may date from this period.

Planning Constraints

The Convent is owned by the sisters and does not come under the jurisdiction of the Diocese. A faculty application is therefore not required for the chapel or other buildings.

A search of the local plan does not reveal any specific policies or Article 4 Directions which apply directly to the site.

The Convent is an amalgamation of 3 historic, but unlisted houses which were formerly a single mansion. In an email exchange with the Assistant Director of planning, we were advised that Gravesham 'would want to understand how the remaining part of the convent buildings, that are not going to be occupied by the community, would be kept in productive use or at least maintained so that their heritage value is safeguarded.'

- In the short term, the sisters will be decanted into Rydal and Hillside, which do not form part of plans for the downsized Convent. They will stay there until the works are completed.
- The sisters plan to redevelop Rydal and Hillside once the downsizing project is completed and the sisters have moved into the refurbished convent.
- Should there be a period where the decanted houses are left vacant, measures will be taken to mitigate against trespass, frost damage, rats and pigeons.
- The sisters and their staff will retain a presence on the site throughout.

Constraints listed on the planning portal relevant to this application include:

Groundwater SPZ2:

- The amount of extension proposed is very modest, with a footprint of approximately 16m². This should have a very low impact on existing surface or rainwater discharge. Should EP propose a condition we can look at this.

Smoke control:

- There are no plans for any new fireplaces in the redevelopment.

Historic Landfill Sites Buffered:

- Pine Avenue and 'Holyoake Mount' are listed as historic landfill sites. We are unable to locate a 'Holyoake Mount' on the map.
- Gravesham Borough Council to advise

Thames Estuary and Marshes Ramsar Buffer Zone:

- No new dwellings are proposed in this application

Areas of Archaeological Potential:

Archaeological finds close to the site include:

- TQ 67 SE 1221: Pine Avenue WWII air raid warden's post
- TQ 67 SE 19: Dene hole on Coombe Road
- TQ 67 SE 1201: Lamorna Avenue WWII air raid warden's post
- The proposed extension for a stairwell occupies an area with a sharp change of level between ground floor and lower ground floor, between the chapel and the 1950s block. The sisters have a memory of the 1950s block requiring piling. If there was archaeological material of any interest, it would most likely have been destroyed or lost in the building of the chapel and / or 1950s block.

General design solutions:

- Existing doorways and other connections within the 'party' walls will be closed off to separate Theydon from Hillside.
- A new level access front entrance to the Convent will be created at Theydon.
- The existing chapel is larger than required. The proposals add an office to the ground floor and a new 1st floor with a wide roof dormer to house 2 bedrooms with views over the garden. The refurbished chapel is linked to the new staircase and lift (see below) and therefore fully accessible. The remaining chapel is reduced in size but will function as before.
- The existing refectory is larger than required and has been split to provide for a second visitor room.
- The existing kitchen is larger than required and has been reordered to provide space for a laundry room.
- Bedrooms have been planned to provide space for work, study, contemplation, and prayer.
- Bathrooms and WCs have been reordered, replaced, and upgraded to provide new toilets and accessible bathrooms.

Accessibility issues:

- The buildings are not fully accessible.
- The existing stair to the 1950s block has short treads, is a safety hazard, and has caused a number of trips and falls.
- The staircase to Theydon is served by a chair lift. The lift is very slow. From the chair lift landing, there are another 3 steps to the 1st floor.
- The 1st floor of the 1950s block is connected to the 1st floor of Theydon by 6 steps.
- The attic or 2nd floor in Theydon is only accessible by a narrow flight of stairs.

Accessibility design solutions:

- Build a new staircase extension between the 1950s block and the chapel to serve the basement, ground, and 1st floor levels of the 1950s block, as well as the modified chapel.
- Remove the existing stair to the 1950s block and replace it with a lift shaft of 2200W X 2825D to enable the installation of a passenger lift of internal size of approximately 1400W X 2400D X 2100H capable of carrying a wheelchair and helper to the basement, ground, and 1st floor level of the 1950s block.

- Install a short platform lift to connect the 1st floor of the 1950s block with the 1st floor of Theydon.
- The attic at Theydon is surplus to requirements; only staff or able-bodied sisters need to access the attic.
- This will make the entire Convent, bar the attic, fully accessible to the sisters.

Building condition and thermal efficiency issues:

- The roof of the 1950s block is in a very poor condition and is leaking.
- The 1950s block suffers from excessive solar heat gain, and the rooms get very hot in summer.
- The 1950s block is a concrete frame structure and suffers from cold bridging— parts of the exposed soffit of the concrete roof have spalled, exposing rusted rebars.
- None of the buildings are insulated. The heating system to this half of the convent is antiquated and costly to run.

Building condition and thermal efficiency design solutions:

- Strip off the existing and failed roof finishes to the 1950s block. Build up a new roof deck to introduce a shallow fall to the flat roof. Insulate the roof and roof overhang to Building Regulations Approved Document Part L; finish the roof with a robust single-ply EPDM membrane with a good warranty. Renew all rainwater goods.
- Provide roof access for future maintenance via openable rooflights and a mansafe system.
- Carry out concrete repairs and insulate the 1950s block with an external insulation and finish system.
- Replace all windows to the 1950s block with double-glazed aluminium windows with solar glass to reduce ultraviolet light and solar heat gain. Install brise soleil to all windows on the south elevation to reduce solar heat gain. Design openable windows for natural ventilation.
- Refurbish and insulate all other existing tiled roofs internally.
- Refurnish, insulate and finish all existing flat roofs with single-ply EPDM roofing membrane,
- Where feasible, insulate the external walls of all other buildings internally.

- Where feasible, refurbish and upgrade all other existing windows, introducing secondary glazing where feasible. Where windows are in a poor condition, replace with new double-glazed, thermally broken windows to match the period / existing.
- Replace the existing oil boiler and single-pipe heating systems with a more energy efficient heating system—either a gas fired boiler or Air Source Heat Pump.



The existing two-and-a-half storey Victorian mansion is characterised by three open-hipped gable roofs, with the dominant gable roof over Theydon, the secondary gable roof at the other end over Rydal, and a tertiary gable roof centred over Hillside. A butterfly roof runs the length of the building linking the roof over Theydon and the roof over Rydal.

The mansion is built of red brick; many of the key features of the mansion are arranged at the Theydon end, marking it as the dominant end of the mansion— and the heart of the Convent community.

Of these features the pick of the bunch include:

- The arched front entrance at Hillside
- The grand leaded glass window to the staircase at Theydon (which served a main entrance stair before the mansion was divided into three houses and the one staircase became two)
- The two oriel windows serving the 1st floor corner room at Theydon, and
- The leaded glass window at the end of the 1st floor hallway at Theydon, now overlooking the chapel.

The exterior of the mansion will remain unchanged except for a proposed new entrance at Theydon, which will take the form of a decorative brick archway in matching red brick planted in front of the existing flat-roofed lean-to. This archway will be subservient to the original arched entrance to Hillside.

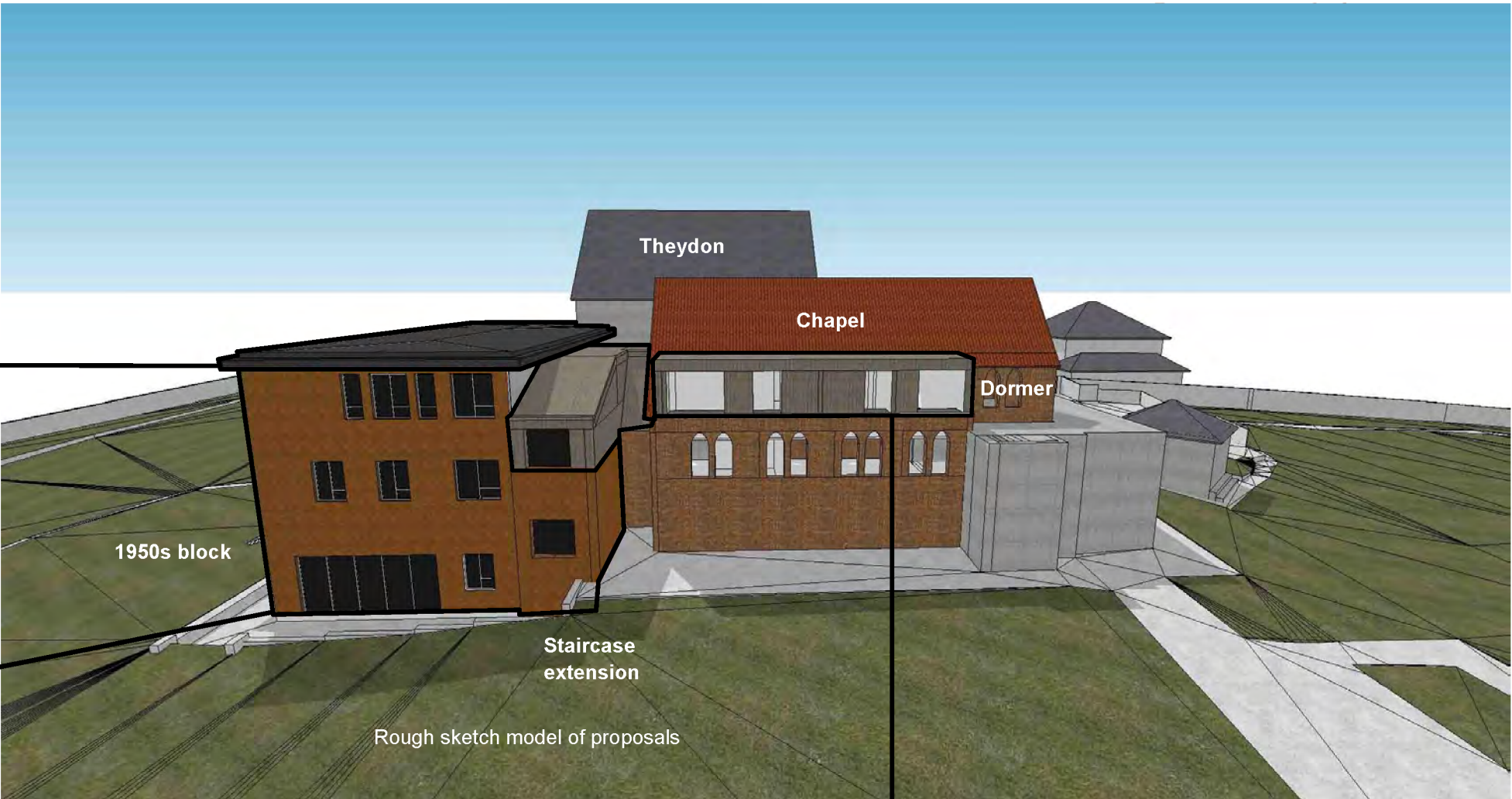


Black Rubber House in Dungeness by Simon Conder Associates.

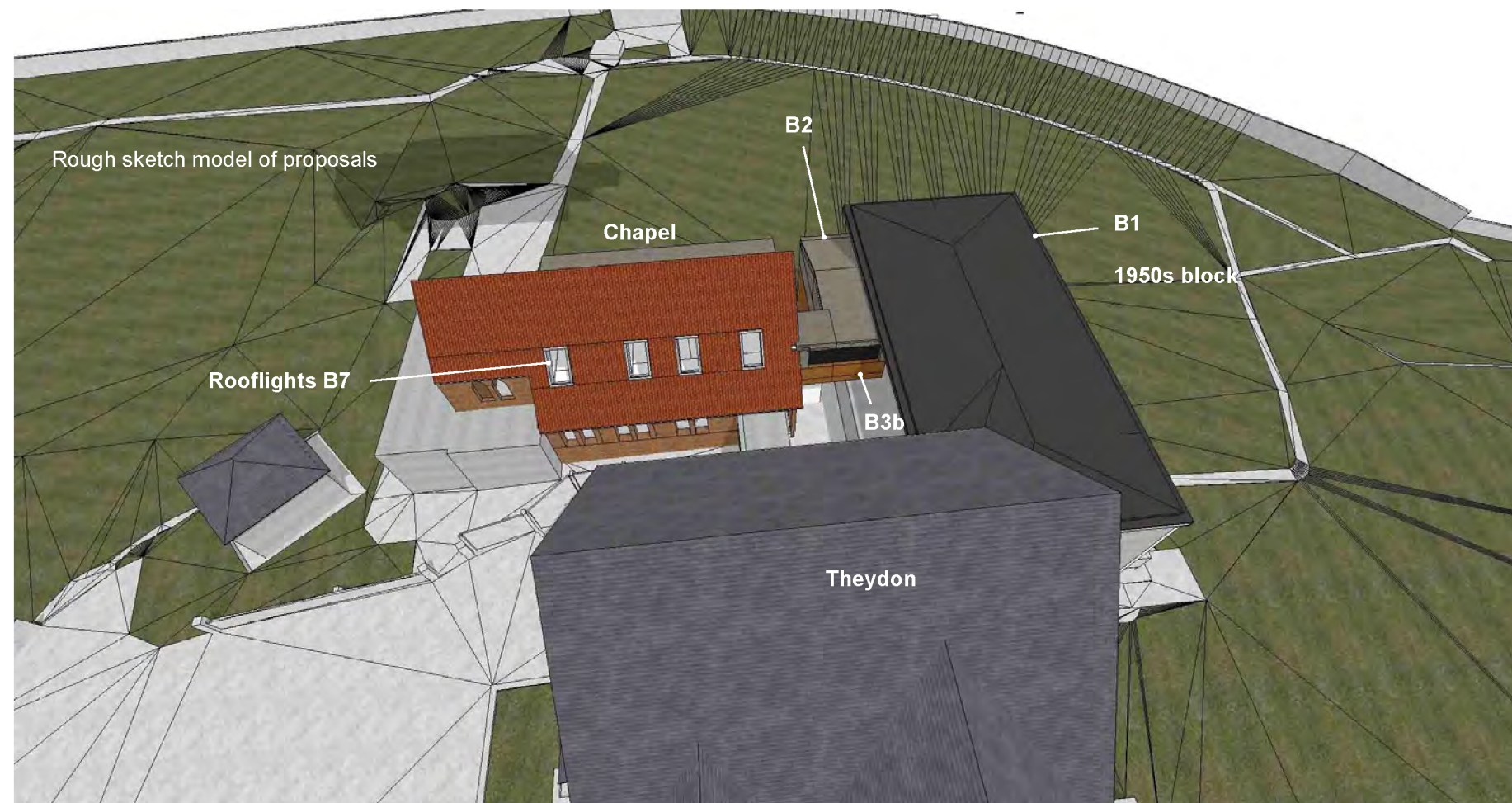


Mid 20thC house in Barcelona clad in textured cork by architect Elisabetta Quarta Colosso

- B1** Black EPDM singly ply roofing membrane
- B2** Standing seam zinc roofing and cladding
- B3a** Textured cork cladding
- B3c** Plain cork cladding alternative



Fitch House with zinc clad extension to Grade II Listed house in Rochester by Clay Architecture



The 1950s block will be over-clad and insulated externally to protect the concrete frame and prevent cold-bridging. We are looking at a number of options for insulating and cladding, the preferred architectural option being natural cork cladding (**B3**).

Cork is a 100% natural and recyclable material which is light, strong, durable, provides a good thermal and acoustic insulation, good thermal mass, is breathable (i.e. vapour permeable) and resistant to fire, water and rot. It is made from the bark of cork trees (found mainly in Portugal), which have an average life of 250 years and are harvested every 9 years. Cork used for cladding is produced from left over pieces of the wine-cork making process, which is pulped and then press-formed into blocks using the natural resin within the cork.

The growing of cork acts as a CO₂ sink so that, even after allowing for CO₂ in its manufacture and shipping, the cladding is a carbon negative material. Aesthetically, cladding the 1950s block in cork is akin to cladding the building in a very thick tree bark. The natural building material works well with the garden and the earthy hues of the red brick and clay-tiled mansion.

Proposed options are:

- **B3a** Textured cork cladding for the south, east and west elevation
- **B3b** Cork insulation with lime render for the north elevation
- **B3c** Plain cork cladding as an alternative to 3a

Other options being considered for cladding include timber rain screens (timber boards will require fire retardant treatment whereas cork does not require treatment) and insulated renders (which are not breathable and have a higher carbon footprint).

All new windows will be polyester powercoated double-glazed aluminium windows, south and west facing windows will be glazed with solar glass to reduce ultraviolet light and solar heat gain **B4**. Aluminium windows are more robust than uPVC windows, aluminium is fully recyclable and the windows are A rated in the Green Guide to specification.

New windows on the south elevation will be shaded with polyester powdercoated aluminium brise soleil **B5** to reduce solar heat gain.

The new stairwell is a small extension linking the 1950s block and the chapel. The top half of this link building will be clad in standing seam zinc **B2** to match the new dormer extension to the chapel; the bottom half will be clad to match the 50s block.

New rooflights to the 1950s block and chapel will be Velux or similar **B7**.

The new proposals mainly affect the later 20th C additions to the convent, namely:

- The chapel— built in mid-20th C ecclesiastical vernacular, and
- The 1950s block— built mid-20th C brick-finished utilitarian reinforced concrete slab block with a projecting flat roof.

The proposed new interventions are designed to create pleasant and comfortable spaces for the sisters which are simple, functional, accessible, and easy to use, whilst subservient in form and height to the existing buildings.

The proposed new first floor to the chapel will be built over the nave and set at a height to fit the 1st floor rooms comfortably within the arched roof structure. Although set lower than the apex of the three-pointed arch windows, the new floor fits *behind* the wall and the window, allowing the arches to still be read externally, and for light to filter through the top of the windows internally.

The extension to the chapel is designed as a full-width dormer spanning the length of the nave. The dormer will have a shallow pitched roof, and deep recessed windows. The dormer extension will be clad in standing seam zinc in a natural finish (**B2**).

Zinc standing seam is a robust roofing finish, cheaper than lead, and requiring very little maintenance. Zinc roofing can be used on vertical faces, and on shallow pitches as low as 5°, making it a versatile material for forming dormers. Zinc roofing is fully recyclable and rated A in the Green Guide to Specification.

The flat roof of the 1950s block will be insulated at a shallow pitch and finished with a black single-ply EPDM (**B1** synthetic rubber) roofing membrane. All rainwater goods will be black to match. EPDM is a recyclable material



Brise soleil: polyester powder-coated aluminium with an elliptical profile.

Sustainable design principles

- The development involves the refurbishment and extension of an historic building, improving its viability and extending its useful life.
- The development will retain most of the existing buildings and their embodied carbon. Therefore, taken as a whole, the development's carbon footprint will be significantly less than that for a new build of equivalent size.
- The proposed staircase extension and chapel extension will be designed in compliance with Building Regulations Approved Document Part L1A Conservation of fuel and power in new dwellings. New windows and other alterations to the existing building will be designed in compliance with Approved Document Part L1B Conservation of fuel and power in existing dwellings. The thermal performance and conservation of fuel and power of the completed development will be a significant improvement on the existing.
- The habitable rooms are designed for natural ventilation, reducing the need for mechanical ventilation and energy use.

Energy and carbon reduction methods

- At the time of writing, a mechanical and electrical services feasibility study has been commissioned for the Convent. The study will look at the available options and make recommendations for a heating system with very low running cost which is reasonably CO₂ effective, to efficiency standards as laid down in Building Regulations (Domestic Building Services Compliance Guide)
- Thermostatic Radiator Valves on all radiators will enable room by room control
- Mechanical Ventilation Heat Recovery can be provided to reduce energy loss through reclaimed heat on vent system
- LED lighting to Building Control standards

Biodiversity net gain

- The Convent sits on a 3.16-acre, 1.28-hectare plot and is characterised by a large garden with many mature trees. The impact of the proposed development on the garden and the trees will be minimal.

- The development will be neutral, with no biodiversity net gain or loss.

Water efficiency and recycling

- The proposal will comply with water regulations.
- Low volume showers are suggested as part of the fit-out.
- No water recycling is proposed.

Waste reduction

- No hazardous materials have been specified for the project.
- An asbestos survey will be carried out before demolition and construction; any asbestos identified or found on site will be safely disposed of by a licensed contractor appropriate to the type of asbestos and level of risk.
- Resource efficiency: the building is of a modest scale and utilises standard construction materials that are widely available, which the contractor can order in the quantities required, to minimise construction waste.

Sustainable transport methods

- The proposal does not change the existing transport requirements of the Convent, which are fairly low.
- Though one or two of the sisters may indeed wish to ride a bicycle, it may be a bit of a challenge at their age.

Education or new resident/occupier information pack

- Not applicable

- The Convent is an amalgamation of 3 historic, but unlisted houses which were formerly a single mansion.
- The proposal is for relatively modest but necessary changes which will improve the buildings accessibility and energy efficiency, enable the convent to be downsized to a more manageable size, and improve the comfort and life of the sisters.
- The proposal will not change the use of the Convent, nor will it affect the current servicing, parking or transport needs of the Convent.
- A search of the local plan does not reveal any specific policies or Article 4 Directions which apply directly to the site.
- Time is of essence. The priority is to redevelop the downsized Convent for the sisters to move into as soon as possible.
- Plans for the surplus Convent buildings and grounds are still in the early stages of development and will be the subject of a separate planning application.
- We have explained how the surplus convent buildings that are not going to be occupied by the community, will be maintained so that their heritage value is safeguarded.
- We trust that the information submitted is in order and ask that the Local Authority grant planning permission for the downsizing scheme.

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	Job No: 5285				
	Project: CONVENT OF MERCY, GRAVESEND: DOWNSIZING				
	Sheet No: 01				
	Drg No	Size	Title	CAD File	Scale
			DEVELOPED DESIGN (Planning)		
	5285/PL/100	A3	LOCATION & BLOCK PLAN	5285_QX	AS
	5285/PL/110	A1	EXISTING LOWER GROUND FLOOR PLAN	5285_BFX	100
	5285/PL/111	A1	EXISTING GROUND FLOOR PLAN	5285_GFX	100
	5285/PL/112	A1	EXISTING FIRST FLOOR PLAN	5285_FFX	100
	5285/PL/113	A1	EXISTING SECOND GROUND FLOOR PLAN	5285_SFX	100
	5285/PL/114	A1	EXISTING ROOF PLAN	5285_RFX	100
	5285/PL/120	A1	EXISTING ELEVATIONS 1 & 2	5285_EleX	100
	5285/PL/121	A1	EXISTING ELEVATIONS 3 & 4	5285_EleX	100
	5285/PL/122	A1	EXISTING SECTIONAL ELEVATIONS 5 & 6	5285_EleX	100
	5285/PL/123	A1	EXISTING SECTIONAL ELEVATIONS 7 & 8	5285_EleX	100
	5285/PL/130	A1	PROPOSED LOWER GROUND FLOOR PLAN	5285_BF	100
	5285/PL/131	A1	PROPOSED GROUND FLOOR PLAN	5285_GF	100
	5285/PL/132	A1	PROPOSED FIRST FLOOR PLAN	5285_FF	100
	5285/PL/133	A1	PROPOSED SECOND GROUND FLOOR PLAN	5285_SF	100
	5285/PL/134	A1	PROPOSED ROOF PLAN	5285_RF	100
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	5285/PL/121	A1	PROPOSED ELEVATIONS 3 & 4	5285_Ele	100
	5285/PL/122	A1	PROPOSED SECTIONAL ELEVATIONS 5 & 6	5285_Ele	100
	5285/PL/123	A1	PROPOSED SECTIONAL ELEVATIONS 7 & 8	5285_Ele	100



Front elevation with the chapel to the left





East elevation: 1950s block to the left, and chapel to the right





Rear elevation



Chapel interior