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Opportunities

Newbrook House

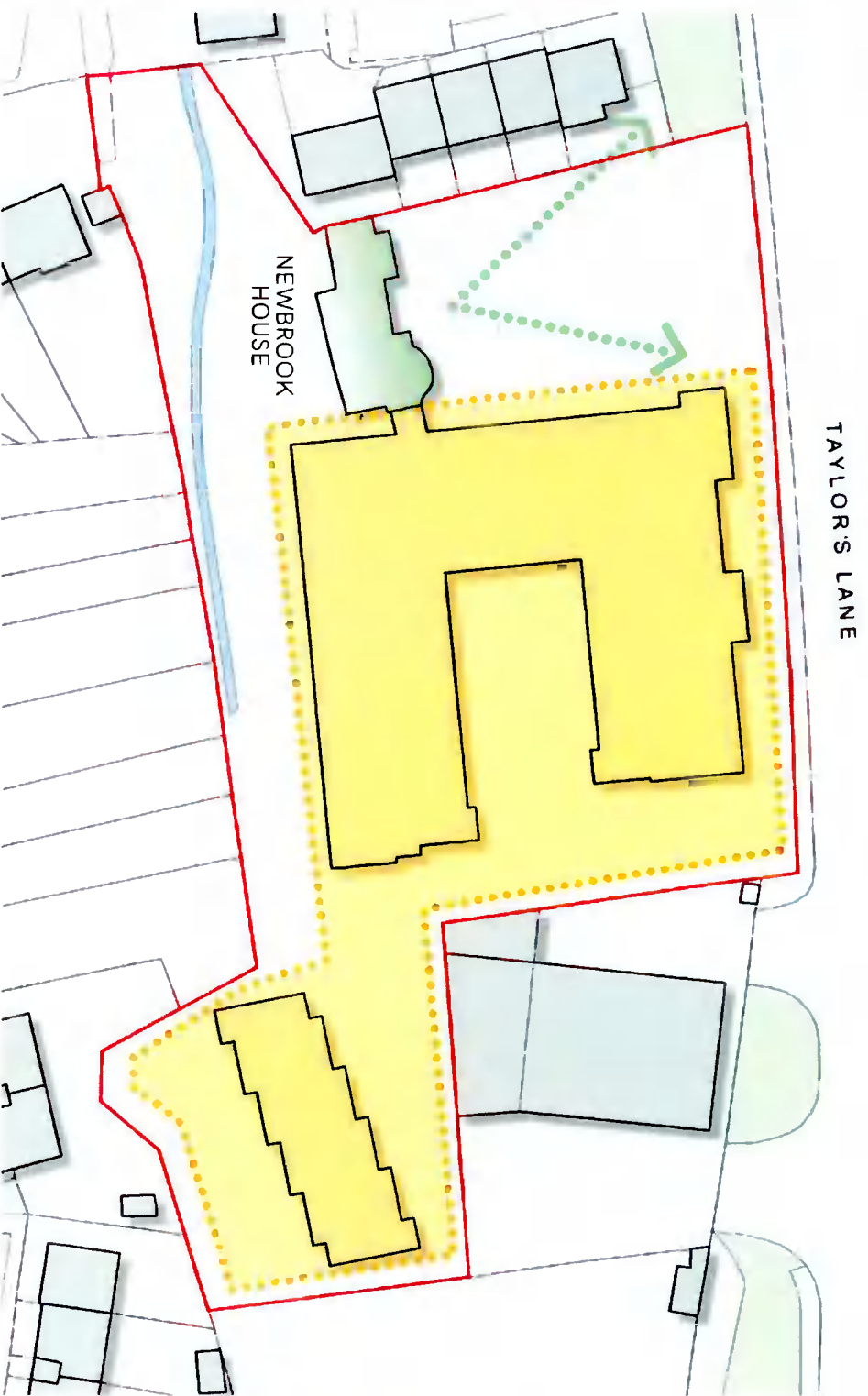
Newbrook House is a landmark in the local area, and an important piece of the local history. It was therefore important to the scheme to preserve the building, and bring it back to its former glory.

The new build element of the development has been set back from the frontage of Newbrook House that faces Taylor's Lane, therefore providing a clear vista from the Protected Structure north towards Taylor's Lane and maintaining its dominant

position in the streetscape.

The new build elements of the development have been kept to the east of Newbrook House, making use of the existing topography of the site and creating spaces of interest throughout.

The restored Newbrook House will form the main entrance to the new nursing home connected via a glazed link corridor.



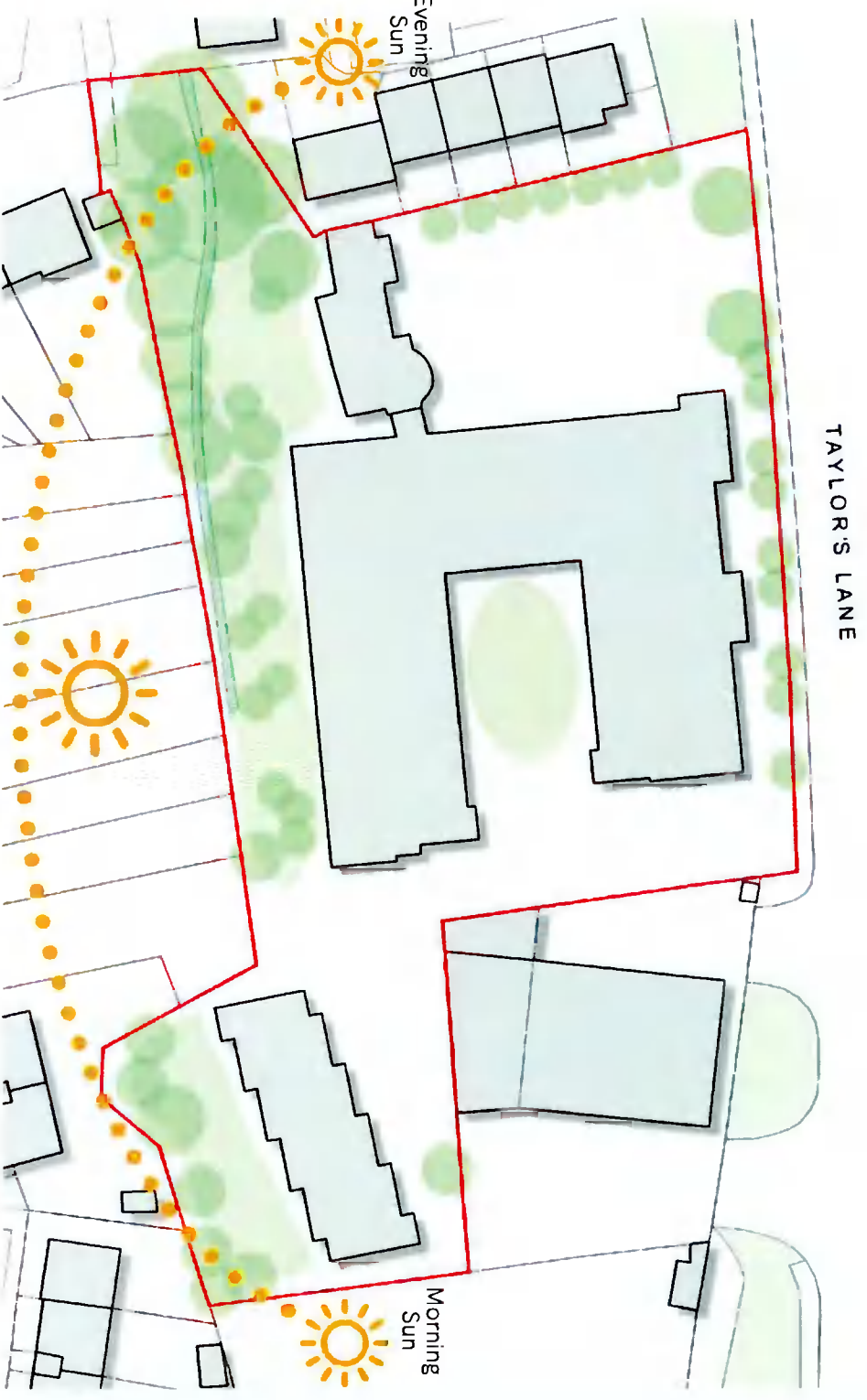
Landscape & Biodiversity

The open landscape to the south west of the site forms a rich component of the local environment. The existing watercourse will be retained and diverted along the southern boundary of the site.

The building has been set back 10m from the open watercourse, which provides a rich setting for the care home and also provides high quality landscaped south facing gardens which will enjoy natural daylight throughout the day for use by the

residents and visitors.

The C-shaped form of the building also provides a semi private external courtyard for use by residents. The courtyard has been thoughtfully designed by a landscape architect to provide a safe and welcoming space for its users, with the soft landscaping carefully chosen for its specific location.



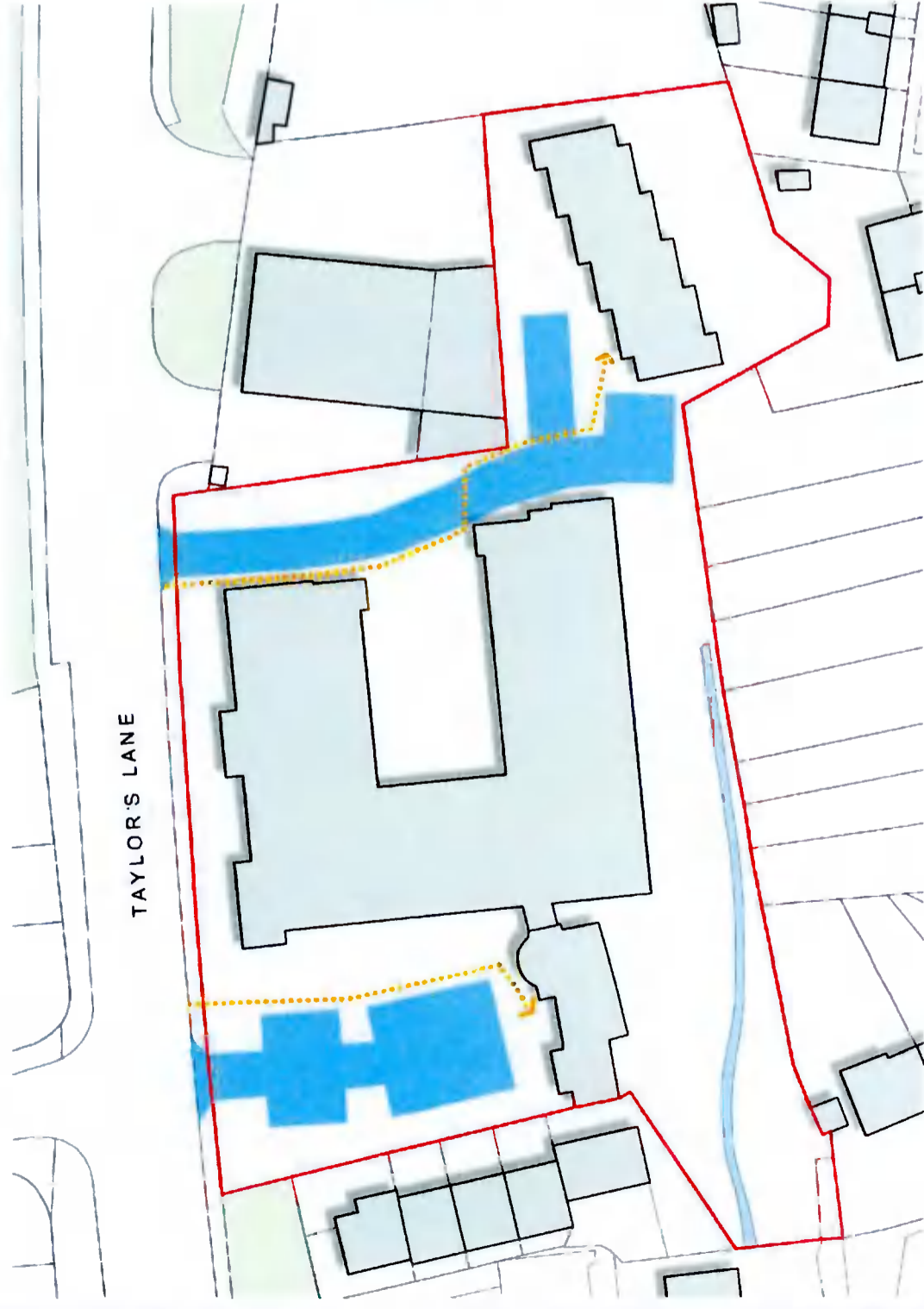
Access

The existing access to the site is to the north east corner. It was recommended during the pre-planning discussions that the site would benefit from relocating the access further west along Taylor's Lane. The primary vehicular entrance is now proposed further west, rising up to the existing Newbrook House.

The majority of the parking provision will be provided either side of a central aisle.

A secondary access will be provided in the location of the existing access. This will provide access to the housing, as well as service vehicles for the nursing home.

Pedestrian access will be provided alongside both points of vehicle access via designated footpaths to provide good permeability throughout the site.



Topography

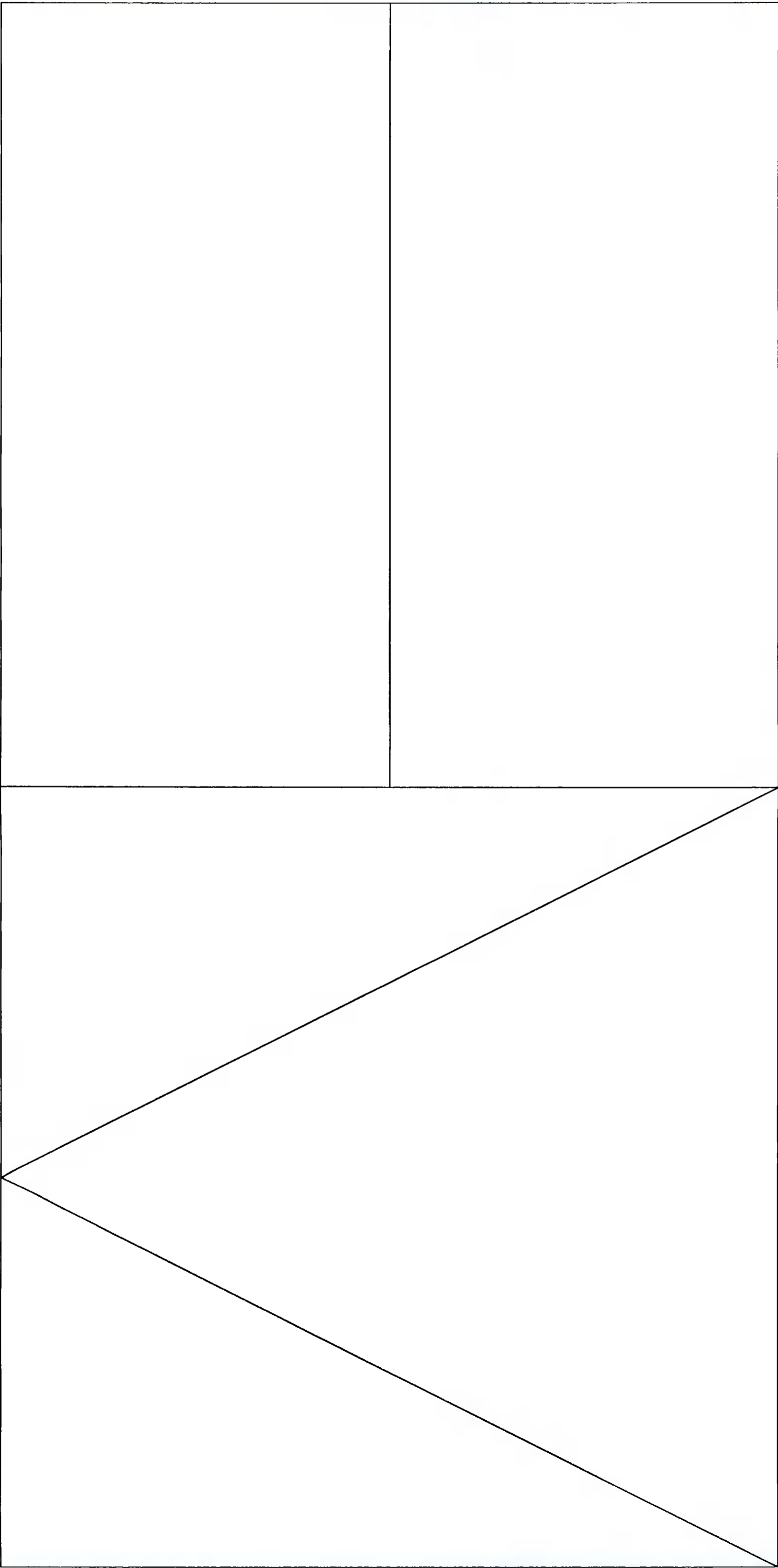
The topography of the site is a challenge and the solution is a balance of minimising the retaining wall, to the southern and eastern boundary and achieving level access to the front entrance, as well as tying in the watercourse to existing levels at the site extents.

The main entrance to the nursing home will be via the restored Newbrook House, which sits a storey height above Taylor's Lane. The opportunity is taken to provide a lower ground floor

level at Taylor's Lane, therefore reducing the overall height of the building by stepping the roof line down towards the road.

This not only allows the ancillary functions to be located at the lower level for bin removal, deliveries etc, away from the main entrance, it also allows for residents and visitors additional break out external space at the lower level.





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Design Approach

Proposals

The proposed development will provide a new state-of-the-art 111 bed nursing home, and a terrace of 5 townhouses. Each bedroom in the nursing home will have its own high quality en-suite bathroom and will be located in small self contained 'communities'. Each community will benefit from its own day room, dining area and quiet room, among other facilities in full accordance with best practice infection control guidance.

The proposed care home layout is simple in form, with each self contained community accessed off a central core. Each day room will be provided with an external terrace with a fantastic south / south-west facing aspect. The building has been set well back from the site boundary to ensure the privacy of the care home residents and surrounding neighbours, is maintained.

Particular cognisance has been given to the existing landscaping on the site, especially the existing watercourse to the south west corner of the site and the surrounding vegetation. The building has been set 10m away from the watercourse, which results in a green landscaped corridor for the enjoyment of residents and their visitors. The garden area is also south facing, with minimal shading, therefore will gain the benefit of natural daylight throughout the day.

An engineering solution has been developed to ensure a suitable road and pedestrian access can be provided, whilst being sympathetic to the site boundaries. Where some trees have been removed, new trees are to be planted as illustrated on the proposed landscape plan, with a high quality landscaping strategy being employed which makes best use of the site topography and offers residents, and their visitors, generous outdoor amenity space.

The proposed nursing home is very much a community orientated operation. Facilities to be provided such as the hair salon, visitor cafe and cinema will all be open to the

public, with the community being actively encouraged to come in and utilise. The benefit of this is that it will also offer the residents added interaction with the wider community.

Although the site is not within an Architectural Conservation Area, the Protected Structure of Newbrook (Ref no 300) sits within the curtilage of the site. It is recognised that the design merits a high quality aesthetic, which will complement the existing building to be retained, and not to dominate it.

It is proposed to utilise a simple palette of high quality materials for the building exterior of both buildings. A stone cladding system is proposed to the feature projections and corners of the care home building, providing interest as the building is approached from the east and west along Taylor's Lane. The housing element will consist mainly of a red multi facing brick, which ties in with the adjoining housing on Kingston Court

The lower 2 storeys of the nursing home will be finished in off-white render, with the topmost storey in a dark grey fibre cement cladding to break up the elevations. The roof of both buildings will be finished in dark grey concrete tiles. Large format full height windows are proposed to each habitable room offering residents and guests the full benefit of natural daylight.

It is proposed to provide a total of 25No. vehicle parking spaces to facilitate the nursing home and townhouses. Safe & secure long stay & short stay cycle parking will also be provided in line with planning policy requirements.

The proposed 5 new homes with associated parking and garden amenity space has been located to the south east corner of the site. This portion of the site works well for a stand alone housing development. The development also benefits from a dedicated site access, whilst also providing much needed additional housing to the area.



View east along Taylor's Lane

Key Outcomes

Introduce an **inviting** and **secure** entry point into the nursing home site

Maintaining the high quality **character** of the **streetscape** through **retention** of the existing **stone wall** & introduction of new **planting** throughout

Utilise materials of **high quality** to **complement** the context such as high quality **stone** and large areas of glazing

Provide required vehicle **parking** provision as well as **cycle** parking to promote **active travel** methods

Save a piece of the local **built heritage** that is Newbrook House, restoring it to its **former glory**

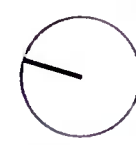
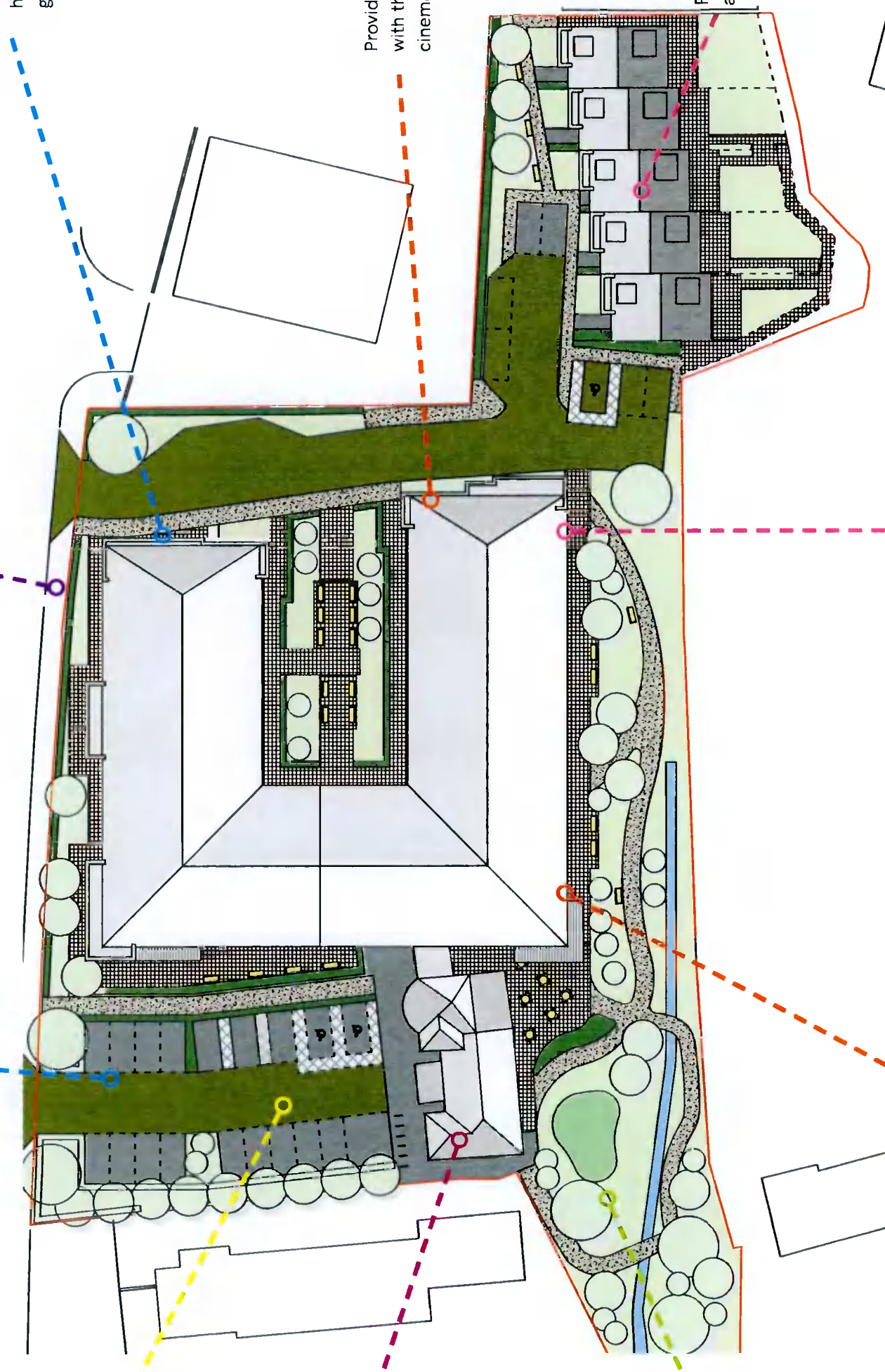
Create a safe and welcoming **high quality** landscaped **garden** space for use by residents and visitors

Provide a usable **resource** for the **community** with the provision of facilities such as hair salon, cinema, library and cafe

Provide much needed **new housing** accommodation for the area

Provide **much needed** residential care for the elderly and accommodation that meets current **infection control** requirements in a post-Covid world

Creation of over 100 long term operational **jobs** and apprenticeships for the local **community**



Building Footprint

The building footprint of the nursing home is proposed as a C-shape in order to provide 2 distinct 'wings' of bedroom accommodation. These wings will provide for more intimate communities and will be more domestic in scale, providing a greater sense of familiarity for residents.

This arrangement also makes best use of the topography of the site, allowing the building to step down towards Taylor's Lane. This C-shaped floor plan arrangement also provides a semi private external terrace at the lower ground level for its residents.

The nursing home will be serviced from the eastern entrance to the site off Taylor's Lane. A drop off layby has been provided which provides a set down point, providing level access into the lower ground floor. The majority of the ancillary functions of the home are situated here such as plant room, staff facilities and kitchen.

The crowning glory of the nursing home scheme will be the main entrance to the building. It is proposed to save the existing Newbrook House from further dilapidation and restore it to become the arrival point of the facility. The hair salon, matron and visitor's cafe will all be situated within the existing structure, which will open out onto the south facing gardens behind.

The new build element will be connected via a single storey glazed link, with a gentle slope up into the extension to respond to the site topography.

The 5 townhouses have been carefully nestled in the eastern end of the site. The houses have been staggered to make best use of the site geometry, whilst also providing generous gardens to the rear. A total of 7 car parking spaces have been provided for the houses.



Proposed Site Plan

Building Form & Materiality

The nursing home building forms two wings of three storeys, with the southern wing having a semi basement to house the back of house accommodation. Each wing stretches from the central hub east away from Newbrook House. This footprint arrangement reduces the appearance of the building volume to three individual block sizes.

The materials used to form the elevations are stone, grey cladding and white roughcast render. Projections from the main face of the building are finished full height with stone, and further break down the proportions of the building. These projections are topped with a flat parapet and create a strong visual & contemporary punctuation to the elevations.

A strong feature of the nursing home building are the distinctive feature surrounds to the windows on the top floor of the north and west elevations. This detailing is a nod to the immediately context of the housing on Kingston Court and Glendoher Drive, which consist of metal clad dormer windows.

Both the north eastern and north western corners of the nursing home have been set in full height stone cladding to mark out the building as viewed along Taylor's Lane, and create book ends to the site. These also create a feature point to the building form, and a visual cue for those navigating it.

The main entrance to the nursing home, via Newbrook House, will have a modest glazed lobby added at the existing front door. Whilst this is a modern structure sitting in front of the historic fabric it is to be constructed from minimally visible materials to show the original building façade as clearly as possible.

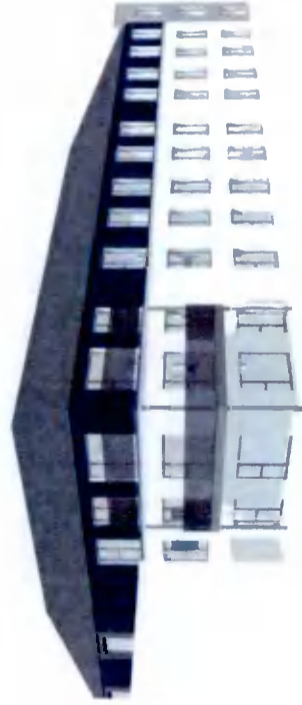
The windows are generous in scale and provide an excellent connection for the residents to the outside world and, particularly at this site, to the landscaping and open space and beyond. The upper floor windows will be provided with great views north towards Dublin city centre. The window frames will be finished in a contemporary dark grey.



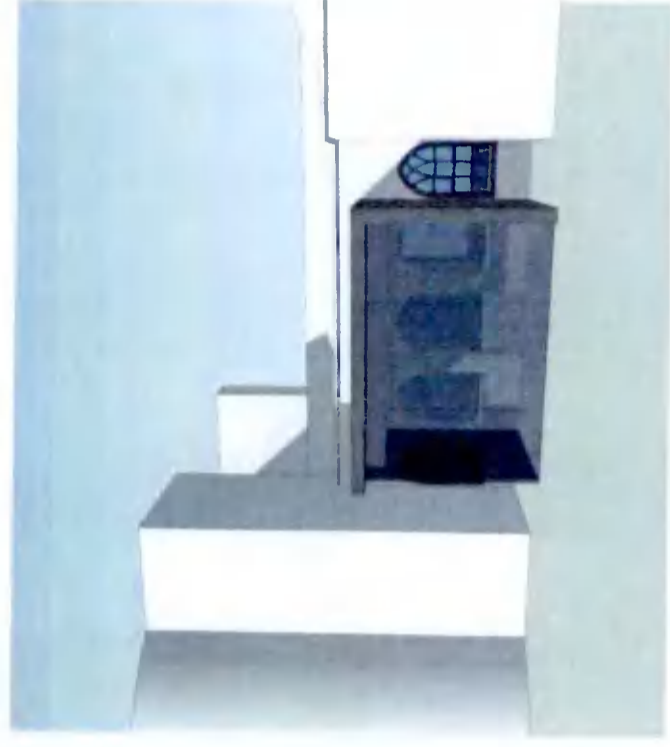
Aerial View of North West Corner



Aerial View of East Gable



Ground level View of South West Corner



Proposed New Lobby to Newbrook House

The housing terrace to the eastern end of the site will be constructed over 3 storeys, set out with a staggered floor plan to help break up the mass of the elevation.

The design of the housing has been kept deliberately contemporary in style, with the use of projecting bays to complement the nursing home design.

Dormer windows clad in dark grey metal seam are provided on the upper floor to provide interest to the elevations, whilst also breaking up the massing of the block

The materials proposed to form the elevations are brick, off white render and grey concrete roof tiles. The brick that will be chosen will be a red multi to tie in with the neighbouring new build housing on Kingston Court.

Each house will be provided with a front and rear garden, with large format windows to maximise the amount of natural daylight



Aerial View of Housing Terrace

Landscape

The landscape design process has been informed through feedback from the Council in terms of landscape and ecological considerations to create a series of character areas as part of the masterplan, introducing a strong landscape framework to compliment the proposed development.

The landscape objective would be to provide new elements of landscape and green infrastructure that would enhance existing habitats within the locality and exert a positive, lasting impact on the character of the surrounding townscape. The landscape framework will ensure an integrated approach to amenity, biodiversity and ecology and visual mitigation.

The landscape masterplan and embedded mitigation proposals aim to achieve the following landscape objectives:

- To provide a new landscape structure that benefits both the Care Home and the wider community by enhancing the existing landscape features as a physical framework for the development.
- Introduce new woodland and structure planting to reinforce the visual containment of the site.
- To broaden the range of habitats on site and extend the network of wildlife corridors.
- To provide an attractive enhancement of the southern edge and new watercourse through the introduction of an attractive riparian corridor with native planting
- To safeguard the residential amenity of neighbouring private dwellings by sensitively positioning of new planting both at the periphery and internal parts of the site to create a landscape framework to filter views of the proposed development.

- Sympathetic use of natural materials to create attractive and contemporary buildings to integrate with the surrounding townscape.

- The introduction of ecologically rich and contextually informed planting schemes within the site that help to enhance the existing space with native/semi native mixes that reflect the surrounding context;

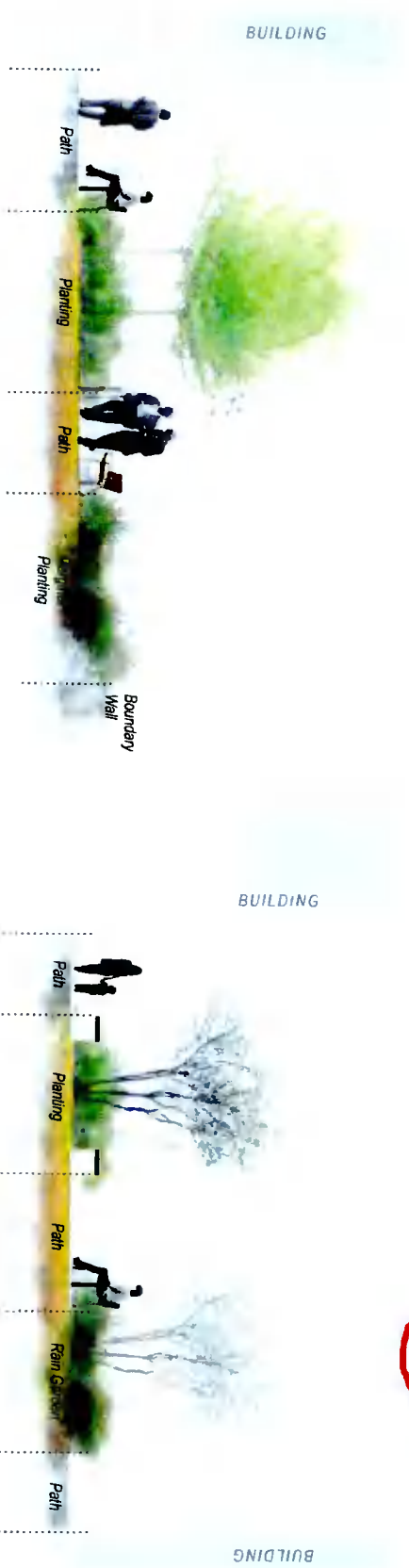
- The introduction of footpaths and pedestrian orientated areas in which people can interact with the natural environment as an enhancement of both natural systems and user interaction;

- The considerations of building materiality as to reflect the local vernacular built form palette and to help further integrate the Proposed Development into the surrounding context.

For further details refer to submitted TGP Landscape Architects design proposals.



Proposed Landscape Site Plan



Section 1 at Character Area 1 (Riparian Corridor)

Section 2 at Character Area 3 (Courtyard)

Light Pollution

External lighting has been calculated and designed in compliance with a class E4 environmental zone with regard to light pollution.

Compliance has been achieved with this zone - please see below for outputs:

- Luminaire intensity (Max 2500 cd for E4 Post Curfew)
 - Column - 895 candela
 - Bollard - 125 candela
- Sky Glow Upward Light Ratio - 3.5% (Max 15% for E4 Post Curfew). Luminaire aims light directly down at ground level via optic.
- Light Intrusion into windows - 3 lx at worst case (Max 5 lux for E4 Post Curfew).

For further information refer to submitted Design Mechanical, Electrical and Public Health Engineering Services document



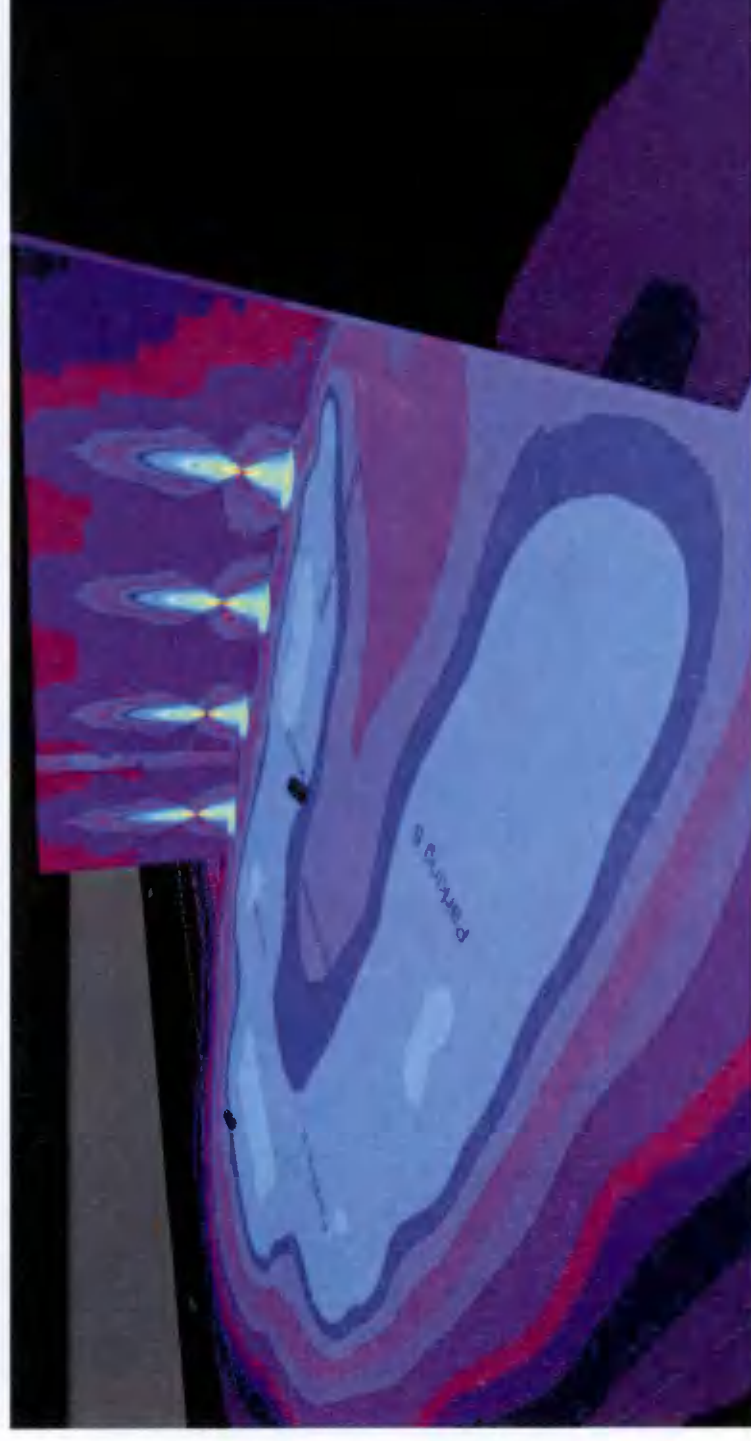
Relationship to Context

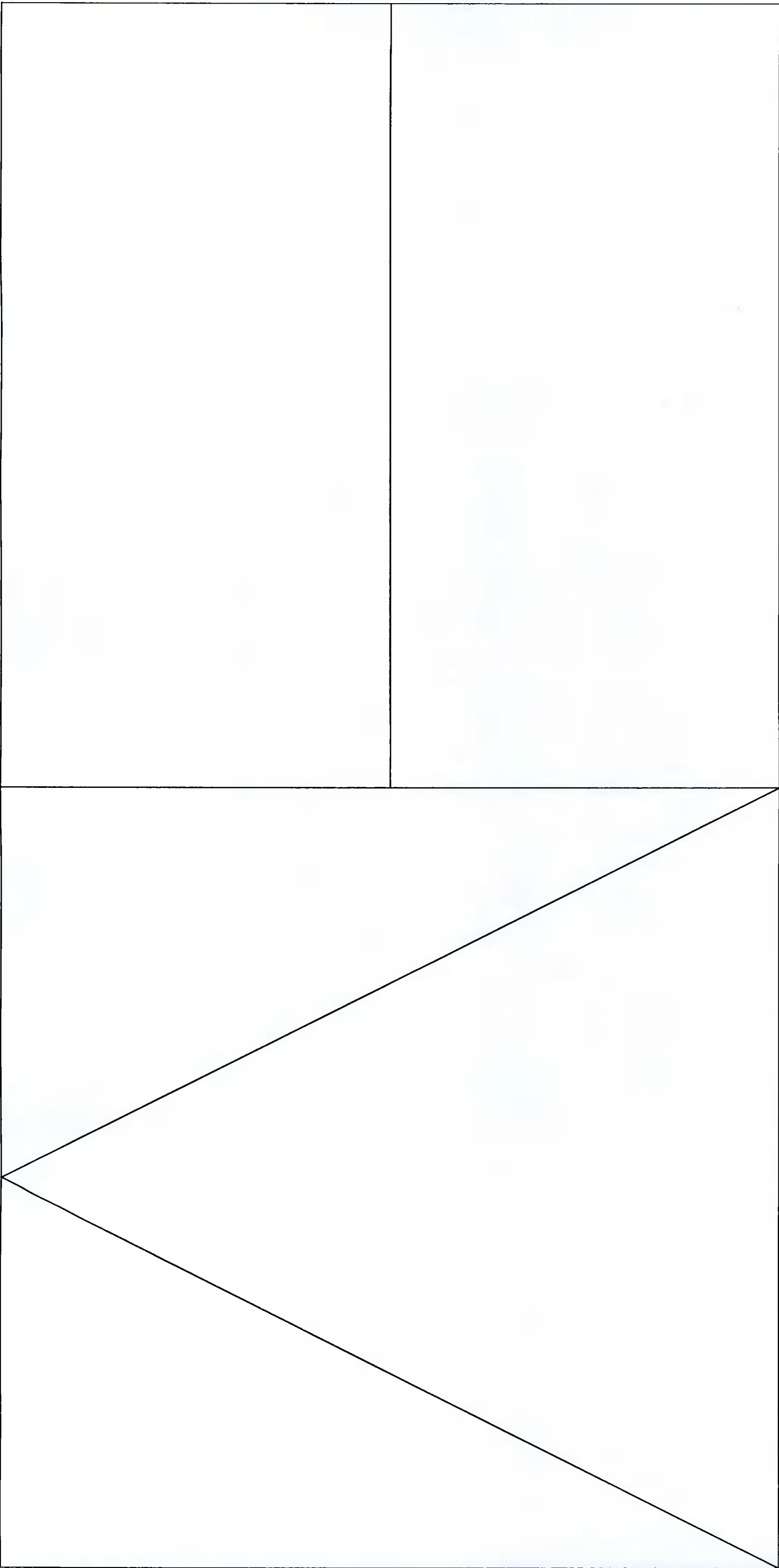
As noted previously there is a change in ground level of approx one storey across the site from north to south. The south being the highest point.

The proposal is to maintain the predominant height of the building at 3 storeys, and to step the building down towards Taylor's Lane to follow the existing site topography. This is also to minimise the visual impact of the development as viewed along Taylor's Lane. By doing this the proposed massing of the development also will not to dominate the vista south towards the retained Newbrook House.

In order to mitigate against the potential for overlooking onto neighbouring properties, a minimum separation distance of 22 metres has been provided throughout the development from all windows, which has been illustrated on the submitted proposed site plan.

The housing element to the development has been nestled within the south east annex of the site, which provides a natural location for a row of high quality residences. It is proposed to introduce planting to the southern boundary to provide further separation with adjoining properties.





Technical

Groundworks

- Phase 1 and Phase 2 Ground Investigations have been carried out on the site , and are submitted with application
- Ground conditions were made ground (mainly re-worked sands and gravels) over soft becoming stiff boulder clay at depths from 1-2m varying across the site
- Foundation recommendations are for standard reinforced concrete strip foundations founded on the stiff clays at varying depths , with mass concrete trench fill where the stiff clay was deeper
- Soil sampling encountered one localised hotspot with traces of arsenic , lead and dibenzo anthracene – this will require remediation by removal and sampling to confirm extents removed or localised capping

Drainage

- The foul drainage has been connected into the public foul sewer
- Surface water has been designed to treat and attenuate surface water flow in accordance with SFS4 and CIRIA 753 , and proposals include permeable paving , rainwater garden , downstream defender and over-sized pipes for attenuation before the connecting to existing public surface water sewer

Sustainability / Services Strategy

The design parameters for the M&E services on the project will be dictated by the production of our SBEM calculation/ Thermal model. This will be carried out using IES software and will help us demonstrate the benefits of using specific types of renewable and low carbon technologies to reduce the carbon emissions of the new building. This calculation will confirm the percentage improvement in carbon emissions over the Building regulation minimum for the project.

The outline proposals include the use of LZCT & renewable technologies such as Combined Heat & Power Units (CHP) for the generation of heating & hot water and roof mounted Photovoltaic (PV) panels (if required). This renewable technology will be supplemented by the use of low-carbon technologies such as LED lighting, automatic lighting controls, variable speed drives on pumps and mechanical ventilation as well as heat-recovery ventilation systems.

Our Approach

At the heart of our design philosophy is an intelligent, rigorous and sustainable approach to MEP services design. All our engineers are fully trained in all aspects of building services - both mechanical and electrical engineering.

Engineering is a creative and collaborative profession and our team comes from a wide range of backgrounds so that we can bring fresh perspectives and diverse thinking to projects. We provide an open and intelligent approach to mechanical and electrical engineering by focussing on what is right for the building and the client. From going back to first principles to using cutting edge modelling software, we have the knowledge and understanding to quickly appraise options and consider risks carefully to ensure the best solutions are delivered on time and on budget.

Our analysis of the building, using computer modelling, and our initial advice on such issues as shading, daylighting and thermal performance often have the greatest effect on shaping the building and ensuring a sustainable, low-energy design can be realised.

We use a wide range of tools, including computer modelling, to inform our understanding of how the building will behave and to optimise the form and fabric of the buildings. Our software includes Revit MEP, AutoCAD, Hevacomp, Stroma, and IES Virtual Environment.

Our methods are collaborative and allow other design team members (and clients) to make informed decisions about the project by providing them with objective assessments about the effectiveness and environmental impact of development proposals. An overview of our methods is noted below.

Thermal Modelling & Heat Analysis

Overheating can be a really significant problem in buildings, especially with increases in air tightness and insulation standards driven by Building Regulations, particularly in high-rise or densely-planned residential schemes. With careful design, most buildings in our temperate climate ought to be able to be naturally ventilated, and our analysis will help you to determine the most appropriate technical solution. CIBSE TM52 and CIBSE TM59 have been developed to set objective standards and our experts understand the technical jargon; we can help you achieve a building which is comfortable all year round. At the early design stage, comprehensive thermal modelling is crucial to influence design decisions, we use IES VE software to build a 3D dynamic model of the building and use this to analyse different scenarios and design options, including future climate situations.

Daylight Calculations

Good levels of natural daylight are important in the design of new buildings. We use computer software to accurately determine the level of daylight, including the average daylight factor and minimum point daylight factor. We also undertake Climate Based Daylight Modelling (CBDMM).

Our daylight analysis is undertaken either as part of the pre-planning service alongside our energy and sustainability work, as a standalone service often as part of BREEAM compliance, or most commonly as part of our M&E service where we always recommend building a computer model for daylight, energy and thermal comfort.

Building energy modelling and Energy Performance Certificates (EPCs)

An Energy Performance Certificate (EPC) is required for all new buildings and this can be produced through the thermal model and IES. We have Elmhurst accredited Low Carbon Energy Assessors as part of our team, fully qualified to produce EPCs.

For non-domestic buildings we use IES Dynamic Thermal Modelling software which allows us to model a building in 3D and run different simulations to establish predicted energy demand and use, lighting loads, CO² emissions, daylight provision, overheating etc. Modelling can be used to demonstrate Building Regulations Section 6/ Part L compliance, BREEAM compliance or for general advice as part of our sustainability offering.

Energy Modelling & Building Physics

Often the most challenging questions we need to address during the design process are not the precise details of the building systems but the more fundamental questions about the fabric of the building and how it will behave and respond to the environment and how this affects sustainability and the building physics.

The main issues we usually need to consider include:

- Shading and solar gain
- Daylighting, glare and window design
- Thermal mass
- Summertime comfort and avoiding overheating
- Natural ventilation
- Insulation and heat loss

It is crucial that our proposals for projects are evaluated against these criteria to ensure that we will have buildings which will provide comfortable conditions at all times with a robust, efficient and easy-to-maintain engineering services installation.

We use a wide range of tools, including computer modelling, to inform our understanding of how the building will behave and to optimise the form and fabric of the buildings. Our software includes Revit MEP, AutoCAD, Hevacomp, NBS, Stroma, and IES Virtual Environment.

Our analysis of the building, using computer energy modelling, and our initial advice on such issues as shading, daylighting and thermal performance often have the greatest effect on shaping the building and ensuring a sustainable, low-energy design can be realised.



Newbrook House

