

Design, Access & Heritage Planning Statement
Revision B 05/09/22

Bishop's Stortford Town Council Offices
The Old Monastery, Windhill, Bishop's Stortford

Renovation Works to Reduce Energy Consumption & Carbon Footprint

Bishop's Stortford Town Council occupies The Old Monastery in Bishop's Stortford a Grade II Listed building in the town centre Conservation Area. While acknowledging its responsibility to preserve and protect the listed building it occupies, the Town Council also recognises the importance of the climate emergency in its Constitutional Policies as follows:

"the severe threat posed by man-made climate change and other man-made activities which contribute to the degradation of the natural environment and is committed to taking concrete and measurable action to reduce the environmental impact caused by its activities and to influencing others, to the extent that it is able, to do likewise. The Town Council will embark, with immediate effect, on a programme of analysis and reduction of its own environmental impact with a specific focus on the consumption of energy, water, materials and in particular non-recyclable materials"

In addition to this, the council also has duty to seek the most cost-effective measures and obtain 'value for money' wherever possible in its procurement policies. This means that any measures to improve the energy efficiency and reduce the carbon footprint of its buildings and activities must also be weighed against the financial considerations of what is possible within constrained budgets, while at the same time maintaining the heritage assets it occupies for future generations.

Therefore, the approach taken with the proposed work is to consider the following:

- 1) Ensuring the existing buildings are in a 'Retrofit Ready' condition with any maintenance issues being taken care of
- 2) Prioritising proposals that will result in the minimum amount of historical fabric being removed or altered
- 3) Where the optimum conservation, energy saving solutions are cost prohibitive temporary alternatives will be considered that preserve the building fabric for future users

It should also be noted that no changes are proposed to the vehicular or pedestrian accesses to the building.





1874-79 OS Map



1896 OS Map



1946 OS Map

Heritage Statement

Summary

This is a Desk Based Assessment for the proposed works to The Old Monastery, Windhill, Hertfordshire CM23 2ND.

The property is Grade II listed and is within the setting of a listed buildings, including the Grade I Church of St Michael, Grade II* Boars Head Inn and much of Windhill (Grade II). The property is also located in the Bishop's Stortford Conservation Area.

The aim of this statement is to recognise the significance and character of the heritage assets and to assess whether the works have affected the significance, character, or setting of the heritage assets.

This report has been drafted to allow for planning and listed building consent purposes. A site visit was undertaken as part of the report.

Methodology

This heritage statement follows the requirements to comply with National Policy Planning Framework (2019) section 16 this statement provides:

- An understanding/describe the significance of the heritage asset
- An understanding/contribution to the setting of heritage assets
- An assessment of the impact of the proposed works on the heritage asset
- An assessment of the impact of the proposed works on the setting of the heritage assets

The National Planning Policy Framework (NPPF 2019), paragraph 189 which states

'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary...'

This statement has been undertaken with the consideration of the level and extent of the proposed works and is not to be considered as a full historical report or conservation plan. In addition, it follows the guidance of the following:

- Planning Practice Guidance on Conserving and Enhancing the Historic Environment (2014)
- Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (Historic England, 2008)
- Historic Environment Good Practice Advice in Planning Note 3: The setting of Heritage Assets (2nd Ed., Historic England 2017)

Information Sources Consulted

This Heritage Statement has been prepared using a variety of resources to provide an understanding of the site and the wider setting. Sources include:

- Local Authority website, including the Conservation Area Appraisal
- National Heritage List for England (NHLE) via Historic England – Search the List
- Heritage Gateway
- Information, historic maps and photographs (online)
- Google Searches

The Site

The site is located in the historic core of Bishop's Stortford, a historic market town in Hertfordshire, just west of the M11 motorway on the county boundary with Essex, 27 miles (43 km) north-east of central London, and 35 miles (56 km) by rail from Liverpool Street station.

The site forms part of the Council Offices. The building is a mix of connected structures that has developed and extended.

Listed Building Description

The listed building description provides the following summary:

Early and late C17, C18 and early C20 range of buildings. Painted and red brick, stone, red tile roofs. Two and a half storeys. East building, formerly Windhill House. Late C17 front to early C17 timber frame, re-windowed C18. Dutch style square hipped roof. North front to street has 4 ground floor and 3 first floor sash windows. East elevation is 5 bays divided by deep plain pilasters. Central door, sash windows, modern dormers. Garden elevation, early C20 rebuild with 2 storey canted window bay. Interior has fine Jacobean oak well staircase with open work panelling and balustrade. Plastered beams with running patterns.

C18 two storey centre building. Sash windows and canted window bay on west, adjoining arched door to church.

Church on west. 1906 by Doran Webb Italian Renaissance style. Two storeys. Street facade, stone with red brick curved aisle walls on rough stone plinths. Paired Ionic pilasters to sides of centre block, with open pediment and first floor crucifix relief. Central ground floor pedimented door. Interior has groin vaulted nave, apsidal ended. Semi-dome aisle chapels divided by segmental doors. Pilasters to walls. Stucco cherubs and mottoes in aisle arch spandrels. Four column Tabernacle over altar. Apsidal ended Lady Chapel with rich painted and mosaic decorations at south-west.

Hertfordshire HER Notes

Monument Types & Protected status

Timber Framed House (Post Medieval - 1501 AD to 1900 AD)

Monastery (1903-1994, Twentieth Century - 1901 AD to 2000 AD)

Listed Building (II) 160988: ST JOSEPH'S MONASTERY AND ST JOSEPH'S CHURCH

Full description

Immediately west of St Michael's Church is a complex of 17th century and later buildings <1>. The east building (formerly Windhill House) has an early 17th century timber frame with a late 17th century frontage and 18th century windows. Inside is a Jacobean oak staircase. The other buildings date from the 18th and early 20th centuries. Windhill House and the area to its rear became a Redemptorist monastery in 1903. The Order was founded in 1732 at Scala, near Amalfi in Italy, by St Alphonsus <3>. Their first English church was built in Clapham in 1843 and they arrived in Bishop's Stortford in 1900 where they occupied a small house in Portland Road with an attached iron church <2>. They left Bishop's Stortford in 1994 and Windhill House is now used as commercial premises

It should be noted that the areas of the building to which this application applies were constructed in the 20th century. The main offices were built circa 1900-1920 and there was an extension in the later part of the 20th century to install a new staircase to the first floor.

Development of Site

Historic Maps

The earliest OS map (1876-91) shows a large building which extends into the rear garden. The house and the substantial grounds were referred to as Windhill House. The 1880 map shows the same collection, but with formal garden layout.

The 1896 map shows the front section of the building fronting the courtyard is removed, and it not shown again until the 1921 OS map which also shows the construction of the Roman Catholic church.

Historic Photographs

A Google search showed limited photographs, with most of them taking in the church or the High Street.



c.1920s postcard

Site Analysis

The site visit was undertaken on 4 August 2020. This sought to identify any features of historic and architectural significance. The site visit was limited to the ground floor office and the two rooms on the first floor where the proposed works are.

Exterior

The property is formed of a group of buildings which form a courtyard. Viewed from the street, The Old Monastery is connected to the Roman Catholic church with the front elevation stepping down from the three-storey part of the building, now a separate demise, to the more recent two storey building that the council now occupies.

The front elevation is painted brickwork, with timber sash windows. The roof has plain red tiles roof covering.



Front elevation views

An arched undercroft leads through to an external courtyard whose elevations are principally brickwork with one rendered elevation to the east. There is also a late 20th century extension on the north side of the courtyard which provided a new staircase to the first floor and entrance to the council offices.



Courtyard view looking West



Courtyard view looking East



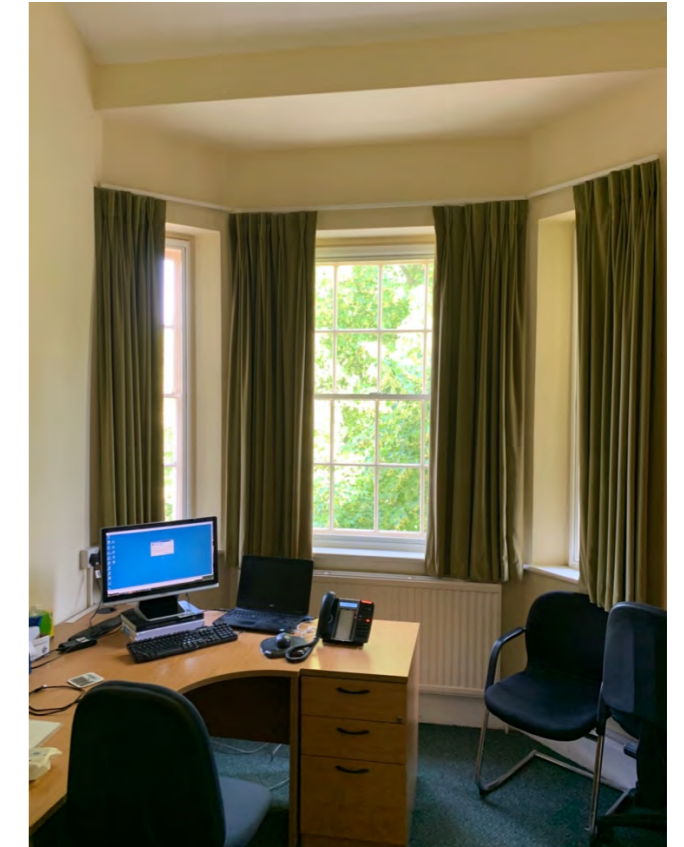
Courtyard view looking South East



Courtyard view looking North West



View of first floor open plan office



First floor cellular office

Grounds

The property still retains the grounds which adjoin the Church of St Michael.



Aerial views of The Old Monastery & Grounds



Identification of other Heritage Assets

Within the setting there are several listed buildings, on Windhill including St Michael's Church to the East, 3-5 Windhill and 12-14 Windhill opposite.

Setting of the Asset

The NPPF states that the setting is

The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be natural.

Criteria for assessing Significance

The criteria used for assessing significance is based upon the Historic England guidance – Conservation Principles: Policy and Guidance and their renewed Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019)

Significance has been categorised into three main headings:

- Archaeological interest: the potential of a place to yield evidence about past human activity
- Architectural or artistic interest: the ways in which people draw sensory and intellectual stimulation from a place
- Historic interest: the meaning of a place for the people who relate to it, or for whom it figures in their collective memory or experience

In some circumstances, scientific or technical value may be considered as a building may have used new technology or materials to achieve the design.

The NPPF (2019) confirms that significance is:

The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance.

Each of these values is rated low; medium or high significance to provide an overall understanding of the building or place.

Assessment of Significance

The archaeological interest of the site is reasonably high having been designated in local planning policy as an area of archaeological significance. However, the proposals do not require any excavations and so this significance is not affected by the proposals.

The architectural and aesthetic interest is of medium significance as recognised by the Grade II listed building status and its contribution to the character of the conservation area.

The historical interest of the range of buildings that make up The Old Monastery is reasonably important in the local context however the proposals are extremely limited to the main public façade of the building as viewed from Windhill and although an intervention is made in the more private courtyard area this can be seen as a temporary situation which can be removed at a future date without damage to or loss of the building fabric.

Proposals

Requirements for Change

As noted in the introduction to this statement Bishop's Stortford Town Council has a stated aim to reduce its environmental impact with a focus on energy, water and materials. These proposals seek to carry out these aims to the Council's own offices. They will include the following work:

- Small scale maintenance to get the building retrofit ready such as repairing leaks and addressing any damp issues.
- Removal of roof tiles, installation of insulation between rafters and reinstatement of existing roof tiles on breathable roof membrane. To avoid condensation ventilation over the top of the insulation will be required so small ventilation strips will be installed under the eaves. Ventilation tiles will also be required close to the ridge (refer to materials photographs). Note, the overall thickness of the roof will not be increased.
- Ultrathin high performance (26mm thick Aerogel Thermaslim or equivalent) Internal wall insulation to ground and first floor rooms that will minimise any impact on room proportions including window reveals where a thinner, 16mm thick, board will be used. This will require the removal of the existing radiators and skirting. The skirting will be retained and reinstated.
- General draught proofing to doors and windows where not already present.
- Secondary glazing where not already present in staircase.
- Installation of Air source Heat pumps in courtyard that can be quickly and simply removed to return the courtyard to its original state in the future without harm to the historic fabric of the building.
- Additional cavity insulation to 20th century extension in courtyard to house the staircase to the first floor.
- Add a ventilation system to the first floor offices
- Add internal access hatch to roof void over arched ceiling for future maintenance.
- External insulation to underside of undercroft passage into courtyard. This will not come below arched entrances to this space.

Design Considerations

The proposed scheme will:

- Have minimal intervention/loss to the historic and/or significant fabric
- Maximum retention of historic and/or significant fabric
- Use like-for-like materials where possible and materials
- Where interventions cannot meet these criteria, they should be recognisable as temporary and allow the building to be returned to its original state in the future.
- Be a whole building approach to minimise heat loss and condensation risks

Proposed Scheme & Materials

The proposed scheme and materials are detailed in the accompanying drawings to this application.

Condition of Asset

Under the NPPF, the local authority should not take into account the condition of the building where there is evidence of deliberate neglect of, damage to, a heritage asset however in this instance maintenance of the asset is good and there is little outstanding maintenance required.

Impact Assessment

In 2008, the then English Heritage (now Historic England) published their 'Conservation Principles, Policies & Guidance', which provided a framework and guidance on which to assess proposed works to historic buildings and other heritage assets.

Within this document, they defined 'conservation' as:

'the process of managing change to a significant place in its setting in ways that will best sustain its heritage values, while recognising opportunities to reveal or reinforce those values for present and future generation'

It is this advice and ethos that the proposed impact of the works is assessed against the 'special architectural and historic interest' and significance of the building and its setting.

Criteria for assessment

The impact assessment will review the proposed works and how these may have an impact on the heritage asset and its significance. Not all works to a designated heritage asset will have a negative impact, some works will have neutral or positive impact on the significance or character.

Impact on the Listed Building

The proposals will have a very minor impact on the listed building as the absolute minimum of historical fabric is being removed and only to the early 20th century parts of the building.

Impact on the setting of the Listed Building

The main element of the proposals that has an impact on the setting of the listed building is the ASHPs however these will be discreetly located in the courtyard and not visible from the street. They will be screened, and they will clearly read as a new intervention. The installation will require the minimum disturbance of the building fabric and can be easily removed without further damage to the building fabric in the future.

Impact on the Character of the Conservation Area

The proposals will have very little impact on the public areas of the Conservation Area as they are mostly not visible from the street or very small scale at high level.

Summary

We appreciate that the proposals will have some impact on the listed building and its setting however, we believe these impacts to be minimal. They also only affect the later parts of the building and are largely temporary with the ability to be removed without significant damage to the listed fabric. As discussed, the proposals will also help the town council meet their stated aim of reducing their own environmental impacts.

Detailed Proposals

1) Retrofit ready

Drainage checks will be made to ensure that moisture can be removed from the site effectively rather than accumulating around the building bases of leaking from defective rainwater goods. Checks will be made during wet weather to ensure all rainwater goods are functioning properly and are not blocked.

All other necessary maintenance works will be undertaken at an early stage, with the root causes of any moisture issues identified and resolved and the building made weathertight if this is not already the case.

The building fabric will be as dry as possible before the main works commence and wherever possible permeable materials will be used so that drying can continue post-installation.

2) Roof / Ceiling

It is assumed that the roof area above the arched ceiling is uninsulated. This area will therefore account for a considerable amount of heat loss (estimated at c.25% of all heat loss for a typical building), and insulation should be a priority. (Leaving the roof area uninsulated is not an appropriate approach and would limit the benefits of any other thermal improvement measures as heat would continue to be lost through the uninsulated roof.)

The proposal is to remove the existing roof tiles and place insulation between the rafters. The insulation depth will be determined by the existing rafter depth and the need to allow for 50mm ventilation above the insulation. Where there is a small void at the apex of the roof insulation will be placed between the horizontal roof members to a depth of 300mm, while at the same time maintaining a clear ventilation path across the roof. A breathable membrane will then be placed over the rafters. New battens will be required but then the existing roof tiles will be reinstated with any new tiles required to match existing. At the same time the ventilation tiles and slots will be inserted (refer to materials photographs). This work will not affect the overall roof thickness and existing soffits and fascias will be retained as far as possible.

The existing ceiling will be retained as is apart from the insertion of a frameless access panel to the roof void in the cellular office next to the main space.

3) Exposed Soffit to Undercroft

The underside of the first-floor open plan office will be insulated where the undercroft passes underneath. This will be done using rigid insulation boards with render. This new lining will be set above any detailing to the arch and will not be visible from the street of the courtyard.

4) Windows & Doors

All windows in the office spaces have been upgraded with secondary glazing. As this is relatively recent (<10 years old) and no performance issues have been raised, there will be no further interventions at this stage (although basic maintenance of the timber primary windows is required in some cases to prevent the spread of damaging rot). However, the windows in the stairwell remain unimproved and, while this is an access space rather than a work space, significant heat loss from this area will have a knock-on effect on the adjacent office rooms. Therefore secondary glazing will be added to these windows to match that already in use in the main offices.

As well as addressing heat loss through the fabric, draughts also require attention. While this is not necessary where secondary glazing has been installed, any unimproved doors will be treated by incorporation of brush strips in routed-out grooves or compression seals combined with automatic closers.

5) Walls

The solid external walls will be insulated on the inside. Internal insulation can be very effective with proper preparation and detailing, and particular care will be taken to ensure continuity of the insulation around window reveals etc.

With due care and attention, solid masonry walls can often be successfully insulated to achieve very low U-values. However, in order to build in some tolerance (in anticipation of imperfect buildings and practice, and to minimise the risk of any issues post-retrofit), best-practice guidance – by respected experts including the Sustainable Traditional Buildings Alliance (STBA) and the BRE – now recommends *not* pushing U-values as low as possible.

The existing plaster is not lime and no problems with condensation have occurred to date. It is therefore proposed to retain the existing plaster and to insulate the walls the walls with an ultrathin (26mm) insulating board (refer to details). A thinner board of 16mm will be used for the window reveals. In this way, the impact on the proportions of the room will be kept to an absolute minimum while at the same time improving the thermal performance of the space. Links to product information are below:

Wall insulation

<https://www.thermablok.co.uk/site/wp-content/uploads/2021/11/Thermablok-Aerogel-ThermaSlim-Internal-Wall-Insulation-TDS-BBA.pdf>

Window Reveals

<https://www.thermablok.co.uk/site/wp-content/uploads/2021/11/Thermablok-Aerogel-ThermaSlim-Internal-REVEAL-Insulation-TDS-BBA.pdf>

6) Ventilation

As airtightness and insulation are improved it is important to improve ventilation to the main spaces.

Thermally efficient buildings require consideration of three interconnected elements: heat loss of the building fabric, air tightness and air quality. Radical improvements in air tightness need to be

reflected in ventilation systems that can maintain appropriate air quality measured in air changes/hr. Building Regulations requires air tightness at 10 m³/hr/m² air loss at a pressure of 50 Pa, and adequate ventilation can be provided by trickle vents and other passive ventilators. Sustainable construction is typically driving air tightness to below 5 m³/hr/m², at which point passive ventilation measures struggle to provide adequate air quality. Mechanical ventilation systems provide the best solution and are a fundamental part of any zero-carbon strategy for a development. Using heat recovery can also help to reduce heat loss through air leaving the building and filtering also offers protection against unwanted pollutants from outside.

It is therefore proposed to add a ventilation system in the existing roof void. This will require an intake and extract grille in the external roof as well as in the office ceilings.

7) Space & Water Heating

While the existing boiler is relatively efficient, gas-fired heating is not sustainable in the long term as gas is a fossil fuel and a finite resource. Currently it is relatively cheap compared with other fossil fuels, but there is a considerable shift towards electric heating systems fed by renewable energy sources.

Heat pump systems take heat from the ground, air or water and convert it to a usable temperature to provide space and/or water heating; the space heating is circulated through a conventional distribution system, e.g. radiators, under-floor heating. They run on electricity but are deemed to be renewable as for every unit of electricity they use they generate several more; this is known as the coefficient of performance (COP). Efficiency is also dictated to some degree by the efficiency of the building, as heat pumps work best in buildings that are relatively well insulated and airtight.

We are therefore proposing to install a small air heat pump to be located in the corner of the courtyard, this will be fully screened with a metal cover that would be black.. The pipework into the building will be discretely located in a recess in the undercroft and also concealed with a metal cover. This approach has the added benefits of being reversible and requiring only minimal amounts of the historical fabric to be removed. The heat pump will work in tandem with wall mounted VRF units (instead of radiators) internally to provide space heating and cooling if necessary.

Hot water will eventually be supplied by small electric point of use heaters once the current boiler is at the end of its useful life.

8) Lighting & Appliances

A simple first step in minimising electricity demand is incorporation of low-energy lighting & appliances throughout. LED lighting will therefore be installed to the office spaces, which will dramatically reduce energy consumption and give a high quality of light and a long lifespan. High-efficiency lighting will also reduce internal heat gains and help manage any overheating risk. These will be suspended fittings.

9) Conclusions

'Conservation, at its most basic, involves handing on to future generations what we value. Conservation advisors are not there to stand in the way of change, but to negotiate the transition from the past to the present in ways that minimise the damage that change can cause and maximise the benefits. Conservation is a process which seeks both to question change and to

reconcile modern needs with the significance of what we have inherited in order to safeguard the interests of future generations' (English Heritage)

'East Herts in 2033: The rich heritage of historic buildings...in the District will have been protected and enhanced... Measures will have been taken to adapt to the effects of climate change, which will have included...supporting the adaptation of buildings to cope with extremes of heat and cold in an energy efficient manner' (East Herts District Council)

'Innovation can be incorporated into development schemes via building construction methods, building materials, and the use of new technologies... Innovation can be an important design element if it raises the standard...by enhancing its performance, quality and aesthetics, resulting in its desirability, longevity and status. Innovation does not have to be limited to... modern districts. If sensitive and intelligent design is utilised, new and old can co-exist' (East Herts District Council)

The town council offices at The Old Monastery have the potential to be made more sustainable in the long term.

This retrofit assessment has considered the condition and proposed retrofit of The Old Monastery, and a range of options to improve energy efficiency, comfort, running costs and wider sustainability have been assessed.

In terms of conservation, we feel the justification for the proposals is clear and is further reinforced by national Building Regulations, climate policy and local planning and sustainability policy. All the proposed measures seek to minimise the loss of historical fabric while at the same time improve the thermal performance of the building. As noted by East Herts District Council, 'the vast majority of significant places survive because they are capable of beneficial use. Their maintenance is justified by their usefulness to and appreciation by their owners.'

Appendix

Policy Relevant to the Proposals

East Herts District Council has a wealth of policy documentation relevant to the proposed retrofit of The Courtyard. This section draws together much of the key text, in order to support planning and listed building applications.

The main reference document is the 2018 East Herts District Plan document. There are no specific policies in relation to retrofit or sustainable design, but a Sustainable Design Toolkit has been developed for the area which includes a wide range of relevant material covering local climate change impacts and sustainable design principles, and at the time of writing this report further content covering retrofit is pending.

The 2014 Bishop's Stortford Conservation Area Appraisal & Management Plan does not have a particular focus on sustainable refurbishment, but it does highlight the National Planning Policy Framework's (NPPF's) emphasis on promoting sustainable development and seeking 'positive improvements in the quality of the built...and historic environment'. It notes the 'generally...high quality built environment' of the town, and the Old Monastery is specifically referenced (but for its history and grounds rather than its architecture).

East Herts District Plan (2018)

The purpose of the planning system is to help achieve sustainable development...contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to...mitigate and adapt to climate change including moving to a low carbon economy.

Policy INT1 Presumption in Favour of Sustainable Development - The District Council will work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible.

Vision: East Herts in 2033 - The rich heritage of historic buildings, features and archaeology in the District will have been protected and enhanced... East Herts will be more sustainable through measures to combat the effects of climate change... Measures will have been taken to adapt to the effects of climate change, which will have included...supporting the adaptation of buildings to cope with extremes of heat and cold in an energy efficient manner.

Strategic Objectives - To mitigate the effects of climate change by reducing carbon dioxide emissions [and support] decentralised, low carbon and renewable energy and to protect and enhance the historic environment of East Herts, promoting good design.

Bishop's Stortford will preserve its market town character and the quality of the town's historic core will be respected in development proposals.

The importance of good design in securing high quality development is widely recognised. Design is not just about visual appearance and function: it is about a whole range of social, economic and environmental considerations, which together are a major contributor to quality of life ... Good design is a key aspect of sustainable development and can contribute positively to making places better for people.

Design Objectives: To achieve high quality design, there are several intrinsic sustainable development objectives that should be understood by applicants... These are to:

- Respect, improve and enhance the existing surrounding environment

- Respond to existing patterns of development and the local context
- Be attractive in appearance but receptive to original design and innovation in construction techniques, design and technologies
- Be adaptable and flexible to the needs of the occupiers now and in the future
- Be socially inclusive, catering for the current and changing needs of the district's population
- Encourage good health and well-being
- Incorporate measures to mitigate and adapt against the effects of climate change

Sustainable Design

There are many industry examples, toolkits, guidance documents and best practice available that provide sources of information on specific aspects on sustainable design. Building Futures is a Hertfordshire guide to promoting sustainability in development. It includes an interactive Sustainable Design Toolkit.

'East Herts Council aspires for all development to exceed national standards and Building Regulations where possible and developments will be expected to utilise the best available sustainable design and technology as possible ... Where necessary, a Design and Access Statement has been completed and accompanies the application. The statement should make it clear how the proposal has integrated sustainable design principles into the scheme.

'Buildings and landscapes that demonstrate a distinct character and are aesthetically pleasing, contribute greatly to the success of a place ... If a development proposal is based on a sensitive understanding of site and context, it can exhibit a distinct character and identity while also belonging to the wider locality.

'Innovation can be incorporated into development schemes via building construction methods, building materials, and the use of new technologies (e.g. solar panels and passive ventilation). Innovation can be an important design element if it raises the standard...by enhancing its performance, quality and aesthetics, resulting in its desirability, longevity and status. Innovation does not have to be limited to... modern districts. If sensitive and intelligent design is utilised, new and old can co-exist.

'The District Council recognises that heritage assets are an irreplaceable resource that should be conserved in a manner appropriate to their special interest and significance.

'The long-term management of heritage assets is essential and where inadequate measures are taken to maintain heritage assets such neglect may result in an asset falling into disrepair, which could result in irreparable damage to or the loss of the asset.

Policy HA1 Designated Heritage Assets

Development proposals should preserve and where appropriate enhance the historic environment of East Herts ... The Council will, as part of a positive strategy, pursue opportunities for the conservation and enjoyment of the historic environment recognising its role and contribution in achieving sustainable development.

Policy HA4 Conservation Areas

New development, extensions and alterations to existing buildings in Conservation Areas will be permitted provided that they preserve or enhance the special interest, character and appearance of the area ... Proposals will be expected to:

- Respect established building lines, layouts and patterns
- Use materials and adopt design details which reinforce local character and are traditional to the area
- Be of a...design and overall character that accords with and complements the surrounding area
- In the case of alterations and extensions, be complementary and sympathetic to the parent building

Listed buildings of special architectural or historic interest must be sensitively repaired and improved, using traditional materials and techniques. Appropriate and sustainable new uses should be found for them in order to secure their future survival.

The listing of a building is intended to ensure that it will be conserved in accordance with its significance. However, alterations and improvements can be made where they are compatible with the special architectural or historic interest of the building.

Policy HA7 Listed Buildings

The Council will actively seek opportunities to sustain and enhance the significance of Listed Buildings and ensure that they are in viable uses consistent with their conservation. In considering applications the Council will ensure that proposals involving the alteration, extension, or change of use of a Listed Building will only be permitted where:

- The proposal would not have any adverse effect on the architectural and historic character or appearance of the interior or exterior of the building or its setting; and
- The proposal respects the scale, design, materials and finishes of the existing building(s), and preserves its historic fabric.

The vast majority of significant places survive because they are capable of beneficial use. Their maintenance is justified by their usefulness to, and appreciation by, their owners.

Climate change is expected to result in hazards such as heatwaves, flooding, and drought. Adaptation means improving our resilience to such impacts ... Measures to address overheating may be undertaken at building level ... Examples of measures include...minimising energy demand [and] using materials that prevent the penetration of heat to a building ... Such measures may have a number of wider benefits, including reduced energy bills and improving the quality of the built environment.

Policy CC1 Climate Change Adaptation

All new development should demonstrate how the design, materials, construction and operation of the development would minimise overheating in summer and reduce the need for heating in winter'

There are four main types of approach to reduction of carbon emissions from development. These are as follows:

- Reduce energy demand by providing natural ventilation and illumination, good insulation, and shading as described in relation to climate change adaptation
- Increase energy efficiency through the use of efficient services and appliances, and low-energy lighting
- Generate heat and/or power through on-site low and zero carbon technologies such as...solar panels...or heat pumps
- Offsetting on-site carbon emissions through off-site means, for example retrofitting existing buildings elsewhere...

These four approaches are usually represented as an energy hierarchy ... The most effective ways of reducing carbon dioxide...must be fully explored first.

Policy CC2 Climate Change Mitigation

All new developments should demonstrate how carbon dioxide emissions will be minimised across the development site, taking account of all levels of the energy hierarchy. Achieving standards above and beyond the requirements of Building Regulations is encouraged. Carbon reduction should be met on-site unless it can be demonstrated that this is not feasible or viable ... The energy embodied in construction materials should be reduced through re-use and recycling, where possible, of existing materials and the use of sustainable materials and local sourcing.

Policy CC3 Renewable and Low Carbon Energy

The Council will permit new development of sources of renewable energy generation, including community led projects, subject to assessment of the impacts upon environmental and historic assets. 'Policy CC3 takes a balanced approach, promoting renewable and low carbon energy where the impacts can be satisfactorily mitigated. The Council encourages proposals that embrace the use of renewable, zero and low-carbon technology.