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SITE LAYOUT

LEFT: AERIAL VIEW OF MASSING MODEL

The arrangement and organisation of the layout of the application has been a process that SL Architectural Ltd have taken a great commitment of time to resolve and plan. It has been developed to provide the best possible environment for all that use the facility.

The site is arranged into five sections; the Book of Remembrance, the main car park zone, the north and south chapels, the reflection garden and the large area of open green space.

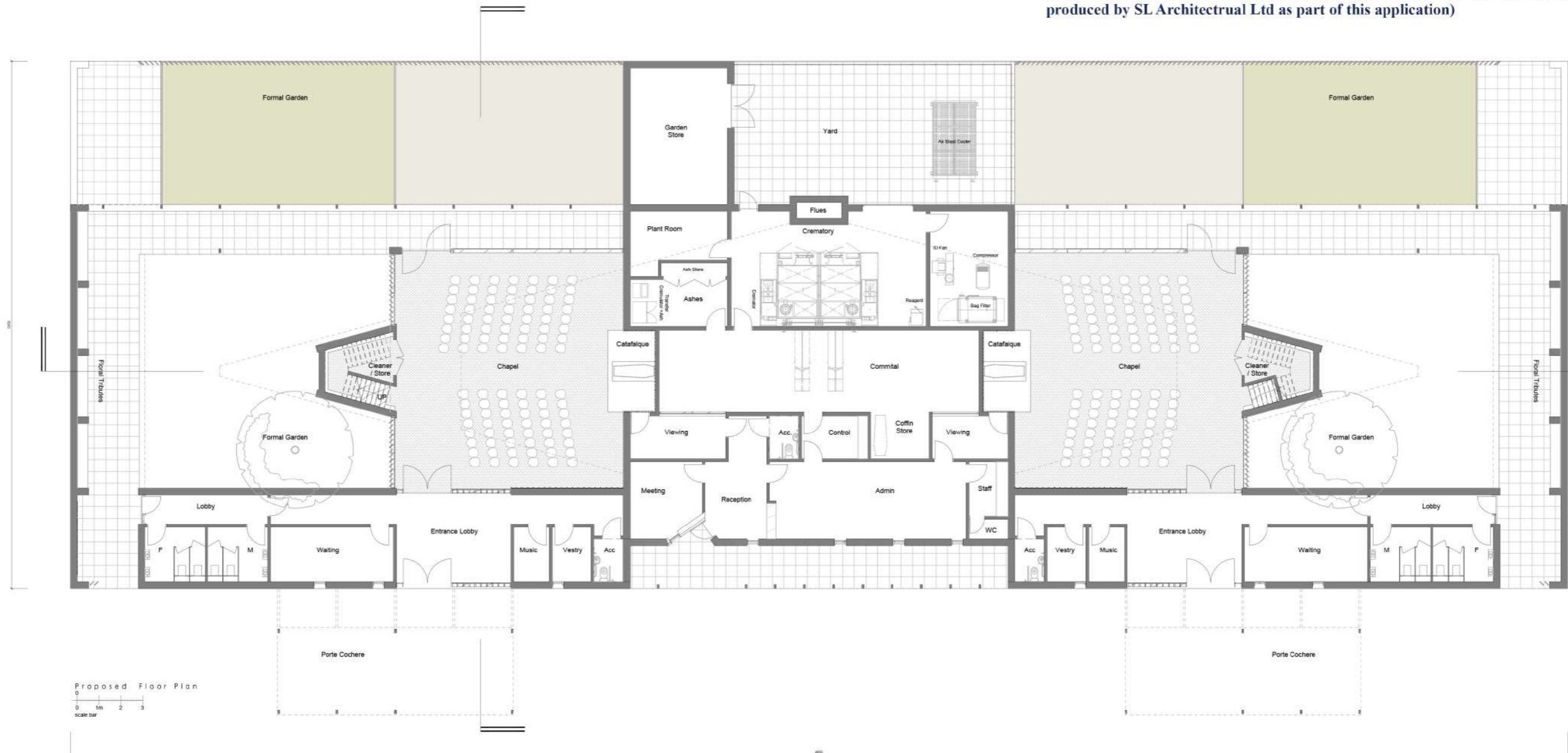
Despite all drawings being indicative, the layering and programme of the site is key as well as the positioning of the crematorium so as to have no road side impact which in turn will allow for massive biodiversity and ecology gains on the open area of the site.

The indicative highway changes, provided by the applicant from their earlier consultation, also brings improvements to the wider area.



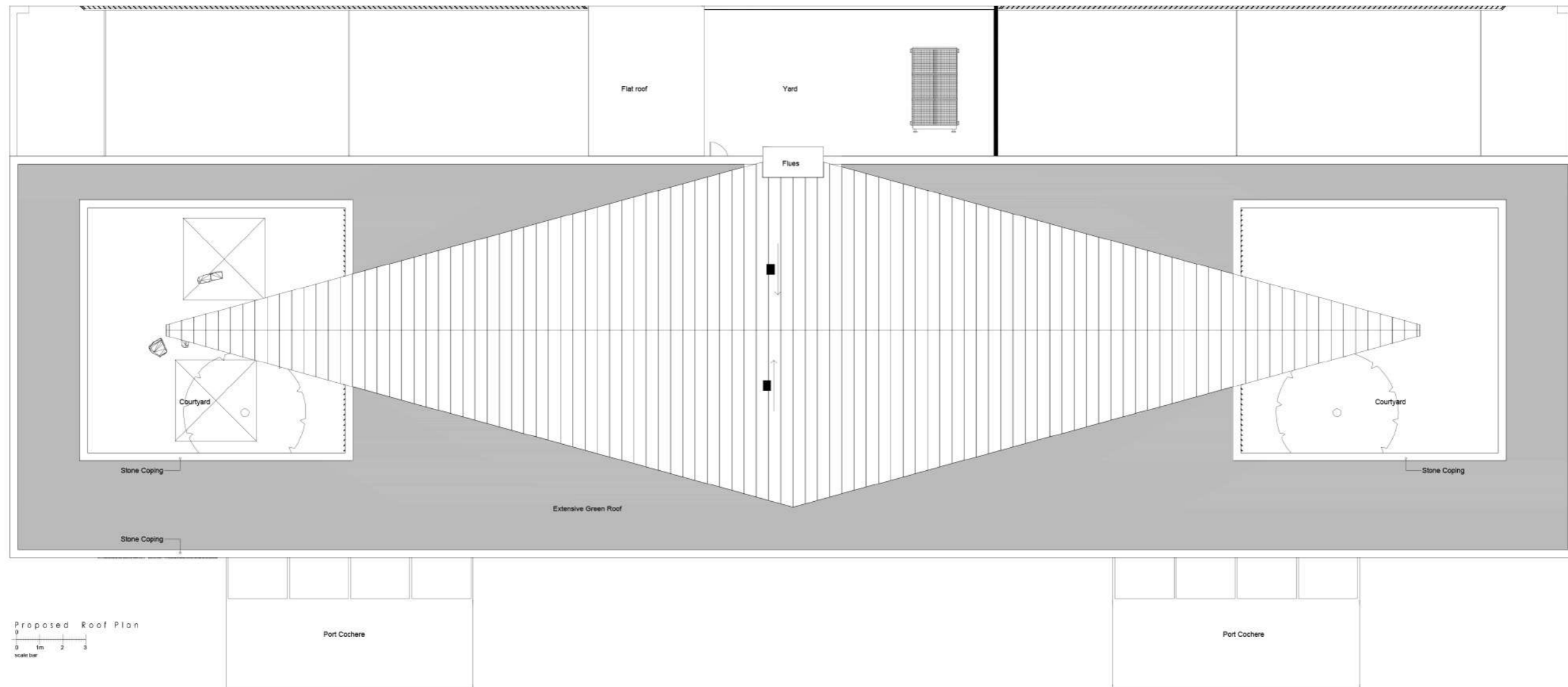
LAYOUT OF CREMATORIUM - GROUND FLOOR LAYOUT
Scale 1:200

(Note Beresford & Barnes have been given permission as a right to use the drawings produced by SL Architectural Ltd as part of this application)



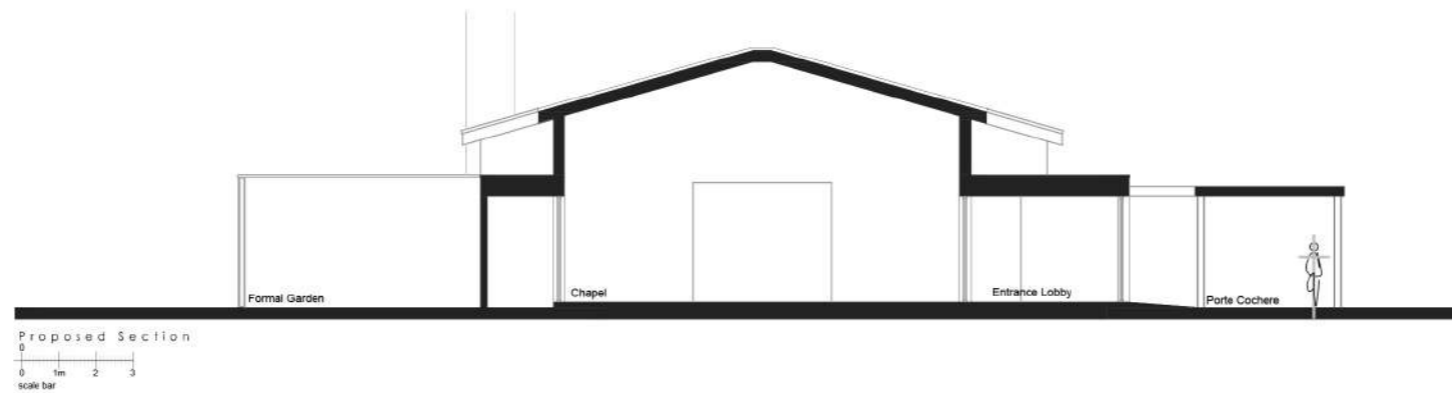
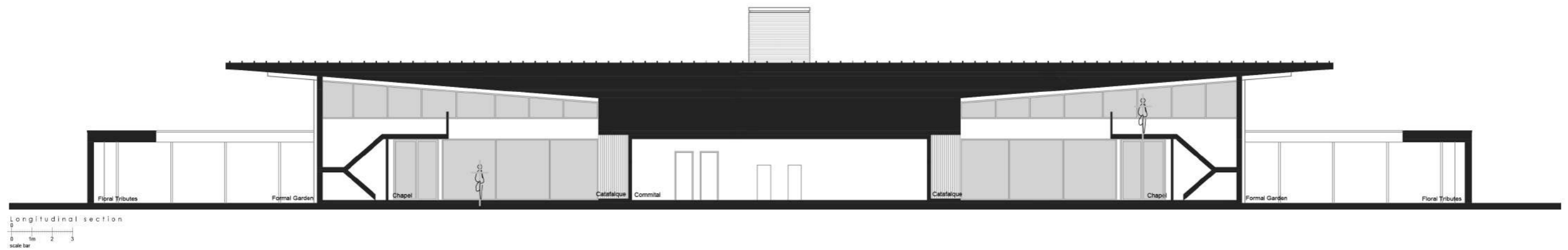
LAYOUT OF CREMATORIUM - ROOF LAYOUT
Scale 1:200

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LAYOUT OF CREMATORIUM - SECTION LAYOUT
Scale 1:200

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BUILT FORM AND APPEARANCE

Through an indicative outline design development process carried out by SL Architectural Ltd, a proposal has been advanced that has considered and appropriately responded to the local conditions and setting. The application has been analysed in the context of constraints and opportunities proposing a built form and scale that achieves the aims of the brief, whilst limiting its impact on the neighbouring sites and surroundings. The proposal is a contemporary architecture that draws reference from the surrounding area. It sits well within its environments and is respectful of both the immediate and wider context and character.

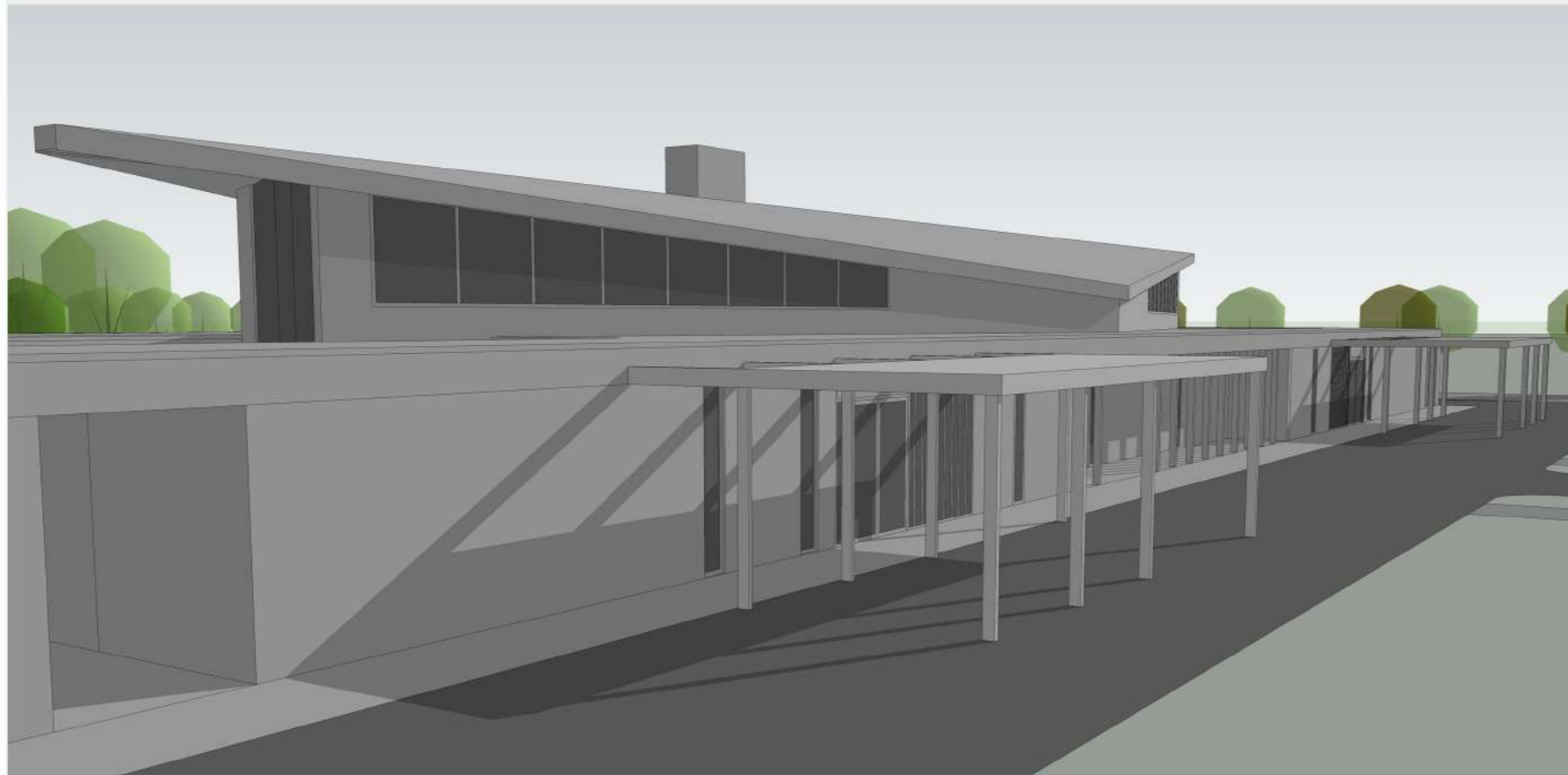
In accordance with the National Planning Policy Framework, the scheme promotes a high-quality design that will dramatically improve the aesthetics of the surrounding area. The immediate context is varied and includes housing and commercial units.

The newly proposed crematorium has no immediate existing built forms for context. It is set on the furthest northern boundary of the site and it is set back from Brentwood Road and the A128 to minimise any street scene impact.

The building is set within the landscape and the proposal will encourage vast areas of biodiversity and ecology gains. The opportunities to bring planting to the site is extensive. green corridors, wetland areas and meadows will all form the basic of the environment around the crematorium. The site will have both a functional and emotional response to the site.

The building will seek the highest levels of sustainability performance whilst the overall site will focus on achieving a carbon negative impact.





OVERALL BUILT FORM APPROACH

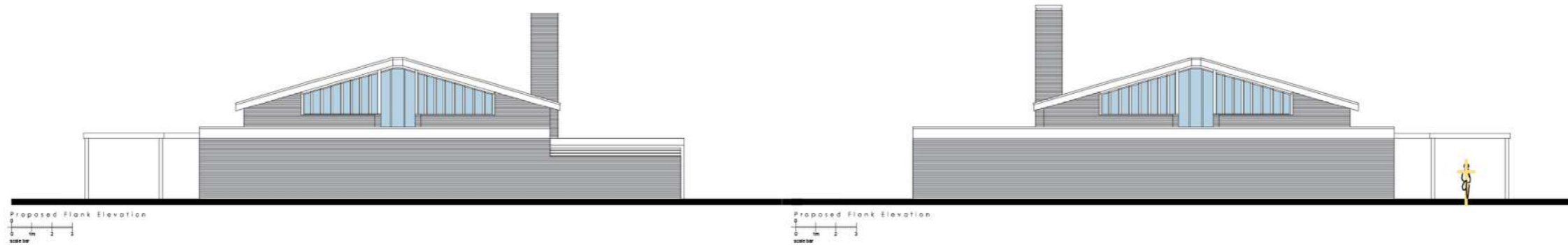
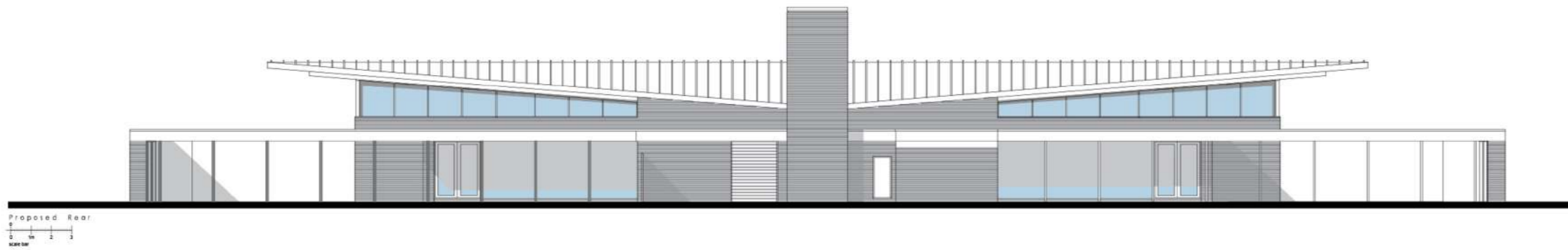
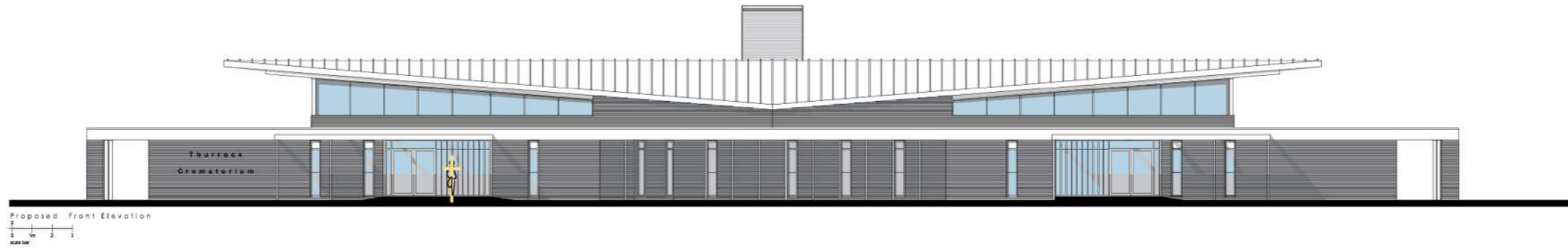
LEFT: OUTLINE MASSING PROPOSAL

The proposal as a whole is formed by a specific programme and layering which is read as a single cohesive whole design approach. The scheme is responsive in its scale and setting, and provides plenty of interest and articulation within the form.

The landscaping works to define both the approach to the building whilst creating good levels of surveillance. The structural planting then wraps and protects the crematorium whilst encourage extensive biodiversity and ecology gains to be created within the development

Overall, the material palettes, the architectural approaches, the level of detail, the scaling, the massing and composition, all contribute to a proposal that demonstrates its thorough design development and is easily readable as being of a high quality and a net benefit for the area whilst setting a high bar for sustainable and carbon zero schemes.





LAYOUT OF CREMATORIUM - INDICATIVE ELEVATIONS
NTS

(Note Beresford & Barnes have been given permission as a right to use the drawings
produced by SL Architectural Ltd as part of this application)



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LANDSCAPE

Note, landscape is a reserved matter within this application but the adjacent indicative proposal has been drawn up by SL Architectural Ltd to support the vision, whilst following the previous design by TerraFirma.

As a vision, the landscape design is a critical component within the overall development proposal. All landscaping both soft and hard will provide overall coherence, softening of the appearance of the built form whilst enhancing the relationship of the building to its setting along with supporting both ecology and biodiversity gains.

The proposed site set back into the site and so the landscaping will retain as well as reinforce a strong green edge on the boundaries as well as enhancements to the street scene. There are plenty of planted areas within the site.

This proposal will provide privacy and security whilst also strengthening softer edges around the developed area. The careful and considered nature of the landscape design will aid in creating a sustainable and biodiverse scheme that ties into the local environment and provides high quality spaces.

The careful and considered nature of the landscape design will aid in creating a sustainable and biodiverse scheme that ties into the local environment and provides high quality spaces.

Areas such as the memorial gardens are enclosed with soft and protective boundaries similar to the planting schedule around the book of remembrance. This aids the tranquil and quiet reflection of these spaces whilst still supporting the green corridors and biodiversity enhancements set out within the vision.



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10.0 SUSTAINABILITY

The NPPF has a presumption in favour of sustainable development. The three roles of sustainable development should not be considered in isolation, because they are mutually dependant.

It should always been considered that the main drive for this development is the identified need for a crematorium and this is the very special circumstance around which sustainable development is considered.

The following section will demonstrate how the proposal has sustainability at the core of its design and how it response to deliver a high quality development.

Economic

Weight should be given to the fact that the proposal will assist the local economy in terms of labour opportunities. This would provide both long and short term economic benefits. The on-site employment, short term benefits would be the construction phase; which assists local trades people, suppliers and consultants. The long term benefits would be to maintenance services such as; window cleaners, open spaces; facilities operators, staffing and general repair services.

In addition there would also be an increase in the local authority revenue.

Social

As with the economic benefits, the proposed development will help support the existing district of Thurrock with the identified need.

The principle design is to create a well considered and needed development that would enhance the shortfall of suitable crematoriums.

Environmental

The development understands that it is located in the Green Belt and so the final proposal will seek to deliver significant ecology and biodiversity gains.

All materials will be locally sourced along with off-site construction processes being used to minimise waste.

The development will use energy efficient products as well as incorporating energy efficient products to reach a holistic development that is carbon zero if not negative.





IMAGE 10.02.001 - Solar panels on all buildings (Photovoltaic Cells)
IMAGE 10.02.002 - VRF/VRV heat recovery units and air source heat pumps
IMAGE 10.02.003 - Rainwater storage and harvesting system.
IMAGE 10.02.004 - SUDS Design includes a on site pond with ecolgy and biodiversity benefits.

The proposal by SL Architectural Ltd is a contemporary 21st century design and technology focused scheme. Site specific economics provided early influence to both the design and construction methods. These considerations are all driven by the requirements of the NPPF.

The issue of sustainability will be integral to the design and will introduce on site renewable's in the form of either roof mounted or stand alone framed photo-voltaic panels as well as utilizing construction technology to achieve high levels of insulation and carbon reduction as well as the implementation of the SUDS package.

It is perceived that the development will utilise a minimum of 20% sustainable building materials.

Low energy lighting systems will be used with all electrical good to be rated types only.

Heating will be provided via air source heat pumps with the development being supported by a VRF/VRV heat recovery heating and cooling systems.

A waterloc system will be employed to store rainwater/surface water. There will be a controlled discharge employed within the system, with the store providing water to the building and grey water uses through a harvesting system. Irrigation will also be possible via the stored surface water.





The development of this site will make best use of the infrastructure and connectivity that is available in the area, whilst accepting that the site is not in a highly sustainable location.

Therefore it is important that this development makes good contributions to biodiversity and the local ecology.

SL Architectural Ltd's design for the crematorium allows for areas of flat green roof systems that will assist with surface water catchment. There are also thermal benefits to this type of roofing finish as well as the opportunity to offer high levels of environmental improvements to the area. It was considered that a wild flower and sedum option would be the most appropriate within this setting as it provides a multitude of ecology and biodiversity benefits.

Recycled aggregates, taken from the demolition of local buildings, will be used for external bases and all the sub-bases for the roadway and parking areas.

A proposed soft edge boundary of planting and soft landscaping will be used in conjunction with the hard landscaping throughout the site. A rows of green corridors will be positioned through the site as well as the retention of as many existing boundary trees/bushes as possible.

Further planting enhancements will be provided to nestle the building into the site whilst providing plenty of green landscaping and green connectivity for wildlife to flourish and for carbon sequestration to take place.

IMAGE 10.03.001 - Structural boundary treatment and useable space with an example of a solid footpath.
IMAGE 10.03.002 - Further green corridor enhancements with wildflower areas to buffer the site.
IMAGE 10.03.003 - Green roofing system with wildflowers and sedum
IMAGE 10.03.004 - Green roofing system and possible edge detail (colour to be agreed).



SUSTAINABILITY CHECKLIST

Is this application for residential or non-residential development? YES NO N/A

This checklist forms part of the sustainability statement for this application and is submitted with all stages of the application phases for new residential or commercial units

Has an Architect been instructed that has experience in designing and delivering sustainable buildings?

YES NO N/A

Is the site a historic building, listed building, within a conservation area or an area of archeological potential?

YES NO N/A

Have sustainable design principles been incorporated into the final planning proposal?

YES NO N/A

Sustainable Design Principles – To be Implemented

Landscape-Led Design	YES
Orientation and Form	YES
Energy Efficiency	YES
Renewable Technologies	YES
Fabric First Approach	YES
Indoor Air Quality	YES
Water Management	YES
Materials and Finishes	YES
Adaptable and Future-Proof Design	YES
Waste Management	YES

Will the building seek to achieve an Energy Efficiency Rating of A (92+)

YES NO N/A

Will the building seek to achieve an Environmental Impact (CO2) Rating of A (92+)

YES NO N/A

Use Less Energy

The first step addresses reduction in energy use, through the adoption of sustainable design and construction measures.

In accordance with this strategy, this development will incorporate a range of energy efficiency measures.

Enhanced Building Fabric

The heat loss of different building elements is dependent upon their U-value. A building with low U-values provides better levels of insulation and reduced heating demand during the cooler months.

The new build elements will incorporate high levels of insulation and high performance glazing to exceed Part L1a 2013 targets and notional building specifications, in order to reduce the demand for space heating.

Air Tightness

Heat loss may also occur due to air infiltration. Although this cannot be eliminated altogether, good construction detailing and the use of best practice construction techniques can minimise the amount of air infiltration. To aid in this, the Accredited Construction Details will be adopted for the thermal bridging.

The proposed development will aim to achieve Part L Building Regulations (2013) target air permeability rate of 5m3/m2 at 50Pa through good detailing and draught proofing in each section of the development.

Supply Energy Efficiently

The second step takes into account the efficient supply of energy, by prioritising decentralised energy generation. The feasibility study showed that there are no existing district heating networks within close proximity of the site that are feasible for connection.

Use Renewable Energy

The third strategy covers the use of renewable technologies.

A feasibility study was carried out for this development and a range of renewable technologies were analysed. The analysis included a biomass heating system, ground source heat pumps, air-source heat pumps, photovoltaics, solar thermal and wind turbines.

The analysis identified individual solar photovoltaics and air source heat pumps as suitable technologies for inclusion in the proposed development.

Daylight

The development has been designed to maximise daylight in all public spaces as a way of improving the health and wellbeing of its occupants.

Rooms that require good levels of natural light will benefit from full height windows to increase the amount of daylight within the internal spaces.

The above are measures expected to substantially reduce the need for artificial lighting whilst delivering pleasant, healthy spaces for occupants.

High Efficacy Lighting

The development intends to incorporate low energy lighting fittings throughout the habitable spaces. All light fittings will be specified as low energy lighting, and will accommodate LED, compact fluorescent (CFLs) or fluorescent luminaires only.

Thermal Mass

During peak summer periods the thermal mass of the building will absorb and store excess heat. The building will release its heat in the cooler evenings to allowing for cooler internal spaces dampening the peak diurnal weather conditions.

Ventilation

In order to provide fresh air and the dissipation of heat in the habitable areas, it is proposed that each wet area will have an individual extractor fan installed. Passive ventilation of the dwellings will also be possible by providing openable windows that allow for cross ventilation, should occupants wish to use this.

Photovoltaic Panels

Four types of solar cells are available on the market at present and these are mono-crystalline, poly-crystalline, thin film and hybrid panels. Although mono-crystalline and hybrid cells are the most expensive, they are also the most efficient with an efficiency rate of 12-20%. Poly-crystalline cells are cheaper but they are less efficient (9-15%). Thin film cells are only 5-8% efficient but can be produced as thin and flexible sheets.

Photovoltaics are considered a suitable technology for this development for the following reasons:

- The development provides a large enough space for the installation of PV panels, giving the opportunity to locate them in an efficient position at this development.
- PV arrays are relatively easy to install when compared to other renewable systems.
- PV panels provide a significant amount of CO2 savings, and can be added to in the future.
- Based on the reasons above, photovoltaics would be a suitable renewable technology for the proposed development.

Location of Photovoltaic Panels

An appropriate location for the proposed photovoltaic panels was identified once the site constraints were taken into account. It is proposed that PV panels, laid on the south facing roof surface will allow for good electricity generation.

Air Source Heat Pumps (ASHP)

Air source heat pumps (ASHPs) employ the same technology as ground source heat pumps (GSHPs). However, instead of using heat exchangers buried in the ground, heat is extracted from the external ambient air.

ASHP is considered a suitable technology for the development for the following reasons:

- It is a high efficiency system for the proposed development.
- It requires less capital cost than GSHP and other renewable technologies.
- It also doesn't require a large section of land for installation unlike GSHPs.

The efficiency of heat pumps is highly dependent on the temperature difference between the heat source and the space required to be heated. As a result ASHPs tend to have a lower COP than GSHPs. This is due to the varying levels of air temperature throughout the year when compared to the relatively stable ground temperature. The lower the difference between internal and external air temperature, the more efficient the system.

Based on the reasons above, ASHP is considered suitable for the proposed development.

Working with Nature - Enhancing Biodiversity

What measures will be taken to enhance ecological value of the site?

Planting of native species	YES
Installing bird/bat boxes	YES
Green/brown roofs	YES
Pond(s)	YES
Other (Please specify)	

Managing Surface Water runoff

What measures will be taken to reduce surface water runoff?

Green/brown roofs	YES
Rainwater harvesting including water butts	YES
Minimise paved areas	YES
Permeable hard surfaces	YES
Filter strips and swales	YES
Other	

Reducing Energy Demand and Carbon Dioxide Emission

How will we reduce the energy demand of your development?

Building design making best use of solar energy	YES
Site layout minimising potential for passive solar gain	YES
Reducing air leakage and limiting thermal bridging	YES
Insulating above Building Regulation requirements	YES
Energy efficient lighting	YES
Light sensors	YES
Passive ventilation	YES
A-rated ASHP	YES
Landscaped/plants to provide wind shelter and avoid overshadowing	YES
Other (Please specify)	

Selecting Construction Materials with Low Environmental Impact

It is our target that the development utilises a minimum of 20% sustainable, re-used or recycled building materials in the construction. How will you reduce the environmental impact of the construction materials used in this development?

It is intended that the proposed development will make use of off-site and preformed construction modules with the timber coming from an approved sustainable source. There is also a consideration to reuse waste concrete materials within the development networks

The new building will also offer PV displays as well as air source heat pumps and rainwater harvesting systems.

Managing Construction Site Pollution and Waste

10) Do we intend to have the site or your company registered with the Considerate Contractors Scheme (www.ccscheme.org.uk)

YES NO N/A

What measures are you taking to minimise waste?

Major building components will be manufactured off-site in a controlled environment. All existing materials on site will be reused within the development.

What measures are you taking to minimise air, water and noise pollution from the construction site

As above all manufacturing will be off site and hours of operation will not be during unsociable hours.



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ACCESS

Note access is a reserved matter so the discussions within this section are indicative of the possible strategy.

The proposed development creates one new access onto Brentwood Road. The adjacent A128 which connects to the A13 and A127 form part of the major transport corridor providing direct access to London and beyond.

A new indicative highway adjustment has been proposed by SL Architectural Ltd which follows on from works done by a consultant in the previous application.

The site is designed to meet all highway and access standards and off-street bike and car parking spaces have been accommodated with the parking zones and a secure bike storage area can be catered for within the site.

Parking sizes and clear distances are designed to comply with the LA highways requirements. The parking arrangement will take the form of permeable block paving parking bays which will allow for the landscaping to bleed into the more traditionally harder surfaced areas.

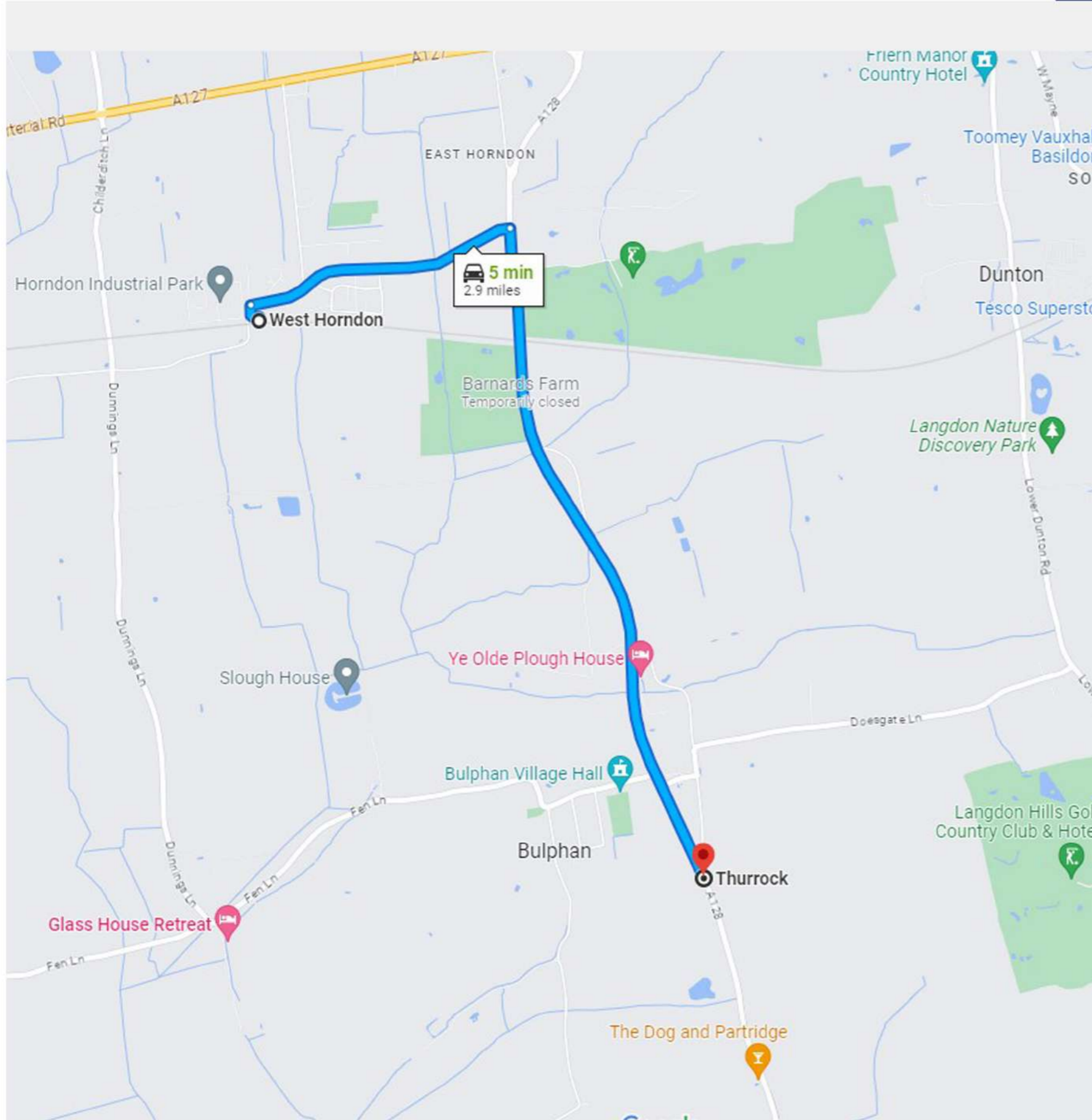
SL Architectural Ltd have design strong entrance language on the front facades of the building with clear landscaping in place to reinforce its location. The layout of the building is designed so that there is an appropriate levels of transparency to directly view the frontage and main access points which provides visibility and security.

The design of the landscaping, access, circulation spaces, parking and amenity ensures adequate provision has been made to make the scheme inclusive for people with disabilities.

The building can facilitate entry level wheelchair useable spaces to provide complete inclusion of accessibility. The access and movement both to and from and within the building has been carefully considered to adopt all relevant policies and standards.

There are suitable access arrangements for emergency vehicles within thr site.



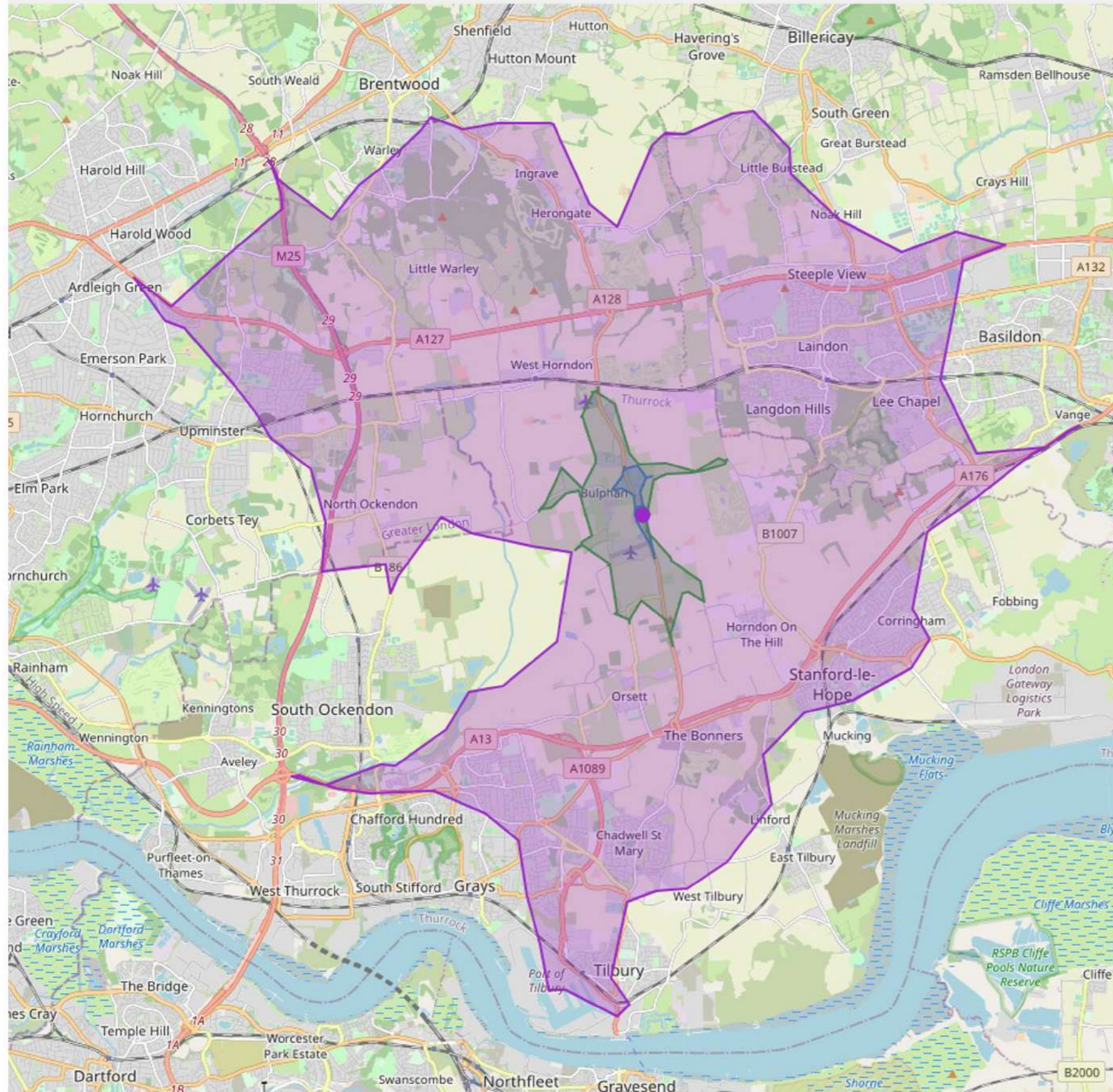


PUBLIC TRANSPORT

Left: Map travel time via car to West Horndon Train Station

West Horndon Train Station is a 5min car journey away. This provides access on the C2C train line into Fenchurch Street Station within 30mins.





TRANSPORT

Left: Map showing travel distances within 10mins via different transport methods

- Blue – 10min walking distance
- Green – 10min cycling distance
- Purple – 10min driving distance



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12.0 SECURITY

The proposed development will improve security on the site by increasing the number of people accessing and using the site.

The proposal has been designed with layouts and levels of glazing that enable policing of the proposed built form as well as the surrounding area.

All windows, doors and security mechanisms will be compliant with Part Q of the Approved Building Regulations Document.



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CONCLUSION

Throughout this Design & Access discussion document, we hope that we have provided the LPA with a clear steer of what our intentions are and the potential the site offers as well as the wider benefits to the surrounding area.

There is a demonstrable demand and pressure for a crematorium facility within the outlying areas covered by Thurrock Council. This application seeks to meet this demand with the provision of a new two chapel crematorium with associated parking and landscaping.

This proposal is located on a site that is both remote enough to meet the required statutory regulations whilst being able to benefit from its connectivity to the road network. The site additionally benefits from being within close proximity to the C2C West Horndon Train Station.

The design has been developed to minimise its impact on the openness of the green belt with the main crematorium carefully located in the far corner of the site in order to obscure it from the public realm with screening provided by the properties to the west that front onto Brentwood Road. Further screening and softening have been provided with the inclusion of an extensive landscape proposal that completely greens the entire boundary condition.

The crematorium itself has been designed to be a contemporary proposal that exceeds the current standards for a cremation facility. It has easily readable quality that is crucial to demonstrate for the important intended community function. The parking arrangement has been organised to create a processional route to the chapels and the level of parking is appropriate for the size of the facility.

Thurrock has a shortage of cremation capacity and this proposal will provide a much needed facility that will greatly benefit the local community in a well suited location with a high quality and appropriate design language. On this basis the applicant respectfully requests the Local Planning Authority support this application.





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