

Design and Access Statement

Grade II Listed, early C18 Manor House and Gardens, Buildings and Parklands, 27.8 Hectares – Formerly Princess Helena College – are to be redeveloped for residential use, plus 24 new dwellings, and associated landscaping works.*



Princess Helena College, Main Building, 2015.

Applicant:

The Door PHC Ltd.

Site:

Temple Dinsley,
Preston, Hitchin,
Hertfordshire,
SG4 7RT

Compiled by Agent:

Kay Pilsbury Thomas
Architects (KPTA) / Studio
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July 2024
Rev 1

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1.0 Introduction

1.1 Project context

Temple Dinsley, listed grade II*; extract from the list entry 1000919:

A country house of early C18 origin, substantially enlarged by Edwin Lutyens 1908-13, at which time he and Gertrude Jekyll collaborated on the creation of the formal garden around the house. The house and garden are surrounded by C18 parkland.

The site has multiple buildings and extensions of varying age, construction and materials. The site was Princess Helena Boarding School and Princess Helena College from 1935 until 2021.

The project is to restore and redevelop the site – buildings, gardens, and parkland – to provide private residential accommodation, including elements of demolition, new construction, and landscaping proposals that include provision of community facilities. A total of 69 homes are proposed: 43 apartments and 2 houses in the existing buildings and 24 houses and apartments in new.

1.2 Site ownership

The landowner is The Door PHC Limited.



Dashed red line - Site boundary

1.3 Site location

Refer to

- 641-KS-02-XX-DR-A-00001 Existing Site: Location Plan.

Temple Dinsley is situated on the east side of the village of Preston, approximately 5km south of Hitchin's centre, at the northeast end of the Chiltern Hills. The site, covering around 27.8 hectares, is bordered by lanes to the east, south, and west. School Lane, Preston's main village street, marks the western boundary, partially indicated to the west of the Main House by a red-brick wall (Lutyens, circa 1908, Grade II listed). To the north, the boundary is defined by agricultural land.

The terrain gently undulates, rising northwest of the house, with a distinct valley extending northeast from the north side of the gardens, offering distant views of Letchworth. The rural setting includes additional structures by Lutyens, for the Fenwicks, close to the south boundary. These include the former model farm, Ladygrove Stud Farm (also known as Minsden Farm, now converted for domestic use), and Kiln Wood Cottage (both designed by Lutyens, 1912-13, Grade II listed). Concurrent with Lutyens' involvement in expanding Temple Dinsley, he and Jekyll were also collaborating on the gardens at Putteridge Bury (q.v.), 6km to the west.

1.4 Site area

Refer to

- 641-KS-03-XX-DR-A-00001 Existing Site Plan,
- 641-KS-03-XX-DR-A-00002 Existing Location Plan.

The site application area measures 277,945m² (27.8 hectares).

1.5 Existing buildings, structures, and gardens

Refer to

- 641-KS-03-XX-DR-A-00001 Existing Site Plan,
- 641-KS-03-XX-DR-A-00002 Existing Location Plan.

In plan

The Main Building has Ithel's Old House (1714) at its centre, flanked by Lutyens' West Wing, East Wing and East Annexe (1908) – the latter extended further east by Lutyens in 1913 to join with the Georgian stable block. Late C20 additions to the West Wing join with Lutyens' garden houses & Loggia to make the West Spur and extend the East Annexe to the north.

The gardens to the west and north were remodelled by Lutyens (Gertrude Jekyll) as a series of interconnected compartments, separated from the front courtyard by the West Wing. These house a collection of small structures, including walls, pergolas, and steps, as well as a small detached garden building referred to as the Belvedere or 'Gazaebo'.

The Teaching Block is located to the northeast of the Main Building's East Annexe. It has a C19 core, extended and remodelled in the late C20 (1990-92), with some internal remodelling in C21. The Science Block (2001) sits immediately east of the Teaching Block and the area north of the Teaching Block is dominated by the Sports Hall (1983-4).

The parkland to the south of the Main Building has several structures and buildings, including: the Ice House (C18, Grade II listed), Piggery (Lutyens, c. 1908, Grade II listed), Tank House and Pump House (both early-C20, curtilage listed).

Summerhouse Plantation comprises an area of woodland to the northeast of the site. Barn 2 (1980s), also referred to as the Summerhouse Building, is located within the southwest corner of this woodland.

A residential lodge (late-C19, curtilage listed) is situated on the east boundary of the parkland, to the north side of the site's access drive where it joins with St Albans Highway.

The estate is part enclosed by brick walling (Lutyens, c. 1908, Grade II listed), which has several gates and piers, including at the main entrance to the site, on its southwest boundary with School Lane, and at the former access to the former Temple Farm to the south.

In section

The site falls to the east such that the Old House central front entrance sets the ground floor, with the original stable block, now conjoined with the East Annexe, entered at ground level two floors down. In all, the Main Building has five levels, accessed by three stairs: one in the Old House (Main Stair), one in the East Wing (Middle Stair) and one in the East Annexe (East Stair).

All buildings and structures are currently unoccupied.



Existing Summerhouse Plantation building

1.6 Existing access

Refer to

- 641-KS-03-XX-DR-A-00001 Existing Site Plan,
- 641-KS-03-XX-DR-A-00002 Existing Location Plan,
- 641-KS-70-XX-DR-A-11000 Proposed Parking & Refuse Strategies,
- 641-KS-70-XX-DR-A-11100 Site Plan: Proposed Land Use.

Vehicle and pedestrian access to the site is via a private drive (tarmacadam), connecting two established junctions with the Highway. The main entrance, to/from School Lane, on the site's west boundary, is described by a crescent shaped red-brick wall with iron gates (Lutyens, c. 1908, Grade II listed). From here, the private drive leads north-northeast for ~250m before turning northeast at the eastern end of the main building. After ~125m, the drive turns southeast, continuing for another ~375m to meet St Albans Highway on the site's east boundary.

The site has two established areas for vehicle parking. One is located on the site of the historic ornamental gardens directly in front of the Old House's south elevation and is surrounded by a low red-brick wall topped by iron railings and with iron gates (Lutyens, c. 1908, Grade II* listed with the Main Building). The other flanks the private drive as it runs northeast, east of the East Annexe. Both are gravelled.

Pedestrian access to the site is also possible from the north, via a private footway (tarmacadam) that runs for ~350m, from the north elevation of the East Annexe to join with Preston Road at the location of the Dower House. The final 100m of this distance is via a section of private road of unknown ownership.

A permissive footpath crosses the southern portion of the site, running east-west between the vehicular junctions with School Lane (west) and St Albans Highway (east).

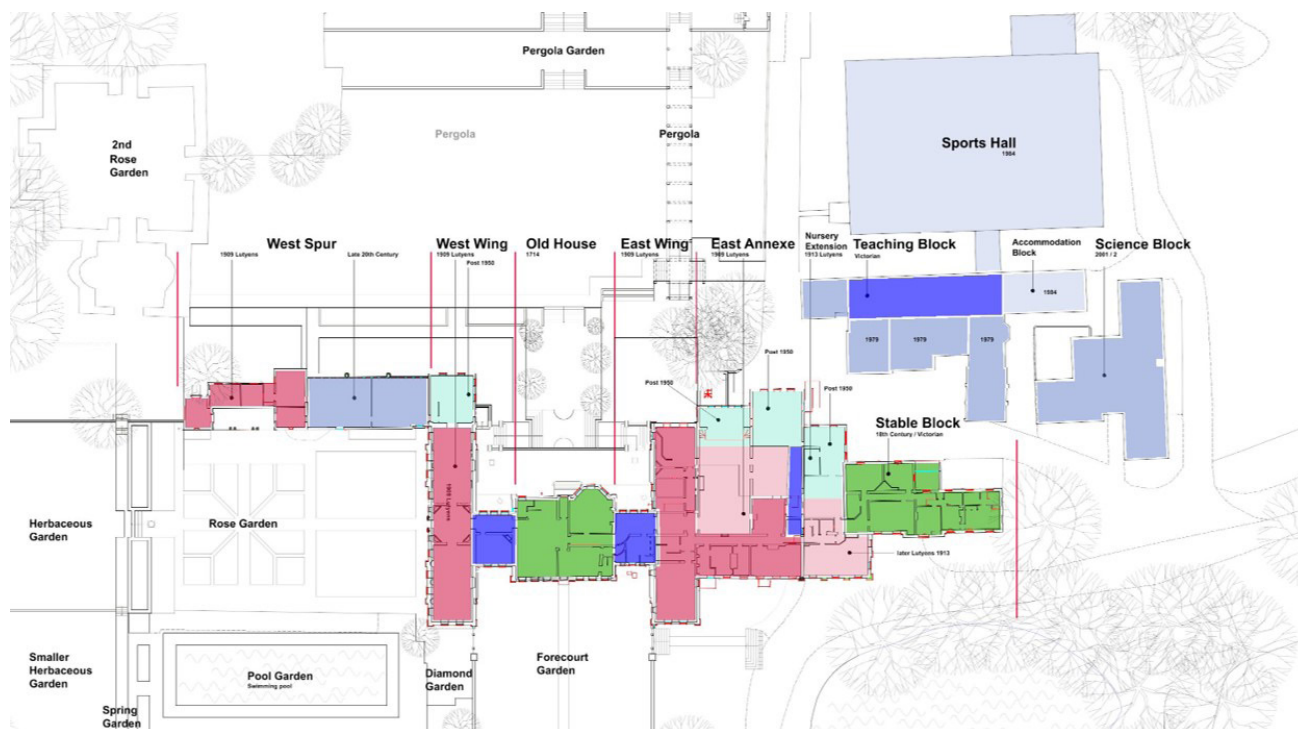
1.7 Summary of proposals: statement of intent

Refer to

-641-KS-03-XX-DR-A-00001 Existing Site Plan

The site contains numerous buildings which are named in the existing site plan.

The Main Building is large, sprawling and complex, so its different parts are named in the plan below.



This Design & Access and Heritage Statement has been prepared to support the Listed Building Consent and planning application for works to restore and redevelop the site, including its buildings, structures, formal gardens, parkland, and landscaping, to provide private residential accommodation, including elements of demolition, new construction, and landscaping.

The Door PHC Limited has employed Conservation Architect Kay Pilsbury Thomas (KPT) and Studio Cullinan And Buck Architects Ltd. (SCABAL) – KS in drawing titles – to undertake works to sensitively conserve and repair the ecological and heritage assets, to safeguard their future.

Conservation benefits

Best conservation principles engage us with the significance of Temple Dinsley to ensure its heritage values are carried for future generations through ensuring viable and sustainable use:

The design and conservation strategy can be found in this document at 5.0 Design and Justifications.

Use

Reinstate residential use to the Old House and its ancillary buildings.

Historic context

Remove the detracting school buildings such as the Sports Hall, Science Block, the shed on rear of the Pavilion and the west extension of the Teaching Block, stables sheds and various other sheds.

Enhancements to the Main House & historic ancillary buildings, external and internal

Repair historic fabric. Remove and replace modern detailing and material interventions. Remove late C20 interventions in the Main Building. Renew building services, including foul and surface water drainage.

Enhancements to the Gardens & Parkland

Remove car parking and reinstate landscaped ornamental garden in front of the Old House south entrance. Remove the swimming pool and reinstatement of the Jekyll attributed Reflecting Pool. Repair and reinstate historic garden structures, gates, fencing, terraces, etc. Take overhead cabling below-ground where possible. Reinstall the Jekyll attributed gardens, Rose Garden, Diamond Garden, Pool Garden, Paved Rose Garden, Spring Garden, Small Herbaceous Garden, Herbaceous Garden, Pergola Garden, Magnolia Steps, etc. Reinstall historic views through removal and replanting of trees.

Shared entrances and shared stairs

With respect to the historic spatial arrangement and fabric of the Main Building and gardens, the proposals will cause minimal disturbance in accommodating the new use as residential.

Retaining the existing three stairways and making them shared, along with the existing halls, corridors, and external entrances, allows the historic fabric to be unaltered. Maintaining the existing circulation promotes the arrangement of single-level apartments throughout the main building.

Sharing the Main Building and gardens

Sharing pathways, entrances and existing stairways to apartments within the (shared) Main Building, reflects the use of the formal gardens as communal, with some pockets of private amenity space where suitable. In this way, the Lutyens/Jekyll attributed garden layout is sustained without subdivision or partition and maintains the single-owner feel.

Apartments

The Main Building has a gross internal floor area (GIFA) of 3,709m², with rooms of wide-ranging status, significance, and size. As with the gardens and circulation, the apartments in each case are arranged to cause minimal disruption to the historic fabric and to sustain the historic building.

Convert

The Main Building and Teaching Block, Pumping Station and Barn in the parkland will be converted to homes.

4,794m² total GIFA ≈ 45 homes, apartments and houses made within these existing buildings. Total ≈ 45.

Replace

Benefiting the historic setting, the following buildings are removed:

3,586m² total GIFA ≈ 22 homes, apartments and houses made in place of the Sports Hall, Science Block, and Stables, and 2 new houses in place of Barn 1 in the Summerhouse Plantation. Total ≈ 24 homes.

Shared parking

The Main Building is shared by apartments, likewise the gardens and grounds, so in turn car parking is shared and kept well away from the external spaces in front of and between buildings.

Proposed to the east of the Main Building's East Annexe, car parking is shared under solar roofs; taking advantage of the site's contours to reduce its visibility, enclosed by a hornbeam hedge and red brick wall, horse-shoe in plan.



2.0 Understanding Temple Dinsley

Refer to

- 641-KS-XX-XX-RP-A-90102 Heritage Statement

3.0 Site Analysis and Strategies

3.1 Asbestos

Refer to

- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Barn 1 & Barn 2, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Gazebo, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Ice House, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Main Building, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Piggery, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Pumping Station, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Science Block, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Sports Hall, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Storage Sheds, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Summerhouse Building, August 2023,
- Cambridge Asbestos Removal Ltd (CAR), CAR ECB5349 R&D Asbestos Survey Teaching Block, August 2023.

Site asbestos refurbishment & demolition surveys for the following buildings and structures:

- Barn 1 (referred to herein as Tank House) & Barn 2 (referred to herein as part of the Tank House),
- Gazebo (referred to herein as Belvedere),
- Ice House,
- Main Building,
- Piggery,
- Pumping Station (referred to herein as Pump House),
- Science Block,
- Sports Hall,
- Storage Sheds (referred to herein as Stables),
- Summerhouse Building (referred to herein as Summer House),
- Teaching Block.

Small amounts of asbestos (Chrysotile) were found in the Sports Hall and Summer House. These are assessed as 'very low risk', with it recommended all be removed prior to refurbishment if affected by works.

A small amount of asbestos (Amosite & Chrysotile) was 'strongly presumed' in the Teaching Block. This is assessed as 'low risk', with it recommended all be removed prior to refurbishment.

Asbestos (Amosite, Chrysotile, and Crocidolite) was found throughout the main building. These are assessed as having a range of risk, from 'very low' to 'high', with it recommended all be removed prior to refurbishment.

3.2 Structure

3.2.1 Structural Inspections

Refer to

- AFP Consulting Engineers Ltd (AFP), Structural Report (AFP ref: CE24/4030), May 2024.

Structural inspections were carried out of the following buildings and structures; key findings (*extracts*) are presented; refer to the full report for further detail:

1. Main Building: Old house,
2. Main Building: East Wing,
3. Main Building: West Wing,
4. Main Building: West Spur,
5. Main Building: East Annexe,

[T]hese blocks can be successfully converted with limited repairs, strengthening and invasion to historic fabric.

6. Teaching Block,

There appears to be no significant structural defects. Therefore, a successful conversion should not require high levels of structural intervention. [...]

7. Science Block
8. Piggery,

[R]epairs can be carried out relatively easily without major structural intervention, retaining structure where possible.

9. Barn 1 (referred to herein as Summer House),
10. Pumping Station (referred to herein as Pump House),

It is likely however that the main contributing factor to the movement seen is from ground movement. Subject to trial hole investigation underpinning may be required to both buildings.

[...S]ome form of land drainage may be required as part of the development.

11. Barn 2 (referred to herein as Tank House),

Wholesale amendments are required to this building to convert to domestic accommodation notably, a reconstructed timber frame reusing existing timber, where possible new foundation, ground floor and first floor structure and reconstruction of the roof, reusing existing structure where possible.

- 13a. Belvedere (also referred to as 'Gazebo'),

[...R]epairs can be carried out relatively easily without major structural intervention.

- 13d. Park wall.

[...R]equired repair of these walls are achievable with minimal requirements.

In summary:

[...A]ll buildings will require some kind of structural intervention to convert successfully into domestic accommodation.

The Old House, East Wing, West Wing, West Spur, East Annexe and Teaching Block are in good structural condition keeping minimal repair works and we deem adequate for conversion.

The Pumping Station requires some further investigation and will require a more intensive repair schedule but can be converted into domestic accommodation.

The Tank House will require intrusive works, notably to safely remove this water tank and will require a reconstruction, where possible reusing existing materials.

The Piggery, Belvedere and Park Wall can all be repaired using conservation techniques where possible

3.4.1 Method Statements for demolition

Refer to

- AFP Consulting Engineers Ltd (AFP), Method Statement for Demolition [...] (AFP ref: CE24/4030), May 2024.

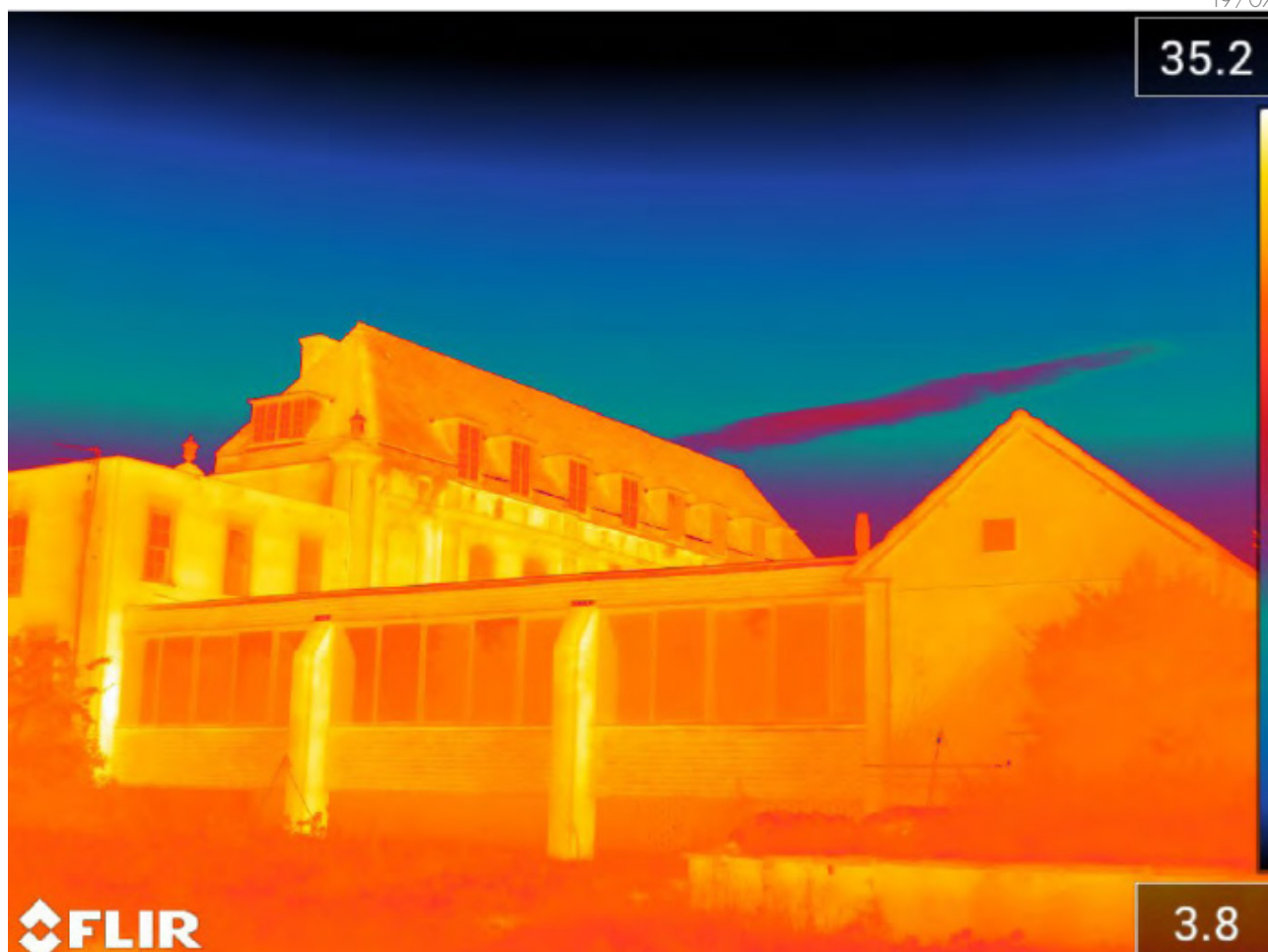
Method statements for demolition are provided for the following buildings and structures; key findings (*extracts*) are presented; refer to the full report for further detail:

- 7. Science Block (CHECK),
- 9. Barn 1 (referred to herein as Summer House),
- 13b. Pavillion,
- 14. Sports Hall,
- 15. Stables.

[AFP] do not believe that any of [the proposed demolition] works has an impact on any historical structure on the site and can be carried out in a manner that limits the disturbance to any listed building or buildings of interest on the site.

The contractor should provide their own statements and risk assessments for the works for review by AFP and should carry out any works in accordance with this report and good building practice.

[AFP] therefore deem these buildings can be safely demolished as part of the works.



FLIR T1020 (1024 x 768 pixel resolution) with 45 degree lens = bat in flight detection distance of 104 m.
Camera located 50 m from furthest point of building

3.3 Ecology

Refer to

- Applied Ecology (AE), Ecology Report, July 2024,
- Applied Ecology (AE), Bat Tree PRA Report, 1.0, June 2024.

A Preliminary Ecological Appraisal (PEA) and select protected animal species surveys were undertaken in the second half of 2023, covering the site, its buildings, structures, and grounds. Further to this, a ground level potential roost assessment of trees scheduled for removal or management was undertaken in June 2024. Key findings are presented below; refer to the full *Ecology Report* for further detail.

3.3.1 Great Crested Newts (GCN)

No Great Crested Newts were identified.

3.3.2 Bats

Preliminary Roost Assessment (buildings)

The Preliminary Bat Roost Assessment found evidence of bat utilisation in the roof spaces of the Old House East and West Wings (brown long-eared type droppings), below a hanging tile facade on the Teaching Block east elevation (pipistrelle type droppings), and to the gable end of the Science Block (pipistrelle type droppings). The Ice House was also identified as having potential to support winter roosting bats. No other evidence of roosting bats was recorded on/in any of the other buildings.

Bat Activity Survey (buildings)

Day roosts of small numbers of common bat species (pipistrelle, soprano pipistrelle, brown long-eared, natterer's) were recorded in six buildings within the site: Old House West Wing, Old House East Annexe, Science Block, Teaching Block, Barn 2, Pumping Station.

Preliminary Roost Assessment (trees)

The Preliminary Bat Roost Assessment identified eleven trees with a potential roost feature suitable for multiple bats (PRF-M); these require aerial inspections to verify. A further nine trees were identified as having potential roost feature/s suitable for individual / very small numbers of bats; these require no further assessment.

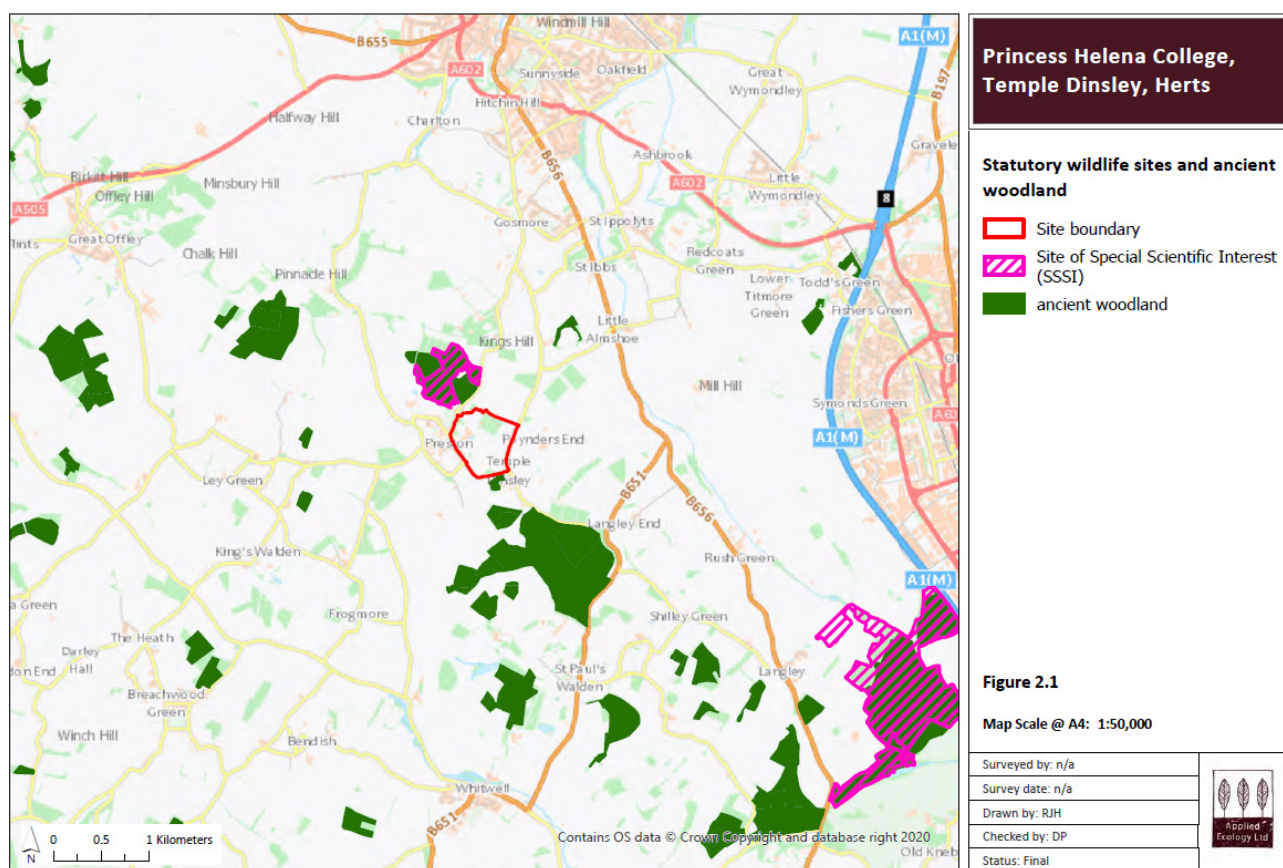
3.3.3 Nesting birds

The presence of barn owl was confirmed in the Pumping Station and Barn 2.

3.3.4 Ecological assessments, surveys, and mitigation

Bats

Works to buildings and structures of value to bats should be implemented under the auspices of a Natural England bat licence where appropriate.



Statutory wildlife sites and ancient woodland map

The Ice House should be retained as open and accessible to bats and screened to prevent humans and pets entering the structure.

Identified roosting opportunities within the Old House West and East Wing roof spaces to be maintained by using bat safe roofing felt membranes and providing suitable access tiles etc.

Use of external lighting should be minimised at night, with all essential security lighting designed to minimise adverse impacts on bats.

Damage to any building-nested bat habitats are considered of low conservation value and can be compensated for with bat boxes.

Trees with potential for bat roost are not marked for demolitions so no further works need to be carried out.

Nesting birds

Works to the Pumping Station and Barn 2 should take place outside of the bird nesting season due to the potential value of these buildings to nesting barn owl.

Removal of scrub, trees, and other areas of dense vegetation to facilitate development should be undertaken outside of the bird breeding period between September-February, or immediately following an inspection of these areas by an experienced ecologist that confirms nesting bird absence.

Other species

A watching brief for badger setts and hedgehog should be maintained during any habitat clearance and construction.

Biodiversity Enhancement

Recommendations to enhance the site's biodiversity include:

- Restoration of non-residential buildings or structures to enhance their value for wildlife e.g. enhanced bat roosting opportunities associated with the Ice House, Piggery and Belvedere.
- Incorporation of enclosed bat boxes into converted buildings – notably Barn 2 and the Pumping Station.
- Restoration of wetland habitats, creation of wildflower meadows, and the adoption of a traditional hay meadow.
- Provision of tree mounted bat and bird boxes around the Site.
- Provision of barn owl nest boxes on suitable trees and monitoring their use.
- Retention of dead wood resulting from development related habitat clearance as habitat piles.

3.3.5 Biodiversity Net Gain

Refer to

- Applied Ecology (AE), Preliminary BNG Calculations, 18 July 2024.

Preliminary Statutory Biodiversity Metric calculations were undertaken in June 2024. A Statutory Biodiversity Metric Calculations was produced July 24. Key findings (*extract*) are presented below.

Current BNG outcome

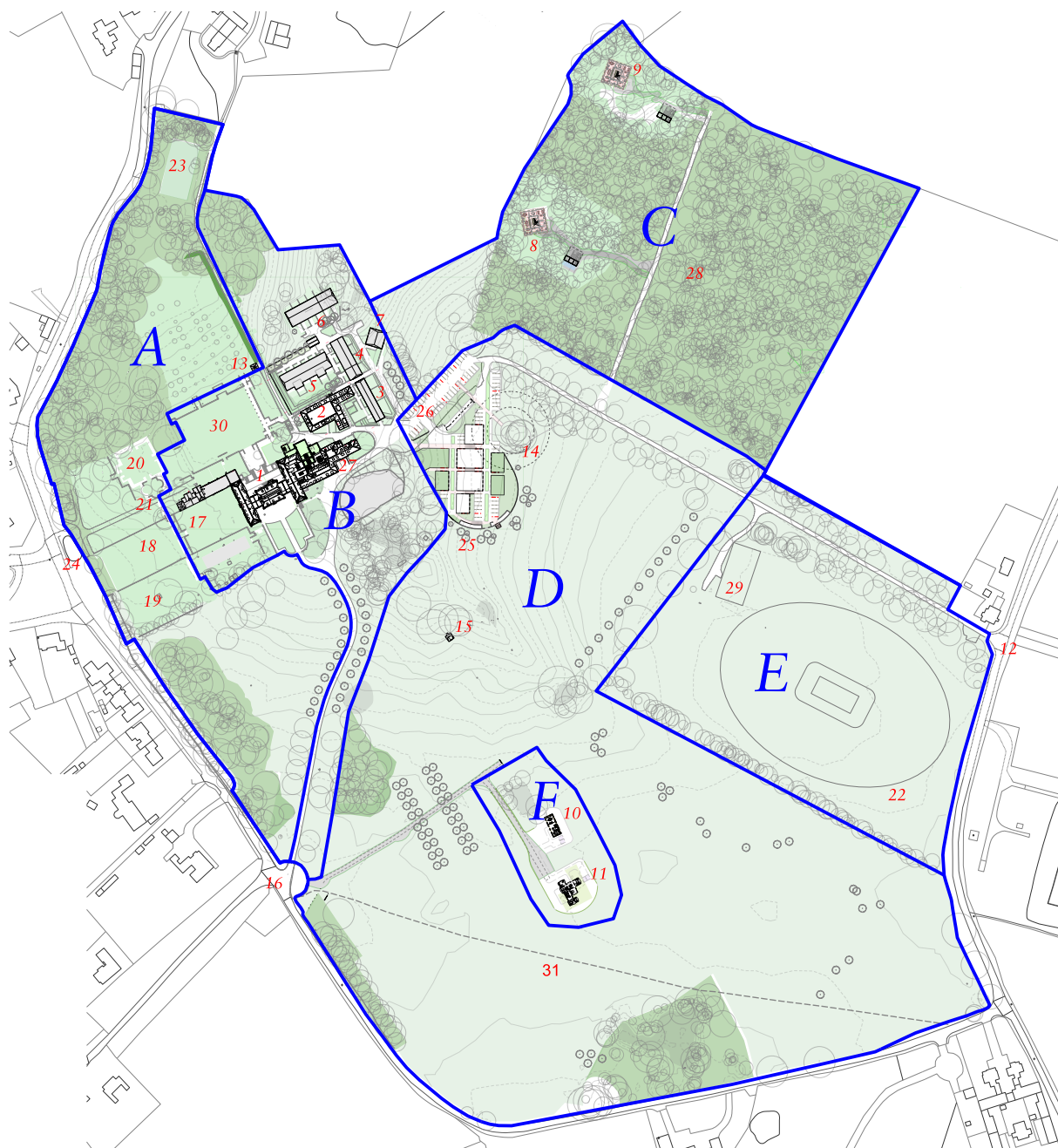
Based on the Development layouts and the proposed habitat enhancement and creation measures set out above, the overall scheme would achieve an uplift in habitat units from 129.7 before Development to 151.2 after Development (+21.5 habitat units), equivalent to a +16.6% Biodiversity Net Gain (BNG), and would comply with habitat trading requirements. Linear features would also be improved from 17.1 hedgerow units before Development to 21.5 hedgerow units after Development (+2.2 hedgerow units), equivalent to a +12.8% BNG for hedgerows.

3.4 Contaminated Land

Refer to

- 641-KS-03-XX-DR-A-10002, Proposed Site Plan,
- J P Chick & Partners Ltd (JPC), Geo-Environmental Desk Study Report (JPC ref: IE24/050/Area A/SITI), June 2024,
- J P Chick & Partners Ltd (JPC), Geo-Environmental Desk Study Report (JPC ref: IE24/050/Area B/SITI), June 2024,
- J P Chick & Partners Ltd (JPC), SITI Report (JPC ref: IE24/050/Area C/SITI), June 2024,
- J P Chick & Partners Ltd (JPC), SITI Report (JPC ref: IE24/050/Area D/SITI), June 2024,
- J P Chick & Partners Ltd (JPC), SITI Report (JPC ref: IE24/050/Area E/SITI), June 2024,
- J P Chick & Partners Ltd (JPC), Geo-Environmental Desk Study Report (JPC ref: IE24/050/Area F/SITI), June 2024.

The Stage 1/Tier 1 Geo-Environmental Desk Study Report is split into six areas: A, B, C, D, E, and F, as per Fig. 3.9.1, below; extracts from the Executive Summary's recommendations for each area follow.



Extract from KS drawing 641-KS-XX-SK-A-00017 showing survey areas with respect to the Stage 1 / Tier 1 Geo-Environmental Desk Study.

For the contaminated land survey to be carried out, the land was split into six areas, A-F.

Area A

Waste soils leaving the site will need to be tested for a suite of typical contaminants and exported to a suitably permitted waste facility. If soil is to be excavated elsewhere on the wider site for re-use on-site, it would also need to be tested and re-used under the appropriate legislation such as a CL:AIRE MMP.

Area B

It is recommended that samples of the Made Ground are collected from the shallow soils following demolition of the existing hardstanding and buildings to assess the potential for contamination within the Made Ground. The areas proposed for sampling include regions of soft landscaping and amenity space. We would recommend soil samples to be collected via machine excavated trial pits to a maximum of 1.00mbgl for laboratory testing of a typical range of contaminants;

Area C

We would recommend that a Stage I/ Tier II Ground Investigation is undertaken across the western section of the development site. The investigation would likely comprise hand excavated boreholes to a maximum depth of 1.00mbgl surrounding the identified Made Ground on-site.

Area D

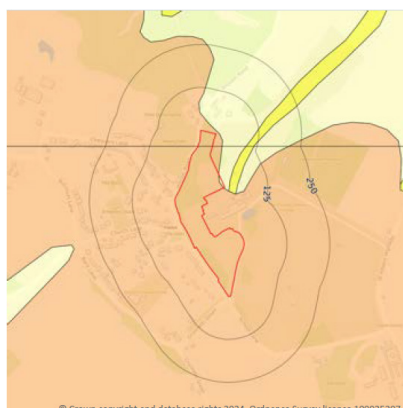
No Asbestos Containing Materials (ACMs) were identified during the walkover and proposals do not seek to convert or demolish any on-site buildings. However, should development plans change, due to the age of the piggery building there is a possibility that ACMs could be present within the make-up of the structure.

Area E

It is recommended that samples of the Made Ground are collected from the shallow soils following demolition of the existing buildings, tennis courts and hardstanding to assess the potential for contamination within the Made Ground.

Area F

Although not related to the condition of on-site soils, due to the age of the on-site buildings, we would recommend undertaking a HSG264 Pre-Demolition/ Major refurbishment asbestos survey on the existing buildings. All identified ACMs should then be removed by a suitably experienced contractor, prior to the conversion of the buildings



(left) Geology, superficial

(right) Natural ground
subsidence - Shrink swell
clays

3.5 Building Services

Refer to

- 11951-CBG-XX-XX-RP-ME-90003-PO1 - M&E Feasibility Report

3.5.1 Mechanical

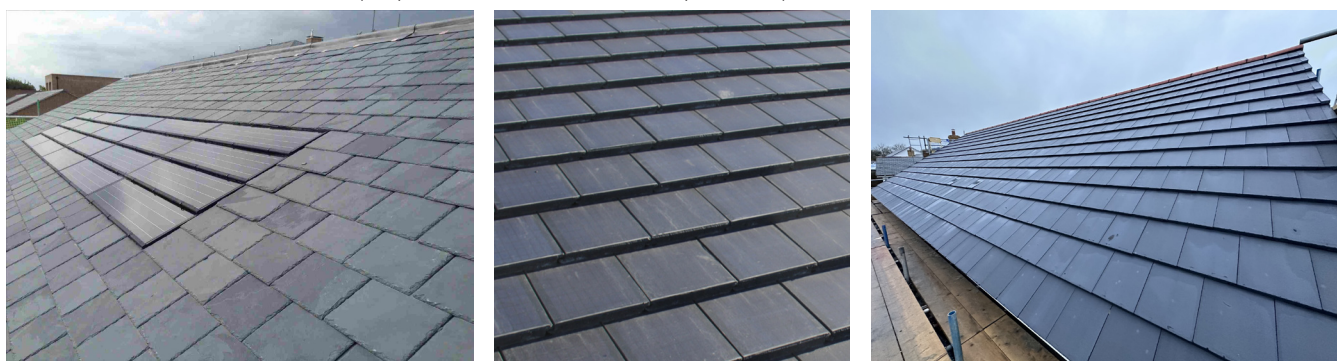
CBG has carried out an analysis of the Temple Dinsley estate in order to propose a strategy to minimise carbon emissions for the proposed scheme of apartments and new houses, that will meet the requirements of the North Hertfordshire District Council. The findings and proposals are as follows:

Incorporate the following technologies:

- Low Temperature Air Source Heat Pump (LT ASHP)
- Low Temperature Ground Source Heat Pump (LT GSHP)
- Solar Photo-voltaic (PV) – PV Panels and PV Slate

Recommendations:

- Deployment of an ASHP heat network will be significantly cheaper compared to a GSHP equivalent.
- A GSHP heat network will reduce operational costs due to its higher coefficient of performance meaning electricity bills for both the landlord and tenants will be less.
- An ASHP heat network will incur higher distribution losses due to its requirement to be externally sited away from the Main School Building.
- Dedicated ASHPs are the likely solution for the new-build dwellings and stand-alone conversions.
- A district heat network served from a number of commercial-sized ASHPs is the preferred approach to provide heating and hot water to the flats. Each flat would use a Heat Interface Unit (HIU) to supply and meter the final hydronic circuits.
- A combination of PV panels on the car park roofs and PV slate on some of the new dwellings will meet the NHDC's Gold Standard for renewable energy generation with the deployment of an ASHP.
- To meet the LETI target for small scale housing, a small number of additional PV panels will be required, however if a GSHP is deployed, an excess of electricity will be produced.



Photovoltaic slate panels

3.5.2 Electrical

The proposed strategy for the Main Building and Teaching Block are as follows:

- Incoming Electrical Supply: There is an existing substation located on the main road. A Load
- Assessment has been carried out, with an estimated usage of 1.6MVA, therefore requiring an upgraded UKPN supply. The new Substation to be located at the site boundary, feeding 43 flats, 26 houses & two existing structures which are being converted into accommodation, all via local
- Ryefield boards in a purpose-built structure. Separate supplies for communal energy center and EV chargers are proposed.
- LV Distribution & Small Power: The existing condition of services in the listed buildings show signs of aging and wear. The proposed plan for each property is to have a dedicated UKPN supply with a consumer unit feeding all final circuits. Small power provision will be developed to suit furniture arrangement and appliances.
- Data Network: The proposed plan is to replace existing fibre connection with a new connection from a nearby BT base. Fibre to be installed in the same trench as the main power cable.
- CCTV and Security: CCTV provision for external coverage around buildings and gates. Intruder Alarm to each property to have its own system, designed to BS EN 50131 Grade 2.
- Lightning Protection: Existing condition of current system assumed inadequate. The proposed plan is to conduct a strike risk assessment. Install necessary protection systems and surge protection for all distribution boards.

3.6 Sustainability Statement

Refer to

- 11951-CBG-XX-XX-RP-ME-90003-P01 - M&E Feasibility Report

Excerpt from CBG's M&E Feasibility Report:

The proposed site plan is to include the refurbishment of the Main Building and Teaching Block into 43No. flats. The Tank and Pump house into two new dwellings and the construction of 24No. new dwellings.

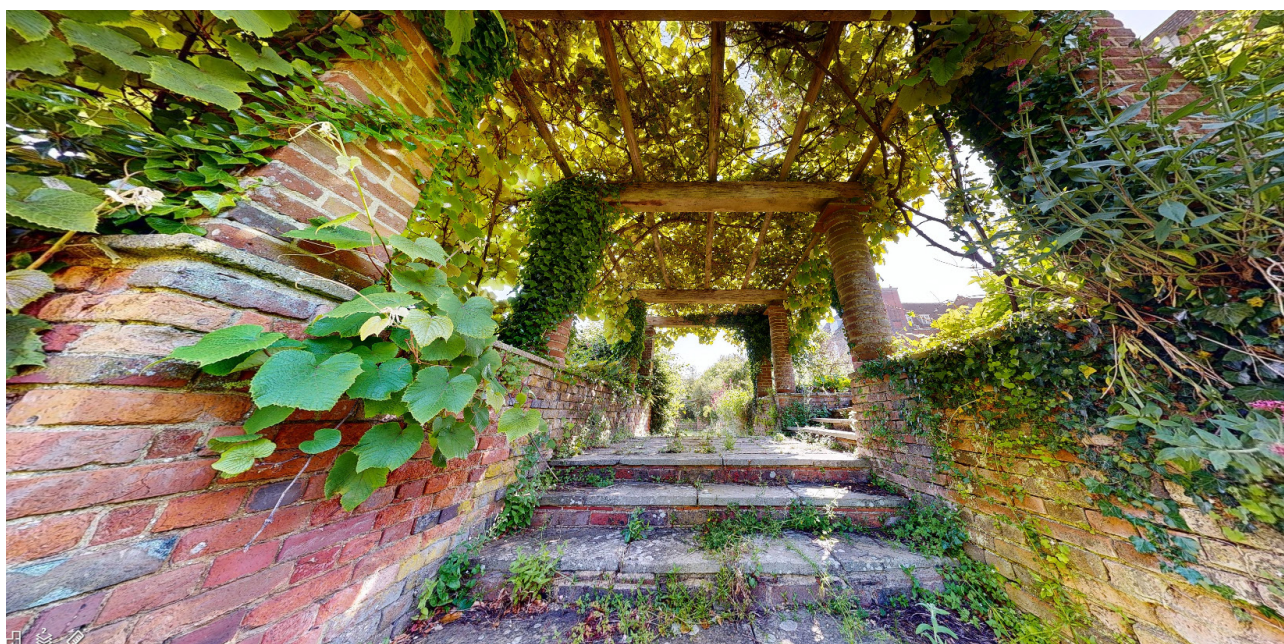
The minimum target requirements are in line with those stated by North Hertfordshire District Council (NHDC). Within this, the client would like to aim for Silver for the existing (refurbished) buildings, which entails the following:

- Energy Efficiency – Equivalent to Sustainable Traditional Building Alliance (STBA) Whole House Advanced which includes the deployment of a district scheme for renewable energy.
- Energy Generation – A minimum of 25% renewable generation onsite.

For the new dwellings, the NHDC Gold standard is the aspiration, specifically the London Energy Transformation Initiative (LETI) for small scale housing, as below:

- Energy Efficiency – Equivalent to LETI Small Scale Housing with the following targets:
 - Energy Use Intensity (EUI) less than 35 kWh/m².annum
 - Space Heating Demand less than 15 kWh/m².annum
- Energy Generation – NHDC Gold requires a minimum of 50% renewable generation onsite.

For the new dwellings only, there is a client desire to build in accordance with LETI entirely, therefore generation of renewable energy on site would be 100% compared to NHDC's Gold Standard of 50%. Both of these renewable energy generation targets are considered later in this report.



3.7 Lighting

Refer to

- External Lighting Scheme CBG

The external lighting design should comply with recommended guidelines for surrounding habitats and species such as bats, birds, and hedgehogs.

The proposed lighting design shall allow for dark areas which can let the wildlife move without being disturbed. Warmer 2700k/3000k LED luminaires shall be used to avoid harsh blue/white light and high levels of UV, which can have a negative impact on species. 2200K luminaires shall be used where practicable.

The site shall be lit to 10 Lux for drive ways, enabling suitable light levels for picking up and dropping off. External walk ways around the building shall reach a level of 5 Lux.

An important aspect around the site boundary is the level shall not exceed 0.5 Lux, 3 meters from the edge of site. This is to prevent possible light intrusion to surrounding wildlife, hedgerows and structures outside of the site boundary. Dark areas shall be maintained at tree level ensuring no light pollution is produced.

All the proposed luminaires shall use cut offs which will reduce the upwards output lighting and skyglow effect, which will be used to minimise the spill of light. Where necessary, luminaires shall use back shields which will further reduce the light intrusion outside of the site boundaries.

Luminaires shall be selected for their low glare ratings and direct beam angle.

All luminaires will produce minimal glare when in the immediate vicinity of the luminaire. Where adjustable optics are used for beam angle, the luminaires shall be fixed to prevent possible movement during adverse weather conditions and future maintenance. The angle shall be at 90 degrees to minimise sky glow, which can brighten up the night sky causing disturbance to wildlife.

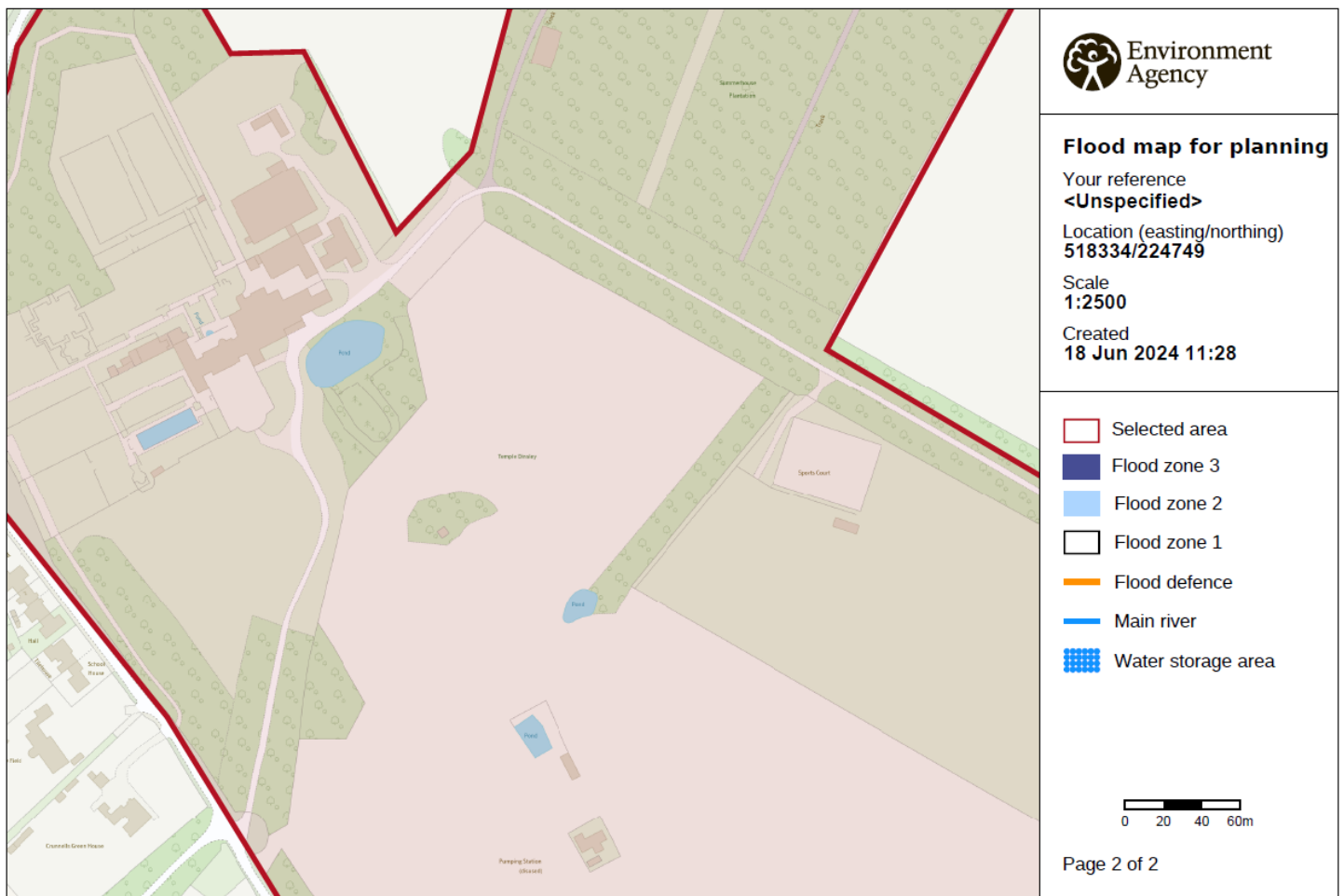
Driveway luminaires shall be controlled via a daylight sensor with timeclock. The remaining apartment luminaires will be controlled via manual switches and connected to their corresponding apartment.

No security lighting shall be used as to reduce the possible risk of skyglow effects.

The lighting scheme proposed by CBG will ensure minimal spillage from internal dwellings via glazing to external areas. On the horizontal plane it will be kept to 0.2 Lux and below; the vertical plane will be to 0.4 Lux and below. External lighting will be designed to reduce upwards output to reduce skyglow.

CBG will produce isoline plans to document the above.





3.8 Drainage Strategy

Refer to

- 20240709-FRA-SuDS-Temple Dinsley (small) 1 of 4 EAS SuDS report
- 20240709-FRA-SuDS-Temple Dinsley (small) 2 of 4 EAS SuDS report
- 20240709-FRA-SuDS-Temple Dinsley (small) 3 of 4 EAS SuDS report
- 20240709-FRA-SuDS-Temple Dinsley (small) 4 of 4 EAS SuDS report

EAS undertook a site visit to report on the drainage systems already present on site and to carry out tests outlined and concluded below:

The visit found the existing main building and teaching block drained via a series of manholes and surface water sewers. These sewers direct surface water flows from the existing buildings at the centre of the site to an existing ditch located towards the north of the site. It is assumed that the existing surface water runoff discharges to the ditch at an unrestricted rate.

Infiltration testing was undertaken at the site to BRE 365 Standards. The testing confirmed infiltration rates of greater than 1×10^{-6} m/s therefore infiltration is not considered viable at the site. As such, an attenuation-based strategy with a restricted outfall to an existing ditch located to the north of the site is proposed.

EAS propose the existing drainage network serving the main building to also remain unchanged and continue discharging to the existing ditch. The teaching block and proposed buildings north of the existing main building are to be drained via a proposed new system with a restricted outfall to the same ditch. The outfall for the proposed system will be restricted to 2.9 l/s offering a significant reduction on existing runoff rates from the site.

The proposed attenuation based strategy for the teaching block and proposed buildings to the north will utilise a combination of SuDS devices including Raingarden Planters, Lined Permeable Paving and below ground Cellular Storage Tanks in order to meet each of the four pillars of SuDS – Water Quantity, Water Quality, Biodiversity & Amenity.

3.8.1 Flood Risk Assessment

The documents referenced above include the flood risk assessment carried out by EAS which returned information summarised below:

The site is located in Flood Zone 1. Flood Zone 1 is defined as having less than 0.1% annual probability of river flooding. The risk of fluvial flooding at the site is considered low.

The EA long term risk maps also display the risk from reservoirs. The site is shown to not be in a reservoir flood risk area on the EA long term risk maps, therefore the risk of reservoir flooding is low.

Based on Hertfordshire's interactive mapping, the site is not susceptible to groundwater flooding. The Hertfordshire Level 1 SFRA also indicates a low risk. Therefore, the risk of groundwater flooding is considered low.

The northwest of the site is shown on the EA long term risk maps to be at low, medium and high risk of surface water flooding. The surface water flooding forms a flow path originating from the centre and west of the site, flowing in a northerly direction until it leaves the site boundary and continues northwards.

In order to assess the surface water flood risk in more detail DEFRA surface water flood data for the 0.1% flood risk event was obtained and overlayed onto the proposed site layout. This confirms surface water flood depths of up to 900mm within the vicinity of the proposed and existing buildings with a flow path travelling from south to north through part of the site.

In order to mitigate the surface water flood risk, it is proposed to alter ground levels around the site to re-route the surface water flow path so it travels around the proposed buildings and the existing buildings that are to remain, whilst ensuring flood volumes are adequately maintained. The design of the ground levels will need to be informed by a more detailed site specific surface water flood model which is to be undertaken. As such details of the required changes to the ground levels will be confirmed once the detailed flood model has been completed.

Further mitigation measures such as raising the finished floor level of the proposed buildings, avoiding ground-floor sleeping, relocating proposed buildings and utilising flood resilient construction methods may also be required. As the existing buildings to remain are Grade II listed altering floor levels and utilising flood resilient construction methods may not be viable. As such, surface water flood water may enter the existing buildings in the most extreme design event.



3.9 Acoustics

Refer to

- Gillieron Scott Acoustic Design (GSAD), "Temple Dinsley: Acoustic Design - Feasibility", 1st July 2024

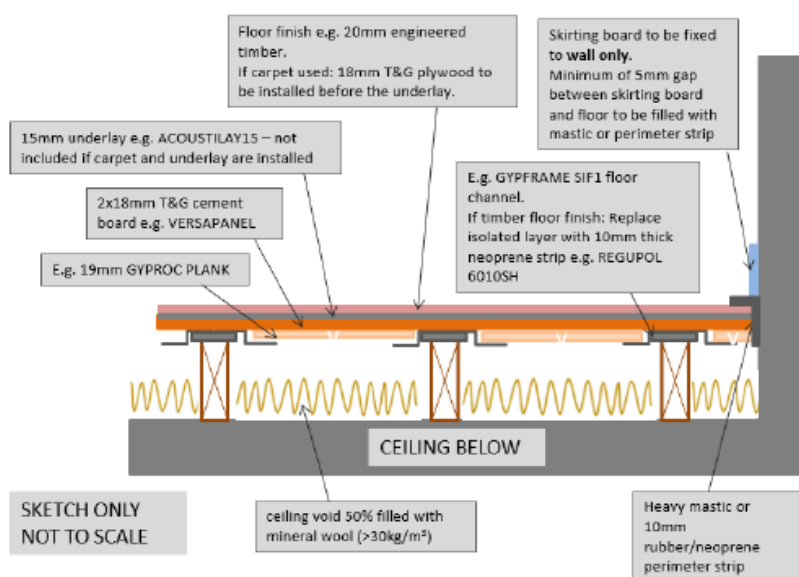
Gillieron Scott Acoustic Design (GSAD) have been appointed as acoustic consultants to carry out a feasibility study on the refurbishment of Temple Dinsley Preston, SG4 7RT, in collaboration with KPTSCABAL Architects.

GSAD carried out an initial site visit on the 8th June 2023 with SCABAL Architects and the Historic Recorder, John Selby. Comments and observations are presented in their report.

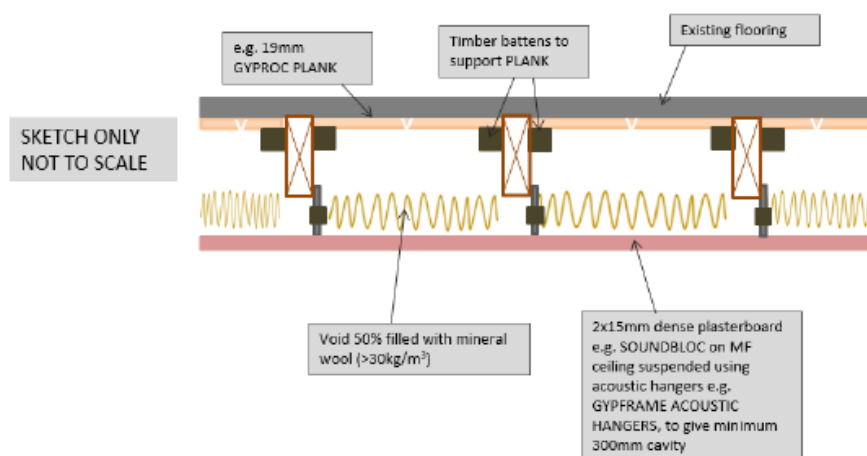
Airborne and impact sound insulation testing was carried out on 20th July 2023 to measure the existing performance of typical walls and floors around the building.

The GSAD report sets out acoustic criteria with outline methods to achieve Approved Document E – Resistance to the Passage of Sound, 2003 edition (ADE 2003) for party walls and floors, internal partitions and reverberation time for common parts. Part E regulations set out different acoustic criteria for change of use and new build.

Option 1 – Alterations to floor above only



Option 2 – Alterations to ceiling below only



Excerpt from GSAD Feasibility Study

3.10 Transport Strategy

Site Access

Refer to

- EAS, Transport Assessment Report, July 2024
- 641-KS-03-XX-DR-A-10002 Proposed Site Plan
- 641-KS-70-XX-DR-A-11000 Proposed Parking & Refuse Strategies

The report provides transport planning input to support the proposed planning application for the redevelopment of Temple Dinsley into residential use. Excerpts from the report addressing the proposal's access to-and-fro site, different proposed apartments, new housing and one-off houses, car & cycle parking provisions, refuse collection strategy and fire tender access are described, with supportive drawings in Chapter 4,5,8 of the report. Highlights of these chapters are captured below:

A new vehicular path will be added at the south-west edge of the site boundary, extending a new path from School Lane towards Tank House and Pump House. In addition, new private vehicular paths are introduced in the Sports Hall Housing proposal, as well as towards the Summerhouse and Harwood house. All proposed new paths will be accessible by fire tenders.

Access for Fire Tender

A fire tender swept path analysis was carried out by EAS Civil Engineering Consultants. Proposed drives and driveways meets the statutory requirements for fire tender access to Main Building, Science Block, and Sports Hall Housing.

Car Access

Refer to

- "Hertfordshire County Council, HCC ref: NH/18376/2023, Highway Pre-Application Note, 21st May, 2024"
- "EAS, "Temple Dinsley, Preston, Hitchin, Hertfordshire SG4 7RT, Highways Pre-Application Note",13th May 2024

The proposal will provide a total of 127 parking spaces, including 94 allocated spaces for residents and 33 unallocated spaces for visitors

8.15 – The current proposal for 127 car parking spaces equates to an allocation of one space for each one and two-bedroom apartment, two spaces for each 3-bedroom apartment and house; and 33 unallocated visitor spaces. It is also proposed that all allocated parking spaces and a policy compliant number of unallocated parking spaces will be provided with EV charging capabilities.

8.16 It is proposed that the site will provide a minimum of 158 cycle parking spaces, formed of 130 long stay spaces for residents and at least 18 short stay cycle parking spaces for visitors; this meets the policy requirements as set out by NHDC.

Further details on car parking design, refer to 5.14 of DAS.

Refuse collection

8.17 – Refuse collection will be undertaken from within the site by the district's waste collection services. Bin stores are located within most residential blocks, allowing future residents to transfer their waste from their dwellings to these stores before collection day. For larger detached dwellings, residents will leave their bins within storage points within the curtilage of their property. There are four refuse collection points that site managers will move bins to, ready for waste collection day.

Alternative Modes of Transport

The report outlined the following access provisions, as per comments from the HCC, by the development proposal:

- The site is accessible by cycle "without the need to rely any personal vehicle."
- 15 min. cycle from nearby village to access everyday necessities, i.e. convenience store, post office, restaurants, village halls, public house/ restaurant, children's nursery, children's primary school, church playground, cricket club
- 25 min. cycle from site to southern side of Hitchin
- 30 min cycle towards west side of Stevenage
- The site is accessible by foot
- Linkage to Public Rights of Way (footpath, bridgeways) from existing school site to wider village of Preston
- North Chiltern Trail walking route
- The site is accessible by public transport (bus & rail)
- Proposed bus shelter ("Proposed off site improvement within Preston Village - SK02")
- The site has provision of cycle storage infrastructure on-site to encourage low-carbon mode of transportation.



FIG. 376.—LOOKING INTO FORECOURT FROM THE EAST.
A study in brick and iron.



3.11 Trees

Refer to

- Sharon Hosegood Associates (SHA), AIA Arboricultural Impact Assessment Report (SHA ref: 1676), June 2024.
- SHA 1676 TPP Site - Tree Protection Plan, July 2024
- SHA Executive Summary - July 2024
- Appendix 1 SHA 1676 Temple Dinsley Tree Survey Sheets - SHA Tree Survey

Extract from Executive Summary:

This report includes detailed tree survey sheets, plans and the Arboricultural Impact Assessment. All information is in accordance with the British Standard (BS 5837: 2012 "Trees in relation to design, demolition and construction. Recommendations" (referred to as BS). The proposals have been carefully designed to minimize impact to trees and follows close design team collaboration. The vast majority of trees will be retained, although two discrete areas of the mid last century plantation 'Summerhouse Plantation' will be removed. Tree planting will exceed the NHDC Tree Strategy Policy of requiring two trees for every one tree removed, including new woodland planting of a greater species diversity than the relatively poor quality, self sown sycamore dominated parts of the plantation which is required for removal for development. The existing landscape screens all of the proposals, and will be enhanced by planting which is appropriate for the biodiversity and landscape setting.

Categorisation of tree features - trees/groups/hedges/woodlands	Total	Trees/groups to be retained	Trees/groups to be removed
Category A	28	28	0
Category B	391	380	11
Category C	511	413	98
Category U	123	74	49
Total	1053	895	109+49 U

Table 1– tree numbers by category – (U categories exclude tree works required for safety reasons)

Trees/groups to be retained	Trees/groups to be removed	Trees to be planted	Net gain
895	109 (excluding U)	335	226 plus woodland planting

Table 2 – tree numbers