

9 SCHEME ANALYSIS

9.13 FIRE STRATEGY

FIRE DESIGN AND ACCESS

Fire tender access, fire protection and escape from buildings has been considered in the accessibility of all buildings across the development. A fire statement Policy D12 has been undertaken by Robson Frankham as part of the overall design and development of Belvedere. The apartments and houses have been designed to the guidance within Approved Document B (ADB) Volume 1 2019 including amendments up to June 2022. Part B of the Building Regulations 2010 consists of 5 parts: B1-B5. The fire strategy document that accompanies the planning application will review each area in turn.

GENERAL BUILDING DESCRIPTION

- Belvedere development is a collection of 11 blocks of flats and houses. The proposed blocks of flats consist of residential use except for Block B, as of the ground floor is commercial use only and the upper floors are residential.
- All blocks of flats are single stair buildings. Buildings A and F are designated as small single stair buildings as they have no more than 3 storeys above ground level.
- Buildings B, C & E are split into two blocks a with single stair configuration. These blocks do not have internal access between each other.
- Buildings B and C consist of duplex flats at ground and first floor only.
- An evacuation lift is provided to all blocks of flats. As the height of the top floor level of all buildings are less than 18m above ground floor level, the required minimum structural fire resistance is 60 minutes.
- All blocks of flats are accessed from an entrance lobby at ground floor level, providing access to a vertical core that continues to upper levels. Flats are currently proposed to comprise of a single or double storey with protected entrance halls.
- As the height of top occupied storey of Building A and F are less than 11m, sprinklers are not required. However, sprinklers are required to all other blocks of flats.
- The houses across the site are three storey properties.
- For further details please refer to Robson Frankham Fire Engineers Fire Strategy Report that accompanies this planning application.



Fire Tender site and building access strategy

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9.14 NON-RESIDENTIAL SPACE

The non-residential space proposed within the scheme is all located within Block B to the north of the site. Facing on to Yarnton Way and situated between the two main points of access to the development, commercial uses here will not only be easily accessible but clearly visible from the main road.

In total the scheme proposes 337m² of non-residential space (GIA) which is currently configured as indicated in the table shown in fig. 4 below:

As proposed, the size of each unit is designed to be less than 100sqm, avoiding the need for a commercial sprinkler system and the associated storage tanks. However should an alternative arrangement be preferred,

units can be combined in different configurations providing that a 60min. wall and fire doors is retained to keep the compartmented spaces individually less than 100sqm. An example of this is shown in Figure. 2 below. Alternatively, the spaces can be subdivided into smaller units as indicated in Figure 3, creating flexibility to accommodate cellular working or smaller individual lets / uses.

Currently, aside from the residents gym, the other non-residential spaces have not been defined and will reflect market interest at the appropriate time. It is thought that an element of residents workspaces would be welcomed, offering people that work from home an alternative desk space

on their door step, providing a shared working environment with the benefits of communal office amenities. Given the limited retail offer north of the railway line, and in light of the number of new residents that the SGN Belvedere develop will bring, it is thought that a small local shop may also be an appropriate commercial use for one of the proposed units - a point raised within the most recent public consultation. The non-residential areas will have a ground floor to soffit height of 3.0m, appropriate for a small retail unit.

5no. secure cycle spaces will be provided for the non-residential uses. The location of these will be determined once a layout has been formalised.

Unit 1	56.2m ² net	Commercial - use to be defined
Unit 2	92.4m ² net	Commercial - use to be defined
Unit 3	93.3m ² net	Residents gym
Unit 4	56.3m ² net	Commercial - use to be defined
Lobby	27m ² net	Commercial circulation

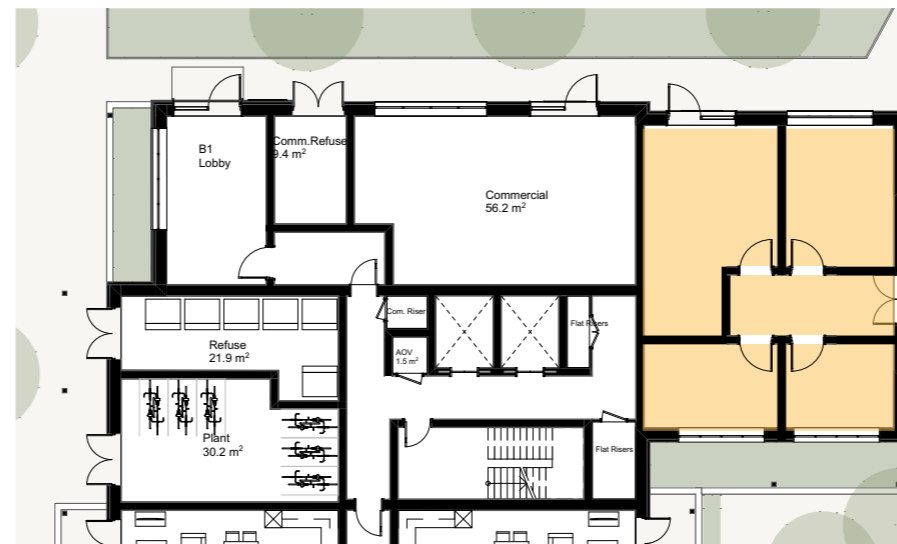
5. SECTION THROUGH BLOCK B (NORTH) SHOWING THE NON-RESIDENTIAL SPACE



1. PROPOSED ARRANGEMENT FOR NON-RESIDENTIAL SPACE WITHIN APPLICATION SCHEME INCLUDING RESIDENTS GYM



2. PART PLAN SHOWING ALTERNATIVE ARRANGEMENT COMBINING TWO SPACES



3. PART PLAN SHOWING ALTERNATIVE ARRANGEMENT SUBDIVIDING SPACES



5. SECTION THROUGH BLOCK B (NORTH) SHOWING THE NON-RESIDENTIAL SPACE

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9.15 ENERGY & SUSTAINABILITY

ENERGY

The energy strategy for the proposed development has been formulated following the London Plan energy hierarchy: Be Lean, Be Clean, Be Green and Be Seen. As a result, a range of Be Lean energy efficiency measures are proposed. They allow the development to achieve a 15% reduction in site-wide regulated CO2 emissions, with a 15% reduction for the residential portion of the development and a 18% reduction for the non-residential development over a Part L 2021 baseline, meeting London Plan requirements.

- The feasibility of decentralised energy production has been considered at the Be Clean stage in line with the London Plan. A connection to an existing heat network is proposed, sourced by high grade waste heat. This delivers a further site wide CO2 reduction of 82%.
- A range of Be Green renewable energy technologies has been considered. Suitable roof space will be utilised to provide approximately 388 kWp of solar PV.
- The combination of the Be Lean, Be Clean and Be Green measures as outlined above result in an overall 98% reduction over the Part L 2021 baseline.
- In line with the GLA guidance, the development will commit to offset the remaining CO2 emissions through a payment to the London Borough of Bexley. The remaining CO2 emissions to be offset are estimated as 186 Tonnes CO2 per annum, resulting in the estimated offset payment of £22,241, using the price of £95 per tonne of CO2 for a period of 30 years.

SUSTAINABILITY

The key sustainability features outlined in this Sustainability Statement are listed below:

- BREEAM: All commercial units will be designed and built to achieve a BREEAM 'Very Good' rating under the New Construction 2018 scheme.
- Energy efficiency: As noted, the proposed development will deliver a 98% reduction in overall CO2 emissions over the Part L 2021 baseline through energy efficiency measures such as connecting to an existing heat network and solar PV.
- Overheating: The scheme has been designed to ensure overheating risk is reduced to acceptable levels in accordance with CIBSE TM59:2017 requirements.
- Water efficiency: Flow control devices and water efficient fixtures and fittings will be installed in all dwellings to target a maximum internal daily water consumption of 105 litres/person/day.
- Waste and recycling: Adequate facilities will be provided for domestic and construction related waste, including segregated bins for refuse and recycling.
- Circular Economy: The principles of a circular economy shall be incorporated into the development, where possible.
- Materials: Where practical, new building materials will be sourced locally to reduce transportation pollution and support the local economy. New materials will be selected based on their environmental impact and responsible suppliers will be used where possible.
- Pollution: Acceptable air and noise quality levels will be achieved on site with proper mitigation measures.
- Flood Risk and Sustainable Urban Drainage Systems (SuDS): The proposed development site lies in a high flood risk zone but will benefit from flood defences and SuDS such as ponds, attenuation tanks, permeable paving.
- Security: Consultation with a Security Specialist will take place to ensure the development is safe and secure for its residents.
- Sound insulation: The dwellings are to target an improvement on Building Regulations Part E through party walls and floors.



1. ROOF PLAN INDICATING AN AREA OF CIRCA 4,900m2 AVAILABLE FOR PV ARRAY

Full details of the energy & sustainability strategy for redevelopment of the the SGN Belvedere site can be found in the Hodkinsons' Energy & Sustainability statements that accompany this application.

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9.16 POTENTIAL TO ACCOMMODATE FUTURE BRT ROUTE

Various options have been considered in terms of safeguarding land within the site along which a future bus route could be extended through the development. Other options for a new bus link have been considered, however these would result in the loss of amenity space within the site and so would not be feasible.

Instead, the current drawing shows how land on the inside of the 90 degrees bend along the access road could be safeguarded for future widening, if ever required. This would allow a one-way westbound bus route between Maida Road and Yarnton Way, noting that eastbound services could instead follow the route further west along Yarnton Way. The safeguarded land for future widening would also ensure that a car travelling in the opposite direction could comfortably pass a bus. The plan confirms that a bus could potentially be routed through the site, thereby allowing for any possible Bus Rapid Transit (BRT) link to be accommodated without significant amendments to the proposed road layout, and with no impact on the level of available amenity space within the site.



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9.17 FLOOD RISK MITIGATION MEASURES

The Environment Agency's flood map for planning shows that the Site is located within fluvial Flood Zone 3 associated with the River Thames. The Site is located within an area benefiting from defences. There is however, a residual risk to the Site in the event of a breach in the Thames tidal defences. Based on the EA's breach model for the area, the maximum predicted flood level for the 200 yr CC event is 2.49m AOD.

Following consultation with the EA, it is recommended that sleeping accommodation is located above 300mm above the 2.49m AOD flood level, at 2.79m AOD. Living accommodation can be located at ground floor. Access to upper floors for safe refuge above the flood level is necessary.

It is proposed that all residential sleeping accommodation will be located at first floor level (Blocks A, B, C & D) or on made ground and therefore raised above the predicted flood level for the site. (Blocks E & F to the south of the site) - subject to post development modelling showing de minimis increase in flood risk as a result of the raised platforms.

A Flood Response Plan (FRP) will be produced for the development and where necessary additional flood resilient measures will be proposed such as waterproof seals, raised electrical sockets etc.

KEY

- Zone in which existing site levels are used - All sleeping accommodation at first floor level
- Zone in which existing site levels are raised to achieve sleeping accommodation at ground floor level



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9.18 RESPONSE TO L.B BEXLEY'S LOCAL PLAN

Bexley's Local Plan was adopted in April 2023 with Belvedere Yarnton Way site identified as Site Allocation BEL 05. The site is allocated for primarily residential development with an estimated capacity of approximately 465 new homes in association with green, open spaces.

The Site Allocation requires proposals to:

- establish a consistent building line along Yarnton Way
- establish a legible and permeable internal movement network with active frontages that connects to adjacent streets
- not preclude a public transport route through the site by establishing a street alignment that will enable a future bus-based connection, connecting Yarnton Way with Maida Road
- create a green linear route through the site that provides a high quality environment for pedestrians
- introduce new, significant habitat on the southern part of the site.

Our development proposals for the site have responded to the above requirements by:

- Establishing a strong frontage along Yarnton Way
- Creating a legible network of internal movement. Ensuring this network is lined with active frontages in the form of individual and communal residential entrance doors and the placement of non-residential uses in key locations.
- Enabling a public transport(BRT) route through the site, via the new road layout which has the potential to connect Maida Road with Yarnton way
- Delivering a green link through the centre of the site which runs from the site entrance to the south of the site.
- Introducing a green corridor along the southern boundary of the site which included areas of grassland and wild flowers as well as forested area in the south-east corner.



EXTRACT FROM LB BEXLEY'S LOCAL PLAN APRIL 2023
SITE FEATURES AND INDICATIVE DESIGN RESPONSES



DEVELOPMENT CAPACITY

The site's capacity for residential development has been thoroughly tested through the pre-application process with L.B Bexley. The conclusion reached following the consideration of numerous options is that, whilst a development of circa 465 home may be appropriate in urban design terms, the resultant requirements for open space, amenity & car-parking etc. create a natural development ceiling. The extensive design process has demonstrated that a scheme of under 400 dwellings is an appropriate development maximum.

10 CONCLUSION

10.1 SCHEME SUMMARY AND RESPONSE TO THE KEY ISSUES

The proposals for the redevelopment of the SGN Belvedere site represent the culmination of a period of extensive discussion and design development with the London Borough of Bexley, their Design Review Panel (D:SE), The GLA and local residents and stakeholders. Working closely with Bexley's Planning Department over several years - and specifically over the last six months as the redesigned proposals emerged, the design team have sought to develop a scheme that will enhance the character of the area and benefit both new and long-term residents of Belvedere.

When complete the scheme will deliver 392 new homes, ranging in size from one bedroom apartments to four-bedroom houses, all with outstanding amenity and aspect and offering excellent standards of internal living accommodation. Residential amenity will be delivered in the form of private balconies or gardens, all of which will meet or exceed relevant standards. Communal amenity spaces, incorporating playspace for younger children, will be open to both residents and the general public, benefiting families in the adjacent roads to the east.

The proposal will create a vibrant development, with many homes designed to have a street-facing aspect with individual front doors. In conjunction with a well considered lighting scheme, this will ensure the scheme is safe and welcoming for all users - at all times. It is the intention to discuss the scheme in detail with the Borough's Crime Prevention Design Advisor during the determination period and incorporate any additional recommendations.

The SGN Belvedere site is identified within the Borough's Local Plan as development site allocation BEL 05. The proposals have been designed with reference to this and address the site specific requirements where possible.

The historic Gas works made poor use of the land. Largely unoccupied and inward looking, the site's closed nature limits connectivity between Belvedere and the land to the west, and is an attractor for anti-social behaviour. The redevelopment will transform a neglected and under-used land parcel - opening it up for public use, delivering much needed housing and creating a vibrant new community.

THE PROPOSALS FOR SGN BELVEDERE WILL DELIVER:

- 392 new homes comprising 299no. lateral apartments, 18no. duplex (two-storey) apartments and 75no. houses. The variety of housing typologies proposed will offer genuine choice to future residents
- 114no. homes suitable for families (29.1% of total dwelling number) having 3+ bedrooms.
- 257no. homes (65.6%) which will have dual or triple aspect.
- 19,292m² of amenity space, comprising 14,715m² of public realm, 1,305sqm of private rear gardens and 3,272m² of balconies and terraces at ground floor and above. The combined figure represents 55.7% of the total site area.
- 2,405sqm of play-space, significantly exceeding relevant GLA standards.
- 157no. parking spaces provided in the form of external, at-grade parking bays - representing a ratio of 0:4 per dwelling.

...AND WILL COMPRISE THE FOLLOWING KEY BENEFITS:

- Increased permeability, with the Sutherland Road and Maida Road junctions to the eastern boundary opened up to offer new pedestrian and cycle routes, connecting Belvedere with Yarnton Way and areas west of the site.
- A safeguarded route for the proposed Bus Rapid Transit (BRT) route through the site, connecting Belvedere Station with Yarnton Way via Maida Road.
- A context-led development, with variation in height across the development of between 3 and 5 storeys in response to the Borough's concerns in relation to uniformity of heights. Height has been carefully placed, with the lower rise three storey housing located adjacent to the sensitive site boundaries and taller buildings located in the less critical areas of the site.
- Provision of commercial space fronting onto Yarnton Way including both an ancillary residents only gym and commercial / retail space. The design of the blocks at this location incorporate a 'spill-out' areas to support place-making and ensure the non-residential areas are well used.
- Incorporation of a large areas of public open space including a principal park located on the eastern side of the development, so as to equally benefit existing residents in Maida and Sutherland Road and new residents of the development.
- Provision of a tiny-forest scheme and reptile retention zone located to the rear of the site to accommodate and enhance the provision of habitats and retain the 'green' corridor along the railway line.