

1.1 Preamble

- 1.1.1 This Environmental Statement has been prepared on behalf of J.H Leeke & Sons Ltd, to accompany Planning and Listed Building Consent applications that seek permission for amendments to certain elements of the schemes approved under planning permission 2005/00087/FUL (22nd December 2006) for the comprehensive redevelopment of Hensol Castle and its associated land and Listed Building Consent 2008/01115/LBC (June 2006) for the conversion of and extension to the castle and works to the "pre 1947 curtilage buildings" (the former southern ward blocks).
- 1.1.2 The original planning application site included areas of land and buildings now excluded from the current application site. Those areas/buildings are identified below and have been excluded because
 - The conversion of the former "H" ward (now known as Talbot House) to residential apartments has been completed in accordance with the approved plans, the conditions of the permission have been fully discharged and, accordingly, the development benefits from a fully implemented extant planning permission.
 - Full planning permission has been granted and implemented for the construction of a sports pavilion and sports/training pitches in the location previously approved for the development of new-build holiday accommodation under permission reference
 - Full planning permission has been granted and implemented for the construction of three training pitches for the FAW and WRU under permission reference
 - Full permission has been granted for the demolition of the northern ward blocks and their replacement with a new-build private hospital which is under construction under permission
 - Full permission has been granted and partly implemented for the renovation and extension of the dwelling known as Ty Hensol under permission
 - The internal road layout and the layout, configuration and landscaping of the main parking areas for both the new hotel/spa and the apartment blocks have been amended and approved through the discharge of various conditions, in particular conditions 4, 5, 10, 14, 17, 21, and 24 of permission 2005/00087/FUL.



- 1.1.3 Accordingly, those specific elements of the original scheme have been excluded from the current applications save that the road layout and parking areas are shown as an integral part of the revised masterplan. The consequence is that the current application site, shown on the Plan at Appendix 1, is considerably smaller than the site and proposal environmentally assessed and then approved under permission 2005/00087/FUL.
- 1.1.4 J.H Leeke & Sons Ltd acquired the site from the National Assembly for Wales following the decision by the Bro Morgannwg NHS Trust to surrender their lease on the hospital property. A development brief was prepared by the local planning authority to provide a planning framework for the site and both the original and this revised environmental statement have been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. This Updated Environmental Statement addresses revised proposals for:
 - The conversion of the Grade 1 listed castle and associated service courtyards to a Spa Hotel.
 - The construction of additional serviced accommodation for the spa hotel by the addition of an extension to the immediate north of the castle building.
 - The conversion of **eight of** the existing nine southern ward blocks and central community building into **52** private residential apartments.
 - A new two-storey staff accommodation building located to the north of the walled garden.
 - The restoration of the walled garden.
 - A complete landscape master plan for the whole site and an ecology and landscape management programme (Appendix 2), both of which have already been approved but clearly form an integral part of the current revised proposals.
- 1.1.5 This Updated Environmental Statement is not a stand-alone document and must be read in conjunction with all other elements of the submissions, which include the application forms and associated plans, the updated technical appendices, and the updated non-technical summary, the updated Transport Assessment, the Deed of Variation for the originally executed Section 106 Agreement, and the Design and Access Statement which was not a requirement of the previous applications but is now required through the T&CP (GDP)(Amendment)(Wales) Order 2009 and the Planning (LB's and CA's)(Amendment)(Wales) Regulations 2009 to accompany all planning and listed building consent applications.



1.2 Legislative Framework

- 1.2.1 The purpose of an Environmental Impact Assessment is to provide the local planning authority, when determining a planning application, with sufficient information to allow it to properly assess the environmental effects of a project.
- 1.2.2 The legislative background for EIA originated with the European Community Directive on 'The Assessment of the Effects of Certain Public and Private Projects on the Environment' (85/337/EEC) as amended by Directive 97/11/EC. These directives are implemented for the purpose of determining planning applications via the Town and County Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 which came into force on 14 March 1999.
- 1.2.3 The above regulations establish the criteria which determine whether Environmental Impact Assessment is necessary or not and identify the nature and scale of the projects and their applicability to be determined as Schedule 1 or Schedule 2 projects. Schedule 1 projects require EIA in every case. Schedule 2 projects may or may not require EIA dependent on whether the project in question is likely to give rise to significant environmental effects by virtue of factors such as nature, size or location.
- 1.2.4 The Local Planning Authority has confirmed that the proposed development falls within Schedule 2 (Part 12(c)) of the above Regulations by virtue of the fact that it has potential for significant environment impacts. It has therefore determined that an EIA is required.

1.3 Structure of The Statement

- 1.3.1 This document provides the full text of the statement whilst Volumes 1 and 2 contain the Technical Appendices.
- 1.3.2 This document is divided into the following: -
 - This first chapter provides an introduction to the proposed development, describing in brief the project, site description and structure of the report;
 - Chapter 2 explains the background to and rationale for the applications;
 - Chapter 3 provides a description of the proposed development in terms of its physical form, land use and access arrangements;
 - Chapter 4 comprises a conservation and design statement that describes the rationale behind the design ethos proposed to be adopted;



- Chapter 5 covers the planning policy context against which the applications will be determined;
- Chapter 6 details the landscape character and visual impact assessment;
- Chapter 7 describes the impact of the proposal on the ecological interests of the site:
- Chapter 8 details the cultural heritage and archaeology;
- Chapter 9 comprises the transport and highways assessment;
- Chapter 10 describes the noise impact assessment;
- Chapter 11 relates to air quality;
- Chapter 12 covers the issue of waste;
- Chapters 13 and 14 provides a description of the ground conditions, hydrology and drainage arrangements for the site;
- Conclusions are drawn in Chapter 15.

1.4 Site Description

- 1.4.1 The application site lies on the western edge of the Ely Valley to the south of Llantrisant and is contained by rolling hills which rise steeply to the north east from the park. Hensol Castle is contained within historic parkland setting encompassing an area of around 63 hectares. The centre of the park is occupied by a large lake, which lies to the west of the Hensol grounds.
- 1.4.2 The site is currently split into a number of zones of existing buildings and landscape features which can be summarised as follows:
 - Hensol Castle a Grade I listed building, largely 2 and 3 storey forming a courtyard with the main entrance front on the south and single storey wings to the east and the west.
 - Southern Ward Buildings These pre-1948 inter-war hospital buildings are listed (under paragraph 1 of the planning (Listed Buildings and Conservation areas) Act, 1990) as they lie within the curtilage of the Castle and formed a part of the historic estate before 1st July 1948. The nine pre-1948 two storey buildings (only eight of which are included within this application), predominantly built of local pennant stone or render finish with a degree of architectural/historic importance. This area also includes the former concert hall building in the centre of the park and setting again a pre 1948 war building with steeply pitched slate roof. It displays clerestory windows with local pennant stone and bath stone dressings forming the envelope.



- Hensol Lake a large body of water lying to the west of Hensol Castle.
- The "Mill Pond" another significant body of water that lies to the east of the Castle.
- The Walled Garden
- The historic parkland including woodlands and key individual and protected tree species.
- 1.4.3 A Development Brief for the site was approved on 7th July 2004. It is a non-statutory document that does not form part of the Development Plan in terms of Section 54A of the Act. However, it is a material consideration insofar as the determination of the applications is concerned.
- 1.4.4 The Brief acknowledges other buildings, structures and landscape settings which are significant, namely the Teifi Ward and the residential buildings at the northern end of the site. However the development proposals do not affect these areas and therefore they are not discussed in great detail within this statement.
- 1.4.5 This assessment analyses the existing buildings and defines which buildings will be retained and enhanced where necessary. Structures recommended for demolition (and now demolished) are also identified, together with the extent of new build across the site.
- 1.4.6 The **original** buildings varied greatly in architectural and historical significance and the Development Brief defined which had particular architectural/historic quality which should therefore be conserved and enhanced.

Hensol Castle

- 1.4.7 Hensol Castle is recognised through its Grade 1 listing as a major Welsh country house, which retains eighteenth century fabric of national importance in the development of the Gothic style. It also represents a fine example of early Victorian re-modelling.
- 1.4.8 The building illustrates at least four major periods of evolution extending northwards from the original house and is arranged around two courtyards in a figure of eight.
- 1.4.9 The inner courtyard is predominantly two-storey and dominated by the three-storey elevation of the original house. A two-storey wing separates the two courtyards. The outer courtyard is enclosed on two more sides by single-storey wings and is enclosed to the north by a single-storey castellated wall. Beyond the outer courtyard wall to the north lays an independent third courtyard defined by single-storey walls and outbuildings.



- 1.4.10 External walls are predominantly constructed of rubble stonework, rendered in parts, with small areas of semi-dressed and coursed stonework to the courtyards. The external elevations have been castellated with crenulated parapets, arrowloops, towers and turrets. Pitched roofs have a natural slate finish and flat roofs are finished with lead sheet.
- 1.4.11 The baseline conditions of the castle are described in more detail in the Conservation and Design Statement in Chapter 4 of this statement.

Southern Ward Buildings

- 1.4.12 These buildings form a principal component of the hospital layout and lie to the south of the castle. They are divided by a strong axial line related to the Castle and laid in a radial pattern centred on the Concert Hall. Built generally at the same time, these nine 'C' shaped buildings (only 8 of which are included in the current application site) and the Concert Hall were built in the intervening years between World War I and World War II. They were identified within the Development Brief as architecturally significant by virtue of their relationship to, and association with, the Castle.
- 1.4.13 Predominantly constructed in pennant stone or render the buildings have pitched and hip slate roofs and are large two storey structures with slight variations in the fenestration and window detailing. Whilst some refurbishment works have commenced a large proportion of these buildings had boarded window openings or poor replacement glazing. The slate roofs were generally sound and the lead flashings and hip detailing did not show obvious signs of disrepair.
- 1.4.14 On some of the southern ward buildings there are later extensions to the inner wing. These have been rendered, and are punctuated by ill proportioned window openings inconsistent with the main fenestration pattern. All window openings are expressed with exposed bath stone lintels which give the buildings a harmonious character. These are also exemplified by the expressed feature cill courses which run around the buildings' perimeter, at ground and first floor level. The rendered ward blocks appeared generally to be in a greater state of disrepair, both in terms of the condition of the window frames and the render finish. These buildings do, however, have feature chimneys constructed in brown brickwork.
- 1.4.15 Appended to almost every building **were** unsightly single storey additions borne out of their function as part of the hospital accommodation.
- 1.4.16 The concert hall has a strong axial relationship to the castle, connected by mature tree lined boulevard running north to south connecting the two buildings. This building has an impressive steep pitched slate roof with a feature weather vane and



dovecote at its centre. It is also constructed in local pennant stone with bath stone dressings and well-proportioned window openings. It has clerestory glazing running the length of the building on each side of the roof, which projects out as a long dormer style window. Again, like the surrounding ward buildings there **we**re unfortunate appended, more modern, additional structures which de-valued the original design intent. Internally, this building has an interesting expressed ribbed structure. This adds to the building's uniqueness, both internally and externally.

1.4.17 Most of the southern wards are positioned directly within the open parkland setting. This setting is typically open grass with perimeter service roads. There are some extensive hard surfacing areas finished in tarmac around the building entrances. There are occasions where the perimeter of the building is enclosed by metal railings which are in a poor state of repair. These structures enforce the institutional history of their previous occupation.

Post War Buildings and Structures

- 1.4.18 The original Environmental Statement described the post war additions to the former hospital site which clearly had little architectural value and only contributed negatively to the original landscape setting. Those buildings were sited in a disorganised fashion as opposed to the strong site geometry of the pre war buildings and their relationship to the castle
- 1.4.19 In addition to these buildings there was a large plant room structure in the middle of the south parkland area which dominated the surrounding buildings. It was completely out of character with the scale of the original buildings and their landscape setting.
- 1.4.20 There were also a number of buildings to the north east of the service courtyard to the castle constructed from a "system build" design. They were identified and have now been demolished due to their limited architectural value and their proximity to the castle.

Walled Garden and Ancillary Buildings

- 1.4.21 Appendix 4 of the Development Brief (extract from 'CADW/ICOMOS Register of Parks & Gardens in Wales Glamorgan') indicated that there has been extensive research carried out regarding the history and former use of the walled garden.
- 1.4.22 In summary the walled kitchen garden lies to the north of the castle and to the east of the lake. The garden is a simple rectangular enclosure orientated in a west southwest to east northeast axis.



- 1.4.23 There is an overflow stream from the lake that runs through the middle of the walled garden in a straight channel. The walls of the garden are of a rubble stone construction which varies in height from up to 5m on the north and west sides and around 2-2.5m on the east and south sides.
- 1.4.24 Against the north wall one large and two small "lean to" glass houses, currently in poor state of repair, are located. Beyond the walled garden to the north are a series of workshops and outbuildings of very little architectural value. Again these are in a very poor state of repair. Some of these buildings are physically attached to the north face of the northern wall of the garden with the remainder on the other side of the service road forming a makeshift street.
- 1.4.25 The poor aesthetic value of these buildings and the poor state of repair has rendered these buildings appropriate for demolition.

Chapel of Rest

1.4.26 The Chapel of Rest is a single storey brick building with a slate pitched roof which lies to the east of the walled garden. This building is of the same era as some of the buildings to the north of the walled garden. However, it appears to be in a good state of repair and has some architectural value when viewed in the context of the other health related buildings.

Residential Buildings

1.4.27 There are three residential two storey buildings which lie in the north east corner of the application site. These are proposed to remain in their current use and one of them, Ty Hensol, is in the process of being renovated and extended in accordance with the permission referred to in paragraph 1.1.2.

The Historic Parkland

1.4.28 The historic park is included in the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, Part 1: Parks and Gardens. The landscape is Grade 2 listed in recognition of the survival of the main features of an important mid-eighteenth century landscaped park.



2 BACKGROUND TO, AND RATIONALE FOR, THE PROPOSALS

2.1 Introduction

- 2.1.1 This chapter describes the scale and scope of the marketing assessment undertaken to establish the most viable alternative use for the former southern ward buildings located within the historic parkland surrounding the castle.
- 2.1.2 It takes account of the fact that the castle is a Grade 1 listed building; that the ward blocks themselves are listed "by association"; that the land within which they sit is a historic garden listed as such by Cadw; and that it would appear to be the Council's primary objective to secure the appropriate protection of the fabric of the castle and to return it to an appropriate and sustainable long-term use. Additionally, the Council was keen to secure the removal of all the "modern" buildings within the site. That indicates that a prime consideration for the Council will be the visual quality of the site, its buildings, the spaces between them, and the landscaping around them post conversion.
- 2.1.3 Accordingly, the potential alternative future uses for the ward blocks is not determined just by the typical marketing conditions of location, accessibility, market requirements, investor confidence and so forth, but also by the constraints likely to be imposed upon future users by the conservation status of the site.
- 2.1.4 In undertaking a market review of the buildings' potential, therefore, it was assumed that uses that generate demands for external storage, significant servicing facilities within building curtilages, and access arrangements capable of accommodating goods vehicles of some scale would be deemed to be unacceptable on conservation grounds.

2.2 Marketing by The Health Authority

- 2.2.1 King Sturge were instructed as agents to market the disposal of the property in October 1999. The appointment was made by Welsh Health Estates on behalf of the vendor, the National Assembly for Wales.
- 2.2.2 Following the appointment considerable preparatory work was undertaken before formal marketing commenced during which time the Welsh Rugby Union made a direct approach to acquire part of the site for a rugby academy. That approach was rejected.



- 2.2.3 Formal marketing of the site commenced in late 2001 with national advertising being undertaken in November/December 2001. The property was fully exposed to the open market through local and national advertising and press editorial. This included general invitation of expressions of interest. Editorial coverage of the disposal was much more extensive than originally anticipated.
- 2.2.4 Formal expressions of interest were reported in February 2002 at which point there had been 50 firm enquiries including 32 formal expressions of interest. Among those 32 were 9 house builders and 7 major developers (commercial/mixed use). The remainder were agents or intermediaries acting for undisclosed clients.

Bidding

- 2.2.5 Informal tenders were invited by July 2002. Ten bids were received including that which proved to be for use as a resettlement centre for asylum seekers. With the exception of Barratt/Leeke Consortium, only one other <u>national</u> house building company submitted a bid at that stage.
- 2.2.6 Smaller niche companies and those proposing mixed use remained interested in submitting conditional bids. Following the submission of formal proposals and financial offers received by Friday 19 July 2002, the following were invited to submit tenders by Friday 22 November 2002:
 - The Barratt/Leeke Consortium.
 - Three niche residential/ mixed use developers with a proven track record on the conversion and rehabilitation of listed buildings.
 - A company acting for the Home Office seeking a secure unit.
 - A consortium proposing mixed commercial/ leisure/ residential development with an existing interest in another castle in South Wales.
 - One national housebuilder.
- 2.2.7 Although the property was not re-advertised at this stage a great deal of publicity was generated around the potential future use as accommodation for asylum seekers. There was also speculation in the local and national media that the Castle might be acquired by an international celebrity. Such media speculation served to publicise the availability of the hospital for acquisition on the open market.
- 2.2.8 Any further expressions of interest would have been reported to the client body under public sector disposal rules.



Bids Received

- 2.2.9 Six bids in total were received. One of the niche residential/mixed use developers did not submit a bid having secured preferred bidder status on another substantial listed building in South Wales.
- 2.2.10 On consideration it was recommended that the detail of the overage offer from the Barratt/Leeke Consortium be clarified with them to establish whether this was the best bid.

Clarification of the Bids

- 2.2.11 A meeting was held with the bidders on the 3 December. A number of bids were clarified over a period of 10-14 days following which a letter dated 13 December was sent by Leekes finally confirming the terms of their bid.
- 2.2.12 King Sturge are prevented from disclosing the precise amounts of underbids or the identity of underbidders.
- 2.2.13 A copy of the marketing literature is attached at Appendix 3. It can be seen that there is a clear statement on planning in that the established use fell largely within Class C2 and that potential alternative uses within that use class would not require planning consent. Reference is also made to Policy COMM2 re-use of redundant hospitals.
- 2.2.14 King Sturge confirmed that the vendors placed no constraint upon the potential end use and the premises were available on a truly open-market basis. It was not the intention of the previous owners, therefore, to restrict the future alternative use of any of the buildings and, in particular, the ward blocks to residential.

2.3 Market Assessment

- 2.3.1 J H Leeke and Sons Ltd acquired the premises for two reasons:
 - They needed to protect the value of their investment in the adjacent Vale of Glamorgan Golf Resort. The potential purchase of the site, and its eventual occupation, for the accommodation of asylum seekers (understood to be one of the offers) would have had a severely detrimental effect upon the attraction and viability of the adjacent Golf Resort and the investment that had been made in it.
 - The site offered an opportunity to extend the range of quality facilities then available at the Resort in a manner that was complimentary to both the resort itself and, in particular, the protection and enhancement of the historic castle and its grounds.



- 2.3.2 Accordingly, J H Leeke & Sons Ltd secured the premises at a cost considerably in excess of normal market value, or at least the value placed upon it by the competing bidders.
- 2.3.3 The **proposed and approved new** uses **for** the ward blocks are inherently linked to the potential alternative use of the castle for the following reasons:
 - The ward blocks are listed and their future use will be required to respect not only their own listing but also their setting and, in particular, the setting of the Grade 1 listed castle.
 - The cost of renovating the castle and of converting it into a facility that is both commercially viable and acceptable to the Council and Cadw is extensive. Indeed, on a stand-alone basis it is non-viable. Accordingly, there is a need to generate capital receipts from elsewhere on the site to fund the works necessary to bring the castle to beneficial use. The conversion of the ward blocks and the sale of the converted units is the only viable option in that respect.
- 2.3.4 In order, therefore, to render the renovation and conversion of the castle viable, there is a need to secure enabling funds from the conversion and sale of the ward blocks.
- 2.3.5 The potential options that **were originally** considered for the conversion of the ward blocks **we**re:
 - Institutional;
 - Educational:
 - Employment;
 - Residential; and
 - Tourism/Leisure.
- 2.3.6 King Sturge confirmed that in the marketing of both the Hensol and Sully Hospitals only the following serious enquiries and offers met the existing use criteria of Use Class C2.
 - Residential education there was an offer for Sully Hospital for use as a Moslem College. The bidders failed to produce evidence that they had sufficient funds to acquire the listed buildings. King Sturge had no similar offers on Hensol. At the time of marketing there were no enquiries on either Hensol Castle or Sully Hospital for private healthcare use.
 - Enquiries were received on both hospital sites for mixed-use development, the
 prospective purchasers suggesting an office, research, conferencing mix.
 However, the value of such bids for commercial mixed use were very low and
 were interpreted as speculative. The bids were also conditional upon planning
 consent for change of use being secured.



- 2.3.7 Given the availability of competing sites for such commercial mixed-use development it became obvious from the marketing perspective that some element of residential use would be necessary to make the overall proposals viable. Having regards to the location of Hensol it is very unlikely that such commercial mixed-use development would otherwise be viable without an element of proven residential occupational interest. Without a substantial pre-let or sale to an occupier, funding for the acquisition and development would be difficult.
- 2.3.8 King Sturge confirmed that it had no direct enquiries from potential purchasers proposing solely the range of uses that would have satisfied the planning criteria identified in the Development Brief.
- 2.3.9 Other than that from **the** Barratt/Leeke consortium, no other bid included any element of tourism and recreation use. No bids were submitted by hoteliers or agents likely to be acting for leisure and tourism operators.
- 2.3.10 King Sturge have undertaken numerous detailed market studies since the sale of Hensol castle. By way of brief summary the market for such property remained broadly similar at the time of the first application. There was little speculative development of business space, most development requiring a minimum of 50% pre let space.
- 2.3.11 It was also clear that the market interest in the site for employment uses had been inhibited by the constraints that the conservation objectives of the Council and Cadw would place upon the activities and the curtilage operations that they would demand in the form of:
 - Signage;
 - External storage;
 - Operational/servicing aprons and cartilages;
 - Approach / Access road widths capable of accommodating commercial vehicles;
 - Parking both operational and visitor; and
 - Inflexibility in respect of the ability to either gut or substantially modify the buildings, both internally and externally, to accommodate modern business uses.
- 2.3.12 Accordingly, from a market demand perspective alone (i.e. ignoring viability and conservation constraints) the development of mixed use commercial space would not be feasible at the site, either within the listed buildings or the historic park. That was recognised by the bidders and reflected in the interest expressed by them which was restricted to the following uses only:



- Niche residential development subject to planning consent;
- Mixed use commercial/ residential development subject to planning consent;
- Mixed use development from the Barratt/ Leeke consortium which was an unconditional offer; and
- Institutional use believed to be for the resettlement of asylum seekers and an unconditional offer.
- 2.3.13 King Sturge confirmed that such institutional interest had proved to be unacceptable to communities elsewhere in the UK. It was recognised that other institutional uses would be acceptable in planning and conservation terms. However, the market had been repeatedly tested by national advertising of this and other hospitals and there was no demand for such uses. Even if there was a demand the value of the uses was predicted to be insufficient to fund or enable the conversion works necessary, let alone to offset and supplement the conversion/rehabilitation costs associated with the renovation and return to the former glory of the castle.

2.4 Alternative Sites Assessment

- 2.4.1 The **originally approved** proposals involved the comprehensive redevelopment of a redundant hospital site, which included the renovation of the castle, a Grade 1 listed building. It is clear from the Brief that the local planning authority were keen to find an end use for the existing buildings and associated land that would secure the future of this historic site. The proposals that were approved in 2006 were therefore devised in response to the need to find a viable end use for the site that would not compromise the basic conservation objectives of preserving and/or enhancing the character and appearance of the listed buildings and historic parkland itself. Accordingly alternative sites were not considered, an approach that was accepted by the Council at the time.
- 2.4.2 The EIA Directive and the associated Regulations in the UK do not specifically require the assessment of alternatives. However, it is clear that where the ultimate conclusion of the Environmental Statement is that there will remain significant environmental effects, the failure to consider alternative sites weakens the argument that all avenues have been explored for reducing the environmental impact of the proposal. In this instance, however, the **Council accepted that the** overall conclusions of the Environmental Impact Assessment clearly indicated that the proposals would not result in significant and unacceptable environmental impacts.



2.5 Conclusions

- 2.5.1 The following marketing conclusions **we**re relevant to the determination of the **original** applications:
 - The initial marketing exercise undertaken by the previous owner did not restrict
 the interest to residential only, especially insofar as the use of the ward blocks
 was concerned.
 - Other than the bid on behalf of the asylum operators no bids were received that proposed anything other than the residential conversion of the ward blocks.
 - The location and constraints of the site are such that the conversion of the ward blocks to some form of employment use **wa**s not viable or practicable.
 - The blocks did not meet market expectations in respect of their use for some form of leisure use, particularly time-share apartments.
 - The blocks were eminently suitable for conversion to residential apartments for which strong interest and high capital receipts were expected for the purpose of reinvestment in the conversion of the castle.
 - The conversion of the blocks to residential was likely to have the least impact upon the conservation attributes of the site – the listed buildings; their settings; the historic parkland.
- 2.5.2 Accordingly, the **originally approved** proposals **were** considered to be the only realistic viable option for the site as a whole. The **Council accepted that conclusion and granted permissions accordingly. The** conversion of the former ward blocks to residential use **was, and remains**, an essential prerequisite of the exercise. Without the ability to invest the funds that will derive from the sale of the converted ward blocks in the renovation of the castle, its walled garden and its landscape, the project as a whole is not viable. **The significant downturn in the economy and property market since the 2006 approval has exacerbated that concern although the expected slow return to market growth conditions is now sufficient enough to progress the conversion works.**
- 2.5.3 The conversion of the **remaining** blocks to residential apartment use is considered, **therefore**, to be the only viable commercial option.



3 THE PROPOSALS

3.1 Hensol Castle

- 3.1.1 The development proposals for the Castle continue to aim to create a high quality hotel consisting of the Castle itself together with a new health spa building on the site of the former outbuildings, now demolished, to the north of the main Castle buildings.
- 3.1.2 Both parts of the development will share a common entrance centrally located in the outer courtyard and accessed below the clock tower prominent on the eastern approach elevation. This common entrance will lead into a glazed reception area providing access to **both the** spa and hotel facilities. The new health-spa building will appear as a two-storey refined ashlar stonework construction. The only fenestration to the main elevations of this building will be glazing to the first floor bedrooms. A lower ground floor will be predominantly subterranean.
- 3.1.3 The new health spa will consist of:
 - Bedrooms on the first floor level.
 - Health-spa facilities including a reception area, a spa pool linked to an external pool together with health-spa treatment areas including individual treatment rooms on the ground floor.
 - *Changing rooms, a gymnasium and other spa facilities together with service/plant rooms and goods delivery areas on the lower ground floor.
- 3.1.4 The common entrance and reception area will also be the main point of entry to the new Castle hotel and provide access to the new restaurant in the inner courtyard shared with spa visitors along with bedrooms and reception rooms situated in both the new spa building and the original Castle buildings. Glazed single storey corridors running along the perimeter of the courtyards will connect the existing buildings to the new.
- 3.1.5 The new hotel will **eventually** consist of:
 - **34** bedrooms, communal, service and ancillary areas within the existing castle building.
 - 21 bedrooms within the new spa building at first floor.
- 3.1.6 The approach adopted in the conversion and extension of the Castle is explained in detail in Chapter 4 of this statement.



3.2 Southern Ward Buildings

- 3.2.1 Now that the unsympathetic "system build" buildings within the parkland setting have been demolished the remaining southern ward buildings enjoy a setting consistent with the original site planning. It is proposed therefore to convert these buildings into quality residential apartments, with each individual ward block accommodating six large residential apartments. The total number of apartments so created will therefore be 48, with a further 6 apartments having already been created from the completed conversion of Talbot House (previously known as "H" Ward) which now sits outside this application site.
- 3.2.2 Contemporary extensions are proposed to enhance the existing accommodation, but in a consistent modern form. For example the incorporation of modern, high quality minimalist glass conservatory/day rooms (at both ground floor and first floor levels) to these buildings seeks to enhance the intrinsic quality of the setting in a cohesive manner. The sketches and design precedent contained within the Detailed Design Brochure submitted as part of the original planning application help to explain this design approach.
- 3.2.3 It is also proposed to infill the internal courtyards formed by the building envelopes. Where these have been included they are conceived as rendered extensions, to clearly define contemporary additions. These will either compliment the rendered ward buildings or provide a clean contrast to the local Pennant stone to the other buildings. Such extensions will also use clean minimal flat roof detailing to ensure the roofscape of the original buildings is neither compromised nor diluted.
- 3.2.4 These contemporary additions are seen as a constructive way in which to draw these buildings harmoniously together and to provide some very necessary additional accommodation where needed to the residential units. One of the Development Brief objectives stated that:
 - "New architecture should be of outstanding quality and sympathetic in terms of form and scale with the historic context. With regard to new buildings the Council supports and encourages the procurement of contemporary architecture and design".
- 3.2.5 The design solutions proposed are considered to be sympathetic to that basic objective and the works now completed to Talbot House (outside but immediately adjacent to this application site) demonstrate the soundness of that original anticipation.



3.3 Concert Hall

- 3.3.1 Internally, this building has an interesting expressed ribbed structure, which adds to the building's uniqueness internally as well as externally.
- 3.3.2 It is now proposed to convert this building into four residential units instead of the five units previously approved. Two of the originally proposed ground floor apartments at the southern end of the building are now intended to be converted into a single, larger unit.
- 3.3.3 The proposals have been sensitively developed to maximise the expressed arch rib within the internal layout. The structure 'bays' create a clear method of dividing the accommodation.

3.4 Walled Garden

- 3.4.1 The walled garden is of rubble stone construction. However, this is largely dilapidated and, in places, unsympathetic buildings have been attached to the wall on its northern side. It is proposed to restore its historical use as a kitchen garden, along with sensory garden aspects associated with the health spa.
- 3.4.2 The proposed restoration of the walled garden, including three of the glasshouses, seeks to **make** a major contribution to the **restoration of the** historic interest at the northern end of the application site. Outline Design Proposals for the Walled Garden and Photographs are **found** at Appendix 4.

3.5 New-Build Staff Accommodation

- 3.5.1 The site immediately to the north of the walled garden is proposed for the development of additional new staff accommodation. Through the demolition of dilapidated buildings in this area there is an opportunity to provide a low scale quality contemporary building which can positively contribute to the walled garden setting and provide necessary staff accommodation.
- 3.5.2 Given the proximity of the walled garden and its potential re-use, it has been considered necessary to restrict any proposal to two storeys. It has also been necessary for the proposals to take account of the constraints of the woodland block to the immediate north and west of this site.
- 3.5.3 In order to reduce its overall scale and massing, it is proposed to split the building into two blocks linked by a first floor balcony rather than one large single mass of



- accommodation. The low pitch metal roof will also help minimise any visual impact viewed from beyond the walled garden.
- 3.5.4 The incorporation of roof light glazing not only helps to create a contemporary and interesting visual form as well as allowing south light into the circulation spaces, but is also a reference to the "glass house" structures in the walled garden.
- 3.5.5 Similar to the additions proposed to the residential apartments the building envelope materials are to be white render, timber and panels of local Pennant stone. The use of steel and glass balconies enforces this cohesive contemporary design approach.
- 3.5.6 The footprints of these buildings are distanced both from the walled garden and the woodland block to the north.
- 3.5.7 There is historic evidence that this area of the Hensol Castle site historically provided staff accommodation. Therefore, a return to this use is considered to be appropriate particularly in lieu of the very poor construction, aesthetic value and state of repair of the current buildings in this location.

3.6 Demolition of Post 1948 Buildings

3.6.1 The table below shows the comparison between the footprints of the buildings that existed within the original Development Brief area that have now been demolished against those which are proposed to be retained. So as to not confuse the correct interpretation of the current application the areas for the northern wards have been removed although the totals remain as before in order to demonstrate the correct overall balance between the areas retained and those demolished, an important consideration in the context of the Council's original Development Brief.

EXISTING USE	RETAIN		DEMOLISH	
Hensol Castle	Sq. M	Sq. Ft	Sq. M	Sq. Ft
The Castle Porters Mess & Store Rooms Project 2000 Lecturing Staff Offices Estate Managers Projects 2000 Staff Offices TOTAL	2,087 2,087	22,465 22,465	302 207 341 49 61 960	3,251 2,228 3,671 527 657 10,334
Nurses Training	·			
Nurses Training Unit Project 2000 Class Rooms Other Buildings TOTAL			634 129 49 812	6,824 1,389 527 8,740



Walled Garden				
Chapel of Rest				
Glass Houses				
Workshop	69	743	183	1,970
PortaCabins			132	1,421
Works Yard			17	183
Wood Workshop			47	506
Engineering Stores			112	1,206
Engineering Stores Gardeners Stock Room/			89	958
Toilets			71	764
Stores			117	1,259
Gardeners Mess Room			16	172
Other Buildings			25	269
TOTAL	69	743	809	8,708
Residencies				,
Ty Hensol	140	1,507		
Cartref	71	764		
Conwyl	85	915		
Other Buildings	51	549		
TOTAL	347	3,735		
Hospital Services		,		
Dulais Ward				
Resettlement Department			851	9,160
Physiotherapy			249	2,680
Physiotherapy Offices			243	2,616
Morgannwg Unit			43	463
Main Boiler House &			940	10,118
Generator			299	3,218
Electricians Workshop			69	743
Main Kitchen/OUT/ITY			3,109	33,465
Residents Dining Area			281	3,025
Bungalows No. 1-5			475	5,113
Other Buildings			124	1,1335
TOTAL			6,683	71,936
Southern Wards	100	1.010		
Clun/Ewenni Ward	429	4,618		
Cymmer Ward	460	4,951		000
Gwynfi Ward	455	4,898	25	269
G Block Admin	452	4,865		
Llynfi Ward	384	4,133		
B Ward	383	4,123	0.5	000
C Ward	410	4,413	25	269
H Ward	413	4,445		
Elai/Dawen Ward	385	4,144 40,500	50	F20
TOTAL	3,771	40,590	50	538
Recreational Concert Hall	583	6,275		
Active Playroom	303	0,273	172	1,851
TOTAL	583	6,275	172	1,851
BUILDINGS		,		
RETAINED	8,596 m ²	95,527 ft ²		
BUILDINGS				
DEMOLISHED			9,639 m ²	103,743 ft ²



3.6.2 The table below clearly shows that the new build footprint occupies 2,786 sq. m. (29,989 sq. ft) less space than the footprint of **the post-1947** buildings **originally proposed** to be, **and now actually**, demolished.

NEW BUILD	Sq. M	Sq. Ft
Hensol Castle		
Hotel Extension /Infill	2,920	31,430
TOTA	2,920	31,430
Residential Extensions		
Infill and Extensions to Southern Ward Blocks	470	5,059
TOTA	470	5,059
Residential (Concert Hall)		
Internal Refurbishment Only	-	-
TOTA	_	-
Staff Accommodation		
Site to the North of Walled Garden	549	5,909
TOTA	549	5,909
Time Share Units		
2 Bed Units	1,298	13,972
3 Bed Units	1,213	13,057
4 Bed Units	403	4,338
TOTA	2,914	31,367
OVERALL NEW BUILD FOOTPRINT	6,853 m ²	73,765 ft ²

3.7 Services Infrastructure

General

3.7.1 The original pre-1995 application services infrastructure was very old, fragile by nature and is proposed to be completely replaced. Some of that replacement has already taken place. The main services infrastructure will consist of electricity, telecommunications, water and localised LPG gas storage for heating purposes.

Electricity

3.7.2 The original electricity distribution system consisted of a network of high and low voltage cables running underground throughout the site. Wherever practical the redundant cables have or will be excavated and removed off site. As the site continues to be developed the existing network will be replaced by new cables also run below ground.

Telecommunications

3.7.3 For the main part the **original** telecommunications system **was** distributed throughout the site by means of overhead cabling supported by wooden telegraph



poles between buildings. This network **has been** taken down, removed and replaced by a new infrastructure consisting of cables run below ground in ducting.

Water

- 3.7.4 Water was originally distributed throughout the site underground, fed from a galvanised steel tank located above ground on the hill overlooking the site which has now been removed from site.
- 3.7.5 The **original** water distribution network **was** distributed below ground throughout the site, in the main by cast iron pipework. That network **is being** replaced by a new system of modern MDPE pipework also run below ground.

Oil

- 3.7.6 The localised oil storage **that existed** throughout the site **has** become redundant and all storage vessels **have been** decommissioned and removed in the approved manner. It is not intended to replace these tanks.
- 3.7.7 In the main electricity, utilizing efficient and environmental friendly heat pumps, will provide heating and cooling with LPG gas being utilised to provide hot water and cooking facilities in commercial applications in the Castle Hotel.



4 CONSERVATION DESIGN STATEMENT

- 4.1 Outline History And Description Of The Building
- 4.1.1 The earliest surviving parts of Hensol Castle date from the late seventeenth century. The estate was founded by the Jenkins' family, who owned Hensol for three generations until it was passed through marriage in 1721 to the Talbot family. The Talbots owned Hensol until 1790 when, after three generations, it was sold to Samuel Richardson the first of a series of relatively short-term owners. Samuel Richardson sold Hensol in 1815 to Benjamin Hall (father of Sir Benjamin Hall, Commissioner for Works for Big Ben) who owned Hensol for two years from 1815-17. From 1817 William Crawshay leased Hensol for nine years. He bought the estate in 1826 and sold it to Rowland Fothergill in 1838. On Fothergill's death in 1871, the estate passed to his niece who eventually sold it to Glamorgan County Council for use as a hospital in 1927.
- 4.1.2 In 1927 Hensol ceased to be a family residence and was converted for use as a hospital. Until its sale to the current owners the Castle was used as an administrative and conference centre by the local health authority.
- 4.1.3 More information on the history and development of Hensol is included at Appendix 1 and at Appendix 5.
- 4.1.4 Following a series of wealthy, powerful owners during the first half of the nineteenth century, each applying their own identity to a greater or lesser degree, Hensol Castle as it stands today is, as described by Newman in his 'Buildings of Glamorgan', 'quite an archaeological puzzle'. At first sight it is difficult to establish what is genuine and what is the result of the 'historic' style of the nineteenth century
- 4.1.5 Externally the Castle is a substantial Gothic revival two and three-storey stone built country house. The entrance is on the south front with the main house built around an inner courtyard. Single storey east and west wings extend to form a second, outer courtyard, closed on the north side by a crenellated screen wall.
- 4.1.6 The walls are of coursed grey stone, coursed reddish rubble stone (the turrets, towers and service court), or render (part of the west front) with freestone dressings. Castellations, protruding towers, round turrets on corners, threestorey semi-octagonal towers on the east and west fronts, and a turreted porte cochère in the centre of the south front all combine to create the slightly



austere air of Hensol Castle. The complicated history of the house is reflected in the variety of window types in different parts of the building. Styles include mullioned, traceried Gothic, Georgian sash and 1930's 'Crittal' type windows.

4.1.7 Internally, with the exception of the principal rooms at the front of the building (Entrance Hall and First Floor Landing shown below), the Castle interior has suffered significant damage since the 1930's when the place was converted for use as a hospital.



4.1.8 View of panelled Entrance Hall (G02)



4.1.9 Detail at Main Staircase at First Floor Landing (F19)



4.1.10 In recent years extensive repairs have been carried out to the external fabric, including the complete renewal of the roofs in natural slate, new leadwork and replacement of defective rainwater goods. In addition new stucco work has been carried out to the west front and walls above roof level, using cement render and modern paint finishes.



4.1.11 View of west front

4.1.12 Internally, the character of the principal rooms has been respected but all other areas have been altered and modernised to such an extent that little is now recoverable.





4.1.13 Ground Floor Seminar Room (G36)



4.1.14 Second Floor Landing (S09)



- 4.1.15 Hensol Castle (including the attached courtyard ranges to the north) is considered to be a building of exceptional interest and is listed Grade 1. The Listed Building Schedule and a more detailed description of the house is included at Appendix 2.
- 4.1.16 Whilst the Listed Building Schedule and other available information provide an overview of the building's chronological development, the detailed information required to inform the design process for the conversion of the building was inadequate. For this reason a comprehensive audit of the surviving features of the house has been undertaken and the findings of the study are recorded in the document headed 'Audit of Architectural Features' (Appendix 3).
- 4.1.17 The chronological development of the building is illustrated on drawings numbered LBC 04/441/101 and 102 (Appendix 4).
- 4.1.18 In addition, a survey of the architectural and decorative history of the principal rooms was carried out by James Finlay in November 2007. His report headed 'Hensol Castle: a survey of the architectural and decorative history, November 2007' is included as Appendix 5.

4.2 A Brief Statement Of Significance

- 4.2.1 The following assessments of significance highlight those elements considered to be most important in the context of each area, as assessed below. For identification of rooms etc. reference should be made to drawings numbered LBC 04/441/101 and 102 (Appendix 4).
- 4.2.2 For the purposes of this document the terms minor, moderate and major significance are defined as follows:

<u>Major significance</u> - extremely noteworthy, material.

<u>Moderate significance</u> - noteworthy, material.

<u>Minor significance</u> - not noteworthy or material.

Generally

- Example of very early use of the Gothic revival style in domestic buildings in Wales Major significance.
- Plan form demonstrates the evolution in building form from the earliest, relatively small seventeenth century origins to a major Victorian residence complete with a service and carriage courtyard Major significance.
- Last stage of major remodelling (early Victorian) undertaken by T H Wyatt and David Brandon, architects of London Major significance.



- Social and community role as a hospital for 70 years Moderate significance.
- Historical associations, including Charles Talbot (Lord Chancellor), Sir Benjamin Hall (Commissioner for Big Ben), Augusta Hall (patron of Welsh folk culture) and the Crawshay family - Moderate significance.

Castle Exterior, Including Courtyards

- A strong reference point in the historic parkland setting Major significance.
- Demonstrates the layering of different periods with surviving features from the early Gothic revival style of the eighteenth century to the remodelling by T H Wyatt and David Brandon in the Victorian period - Major significance.
- Inner and outer courtyards Major significance.
- Outbuildings to north Minor significance

Intrusions To The Exterior

- 4.2.3 Examples of intrusions to the exterior include:
 - Modern aluminium and steel windows set into 19th century mullioned and transomed windows on east and south front.
 - Modern timber windows and flush external doors to courtyard elevations.
 - Replacement aluminium rainwater downpipes, boiler flue, TV aerials, cables etc. to all elevations.
 - Modern cement render to west front and walls above roof level.
 - 1950's chimney stack (serving main boiler flue), glazed lean-to's and two metal fire escape stairs in inner courtyard.
 - Oil storage tanks and car park in outer courtyard.

Castle Interior

4.2.4 Reference should be made to the 'Audit of Architectural Features' (Appendix 3) for a description of the surviving features in each room and to 'Hensol Castle - a survey of architectural and decorative history' (Appendix 5) for earlier uses and likely development of principal rooms.

Ground Floor

- 4.2.5 The following principal rooms on the ground floor retain much of their historic integrity (in form and detail) and are considered to be of <u>major significance</u>:
 - Drawing Room (G01).
 - Entrance Hall (G02).
 - Entrance Lobby (G03).



- Morning Room (G04).
- Dining Room (G05).
- Small Drawing Room (G07).
- East Staircase (G08).
- Corridor (G10) and Inner Hall (G09), one room prior to 1930's changes.
- Main Staircase (G11).
- Butler's Domain (G12 & 13).
- 4.2.6 The following principal rooms on the ground floor have been modernised and are considered to be of moderate significance:
 - East Tower Room (G06).
 - Back Entrance Hall (G15).
 - West Tower Room (G16).
 - Meeting Room (G46).
- 4.2.7 All other rooms on the ground floor have been much altered and modernised, leaving little or no historic features (for example, modern toilets installed in earlier kitchen range, several large rooms split up into smaller rooms, flush doors installed throughout, generators installed in stables etc). These interiors are considered to be of minor significance.

First Floor

- 4.2.8 The following principal rooms on the first floor retain much of their historic integrity (in form and detail) and are considered to be of <u>major significance</u>:
 - Landing adjacent to Main Staircase, previously part of Bedroom Suite (F07).
 - Second Floor and Landing (F15).
 - Landing Area (F16), Side Hall (F17) and Toilet (F18), all one room prior to 1930's and later changes.
 - Main Stair and Landing (F19).
- 4.2.9 The following principal rooms on the first floor have been modernised and are considered to be of moderate significance:
 - Bedrooms (F01, F02 and F03), one room prior to 1930's and later changes.
 - Bedrooms (F04 and F05), one room prior to 1930's and later changes.
 - Porch Room (F06).
 - Bedrooms (F08 and F09), one room prior to 1930's and later changes.



- Bedrooms (F10, F11, F11A and F12), one room prior to 1930's and later changes.
- East Tower Room (F13).
- Bedroom (F14).
- Landing (F20 and F20A).
- Bedroom Suite (F54, F55, F56 and F57).
- 4.2.10 All other rooms on the first floor have been much altered and modernised, leaving little or no historic features (for example several large rooms split up into smaller rooms, modern finishes etc). These interiors are considered to be of minor significance.

Second Floor

4.2.11 All second floor rooms have been altered and modernised and are of minor significance.

Intrusions To The Interior

- 4.2.12 Examples of intrusions to interior areas of <u>major significance</u> include:
 - Modern 'cornice' type uplighters and flat fibreboard wall cladding in Drawing Room G01.
 - 1930's glazed screens to create separate rooms (between G09 / G10, F16 / F17 / F18 and F06 / F07).
 - Modern reception desk and chipboard flooring in Stair Hall G11.
 - Fire doors and aluminium glazed screen at Landing F19.
 - Fire doors infilling arched openings on corridors.
 - Exposed electrical and other modern services.
 - Inappropriate colour schemes throughout.
 - Removed and infilled fireplaces.
- 4.2.13 Examples of intrusions to interior areas of moderate and <u>minor significance</u> include:
 - Ad hoc alterations to room layouts
 - Modern wall, floor and ceiling finishes (including suspended ceilings, layin grid type, MDF wallboard etc).
 - Modern heating, lighting and services installations (exposed pipework, surface mounted cables, inappropriate lighting etc).
 - 'MDF' and other modern materials (including moulded MDF dado rails, fireplace surrounds etc in an attempt to be 'sympathetic').



- Three fire escape stairs (1930's, mainly plain concrete).
- Dry lining of walls and construction of plasterboard and stud partitions to create separate rooms.
- Modern flush doors.

4.3 An Overview Of The Main Conservation Issues

- 4.3.1 The use of Hensol as a hospital from the 1930's and as an administrative and conference centre in the latter years has meant that the building has been continually and regularly maintained. The building was first listed in 1993 (Crown immunity prior to that date) and with the exception of the principal rooms, the approach taken to building maintenance and alterations did not respect it's historic importance. Many of the intrusions listed above are the result of works undertaken during that period. The building was re-roofed some twelve years ago, and as the historic importance was by then acknowledged (Grade 1 listed) the work undertaken and materials used were of the highest standards.
- 4.3.2 The major opportunity presented by the proposed development is that converting the building for hotel use is relatively compatible with its historic use as a large residence (complete with reception rooms, guest rooms, kitchen range and service quarters).
- 4.3.3 Other opportunities offered include:
 - Removal of intrusions and enhancement of decorative schemes (based on survey and research) in areas of major significance.
 - Opportunity to enhance the significance of areas of minor significance by removing inappropriate modern alterations, including rationalising the plan where badly altered.
 - Sensitive lighting of principal rooms.
 - Allowing access for public to view principal rooms.
 - Replacement of surface mounted and inappropriate services installations.
 - To understand more about the evolved history. The findings of the survey
 of the architectural and decorative history carried out by James Finlay
 have already helped inform the internal planning of the principal rooms
 (particularly at first floor level where the original family bedrooms are to be
 reinstated as hotel bedrooms) and archaeological monitoring during the
 construction programme will provide more clues to the evolution of the
 building.
- 4.3.4 The fabric and character of the building is vulnerable to many factors:



- A lack of understanding of the place could result in ad hoc planning and the continued use of inappropriate repair methods (as per 1930-1993 period).
- Inappropriate alterations to facilitate current day expectations in a five-star hotel (en-suite bathrooms etc.) could result in further loss of clarity of the evolved building.
- A loss of clarity of the overall evolved Victorian complex could occur through inappropriate building in the courtyards and outside the building curtilage.
- High frequency of use of areas of major significance could cause heavy demand on the building fabric.
- An insensitive approach to the provision of M&E services, particularly in the rooms considered being of major significance.
- Meeting current fire regulations, including the provision of unsightly fire detectors on historic ceilings and the provision of fire escape stairs and fire doors.
- Unsympathetic alterations to improve accessibility.
- Inadequate future maintenance.

4.4 Statement of Conservation Principles

4.4.1 Owing to the varying degrees and quality of alterations carried out, especially in the 1930- 1993 period, the principles to be adopted for areas of major and moderate significance (that is, principal rooms) will, by necessity, vary from those adopted for the remaining areas which are considered to be of minor significance. Future proposals for the building are to be based on the following principles:

Areas of Major And Moderate Significance (principal rooms)

- To respect the evolved condition of the place. In exceptional cases, however, where earlier forms are known, intrusive alterations will be reversed to enhance a feature or aspect that is of overriding significance. By way of example, the 1930's screen infilling the arcading between Room G09 and G10 (area of major significance) should be removed to reinstate the original, known arrangement.
- To conserve the historic fabric and detailing of the building and fittings in a sensitive and lighthanded manner, resorting to restoration and/or reconstruction only where necessary and appropriate. By way of example, where modern partitions have been inserted and earlier openings blocked up to create three separate rooms in the south-east bedroom (area of moderate significance) these should be removed and the proposed layout informed by the earlier form.



- To undertake all works in consultation with statutory bodies such as Cadw and the local planning authority's Conservation Officer and with specialist advisers where appropriate.
- To undertake repairs using traditional materials and methods and replacing like for like, using craftsmen skilled in conservation practice wherever practicable.
- To ensure that all works carried out are properly monitored and complete records retained for alterations. Features of significance revealed during the construction phase are to be recorded.
- Where the removal of significant fabric is unavoidable, records to be made prior to removal and the items stored in appropriate conditions for future reference or possible future reinstatement.
- To install replacement services (heating, lighting, ventilation, fire and security) with minimal damage to the building fabric. All service installations are to be discreet, including the use of aspirator type fire detection in principal rooms.
- Wherever possible, to keep heavily serviced areas (bathrooms, toilets, kitchens etc.) outside the areas of major significance.
- Wherever possible, to keep heavily serviced areas (bathrooms, toilets, kitchens etc.) to a minimum in areas of moderate significance.
- To design proposed alterations (for example, insertion of new fire escape stair to three storey part, addition of en-suite bathrooms) so that the new work is discernible from the original and, wherever possible, reversible.
- To avoid speculative reconstruction.
- To retain the external form of the Castle and the spatial character of the two courtyards.

Areas of Minor Significance

- 4.4.2 These interiors can accept change as they have either been destroyed or altered so much that little is now recoverable.
 - To remove major intrusions to the building fabric wherever possible. By way of example, where modern openings have been formed in the east wall of the outer courtyard (to create access for generating room G40) these should be reverted to their earlier form based on site evidence. Other examples include the reinstatement of window openings within the inner courtyard where fire doors have been inserted to access fire escape stairs.
 - To limit the alterations required for any new use to the 1930's and later features wherever possible. Such alterations are to be informed by the earlier form.
 - To avoid speculative reconstruction. Design of new work to be kept relatively simple and should not try to emulate authentic and decorative features found elsewhere in the Castle.



- To enhance the significance of the interiors wherever possible. By way of example, modern lay-in-grid suspended ceilings are to be removed and the earlier ceiling heights reinstated.
- To undertake all works in consultation with statutory bodies such as Cadw and the local planning authority's Conservation Officer.
- To ensure that all works carried out are properly monitored and that complete records are retained for alterations. Features of significance revealed during the construction phase to be recorded.
- To undertake repairs to the surviving historic fabric using traditional materials and methods and replacing like for like. By way of example, window repairs will be minimal, carried out by craftsmen skilled in conservation work.
- Modern alterations, such as concrete floors and cement plaster, will be retained unless defective.

Use

- To ensure, wherever possible, that all future uses of rooms of major and moderate significance take due account of their former purposes (schedule of earlier and proposed uses of all principal rooms is included as Appendix 6), and to ensure wherever possible that 17 alternative uses do not entail structural changes, or subdivision, or destruction of surviving fittings.
- Occupancy and frequency of use of rooms of major significance should be compatible with their historic importance.
- To maximise access for disabled guests in a manner which does not impinge upon the fabric or spirit of the place.
- Where a new building is deemed unavoidable to secure the future of the place, it should be of outstanding quality, and, be in sympathy in terms of form, materials and scale with the historic context. Such new buildings should be of contemporary design.

4.5 Approach To The Proposed Conversion & Extension Of The Castle

Background

- 4.5.1 Understanding the place, which includes appreciating the significance and vulnerability of features, and the establishment of conservation principles, is essential as a precursor to designing for new uses.
- 4.5.2 The client's original brief, which had been prepared prior to any studies of the building being carried out, required that the major part of the Castle be converted for use as a destination spa and that a new bedroom block be constructed at the northern end of the Castle. The destination spa was to include a hydro pool, lap pool, changing rooms, treatment rooms, steam rooms etc and the new guest bedrooms were to be of high quality with balconies and



en suite bathrooms. It was high on the client's list of priorities that the spa facilities be located within the Castle and that all areas (including the new guest bedrooms) be accessible under cover. The client's 'vision' was that a spa set within the walls of a historic building would be a unique selling point and makegood business sense.

- 4.5.3 However, following research into the history and assessment of the character of the building it became apparent that this original 'vision' was unsustainable in this particular instance. In order to meet the original brief certain areas of major significance would have had their form and character significantly altered. For example, to accommodate the pool and spa facilities the two courtyards would require complete over-roofing. Other areas of major and moderate significance would have been damaged by the installation of heavy services installations to serve changing rooms, steam rooms and treatment rooms etc.
- 4.5.4 The original brief was reviewed with the client in light of the historical and other research carried out. It was agreed that the spa should be located outside the historic building, allowing areas requiring large spaces (pools) and areas requiring extensive servicing (changing rooms, steam rooms etc.) to be constructed from new. It was also agreed that the main entrance to the spa and hotel should be through the original coach yard entrance (clock tower) allowing at least part of the client's original vision of a 'spa within the castle' to be maintained. The clock tower is the first reference point on approach up the drive towards the Castle and is the natural point of entry. This entrance also has the added advantage of minimising the numbers entering via the south entrance, an area of major significance. With the construction of a new spa building to the north of the Castle, the clock tower entrance is centrally located to serve the hotel use to the south (Castle) and spa use to the north (new extension).
- 4.5.5 Within this framework the applicants' requirements have been developed to meet their specific needs whilst minimising damage to the historic building fabric. The proposal reflects flexibility in respect of the applicants' needs combined with imaginative use of existing forms and spaces.
- 4.5.6 Whilst the hotel and spa elements have been designed to work operationally as one complex, the approach to the conversion of the existing Castle is necessarily different to that adopted for the design of the new building.



Approach To Conversion

- 4.5.7 By the mid nineteenth century Hensol Castle had evolved to be a large family residence complete with impressive reception rooms, a Classical drawing room, panelled dining room, a number of well proportioned family bedrooms, servant bedrooms, kitchens etc. By the end of the twentieth century the place had been converted for use first as a hospital and later as administrative offices and conference facilities for the local health authority. Finding an appropriate new use for any redundant building is key to its successful conversion. In the case of Hensol Castle, the sensitive conversion of a house that was once a large family residence into a high quality hotel that will require space for relaxation, lounge areas, good-sized bedrooms, kitchen etc. is considered to be a natural progression.
- 4.5.8 The following approach has, therefore, been adopted for the conversion of the Castle:
- 4.5.9 Wherever possible, the use of all areas of major significance is to be as originally intended (pre- 1930's). For example, the Board Room (G01), which was originally the Drawing Room will be used by residents as a relaxation space, requiring no change from its existing arrangement (except for the removal of intrusions and enhancement of the decorative scheme as proposed in James Finlay's report Appendix 5). Similarly the Entrance Lobby, Entrance Hall, Morning Room, Dining Room, Staircase Hall and all other areas of major significance will be used as originally intended.
- 4.5.10 Wherever possible, the use of areas of moderate significance, such as the first floor offices (originally bedrooms) will be as originally intended (pre-1930's). Where these areas are currently sub-divided into smaller rooms, modern partitions will be removed in most cases and the form of the well-proportioned bedrooms and dressing rooms reinstated. The number of guest bedrooms at the front of the building (immediately above the ground floor areas of major significance) has been limited to three. This minimises the risk from plumbing defects affecting ground floor rooms and the need for extensive services. These three bedrooms have been arranged so as to minimise the impact of soil pipes on the building fabric.
- 4.5.11 Reference should be made to Appendix 6 for a schedule of earlier and proposed uses of all principal rooms (areas of major and moderate significance).



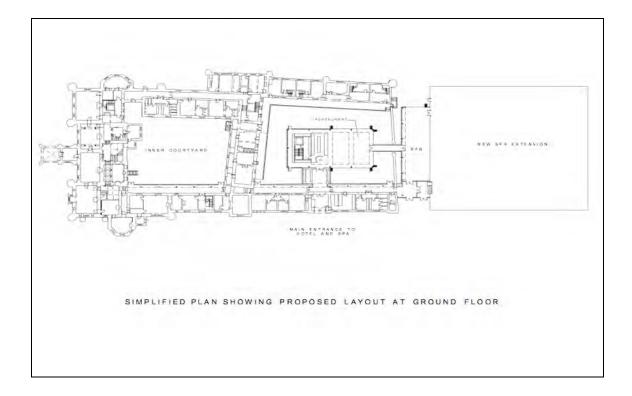
- 4.5.12 The use of areas of low significance will seldom follow the earlier uses. The majority of these areas will be converted for use as guest bedrooms with ensuite facilities.
- 4.5.13 With the exception of a small number of alterations, changes to the Castle exterior are limited to the removal of intrusions. The roofs were re-covered some fifteen years ago and with the exception of adapting the lead flat roof at the north west corner of the south block (above area S22) to accommodate the over-run of the new lift, no other significant changes are proposed.
- 4.5.14 The outer walls of the Castle are to remain unchanged, except for the removal of defective cement rendering on the west elevation and re-rendering using traditional lime based render. In addition, where steel casements inserted into mullioned and transomed windows are visually intrusive, these are to be removed and the earlier arrangement reinstated. Where 1930's steel casement windows have been installed on the east elevation, these are to be retained and repaired.
- 4.5.15 A number of inappropriate changes to openings on the courtyard elevations are to be reverted to their earlier known form. Examples include reinstating windows where fire exit doors have been inserted at first and second floor levels. The inner and outer courtyard elevations were originally rendered (physical evidence exists and several stone window surrounds project beyond the face of the stonework) and the proposal includes for limewashing to unify the stonework.
- 4.5.16 The inner and outer courtyards are considered to be areas of major significance. These two areas evolved as the building was extended, finally being closed on all sides with T H Wyatt and David Brandon's design in the 1840's. The proposed building within the outer courtyard is required for the hotel to operate effectively and has been designed to minimise the impact on the overall space.
- 4.5.17 No new buildings are proposed within the inner courtyard (replacement covered way to east side only) minimising the effects on the (suspected) below ground archaeology (refer to chronology drawings). The design of the replacement covered way is contemporary using materials that are discernible from the existing. The structural impact on the courtyard walls is minimal and reversible.
- 4.5.18 The new restaurant building in the outer courtyard (with kitchen below at lower ground level) has been located centrally, independent of the existing west, south and east walls and touching the original structure at the clock



tower (east side of courtyard) only. The restaurant building will be 21 predominantly of glass and will be connected to the new spa extension on the north side by a glass link which passes between the turrets on the north screen wall.

- 4.5.19 The castellated screen wall on the north side of the outer courtyard is considered to be of major significance, representing the completion of the Victorian core estate buildings. This wall is retained in its entirety, with the roof of the new covered walkway abutting it at the north east corner and one new opening formed at the north west corner.
- 4.5.20 The design reinforces the fact that the north screen wall is the end of the historic and significant development of the Castle buildings and that the new buildings relate to another era and are 'removable'.
- 4.6 Design Strategy For New Spa Building
- 4.6.1 The 1877 map shows the area to the north and west of the Castle to be wooded, with pathways leading to the walled garden to the north and the lake to the west. The landscaped area to the west is still intact but the area between the Castle and the walled garden has been significantly altered. The 1942 map shows two external store buildings constructed immediately to the north of the Castle and the area beyond reduced in level to accommodate a new laundry building. The store buildings still exist but the laundry building has been removed.
- 4.6.2 The proposed new spa building has been located on the site of the existing stores (approximately occupying the area defined by their outer facades) on the main north-south axis of the Castle.
- 4.6.3 Conceived as a 'third courtyard', the building is organised around the centrally located, double height, spa pool atrium, with hotel rooms at first floor and associated pool uses at ground floor and lower ground floor.





- 4.6.4 Organised in this way, the building is expressed externally by the hotel rooms sitting on a plinth formed by the windowless pool uses below.
- 4.6.5 The ground floor level has been set one metre below the existing courtyard level to minimise the overall height of the building, thereby reducing the visual impact on the historic setting. Room uses which do not require window openings (changing rooms, treatment rooms, toilets, plant etc) have been located at ground floor level or lower ground floor level so as to avoid openings in the solid plinth. Guest bedrooms have been located at first floor level to maximise views of the surrounding parkland and beyond.
- 4.6.6 The design is contemporary using materials that relate to, but are discernible from the existing. The walls generally are to be of Stone Ground Bath Stone laid in random courses (100mm / 150mm / 200mm) with Stone Ground Bath Stone surrounds (275mm wide) to window openings and at parapets. The roof covering is to be zinc, left to weather naturally.
- 4.6.7 This approach to the design of the Spa building ensures that whilst maintaining its own identity the new building does not dominate the Castle in terms of scale, material or situation.



5 PLANNING POLICY CONTEXT

5.1 Introduction

- 5.1.1 In assessing the acceptability of the proposal in planning and environmental terms consideration has to be given to the following:
 - National Planning Policy
 - Development Plan Policies
 - Other Material Considerations

5.2 National Planning Policy

Planning Policy Wales (PPW): March 2002

5.2.1 Planning Policy WALES (PPW) was published in March 2002 and as such is up to date and a material consideration in the determination of this application. The document sets out the Welsh Assembly Government's land use planning policies and is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in National Assembly for Wales/Welsh Office circulars. PPW, TANs and circulars together comprise national planning policy.

Planning for Sustainability

- 5.2.2 PPW explains how working towards sustainable development means pursuing the following four objectives at the same time:
 - Social progress which recognizes the needs of everyone;
 - Effective protection of the environment;
 - Prudent use of natural resources; and
 - The maintenance of high and stable levels of economic growth and employment.
- 5.2.3 It further explains how the planning system has a fundamental role in delivering sustainable development in Wales by helping in the process of balancing and integrating these objectives in order to meet current development needs while safeguarding those of the future. In particular the planning system, through both unitary development plans and the development control process, must provide for homes, infrastructure, investment and jobs in a way which is consistent with sustainability principles (paragraph 2.1.5).
- 5.2.4 Paragraph 2.4.4 of PPW notes that priorities for rural areas include:



- Sustainable rural communities with access to public services;
- A thriving and diverse local economy where agriculture-related activities are complemented by sustainable tourism and other forms of employment in a working countryside; and
- An attractive, ecologically rich and accessible countryside in which the environment and biodiversity are conserved and enhanced.
- 5.2.5 It goes on to say that the countryside is a dynamic and multi-purpose resource which must be conserved and, where possible, enhanced for the sake of its ecological, geological, physiographic, historical, archaeological and agricultural value and for its landscape and natural resources, balancing the need to conserve these attributes against the economic, social and recreational needs of local communities and visitors.
- 5.2.6 PPW at paragraph 2.5.6, recognizes that in most rural areas the opportunities for reducing car use and increasing the use of public transport, walking and cycling are more limited than in urban areas and therefore the majority of new development should be located in those settlements which have relatively good accessibility by non-car modes when compared to the rural area as a whole. Local service centres, or clusters of smaller settlements where a sustainable functional linkage (emphasis added) can be demonstrated, should be designated by local authorities and be identified as the preferred locations for most new development including housing and employment provision.

The Natural Heritage

- 5.2.7 PPW refers to the importance of nature conservation and the natural heritage when considering proposals for development. It explains that the effect of a development proposal on the wildlife or landscape of any area can be a material consideration and, in order to achieve sustainable development, it is necessary to balance conservation objectives with the wider economic needs of local businesses and communities. Where development does occur it is important to ensure that all reasonable steps are taken to safeguard or enhance the environmental quality of land. Pre-application discussions between the developers, local planning authorities and statutory advisers such as CCW and the Environment Agency are recommended.
- 5.2.8 PPW emphasises that careful planning and design can minimise the potential for conflict whilst at the same time creating new opportunities for sustainable development for example where new development on previously developed land provides opportunities to restore and enhance the natural heritage through land rehabilitation, landscape management and the creation of new or improved habitats (paragraph 5.1.3).



5.2.9 When considering any development proposal PPW advises that local planning authorities should consider environmental impact so as to avoid, wherever possible, adverse effects on the environment. Where other material considerations outweigh the potential adverse environmental effects, authorities should seek to minimise those effects and should, where possible, retain and, where practicable, enhance features of conservation importance.

The Historic Environment

- 5.2.10 PPW notes the importance of protecting the historic environment and explains that the Assembly Government's objectives in this respect are to:
 - Preserve and enhance the historic environment, recognising its contribution to economic vitality and culture, and its importance as a resource for future generations;
 - Protect archaeological remains, which are part of the historical and cultural identity of Wales;
 - Ensure that the character of historic buildings is safeguarded from alterations, extensions or demolition that will compromise a building's special architectural and historic interest: and to
 - Ensure that conservation areas are protected and enhanced, while at the same time remaining alive and prosperous.
- 5.2.11 PPW also notes the important role that local planning authorities play in securing the conservation of the historic environment while ensuring that it accommodates and remains responsive to present day needs.
- 5.2.12 In relation to Unitary Development Plans and the Historic Environment, PPW states:
 - "There is no statutory requirement to have regard to the provisions of the UDP when considering applications for listed building consent or for conservation area consent, since in these cases the Courts have accepted that Section 54A of the Town and Country Planning Act 1990 does not apply. However, UDPs should include policies for the conservation of the built environment that are relevant to development control decisions and which should be taken into consideration in the determination of applications for both listed building consent and conservation area consent".
- 5.2.13 PPW further explains that there should be a general presumption in favour of the preservation of listed buildings and that the continuation or reinstatement of the original use should generally be the first option when the future of a listed building is considered. PPW recognizes, however, that not all original uses will be viable or necessarily appropriate and therefore policies for development and listed building control should recognise the need for flexibility where new uses have to be



considered to secure a building's survival. It advises that the aim should be to identify the optimum viable use that is compatible with the character and setting of an historic building (paragraph 6.4.6).

5.2.14 In relation to development control and the historic environment and in particular, archaeological remains, PPW explains that the desirability of preserving an ancient monument and its setting is a material consideration in determining a planning application, whether that monument is scheduled or unscheduled. It goes on to say that where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical preservation in situ. In cases involving lesser archaeological remains, local planning authorities will need to weigh the relative importance of archaeology against other factors, including the need for the proposed development.

The Economy

- 5.2.15 PPW explains the important role that the re-use and adaptation of existing rural buildings can play in meeting the needs of rural areas for commercial/industrial development, tourism, sport and recreation. It encourages local planning authorities to adopt a positive approach to the conversion of such buildings for business re-use, provided that:
 - They are suitable for the specific re-use;
 - Conversion does not lead to dispersal of activity on such a scale as to prejudice town and village vitality;
 - Their form, bulk and general design are in keeping with their surroundings;
 - If the buildings are in the open countryside, they are capable of conversion without major or complete reconstruction;
 - Conversion does not result in unacceptable impacts upon the structure, form, character or setting where the building is of historic and/or architectural interest.
- 5.2.16 With regards to proposals for the residential conversion of rural buildings, which have ceased to be used for industrial or commercial purposes, PPW explains in paragraph 7.6.10 that such proposals may have a minimal economic impact and may be detrimental to the fabric and character of historic buildings. It further explains that local planning authorities may include policies within the UDP which do not allow residential re-use unless:
 - The applicant has made every reasonable attempt to secure suitable business re-use and the application is supported by a statement of the efforts which have been made; or
 - Residential conversion is a subordinate part of a scheme for business re-use;
 or



• The resulting housing will contribute to an identified need for affordable housing for local need.

Transport

- 5.2.17 Transport policy is outlined in chapter 8 of PPW where it is explained that a key aim is to extend choice in transport and secure accessibility in a way that supports sustainable development by encouraging the establishment of an integrated transport system, which is safe, efficient, clean and fair.
- 5.2.18 PPW notes that land use planning can help to achieve government objectives for transport through:
 - Reducing the need to travel and by locating development where there is good access by public transport, walking and cycling;
 - Locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;
 - Improving accessibility by and promoting walking, cycling and public transport;
 - Ensuring that transport is accessible to all;
 - Supporting the provision of high quality public transport;
 - Supporting traffic management measures;
 - Supporting sustainable travel options in rural areas;
 - Supporting necessary infrastructure improvements; and
 - Ensuring that transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.
- 5.2.19 In determining a planning application for development that has transport implications, PPW advises local planning authorities to take into account:
 - The impacts of the proposed development on travel demand;
 - The level and nature of public transport provision;
 - Accessibility by a range of different transport modes;
 - The willingness of a developer to promote travel by public transport, walking or cycling, or to provide infrastructure or measures to manage traffic, to overcome transport objections to the proposed development;
 - The environmental impact of both transport infrastructure and the traffic generated; and
 - The effects on the safety and convenience of other users of the transport network.



Housing

- 5.2.20 Chapter 9 of PPW has been replaced since June 2006 in its entirety by Ministerial Interim Planning Policy Statement 01/2006. The MIPPS explains that the Assembly Government will continue to seek to ensure that:
 - Previously developed land is used in preference to greenfield sites;
 - New housing and residential environments are well designed, environmentally sound (especially energy efficient) and make a significant contribution to promoting community regeneration and improving the quality of life; and that
 - The overall result of new housing development in villages, towns or edge of settlement is a mix of affordable and market housing that retains and, where practical, enhances important landscape and wildlife features in the development.
- 5.2.21 MIPPS also advises that when considering suitable sites for housing development, local planning authorities should address the scope and potential for rehabilitation, conversion, clearance and redevelopment. It goes on to say that maximising the use of appropriate previously developed land for housing development can assist regeneration and at the same time relieve pressure for development on Greenfield sites. In particular, local authorities should consider the contribution that reclaimable or reclaimed urban land and disused or underused buildings can make to the overall provision of land for housing (paragraph 9.2.6).

Tourism, Sport and Recreation

- 5.2.22 PPW recognizes that tourism is a major element in the Welsh economy, particularly in rural and coastal areas and is a significant and growing source of employment ad investment.
- 5.2.23 Paragraph 11.1.4 of PPW encourages the planning system to support sustainable tourism in ways which enable it to contribute to economic development, conservation, rural diversification, urban regeneration and social inclusion.
- 5.2.24 PPW advises that development for tourism, sport and leisure uses should, where appropriate, be located on previously used land. Paragraph 11.1.8 states:
 - "The sensitive refurbishment and re-use of historic buildings presents particular opportunities for tourism and leisure facilities".

Infrastructure and Services

5.2.25 PPW emphasises that adequate and efficient infrastructure, including utility services such as water supply, electricity and gas, is crucial for the economic, social and environmental sustainability of all parts of Wales, and underpins economic competitiveness.



5.2.26 The document advises that local planning authorities should seek to maximise the use of existing infrastructure and that the siting requirements of the utility companies responsible for these services to enable them to meet community needs, and the environmental effects of such additional uses, should be taken into consideration.

Technical Advice Notes (TANs)

TAN (W) 11: Noise

5.2.27 Guidance on noise relating to planning for new developments in Wales is given in Technical Advice Note 11 (TAN 11), which states that the guidance provided in Planning Policy Guidance Note 24 (PPG 24) should also be taken into account. TAN 11 and PPG 24 both cite the use of British Standards 4142 for assessing noise from proposed industrial operations on residential properties.

TAN (W) 12: Design

- 5.2.28 TAN (W) 12 was published in a revised form in June 2009. It explains that in the spirit of a more holistic approach to design issues, a shift in emphasis is required away from total reliance on prescriptive standards, which can have the effect of stifling innovation and creativity. Instead, all those involved in the design process should focus from the outset on meeting a series of key objectives of good design, which achieve the aims of the development and ensure its fitness for purpose.
- 5.2.29 It is not appropriate to rehearse the entire contents of the Advice Note here although included below are the objectives of good design contained within **Fig.1 of** that TAN:
 - Sustaining or enhancing local character;
 - · Ensuring ease of access for all;
 - Promoting sustainable means of travel;
 - Ensuring attractive, safe, public spaces;
 - Achieving efficient use of and protection of natural resources.
- 5.2.30 In particular the revised TAN12 reflects the statutory requirement imposed by amended legislation introduced in 2009 for planning applications and applications for Listed Building Consent to be accompanied by a Design and Access Statement (DAS). Appendix 1 thereof gives guidance of the content of DAS's and a DAS has been produced for these applications accordingly. There was no such requirement when the original applications were submitted and approved.



Welsh Office Circulars

Welsh Office Circular 60/96 - Planning and the Historic Environment: Archaeology

- 5.2.31 The Welsh Office published its Circular on Planning and the Historic Environment: Archaeology (60/96) in December 1996. This sets out the Secretary of State's policy on archaeological remains on land, and provides recommendations, many of which have been integrated into local development plans. The key points in Welsh Office Circular 60/96 can be summarised as follows:
 - Archaeological remains should be seen as a finite and non-renewable resource, and in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed.
 - In the case of non-scheduled remains, the planning system provides a context within which the desirability of preserving archaeological remains and other options can be considered by planning authorities. Much can be achieved when developers are prepared to enter into discussions with archaeologists and consider fully the needs of archaeology as early as possible in the development process.
 - Development plans should reconcile the need for development with the interests of conservation, including archaeology. They should include policies for the protection, enhancement and preservation of sites of archaeological interest, and their settings.
 - The desirability of preserving an ancient monument and its setting is a material consideration in determining a planning application whether that monument is scheduled or unscheduled.
 - Archaeological investigations should be carried out before development commences and that investigation can be achieved through agreements reached between the developer, the archaeologist and the planning authority. Such agreements should secure and implement an appropriate scheme of archaeological investigation, to an agreed timetable, and provide for the subsequent publication of its results.
 - Planning authorities should seek to ensure that potential conflicts are resolved and agreements with developers concluded before planning permission is granted.

Welsh Office Circular 61/96: Historic Buildings and Conservation Areas

5.2.32 The Welsh Office Circular Planning and the Historic Environment: Historic Buildings and Conservation Areas (61/96) was published in December 1996. It emphasises that development plans should integrate conservation and other aspects of local planning policy. It also emphasises the need for early consultation on developments likely to affect historic sites and structures. It states:



"Some historic buildings are scheduled ancient monuments and many which are not scheduled are either of intrinsic archaeological interest or stand on ground which contains archaeological remains. It is important in such cases that there should be appropriate assessment of the archaeological implications of development proposals before applications are determined and that, where permission is to be granted, authorities consider whether adequate arrangements have been made for recording remains that could be lost in the course of works to which permission will relate" (Paragraph. 10).

5.2.33 In respect of the changes of use the circular advises that new uses may the key to the preservation of a building or area and controls over land use, density, plot ratio, daylighting and other planning matters should be exercised sympathetically where this would enable an historic building or area to be given a new lease of life.

5.3 Development Plan Policies

5.3.1 Section 54A of the Town and Country planning Act 1990 requires that proposals shall be determined in accordance with the development plan unless material considerations indicate otherwise. In this case, the development plan comprises the adopted Vale of Glamorgan Unitary Development Plan (UDP).

The Vale of Glamorgan Unitary Development Plan

- 5.3.2 The **adopted** Vale of Glamorgan UDP 1998-2011 provides a detailed planning policy context for the consideration of the application proposals.
- 5.3.3 Policy ENV 1 of the UDP provides that development in the countryside will only be granted for:
 - Development which is essential for agriculture, horticulture, forestry or other development including mineral extraction, waste management, utilities or infrastructure for which a rural location is essential;
 - ii) Appropriate recreational use;
 - iii) The re-use or adaptation of existing buildings particularly to assist the diversification of the rural economy;
 - iv) Development which is approved under other policies of the plan.
- 5.3.4 Policy ENV **8** deals with the issue of small-scale rural conversions and states that proposals which involve small-scale conversions of rural buildings to new uses will be permitted subject to several criteria, **the ones relevant to these applications being:**
 - i) Where the building is of architectural or historic value, the proposed conversion retains those architectural or historic features present in the building;
 - ii) In the case of a conversion to business use the building in terms of form, bulk and general design is in keeping with its surroundings;



- iii) The building is structurally sound and the conversion can be achieved without substantial reconstruction of the external walls, or extension to the building.
- iv) Conversion work can be undertaken without unacceptably altering the appearance and rural character of the building;
- v) Where residential use is considered acceptable, amenity space can be provided within the curtilage of the site without undue incursion into the rural landscape;
- vi) Vehicular access is available or can be provided from the public highway without any unacceptable effect upon the appearance of the countryside;
- vii) Satisfactory parking provision can be made within the curtilage of the site;
- viii) In the case of conversion for small scale commercial, industrial, recreational or tourism use the proposal should not create unacceptable traffic or other environmental problems;
- ix) The proposal is not incompatible with activities carried out on adjoining land.
- Utility and infrastructure services can be provided without unacceptable visual intrusion and without detriment to the environment;
- xi) The proposal would preserve or enhance the architectural or historic quality of a listed building or its setting.
- 5.3.5 Policy ENV **10** explains that measures to maintain and improve the countryside, its features and resources will be favoured, particularly in the Glamorgan heritage coast, areas of high quality landscape, and areas subject to development pressure and/or conflict such as the urban fringe.
- 5.3.6 With regard to the issue of landscape protection and nature conservation Policy ENV11 notes that development will be permitted if it does not unacceptably affect features of importance to landscape or nature conservation, including: trees, woodland, hedgerows, river corridors, ponds and stonewalls and species rich grassland.
- 5.3.7 Policy ENV 12 covers the issue of woodland management and explains that the improvement, management and extension of woodland, tree cover and hedgerows, particularly of broadleaf native species, will be favoured, especially where it:
 - (i) Makes a significant improvement to the landscape such as on derelict land, the urban fringe, or in the vicinity of major road/rail corridors and guarries; or
 - (ii) It helps to diversify and extend wildlife habitats; or
 - (iii) It adds to recreational and educational opportunities.
- 5.3.8 Policy ENV 17 confirms the importance of the **built and** historic environment and states: The environmental qualities of the built and historic environment will be protected. Development which has a detrimental effect on the special character, **appearance**, or setting of the following will not be permitted.



- (I) A building or group of buildings, structure or site of historic interest, including listed buildings and conservation areas;
- (ii) Scheduled ancient monuments and sites of archaeological and/or historic interest;
- (iii) Designed landscapes, parks or gardens of historic, cultural or aesthetic importance.
- 5.3.9 Policy ENV 18 confirms that where development is likely to affect a known or suspected site of archaeological significance, an archaeological evaluation should be carried out at the earliest opportunity and may be required before the proposal is determined. Detailed plans would need to reflect the conclusions of the evaluation.
- 5.3.10 Policy ENV 19 provides that where development is permitted which affects a site of archaeological importance, archaeological mitigation measures will be required to ensure preservation on site or adequate recording prior to disturbance.
- 5.3.11 Policy ENV 27 deals with the issue of the design of new developments and provides that proposals for new development must be of a high standard of design and have full regard to the context of the local natural and built environment and its special features. It goes on to say that new development will be permitted where it:
 - (i) Complements or enhances the local character of buildings and open spaces
 - (ii) Meets the **C**ouncil's approved standards of amenity and open space, access, car parking and servicing,
 - (iii) Ensures adequacy or availability of utility services and adequate provision for waste management.
 - (iv) Minimises any detrimental impact on adjacent areas
 - (v) Ensures that existing soft and hard landscaping features are protected and complimented by new planting, surface or boundary features.
 - (vi) Ensures clear distinction between public, private and semi private spaces
 - (vii) Provides a high level of accessibility
 - (viii) Has regard to energy efficiency in design, layout, materials and technology.
 - (ix) Has regard to measures to reduce the risk ad fear of crime.
- 5.3.12 Policy TOUR 1 confirms that proposals for new hotels outside the designated settlement boundaries of the towns and villages will not be permitted. However proposals for hotels which involve the conversion or extension of existing buildings outside settlement boundaries will be permitted if all of the following criteria are met:
 - (i) The scale of the proposal or any proposed extension is in keeping with surrounding uses.
 - (ii) The proposal does not **unacceptably** affect the interests of agriculture, conservation, areas of ecological, wildlife, landscape or archaeological importance.



- (iii) The proposal does not unacceptably affect the amenity and the character of the existing or neighbouring environments.
- (iv) The proposals meet high standards of layout, landscaping and design and has safe vehicular access.
- (v) Adequate utility and infrastructure services exist
- (vi) Suitable access is provided for disabled persons
- (vii) Parking is provided in accordance with the Council's guidelines.
- 5.3.13 Policy REC 7 deals with proposals for new sport and leisure facilities outside existing town and district centres which will be permitted if:
 - The proposal either singularly or cumulatively with other existing or approved developments does not undermine the vitality, viability and attractiveness of Town or district centres or proposed developments at Barry waterfront;
 - (ii) There are no suitable town, district or edge of centre sites and in the case of out of town/district proposals, there are no suitable town, district, edge of centre or out of centre sites (the sequential test);
 - (iii) The proposal does not have an unacceptable effect on the achievement of an acceptable supply of business/industrial land as identified in policies EMP 1 and 2:
 - (iv) The proposal is well located to public transport, the needs of the non car traveller and the main road network;
 - (v) The highway network is capable of accommodating the traffic generated by the proposal without an unacceptable effect on traffic flows and patterns, safety, energy use or other emissions;
 - (vi) The proposal meets the council's approved parking guidelines;
 - (vii) Adequate utility services exist, are reasonably accessible or can be readily and economically provided;
 - (viii) The proposal does not result in the loss of grades 1, 2 or 3a agricultural land or have an unacceptable effect on areas of archaeological, ecological or wildlife importance or landscape protection.
 - (ix) The proposal has no unacceptable effect on the amenity and character of existing or neighbouring environments by virtue of noise, traffic congestion, exacerbation of parking problems or visual intrusion.
- 5.3.14 Policy COMM 2 confirms that proposals for the reuse and redevelopment of redundant hospitals for non-health uses and the land and buildings within their curtilage will be permitted if all of the following criteria are met:
 - (i) The proposal does not unacceptably effect the local environment or character of the area:
 - (ii) The provision of car parking, servicing and amenity space is in accordance with the council's approved guidelines;
 - (ii) Access arrangements are to the council's satisfaction;



- (iii) The proposal does not involve any significant extension to the existing buildings;
- (iv) In the case of a listed building the proposal does not unacceptably affect its character as a building of special architectural or historic interest.
- 5.3.15 The policy also states that in appropriate cases, development proposals for such sites will be guided by the preparation of a Development Brief. Hensol Castle is one such location.

Summary

5.3.16 The **development plan** policies relevant to the consideration of the development proposals are set out in paragraphs 5.3.1 to 5.3.2**3 above**. An assessment of the performance of the development proposals against the policies of the Vale of Glamorgan Unitary Development Deposit Draft has been undertaken and is summarised in the table on the next page.

Policy	Comment
ENV1	Neutral
ENV 8	Positive
ENV 10	Positive
ENV11	Positive
ENV 1 2	Positive
ENV 1 7	Positive
ENV 18	Neutral
ENV 1 9	Neutral
ENV 2 7	Positive
TOUR 1	Positive
REC 7	Positive
COMM 2	Positive

- Positive Contributes to achieving policy objectives;
- Neutral No conflict;
- Conflict Detrimental to policy objectives.

5.3.17 It is often the case that policies and proposals contained within development plans may pull in different directions. The important consideration is the extent to which any development proposal accords with the overall policies and principles within the plan and this concept was considered in the ruling of Mr Justice Sullivan in the case of R V Rochdale Metropolitan Borough Council ex parte Milne. It is therefore considered that the performance of the development proposals should be assessed



in the light of the overall relationship between the developments proposed and the policies contained within the plan.

5.3.18 It is considered that the proposed development accords with the policies and provisions of the Vale of Glamorgan Unitary Development Plan. This conclusion is supported by the evidence provided within this environmental statement in relation to issues such as landscape and visual impact, transport and archaeology, and the fact that permission was granted in 2006 for a near identical scheme.

5.4 Other Material Considerations

Hensol Castle Development Brief

- 5.4.1 A development brief was prepared by the local planning authority to provide the planning framework for Hensol Castle **and** its associated land. The document was approved by Cabinet for development control purposes in July 2004. It is a non-statutory document that does not form part of the Development Plan in terms of Section 54A of the Act. Neither **did** it fully respect some of the comments made in respect of its contents by the applicants during the consultation stage. However, it is acknowledged to be a material consideration insofar as the determination of the applications is concerned.
- 5.4.2 The key aims of the brief **we**re identified as follows:
 - i) To provide a basis for the Council's response to future potential development proposals for the reuse of the site.
 - ii) To identify the special architectural and historic elements of the built fabric, and establish best practice for their conservation.
 - iii) To provide a full appreciation of the quality of the historic landscape and parkland setting, as a source of future management strategies.
 - iv) To inform of the special interest of natural elements of the land as a basis for sustainable resource management.
 - v) To provide advice on the submission of applications for statutory consent and the range of information required to inform those submissions
- 5.4.3 The significance of Hensol Castle and its associated service courtyards was identified in paragraph 3.4 of the Development Brief where it explained that the Castle is a Grade 1 listed building which forms an outstanding example of the use of early-gothic revivalism in Wales. It further explained that the Castle illustrates at least four major periods of adaptation extending northwards from the original house, to ultimately incorporate two service courtyards.



- 5.4.4 The Brief also identified other buildings and structures, which although not of equal significance, **we**re considered to be listed. They includ**ed**:
 - The Bridge.
 - The 'pre-1948' Buildings and Structures which include the inter-war hospital buildings, the former community building and the Island 'Folly'.
 - Hafod Lodge.
 - Other Structures such as the earth retaining dam to the lake, the boathouse and walls enclosing the former kitchen garden.
- 5.4.5 Paragraph 4.1 of the Brief advised that, given the outstanding architectural and historic attributes of the site, developers and their design teams would be required to demonstrate that their proposals were in compliance with best conservation practice as describe in Circular 61/96.
- 5.4.6 In respect of the Castle, the Brief drew attention to the following issues: -
 - Principles of Intervention in the Internal Historic Layout The brief noted
 that the most sensitive rooms and spaces are the principal rooms on the ground
 floor, facing southeast. It explained that the use of period show rooms should be
 compatible with their historic significance, form, scale and detail in terms of
 occupancy, layout, frequency of use and provision of services.
 - 2. The Adoption of Sympathetic Repair Technology The use of appropriate repair technologies in the repair of detail was to be promoted by the Council. Submission for listed building consent would require to show that an appropriate understanding of these issues had been attained, for example through the firm understanding of the condition of the building.
 - 3. The Retention of the Castle at the Centre of the Historic Site As the castle remains the principal built structure in the site, it was considered that there would be significant disadvantages to its separate disposal as this would not only lead to fragmentation of the historic estate but would lead to future pressure for independent development within the immediate setting of the Castle.
 - 4. **The 'Pre-1948' Curtilage Buildings** In consideration of applications for planning and listed building consent, the following principles **were to** be applied to the 'pre-1948' curtilage buildings:
 - Retention and reuse
 - Conversion, repair and renovation in accordance with sound conservation principles.
- 5.4.7 A summary of development opportunities **we**re explored in paragraph 4.3 of the brief as follows:
 - i) Alternative Uses

Paragraph 4.3 of the Brief pointed out that as the primary use of the site was as an operational hospital and that other parts of the site had been used as a conference centre there were alternative uses that **could** be implemented without



the need for planning permission such as nursing homes, residential schools/colleges and training centre. Other identified potential uses of the site include**d** a prestige form of employment or a leisure/tourism use.

ii) Residential Development

The brief explained that, whilst there was a small amount of conventional housing within the site, it did not form part of a recognised settlement in the UDP. Rather it consisted of open parkland where local amenities and public transport services were sparse. Therefore in the interest of sustainability the brief explained that residential development should be directed to allocated sites in established urban areas. It went on to point out that residential development in the countryside would neither accord with national planning policy nor the sustainability objective of the UDP. For the avoidance of doubt the Brief advised that the Council did not consider that there was an enabling argument to justify a departure from planning policy. The Brief did acknowledge, however, that there were two derelict houses and a pre-1948 house on the northern outskirts of the site which may be brought back into residential uses.

iii) Replacement Floorspace

In section 4.3 the Brief explain**ed** that the Council w**ould** support any proposals to demolish the modern, poorly designed system built hospital buildings and provide replacement floorspace, but that new architecture should be of outstanding quality and in sympathy in terms of form and scale with the historic context. It **went** on to say that replacement new development sh**ould** have regard to siting and layout in terms of impact on the setting and special character of the listed buildings and historic parkland.

In terms of the replacement floorspace the Brief emphasised that the preferred location was the "transitional" zone within the basin of the field to the north of the existing Vale Golf Resort and/or adjacent to the existing pre-1948 ward blocks to the south of the lake and on the south eastern perimeter of the site. This area was described as the least vulnerable location having already been influenced by the proximity of modern buildings relating to the golf and country club.

The Brief recommended that the undesirable parts of the site, such as the nurses training blocks to the north of the castle and the garages/workshops adjacent to the kitchen garden, **should** be cleared and the land restored back to the parkland.

iv) The Lake

It was advised that any recreational use of the lake must be low key, such as angling or non-motorised boating. It further advised that there would be a presumption against any new development immediately adjacent to the lake unless it could be demonstrated that it was essential to serve the proposed leisure use.

5.5 Compatibility of Proposals with Planning Policy



Conversion and Extension of Hensol Castle to Hotel Spa

5.5.1 The proposed conversion of the Grade 1 listed castle to a commercial/leisure use and the design principles adopted and outlined in the Conservation and Design Statement at Chapter 4 is considered to be wholly compatible with planning policy at both the national and local level. That has been demonstrated by the fact that planning permission and listed building consent were granted in 2006 for a scheme that is near identical to that now proposed.

Conversion of Southern Ward Buildings to Residential Use

- 5.5.2 The Brief acknowledged that it would be appropriate to find alternative uses for the 'pre-1948 curtilage buildings'. Although, however, there was a clear presumption in the Brief against the use of these buildings for residential purposes the 2005 application argued in favour of that use and succeeded as permission was granted in 2006. One of the blocks (Talbot House) has already been so converted. Permission was granted for the conversion of the remaining blocks and some of that work has been commenced whereas for the others amendments are proposed to the approved internal layouts.
- 5.5.3 Planning Policy Wales emphasises that policies for development and listed building controls should recognise the need for flexibility where new uses have to be considered to secure a building's survival and that the aim should be to identify the optimum viable use that is compatible with the character and setting of an historic building (paragraph 6.4.6). The conversion of the ward blocks to residential has been accepted as being likely to have the least impact upon the conservation attributes of the site the listed buildings; their settings; and the historic parkland because:
 - The buildings are appropriate for conversion to that use;
 - There is no market requirement for their conversion for employment or tourism purposes; and
 - Even if there was some demand for commercial use the works necessary to the structure of the buildings themselves and their curtilages, including the access routes thereto, would be unsympathetic to the basic conservation objectives and policies set for the site.
- 5.5.4 Furthermore, the extensive cost of renovating the castle and of converting it into a facility that is both commercially viable and acceptable to the Council and Cadw is a material consideration in the determination of the applications.
- 5.5.5 The Vale of Glamorgan Council has accepted this argument at both this site and at the former Sully Hospital site where the repair, alteration and conversion (including



new build) of the **former** hospital, which is a grade II* Listed Building, **was approved for the creation of** 234 residential flats

- 5.5.6 As has been accepted by the Council in its determination of the 2005 application the conversion of the castle on a stand-alone basis is non-viable and there is a need, therefore, to generate capital receipts from elsewhere on the site to fund the works necessary to bring the castle to beneficial use. The conversion of the ward blocks and the sale of the converted units is the only viable option in that respect.
- 5.5.7 In essence, it is considered that the proposed conversion of the remaining southern ward buildings to residential use in accordance with the amendments to the approved scheme proposed within these applications complements the conservation objectives and requirements of the Development Brief, CADW and the Council.



6. LANDSCAPE & VISUAL IMPACT

6.1 Introduction

- 6.1.1 This landscape and visual assessment was originally undertaken in 2004/2005. It covered the whole of the Hensol Estate, not just that part of it which is the subject of the current planning application. Since that date the only changes witnessed are those consequent upon the part implementation of the 2006 permission and the discharge of a number of the conditions attached thereto, particularly conditions 4, 5, 10, 14, 17, 21 and 24 thereof.
- 6.1.2 The assessment provides information on the landscape and visual characteristics of the Hensol Castle site so as to determine the degree of physical and visual effect that the proposed development will have upon the immediate parkland environment and the surrounding landscape.
- 6.1.3 A landscape and visual assessment is an analysis of the physical and perceptual attributes of an area. The landscape assessment of the site relates to the effect of development on the landscape resource, whereas the visual assessment is concerned with the effect on visual amenity.

6.2 Assessment Methodology

- 6.2.1 The assessment was carried out in accordance with:
 - The joint Landscape Institute/Institute of Environmental Management and Assessment "Guidelines for Visual Impact Assessment – 2nd Edition 2002"
 - "Landscapes Working for the Vale of Glamorgan" (LWVG) study undertaken by the Vale of Glamorgan Council in line with LANDMAP methodology for landscape assessment developed by the Welsh Partnership Group and the Countryside Council for Wales.
- 6.2.2 The landscape assessment combines the results of both an objective and subjective appraisal of the landscape. The appraisals consisted of three stages that included a desk study, a field survey and an analysis of the results. A detailed account of the methodology used in this landscape and visual assessment is presented at Appendix 9.

Desk Study

6.2.3 The desk study involved an examination of 1:50,000 scale and 1:25,000 scale Ordnance Survey maps to establish the general context of the study area. This was



followed by an analysis of relevant documentation (i.e. reports, assessments and government guidance) to clarify the landscape and planning context.

Fieldwork

6.2.4 Fieldwork involved a landscape survey of the site and an appraisal of key views, both from the site to the surrounding landscape, and looking towards the 2005 application site from public vantage points.

6.3 Baseline Conditions

Landscape Survey

Topography

6.3.1 The Mill Pond at the eastern end of the site represents the low point at around 33m AOD, from which the land gradually rises across an area of open parkland (now occupied in part by approved training pitches and off-pitch training areas) before steeply rising to the Castle at around 46m AOD. There is a small step down in level to the south of the castle and the land is relatively flat in the area where the former hospital buildings are located. Further to the southwest the proposed development area adjacent to the golf course rises at a gentle gradient of approximately 1:70, reaching a level of approximately 50m AOD at the southern boundary. At the northern end of the original 2005 site grassland rises steeply to a level of 72m AOD along the 2005 application site boundary, with the land continuing to rise further north to around 100m AOD at the ridgeline.

Specimen Trees

- 6.3.2 The application site consists of a parkland landscape containing over three hundred mature specimen trees and further distinct areas of woodland planting. A survey of the trees and woodland **was** carried out **in 2004** by qualified Arborists (ESA Tree Care Ltd.) and their report is contained at Appendix 10.
- 6.3.3 Individual trees were surveyed in accordance with BS:5837 (Trees in Relation to Construction). In summary, the majority of the trees were assessed to fit into the "A" class or highest category i.e. trees "whose retention is most desirable". Despite the high value of the majority of the trees many required remedial work i.e. removal of deadwood and crown lifting over roadsides. Several trees required removal due to structural problems (Category "D") and there are areas where some thinning was recommended because overcrowding had lead to trees of poor form and vigour. Specific details of recommended felling and remedial work is contained in the tree survey at Appendix 10.



Woodland

- 6.3.4 Woodland areas **were** classified into different sections. The Principal Areas are listed below and referred to in detail at Appendix 10.
 - Section A the northern end of the Mill Pond: Juvenile to semi-mature wetland native trees consisting of Alder, Ash and Willow with laurel and rhododendron understorey.
 - Section A1 containing northeast edge of site: Juvenile to mature Beech and Yew with under-storey Holly and other shrubs.
 - Section A2 main area of woodland to north of the walled garden: Dominated by mature Spruce and Oak.
 - Section B To north east of main lake: Semi-mature to mature Douglas Fir, Ash and Oak with dense laurel groundcover.
 - Section C To north of main lake: Semi-mature to mature mixed woodland with Beech, Ash, Oak and Yew and Willow/Alder on banks of lake and Rhododendron under-storey.
 - Section D To west and south of main lake: Semi-mature Alder and Willow with mature Oak, Ash and Beech bordering proposed development area.
 - Section E To south of Mill Pond: mature Oak and Birch with rhododendron understorey.
 - Section F Bordering Mill Pond: semi-mature to mature Alder and Willow.

Conifer Screens

- 6.3.5 Leyland/Lawson Cypress conifer screens occur in several places, principally related to the more recent built development on the site. They are located:
 - North of "H" Ward either side of the dry ditch. (ESA Tree Survey No. 429)
 - NE of the Castle (No. 155)
 - Access Road to the Northern Wards (No. 252) (outside the current application site)
 - East of the walled garden (No. 251)

Scrub

6.3.6 The main area of scrub is located to the south and east of the Mill Pond and to the north west of Teifi Ward.

Hedgerows

6.3.7 Field boundary hedgerows composed of native shrub species exist at the northern end of the **estate**, **largely outside the current application** site, partially enclosing pasture. A native hedgerow with mature trees, mainly Oak, exists at the southern end of the site alongside a drainage channel that was dry at the time of survey (June



04). A clipped privet hedge existed around the curtilage of Llynfi Ward (now called Wyatt House).

Ornamental Shrubs

6.3.8 The principal area of ornamental shrub planting is located between the western elevation of the Castle and Hensol Lake. A footpath passes through this area and the shrub beds were at the time of survey over mature with self-seeded trees and bramble. Rhododendron had become the dominant species in many areas. The original graded structure from low plants adjacent to the footpath to taller plants behind had been lost through lack of management.

Grassland

6.3.9 The expanse of amenity grassland around the castle had historically been frequently cut by gang mowers. It is an integral part of the historic parkland. In the 18th century however it is likely to have had a coarser appearance, being regularly maintained by a combination of sheep and cattle grazing. Areas of improved grassland, grazed to varying intensity, occur near the perimeter of the estate, largely outside the current application site.. At the time of survey there were fields at the southern end of the site, physically separated from the Castle by the modern hospital buildings and mature intervening tree planting. Those fields had a closer relationship in 2005 with the Golf Course and the Vale of Glamorgan Leisure Centre and Hotel than they did to the Castle and they have now been developed, with permission, as a Sports Pavilion and playing/training fields instead of the holiday village that was originally approved thereat. The ecological value of the original grassland is discussed in detail in the Ecology section at Chapter 7 although such grassland now no longer remains.

Waterbodies

- 6.3.10 The main water bodies on the site are currently enclosed by plantation woodland and Alder/Willow Carr. The present water level in Hensol Lake is significantly lower than in the past due to a reduction in volume to comply with the **requirements of The** Reservoirs Act. The change in water level is illustrated by a comparison of the current situation with the photo of the island folly in the 1923 Sale Particulars (Refer to Appendix 11, Figure 8.23 centre right photo). There were (both at the time of survey (2004/2005) and now) only several metres of open water between the island and the Alder Willow Carr compared with the significant stretch of water that was originally intended. The waterside vegetation has over recent years naturally expanded through a lack of management and the reduction in the water level.
- 6.3.11 Natural vegetation succession has produced a variety of habitats ranging from open water, through marginal reed vegetation to an Alder/Willow Carr (refer to Ecology



Chapter for further details). The Alder/Willow Carr has colonised extensive areas of the Mill Pond. Examination of the historical maps (Refer to Figures 8.10 to 8.30 at Appendix 10) reveal that the oldest plantation occurs to the north and west of the Castle and around the northern end of Hensol Lake (The "Tulip Walk"). Two areas of plantation were also recorded on the 19th Century maps at the southern end of the Mill Pond. All of these areas are covered by TPO designations.

6.3.12 The maps from the 1960's and 1970's do not show the other areas of woodland and Willow/Alder Carr that currently exist around the margins of both lakes. It will appear, with reference to the cover photo of the 1923 Sale Particulars (Refer to Figure 8.23 – top photo at Appendix 11), that occasional mature trees at the edge of the lakes existed that allowed views through to the water's edge and this is consistent with the principle of the English Landscape style^{1.} These mature trees still exist at the top of the old lake bank near the southwest margin of Hensol Lake, adjacent to the field where the **sports pavilion and training pitches have been developed**. It appears that the lowering of the water level of Hensol Lake and a lack of management has allowed the colonisation of the exposed areas of the former lakebed to produce the wet woodland that is present today.

Public Access

6.3.13 Public footpath No. 20 passes through the Vale of Glamorgan Leisure **C**lub and Hotel car park to the south of the site. The route then follows the road within the site boundary behind the vacant Ward blocks before diverting through woodland north of Teifi Ward (Refer to photos 11 to 15 – Figure 6.4, Appendix 13). The footpath eventually joins the road south of The Mill.

Private Access

6.3.14 In addition to the footpaths around the Castle and the Ward blocks a circular walk exists around Hensol Lake, part of which was developed by the Health Authority as a trim trail with exercise equipment at intervals. There is also a historic path known as "The Tulip Walk" that passes through the oldest woodland to the north of Hensol Lake. The footpath routes were surfaced with compacted aggregate in the past and this surface is still in evidence.

¹ The English Landscape Style is a generic term to describe the evolving landscape style in the 18th Century for "naturalistic" planting also often referred to as "Brownian Parkland landscape" (after Capability Brown) This style was also seen in Wales and Scotland and the "English Landscape Style" is the most commonly recognised term to describe the main phase of the Hensol landscape park.



Landscape Character

Regional Assessment

- 6.3.15 The document entitled "Landscapes Working for the Vale of Glamorgan" (LWVG) is a comprehensive landscape study undertaken by the Vale of Glamorgan Council in line with LANDMAP methodology for landscape assessment developed by the Welsh Partnership Group and the Countryside Council for Wales. Relevant extracts from the document are contained at Appendix 14.
- 6.3.16 The application site falls within Landscape Character Area No 14 "Hensol/Border Vale" defined as "a distinct area north of A48 and between Ely and Thaw river valleys".
- 6.3.17 The area is described as an:

"undulating landscape of small hills, ridges and small damp valleys culminating in elevation at Hensol Forest (Landscape Character Area No. 15). Area drains to Thaw in west and Ely to east. Scattered woodland, primarily pastoral landscape with strong hedgerow cover. Main settlements are at Ystradowen, Welsh St. Donats and Hensol. Area is classified as Border Vale as part of the Welshry north of A48 Roman Road. An area of lowland moor is located at Morfa Ystradowen".

- 6.3.18 The evaluated aspects of the landscape are categorised into four sections: Outstanding, High, Modest and Other. The "Hensol/Border Vale" Character Area is assessed as modest in visual, cultural and geology aspects, modest and high in vegetation aspects, and high in historical aspects.
- 6.3.19 The strategy elements relevant to landscape and visual issues and the development proposals can be summarised as follows:
 - Visual: Protect and manage woodlands and hedgerow cover including riparian vegetation. Apply rural settlement guidelines and rural road design guidelines.
 - Vegetation and Habitats: Maintain features of value such as woodlands, hedgerows, streams, roadside verges.
 - Historical: Poorly understood "Welshry" landscape with need for archaeological landscape characterisation study and historical settlement study
- 6.3.20 A number of specific Design Guidelines contained in Volume 2 of the LWVG are listed as relevant to the Hensol/Border Vale Character Area. Of these guidelines the following have been referred to in the preparation of the Landscape Master Plan:
 - DG16 Woodlands and Hedgerows
 - DG17 Design and Management for Nature Conservation



- DG20 Palette of Materials: Hard Rural Vale
- DG22 Palette of Materials: Planting General guidance
- DG23 Palette of Materials

Local Assessment

- 6.3.21 The notional landscape components of the site are described in the Development Brief at paragraph 3.1. It is stated that there are nine key landscape elements in the site, described as follows:
 - 1. The lake to the west of the castle, including the "Tulip Walk" and associated areas of treescape to the west and southwest.
 - 2. Immediate "pleasure grounds", parkland, buildings and car parking in the setting of the Castle.
 - 3. The historic kitchen garden/walled enclosure.
 - 4. Steeply sloping meadow to the north of the lake.
 - 5. Incidental woodland.
 - 6. Context parkland, in grass, including **the** playing/**training** field**s** to the west of the Mill Pond.
 - 7. The 20th Century hospital layout with associated incidental open space and treescape.
 - 8. "Transitional" sports **pavilion and training pitches** located between the boundary of the country club and 7 above.
 - 9. Modern housing.

Visual Survey

Publicly Accessible Views of the Site from the Surrounding Landscape

- 6.3.22 Close range views of the site are limited because of the dense woodland planting surrounding the site, significant tree planting in the surrounding landscape and by the nature of the landform. Longer distance views to the north and north-east are available from elevated ground e.g. Garth Hill and the edge of Pentyrch, although publicly accessible locations are limited (Refer to Photos 1 to 5 Appendix 12). The castle is located some 5-7km from these viewpoints and barely discernible amongst tree planting, even when viewed with binoculars. The **Vale Resort** complex on higher ground nearer the horizon is more noticeable as the pale façades reflect light and contrast with the dark woodland backdrop.
- 6.3.23 Other potential views towards the site are available from isolated sections of public footpaths on elevated ground around Miskin and Llantrisant. Due to the presence of intervening vegetation, significant distance to the application site and tree



- planting within the site, it is anticipated that all of the elements of the site will be barely discernible from these potential viewpoints.
- 6.3.24 Views of the site to the south west of the golf course are available from an isolated section of a public footpath and as occasional oblique glimpses across field gates from the country lane near Cartregal Farm. In these views, only the upper levels of existing buildings are visible above tree planting. The buildings form a minor component of the overall panoramic view across the valley to the hills above Pentyrch on the horizon (Refer to Photos 6 to 8). Potential views of the site from other public footpaths in the vicinity are prevented by a combination of tree planting and landform.
- 6.3.25 Glimpses of the site are also available from the east near the entrance to the Golf Club. Some **upper levels of the castle can be seen below the** horizon of woodland planting located to the west of the site at Kennel Grove. (Refer to Photo 9).

Views of the Site from the Public Footpath Within the Application Site

- 6.3.26 Public footpath (No. 20) lies to the south of the site along the southern end of the site adjacent to the area now developed as the Sports Pavilion and Training Pitches. The footpath links to the golf course and leisure complex to the south west of the application site.
- 6.3.27 Views of the southern end of the site from the golf club house are possible across the car park. However the majority of existing built structures are obscured by intervening tree planting (Refer to Photo 10). The **training pitches and pavilion have now** become a dominant element in views from the footpath where the route follows the **2005** site boundary (Refer to Photos 11 to 13). Further to the north along the route the hospital ward buildings are set within grassland **areas** and largely screen views further into the site (Refer to photos 14 and 15).

Private Views Within The Application Site – Principal Vistas

6.3.28 The main vehicular access into the site from the northeast crosses the Mill Pond (Grade 2 listed bridge) and is enclosed by a canopy of mature broad-leafed trees, dominated by Beech. The road bends to the south and filtered views towards the castle are available, although intermittent tree planting along the road and tree planting to the east of the castle restrict significant views of the castle itself. As the road rises towards the main castle, the specimen Turkey Oak becomes a dominant feature in the view, obscuring much of the southern end of the Castle. (Refer to Photo 28).



6.3.29 The approach **to the castle** from the south is through an avenue of mature Beech trees and the interwoven canopies form a dark tunnel, obscuring views of the castle (Refer to Photo 20). The vista opens at the top of a flight of steps to reveal the imposing southern elevation of the castle (Refer to Photo 19). Minor routes, running perpendicular to the main vista are also bordered by avenues of trees, but on the northern side of the routes only.

Other Significant Private Views Within The Application Site

- 6.3.30 Views across the proposed development area are available to the **north** along the golf course/**resort** access road (Refer to photos 16 and 17). From these locations the hospital ward buildings are seen against a backdrop of mature tree planting that prevents any significant views of other buildings, or even of the Castle itself further to the north. Views to the hills around Pentyrch on the horizon are available above tree planting within the site. Looking south, there are **largely** unrestricted views to the **existing** leisure **resort** and hotel (Refer to Photograph 21).
- 6.3.31 Views of the main lake and Mill Pond are limited by the growth of trees and understorey vegetation (Refer to photo 18) although isolated views across open water are available in places (Refer to Photos 23 and 25). The western elevation of the castle is substantially screened by a combination of conifer hedging, mature trees and Rhododendron/Laurel bushes (Refer to Photo 24).

6.4 Identification And Evaluation Of Key Impacts

Development Constraints and Opportunities

- 6.4.1 Following the baseline survey in 2004/2005 a landscape constraints and opportunities plan was prepared to guide the development of the Master Plan. The landscape constraints and opportunities plan is attached at Appendix 15 and includes the following elements:
 - Buildings to be demolished and retained (those identified for demolition have now been demolished)
 - Existing significant structural vegetation
 - TPO designations
 - Trees to be retained (Category A and B BS:5837)
 - Trees to be felled (Category D BS:5837)
 - Immediate landscape setting of the Castle
 - Public access



6.5 Construction Phase Landscape and Visual Impacts

- 6.5.1 Landscape related construction effects would be largely limited to the removal of trees (described in detail below) with slight adverse impacts. The development has been designed to minimise the removal of existing vegetation. Localised changes in topography are considered to have negligible to slight adverse impacts, with the majority of changes designed to mitigate the impact of new development.
- 6.5.2 Protective fencing **has been** erected in order to demarcate **sensitive** areas and **to** protect existing vegetation that w**ill** be retained in accordance with BS:5837: Trees in Relation to Construction.
- 6.5.3 Construction activities and vehicular movement is visible from within the listed park including public footpath No. 20, with the degree of effect dependent upon the proximity to the viewer. The movement of the spoil material between the rear of the Castle and the earthworks for the training pitches occurred over a 8 week period, involving 36 round trips per day of dumper trucks (vehicles with a 6m3 capacity.) Such movement of material within the park resulted in temporary visual impacts of a moderate adverse significance. However, such work is now largely complete and the remaining adverse effect is minimal.
- 6.5.4 The visual impact of construction works **has and will** vary with season. Construction activities conducted during the summer **have and will** be screened more effectively by deciduous vegetation around the site than would be the case in winter.
- 6.5.5 Careful location and design of temporary site compounds, lighting and signage **has** reduce**d** both landscape and visual construction impacts to ensure **that** the effects on both landscape and visual amenity are minimised.

YEAR 1 FOLLOWING CONSTRUCTION

Landscape Impacts

6.5.6 The **original** landscape constraints and opportunities **identified in 2004/2005** are illustrated at Appendix 15. The landscape proposals are illustrated on the Master Plan at Appendix 2.

Specimen Trees

6.5.7 The sensitivity of the specimen trees is generally very high due to their maturity and important contribution to the parkland surrounding the Castle. The amenity value of many of the trees is reflected in their TPO status although some specimens had at the time of survey major defects and were removed as agreed for health reasons.
19 trees fell into BS:5837 Category D and were proposed to be removed (see Tree



Survey at Appendix 10 for details on individual specimens). It **was** proposed that all specimens of Lawson and Leyland Cypress throughout the site (12 trees) should be felled on aesthetic grounds **and such felling has now been completed**.

- 6.5.8 A Mature Beech tree protected by a TPO was situated only 4m from the proposed Castle extension. As approved it was felled prior to construction commencing. (Refer to Tree Survey at Appendix 10 No. 411). Six other trees not protected by a TPO were also identified as felling candidates to accommodate the new car park and associated mounding (Nos. 156, 157, 158, 159, 177 &178). Four Yew trees in the vicinity of the Castle extension will be retained although crown reduction and thinning will need to occur (Nos. 153, 410, 412 & 413). There were several small ornamental trees in the vicinity of the modern hospital buildings that were identified for removal, and have now been felled, to allow the buildings to be demolished (Nos. 422, 423 & 430).
- 6.5.9 However, in terms of the overall tree resource the proposals for felling represented and still represent a low degree of change. There would be slight beneficial impacts through the removal of Lawson/Leyland Cypress and slight adverse impacts through the removal of the TPO Beech Tree No. 411 (and the other less significant trees not protected by a TPO). On balance it is therefore considered that the impact at Year 1 on the specimen tree resource is negligible.

Woodland

6.5.10 The blocks of plantation woodland around the site, principally bordering the lakes, have an intrinsic value in defining the character of the historic parkland and therefore the sensitivity of the resource is considered to be high. It is assessed that the management proposals will, over time, enhance the landscape character of the parkland, allowing views across the lakes from key locations and improving the amenity of the existing lakeside walk (Refer to Outline Management Plan at Appendix 16). At year 1 due to the phased nature of the works carried out it has already been shown that there will be a low degree of change and a slight beneficial impact upon the woodland resource. There will be a gradual improvement to the woodland structure each year as the phased works are implemented (Refer to Year 15 assessment).

Hedgerows

6.5.11 The sensitivity of hedgerows on the site varies from medium sensitivity (native field boundary hedgerows) to low sensitivity (Leyland/Lawson Cypress Conifer screens). The existing native field boundary hedgerows at the northern end of the **estate now fall outside the application** site. **However, they** will be maintained and the gaps in-filled with new planting. The hedgerow with mature trees at the southern end of



the site will also be maintained. There will therefore be a negligible impact on the hedgerow resource.

Conifer Screens

6.5.12 It is proposed that all of the conifer screens **not already removed under the terms of the 2005 permission will be** removed on aesthetic grounds and because they
largely related to the modern hospital buildings that **have been** demolished. The
screens also detracted from the layout of the 18th Century Parkland. It is
considered that at **present**, **beyond** Year 1, the proposals **have already resulted in a** slight beneficial impact.

Ornamental Shrubs

6.5.13 The sensitivity of ornamental shrubs is low to medium, with the principal area located between the western elevation of the Castle and Hensol Lake. A footpath passes through this area and the shrub beds are over mature with self-seeded trees and bramble. Rhododendron has become the dominant species in many areas. The original graded structure from low plants adjacent to the footpath to taller plants behind has been lost. The Outline Management Plan at Appendix 16 describes the proposals for a phased replanting of the shrubbery following the principles of 18th Century landscape design. A woodland TPO covers the area and the precise details of clearance and replanting have been agreed with the Local Planning Authority as a part of the discharge of the landscaping conditions. At year 1 the proposals were predicted to represent a slight beneficial impact. There will be a gradual improvement to the ornamental shrub planting each year as the phased works are implemented (Refer to Year 15 assessment).

Scrub

6.5.14 The main area of scrub is located to the south and east of the Mill Pond and to the north west of Teifi Ward. These scrub areas will be unaffected by the main redevelopment proposals. However, the maintenance of the scrub areas, principally to increase ecological diversity, is covered in the Outline Management Plan. The redevelopment will have a negligible impact upon landscape and visual amenity of the scrub. However detailed management proposals for the area to the north west of Teifi Ward, through which the diverted public footpath passes, will allow opportunities for localised enhancement.

Grassland

6.5.15 Grassland varies in sensitivity as a landscape resource according to its location and purpose. The amenity grassland has a medium sensitivity to change because of its historical context with the parkland surrounding the castle. It is assessed that, in



- other locations, improved and semi-improved grassland further away from the immediate setting of the castle has a lower sensitivity.
- 6.5.16 Amenity grassland around the Castle, southern Wards and southern field adjacent to the Mill Pond, will be largely maintained. **Some areas have been** lost to accommodate the **recently completed Sports Pavilion.** The areas left by the demolition of the modern hospital buildings and associated hard standing will be restored to parkland. The improved and semi-improved grassland at the northern end of the site, and **both** sides of the main access road, will be maintained for stock grazing or cut for hay.
- 6.5.17 In summary there will be little change to the **remaining** grassland areas **which resulted in** a slight adverse impact as a result of the development proposals at Year 1 but which will result in a beneficial impact as the reinstated areas mature.

Water Bodies

- 6.5.18 The Outline Management Plan (Appendix 16) proposes a phased thinning, clearance and coppicing of wet woodland and marginal vegetation in certain locations. Dredging of the Mill Pond will also be required although this will be phased and restricted in extent to limit the impact on ecological interests. These proposals will enhance visual amenity and restore views to the lakes that have been lost from the expansion of Alder/Willow Carr at the lake edge. Although the majority of the areas are not covered by TPO designations the lake edge provides valuable habitat for protected species and the location of any clearance will be agreed with the Local Planning Authority and any statutory consultees in advance. In summary it is proposed that the following areas will be thinned, coppiced or cleared to enhance visual amenity:
 - Mill Pond a limited stretch north and south of the listed bridge
 - Mill Pond Southern end adjacent to the amenity grassland (western edge only)
 - Hensol Lake parts of the eastern and southern edge of the lake
 - Hensol Lake western edge to allow views of the Island Folly
- 6.5.19 In visual amenity terms it is assessed that the phased proposals will have a slight beneficial impact upon the water bodies at Year 1, both in terms of restoring some of the historic views of the water and improving the amenity of the listed parkland. The impact following implementation of the Management Plan proposals is assessed at Year 15.



Visual Impacts

Publicly Accessible Views of the Proposals from the Surrounding Landscape

- 6.5.20 Long distance views towards the proposals will be available from public rights of way on elevated ground to the north and north east of the site e.g. Garth Hill and the edge of Pentyrch (Refer to Photos 1 to 5 Appendix 12). There are also potential views from isolated sections of public footpaths on elevated ground around Miskin and Llantrisant.
- 6.5.21 The sensitivity of the receptors is considered to be high (Refer to Methodology at Appendix 9), Hensol Castle is located some 5-7km from these viewpoints and is screened by tree planting, being barely discernible even with binoculars. The leisure complex is more visible, set on higher ground below the horizon and surrounded by woodland. The new Castle extension will be barely discernible, as currently only the uppermost levels of the existing Castle tower are visible above intervening tree planting. The degree and magnitude of change compared with the current views will be very low. In summary it is anticipated that the proposals will have a negligible impact upon these existing long distance views.
- 6.5.22 Medium range oblique views to the south west of the site are available from rural lanes in several isolated locations (e.g. near Cartregal Farm where gaps in the field boundary hedgerow allow) and from a short section of a public footpath (Refer to Photos 6 to 8 Appendix 12). The sensitivity of the receptors is assessed to be medium to high.
- 6.5.23 In these views intervening tree planting largely screens the modern hospital buildings near the southern end of the site, with only the upper levels of taller buildings being clearly visible above the trees. In summary it is anticipated that the proposals will have a negligible impact upon these isolated medium range views.
- 6.5.24 Existing oblique close range views of the Ward blocks near the southern boundary of the site are available from a short section of the classified highway at the entrance to the Golf Club (Refer to photo 9). The sensitivity of the receptor is considered to be low.
- 6.5.25 The **original proposals have** resulted in the removal of the Boiler house **leading** to a significant landscape benefit. It may be possible to glimpse the **proposed** conservatories of the apartments to be converted from the southern ward buildings in winter. However the degree and magnitude of change compared with the current view will be low. In summary it is anticipated that the proposals will have a negligible impact upon these isolated medium range views.



6.5.26 There will be glimpses of the proposals from the public footpath No. 20 that passes through the Vale of Glamorgan Hotel and Golf Course car park to the south of the application site (Refer to Photos 10 and 11). The visual sensitivity of the footpath is high.

Views From Public Footpath No. 20

- 6.5.27 There will be a slight diversion of the public footpath to the south of the site as a result of the construction of the new sports pavilion and training pitches. Views have incorporated the new facilities which have had an adverse impact, albeit one that has been demonstrated to be acceptable.
- 6.5.28 Further north the footpath passes the rear of the southern ward blocks that will be restored and converted to residential use (Refer to photos 12 to 14). It is proposed to add new extensions to the rear of the buildings with private **conservatories at both ground and first floor levels.** Proposed hedgerow planting with timber post and wire fence along the rear boundary of the garden areas will create a degree of screening from the adjacent public footpath. The proposals will represent an enhancement compared with the current views of boarded up and decaying buildings.
- 6.5.29 At the road junction to the north of Llynfi Ward (Refer to photograph 15) there was originally a view dominated by a large expanse of tarmac and a modern former hospital building. The building has been demolished and the tarmac reduced in width. When fully reinstated this will result in an enhanced view of restored parkland. The footpath route follows a recently diverted alignment to the north east, through an area of scrub, before continuing on the original woodland route and joining the road south of The Mill Pond.
- 6.5.30 In summary the impact on views from the footpath within the application site consist both of significant adverse and beneficial impacts. On balance it is considered that there will be a negligible impact on visual amenity for the length of the footpath route within the application site.

Private Views Within The Application Site – Principal Vistas

- 6.5.31 The main vehicular access to the Castle crosses the listed bridge across the Mill Pond before turning through an avenue of Mature Beech trees and then rising towards the Castle flanked by an intermittent avenue of conifer and broadleaf trees. It is proposed to enhance the approach to the main entrance of the Castle.
- 6.5.32 The proposed Spa building will replace the ancillary buildings to the rear of the Castle which have already been demolished under the previous permission.

 The new building will relate to the existing Castle in terms of height and general



proportions and in the use of stone as the dominant external material. The range of stone colours **is** to be taken from the varying colours that can be found in the Castle walls. There are however important differences in the ashlar finish, glazing and balconies of the Spa building that are of a contemporary design. The design approach has been adopted so as to avoid architectural pastiche and to allow the distinction between the old and new buildings to be clearly made.

- 6.5.33 In terms of visual impact the lower levels of the new building, apart from being at a lower level than the surrounding ground, will be partially screened with new tree and shrub planting. At Year 1 the new building will be seen as a significant increase in the built volume when viewed from near the main entrance (Refer to Photograph 28). The new car park will also be visible although partially screened by existing trees and recent new planting. It is assessed, however, that there will be a slight to moderate adverse impact on views from the main approach at Year 1. The landscape surrounding both the existing and proposed buildings will, however, be rationalised to reflect the new functions and to accommodate future parking requirements and there will no longer be a redundant mosaic of smaller buildings and areas of redundant hard standing surrounding the Castle and detracting from its setting.
- 6.5.34 The second principal vista exists between the imposing southern elevation of the Castle and the Concert Hall, framed by an avenue of mature Beech trees (Refer to photos 19 and 20). It is proposed that this pedestrian route will be enhanced by a new bound gravel surface along its length and a new focal feature (e.g. fountain or sculpture) to be located in front of the converted Concert Hall. This vista will be largely unaffected by the proposed Spa extension.

Other Private Views Within And Adjacent To The Application Site

6.5.35 Views from the existing private footpath around Hensol Lake and the western banks of the Mill Pond are limited by waterside vegetation, although in several isolated locations good views are currently available (Refer to Photos 18, 23 & 25). The Management Plan proposals balance visual amenity objectives to increase views across the open water and ecological constraints related to preserving waterside vegetation. It is assessed that the proposals will have a slight to moderate beneficial impact upon the amenity of lakeside views.

6.6 Landscape Mitigation Proposals And Residual Effects

Landscape Mitigation Proposals

6.6.1 The Master Plan (Appendix 2) illustrates the principal landscape mitigation proposals, while the Outline Management Plan at Appendix 16 describes the main principles



that will be adopted in the maintenance of different vegetation and habitat types. The Historical Design Rationale at Appendix 17 describes the principles of the English Landscape Style and how the current proposals relate to it. The typical plant palette at Appendix 18 provides outline details of the species considered appropriate in these areas. It is anticipated that the details of the hard and soft landscaping will be submitted for approval to discharge a condition to be attached to any consent granted.

- 6.6.2 The landscape mitigation proposals have evolved in close consultation with the design team, principally the architects and highway engineer, and have been developed **because the e**nhancement of the landscape surrounding the buildings in a historically sensitive way is an integral part of the redevelopment and will provide an appropriate setting for the proposed new uses on the site.
- 6.6.3 In summary, the principal areas that will be subject to significant new planting, hard surfacing and management operations are as indicated below.

The Sports Pavilion and Training Pitches

- 6.6.4 Although approved and already implemented, and therefore outside the current application site boundary, this development is to be separated from the residential ward conversions and the historic parkland by a substantial new wildflower meadow on grass bank.
- 6.6.5 The original open parkland style of the southern fields has already been lost. However the landscape design strategy of the pavilion/training pitches development has made reference to the existing landscape around the Castle. The enclosed shrubbery to the west of the Castle and the strong avenues of trees to the south of the Castle form an integral part of the English Landscape Style

Wildflower Grass Bank

- 6.6.6 It is proposed that a wildflower meadow is to be established on top of a earth bank to be located between the training pitches and the apartments to be created from the Southern Ward blocks. This proposal will achieve the following upon establishment:
 - Visual separation of the apartments and the training areas. The character of
 the parkland surrounding the apartment blocks has already been reinforced by
 the removal of the "modern" hospital buildings and the wildflower bank will
 form a backdrop that will screen views of the modern Sports Complex and the
 Vale of Glamorgan Leisure Resort and Hotel beyond.
 - The proposals will be in line with the historical evolution of the park. The 18th Century Landscape Design of the Hensol Estate resulted in radical changes to the landform and planting around the Castle including the formation of the two



Lakes and the blocks of plantation. The layout that was imposed on the landscape created and controlled artificial views across the parkland e.g. from the Castle to the Island Folly. Further significant changes occurred with the construction of the inter -war hospital buildings. The **wildflower bank** is considered an appropriate way to control views in relation to the new development proposed.

 The wildflower meadow and bank will provide both amenity and ecological benefits.

Southern Ward Conversions

- 6.6.7 The modern hospital buildings have been demolished as a part of the original 2006 permission and the residual areas have been or are in the process of being converted back to parkland. This proposal will restore the original landscape setting to the remaining 9 ward blocks and the Concert Hall, one of which has already been converted to residential use with the remaining eight being similarly converted once this application that seeks variations to the original permission is granted. The small-scale contemporary extensions and infill to the original Ward blocks are described at Chapter 3.
- 6.6.8 The Landscape Design of this area includes proposals which have been influenced by studies of two successful residential conversion schemes of listed institutional buildings at Pen-Y-Fal Hospital, Abergavenny and Roundway Hospital, Devizes. Please refer to Appendix 19. **They include the:**
 - Retention and enhancement of the open character of the parkland in line with the historic layout.
 - Retention of existing mature trees and restricted planting of new focal specimen trees to enhance amenity (Refer to Appendix 18 for species).
 - Removal of the Conifer screen alongside the ditch and replacement with new native tree planting that connects with existing trees to the north of Llynfi Ward. Views across the parkland under the trees will be maintained while the new planting will produce a new wildlife corridor, potentially extending the existing bat flight path. (Refer to Appendix18 for species).
 - Screening of communal parking areas with clipped hedgerows, softened adjacent to the parkland with small informal clusters of native shrubs (Refer to Appendix 18 for species).
 - Minimisation of the areas of hard surfacing and footpaths.
 - Creation of communal courtyard gardens where space allows. (Refer to Appendix 18 for species).
 - Hierarchy of surface materials from a shared tarmacadam surface for vehicular/pedestrian access, gravel for footpaths, concrete blocks in parking bays to reduce the extent of tarmacadam and to provide a link to the more domestic scale paving slabs around the buildings.



- Communal patio areas to the rear of the buildings associated with the conservatory extensions, potentially with railings where necessary to distinguish the communal space from the surrounding parkland while maintaining open views.
- Bin stores located in purpose built structures and softened with surrounding planting. Each bin store will contain 2 No. 1100 litre Eurobins, which has been assessed as being more than sufficient for the scale of conversion proposed for each block.
- Lighting and other services design to be agreed and to be subject to a condition attached to any consents granted.

Existing Woodland

- 6.6.9 The structure of the woodland has suffered over recent years from a lack of management and this has resulted in many areas having a dense under-storey of non-native species. All of the existing woodland areas will be maintained and subjected to a programme of ongoing management that will balance visual amenity and ecological requirements. The Outline Management Plan at Appendix 16 provides details of the works to be carried out. However the main actions are summarised below.
 - Thinning and creation of glades to enhance amenity and ecological diversity.
 - Waterside coppice of Alder and Willow.
 - Selective removal of self seeded undesirable species e.g. Sycamore.
 - Selective removal of coniferous species e.g. Douglas Fir.
 - Under-storey shrub clearance e.g. Rhododendron.
 - Replanting with native broadleaf trees e.g. English Oak.

Approach to the Castle - Avenue planting

- 6.6.10 It is intended to reinstate the main avenue approaching the castle following removal of the Leyland and Lawson Cypress conifers and other insignificant trees (Refer to Master Plan Appendix 2). Other proposals designed to enhance the approach to the castle include:
 - Dredging the Mill Pond either side of the bridge to restore views of the open water and clear/coppice lakeside Alder/Willow.
 - Rationalisation of the main entrance to the Spa/Hotel by restoring the existing lower car park to parkland planting and the creation of a new car park to replace the existing upper car park.
 - Provision of a circular entrance zone surfaced in bound gravel to provide a
 drop off point for cars and to reinforce the sense of arrival. A fenced 12m
 protection zone around the specimen Turkey Oak in accordance with BS:5837
 has been allowed for.



Landscape Around The Castle

- 6.6.11 The majority of the existing trees to the north west of the Castle, in the vicinity of the proposed car park, will be retained and supplemented by new tree planting in parkland groups. The southern end of the proposed car park will coincide with the existing parking although the lower car park to the east will be restored to parkland, thereby enabling the new parking area to be better screened as it is glimpsed from the access road approach.
- 6.6.12 Disabled spaces are required in close proximity to the Hotel/Spa main entrance and are therefore located at the southern end of the car park. The main area of the car park covers in the main the current area of hard standing and the former Nurses Training Unit building (No. 15) that was demolished subsequent to the granting of the 2006 permission.
- 6.6.13 The service area at the rear of the Spa building has been excavated and will be enclosed by retaining walls. The land to the east of the service area has been built up with fill material to become continuous with a green roof established on top of the covered service area and bin store. Views from the edge of the proposed Spa terrace will be available across the landscaped roof of the service area towards the Walled Garden.
- 6.6.14 Excess fill material from the excavation for the Spa building **has been** deposited in the area of the proposed car park. The deposition **has** allowed both the service area to be contained and the levels between the **original** car park to the south and the main area of proposed parking to be rationalised.
- 6.6.15 Significant tree planting is proposed in the vicinity of the car park to provide both screening of the cars and Spa building and to restore, as far as possible, the historic woodland between the walled garden and the Castle. Evergreen hedgerows e.g. laurel or *Viburnum tinus* along the edges of the car park will provide low level screening.
- 6.6.16 To the south of the Castle the existing tarmacadam surface will be replaced with bound gravel. The current modern Rose Arbour will be removed and a new formal avenue created with clipped Yew (Taxus baccata) columns. This proposal will reflect the formality of the Beech avenue further to the south and will introduce a human scale to the planting, closer to the Castle.



Walled Garden

- 6.6.17 It is proposed to return the walled garden to productive use, principally for the growth of vegetables, cut flowers, herbs, fruit and shrubs. It is anticipated that a significant proportion of the produce will be consumed within the new Hotel/Spa, either in the Hotel kitchen (vegetables, fruit and herbs) or throughout the Hotel/Spa (cut flowers). The final mix of these different types of plants in terms of proportion and precise locations will be determined by market demand and the requirement to rotate different crops from year to year.
- 6.6.18 It is proposed to restore the walls and central watercourse. **Also**, an old blocked up entrance near the south-west corner of the garden **is to be** reopened to allow access to the garden for Hotel and Spa guests. Entrances for garden staff will be through two locations on the northern wall one existing between glasshouses Nos. 2 and 3, and one formed as an opening in the rebuilt wall to the north of the modern platform. The existing stone bridge crossing the water course will be restored and two further crossing bridge points at each end of the garden that existed in the past will be created to allow improved accessibility between the northern and southern half of the walled garden. The historic path network will be largely restored (refer to Archaeology Chapter 8). It is anticipated that the old cinder paths will be capped by aggregate e.g. crushed local slate.
- 6.6.19 Restoration of the three dilapidated glasshouses is proposed. The original frames are past repair. However, it is proposed that the low stone walls, where present, are restored and new timber and/or metal frames built on top that will respect the character of the original design while taking advantage of any modern developments that will offer horticultural benefits. It is anticipated that the further details of the hard and soft elements proposed in the restoration of the walled garden will be subject to a planning condition attached to any consents granted.

Residual Effects (Year 15 Assessment)

Landscape Impacts

Specimen Trees

6.6.20 The growth of new specimen trees will either constitute a restoration of the historic parkland e.g. along the main access road, or will contribute to an appropriate landscape setting for the new development (e.g. **the new apartments**). As such it is assessed that there will be significant enhancement, resulting in a moderate beneficial impact at Year 15.

Woodland



- 6.6.21 The management proposals proposed by Year 15 significantly enhance the landscape character of the parkland, allowing views across the lakes from key locations and improving the amenity of the existing lakeside walk. It is assessed that by Year 15 the following will be achieved:
 - Elimination of the majority of the undesirable species.
 - Creation of the principal glades within the woodland and removal of waterside vegetation at key locations e.g. near the bridge over the Mill Pond.
 - Establishment of new replacement broadleaf planting.
- 6.6.22 As such it is assessed that there will be significant enhancement, resulting in a moderate beneficial impact at Year 15

Hedgerows

6.6.23 In addition to the maintenance of existing hedgerows, the new clipped native hedgerows around the parking courts and to the rear of **Talbot House**, **Richardson House**, **Penry House** and **Wyatt House** will have matured. This will represent a slight beneficial impact at Year 15.

Ornamental Shrubs

6.6.24 The replanting of the area located between the western elevation of the Castle and Hensol Lake will have been completed, while the new shrub planting around the sports pavilion and training pitches (outside the application site boundary but visible from within it) will have matured. It is assessed that at Year 15 there will be a slight to moderate beneficial impact.

Scrub

6.6.25 The Management Plan proposals will ensure that existing areas of scrub are maintained and prevented from reverting to woodland. The impact at Year 15 of the proposals will be negligible.

Grassland

6.6.26 The Year 1 assessment has concluded that there will be little change to the grassland areas, apart from the loss of improved grassland as a result of the construction of the new pavilion and training pitches, representing a slight adverse impact. It is assessed that there will be beneficial impacts as a result of the establishment of the wildflower meadows associated with the woodland buffer. Overall it is assessed that by Year 15 there will be a negligible to slight adverse impact on the amenity value of the grassland resource compared with the current situation.



Water Bodies

6.6.27 As stated in the Year 1 assessment the Management Plan proposes a phased thinning, clearance and coppicing of wet woodland and marginal vegetation in certain locations. By Year 15 these proposals will have noticeably enhanced visual amenity and restored views to the lakes that have been lost from the expansion of Alder/Willow Carr. It is assessed that there will be a moderate beneficial impact on the water bodies relative to the current baseline situation.

Public Access

6.6.28 There will be no **new** changes to public access.

Visual Impacts

Publicly Accessible Views Of The Proposals From The Surrounding Landscape

- 6.6.29 Long distance views towards the proposals will be available from public rights of way on elevated ground to the north and north east of the site e.g. Garth Hill and the edge of Pentyrch (Refer to Photos 1 to 5 Appendix 12). There are also potential views from isolated sections of public footpaths on elevated ground around Miskin and Llantrisant. Any occasional distant glimpses of the proposed development available at Year 1, which **have been** assessed to have a negligible impact, are likely to be completely screened by the growth of new trees by Year 15.
- 6.6.30 Medium range oblique views to the south west of the site are available from rural lanes in several isolated locations e.g. near Cartregal Farm where gaps in the field boundary hedgerow allow, and from a short section of a public footpath (Refer to Photos 6 to 8 Appendix 12). At Year 15 the buildings are likely to be completely screened by the growth of new trees and woodland that form an integral part of the landscaping of the development.
- 6.6.31 Existing oblique close range views of the upper levels of the Ward blocks near the southern boundary of the site are available from a short section of the classified road near the entrance to the Golf Club (Refer to photo 9). It has been assessed that at Year 1 the proposals will have a negligible impact upon these isolated medium range views. This will remain unchanged at Year 15.
- 6.6.32 There will be glimpses of the proposals from the public footpath No. 20 that passes through the Vale of Glamorgan Hotel and Golf Course car park to the south of the application site (Refer to Photos 10 and 11). The growth of planting around the **site** will soften the impact of the development compared with the Year 1 situation, although a slight adverse impact upon views from this section of the footpath will remain at Year 15.



Views From Public Footpath No. 20 Within The Application Site

6.6.33 The impact on views from the footpath within the application site consist both of significant adverse and beneficial impacts as identified in the Year 1 assessment. On balance it is considered that at year 15 there will continue to be a negligible impact on visual amenity for the length of the footpath route within the application site.

Private Views Within The Application Site - Principal Vistas

- 6.6.34 The main vehicular access to the Castle will be subject to the enhancement measures outlined in the mitigation proposals. The growth of the avenue of new trees along the access road, and the planting around the new building and parking area, will result in a slight adverse to negligible impact at Year 15 to views from the main approach.
- 6.6.35 The second principal vista exists between the imposing southern elevation of the Castle and the Concert Hall, framed by an avenue of mature Beech trees (Refer to photos 19 and 20). The proposals implemented at Year 1 will enhance the current views and there will be no significant change at Year 15.

Other Private Views Within And Adjacent To The Application Site

- 6.6.36 To the south the new sports pavilion and training pitches, located outside the application site boundary, will be visible from the approach drive to the golf Resort (Refer to photos 16 and 17). The slight adverse impact upon visual amenity assessed at Year 1 will have softened but will not change significantly at Year 15.
- 6.6.37 Views from the existing private footpath around Hensol Lake and the western banks of the Mill Pond are limited by waterside vegetation, although in several isolated locations good views are currently available (Refer to Photos 18, 23 & 25). The Management Plan proposals to increase views across the open water will be fully implemented by Year 15 and there will be a moderate beneficial impact upon the amenity of lakeside views.

6.7 Impact Assessment Summary

- 6.7.1 At Year 1 the <u>landscape</u> impacts will consist of the following:
 - Negligible impact on Specimen trees



- Slight beneficial impact to Woodland
- Negligible impact upon hedgerows
- Slight beneficial impact from the removal of conifer screens
- Slight beneficial impact upon ornamental shrubs
- Negligible impact on scrub
- Slight adverse impact on grassland
- Slight beneficial impact on Water bodies/water courses
- 6.7.2 At Year 1 the <u>visual</u> impacts will consist of the following:
 - Negligible impact upon long range views to the north of the site
 - Negligible impact on medium range views to the south of the site
 - Slight adverse impact on views from Public Footpath No. 20 adjacent to the southern boundary of the site
 - Negligible impact on views from Public Footpath No. 20 within the application site
 - General enhancement of private views within the application site with slight to moderate adverse impact upon views from the access approach to the main Castle entrance.
- 6.7.3 At Year 15, following the growth of the proposed planting and implementation of the Management Plan proposals, the residual <u>landscape</u> impacts will be:
 - Moderate beneficial impact on Specimen trees
 - Moderate beneficial impact to Woodland
 - Slight beneficial impact upon hedgerows
 - Slight to moderate beneficial impact upon ornamental shrubs
 - Negligible impact on scrub
 - Negligible to slight adverse impact on grassland
 - Moderate beneficial impact on Water bodies/water courses
- 6.7.4 At Year 15, following the growth of the proposed planting and implementation of the Management Plan proposals, the residual <u>visual</u> impacts will generally be similar to the Year 1 assessment. The growth however of significant planting around the Hotel/Spa car park and of the trees along the access road will largely screen the Spa building and parking from the approach road. There will, on balance, be a negligible to slight adverse impact upon these views at Year 15.
- 6.7.5 In summary the development proposals will be accommodated without compromising the historic fabric of the park and will result in a significant enhancement of the landscape resource. The impact on publicly accessible views from the surrounding landscape will generally be negligible and there will be a significant improvement to many of the key private views within the site. The landscape mitigation strategy that



represents an integral part of the development proposals will result in a significant enhancement to the landscape character of the Grade 2 listed Park.



7. ECOLOGY AND NATURE CONSERVATION

7.1 Introduction

- 7.1.1 This chapter describes the ecological and nature conservation value of the application site as at the date of survey (August 2004). Since that date there is no reason to anticipate that there has been any significant change to the ecological baseline position. Additionally, none of the amendments proposed within these applications have any effect on natural areas within the site that were either not anticipated originally or have now been approved or implemented through the subsequent discharge of conditions. No additional buildings are proposed to be demolished and there is no potential, therefore, of previously unassessed sensitive habitats or protected species being disturbed.
- 7.1.2 This chapter therefore assesses the impact that the development could have on the ecological value of the site, based upon the requirements of the Development Brief, the planning policy background, and the ecological information gathered from the site via a series of field and desk studies. The baseline ecology of the site, the potential impacts, the magnitude and significance of any impacts as well as mitigation measures are addressed.
- 7.1.3 The broad aim of the assessment is to understand the ecological background to the site and its surroundings. This includes the nature conservation importance of surrounding statutory and non-statutory designated areas. The assessment also identifies the ecological value of habitats on site and their potential to support rare or protected species. This allows both beneficial and adverse impacts to be assessed, a strategy that will provide solutions to any ecological impacts that may result from the development and also provide measures to generally enhance the ecology of the site and nature conservation value of the surrounding area.

Site Habitats

- 7.1.4 Four main blocks of habitat are found within the Hensol Estate as follows:
 - Woodland habitat ranging from dense plantation, through mixed parkland, to scattered scrub. Much of the woodland habitat is historic and contains a wide range of intentionally planted species as part of the broad landscaping of the park. A layer of more recent scrub and carr has also developed which reflects a period of less intensive management whilst the Estate has been in public ownership. The treescape is fully described in the Tree Survey (Appendix 10).
 - Wetland habitat consists of two major artificial eutrophic lakes and various minor streams feeding to and from the lakes. Extensive reed beds fringe the two lakes



- within the Hensol estate, with a swamp area identified along the lake to the east of the site.
- Grassland Habitat which consists of a number of parcels of improved grassland and poor semi-improved grassland that have been agriculturally utilised for grazing.
- Miscellaneous habitat which consists of a substantial amount of amenity grassland closely associated with the various buildings, the buildings themselves and other entirely artificial areas.

7.2 Protected Species Legislation

European Law For The Protection Of Species

- 7.2.1 In 1992 the European Community adopted Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). This is the means by which the Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The provisions of the Directive requires Member States to introduce a range of measures including the protection of species listed in the Annexes; to undertake surveillance of habitats and species and produce a report every six years on the implementation of the Directive. The 169 habitats listed in Annex I of the Directive and the 623 species listed in Annex II are to be protected by means of a network of sites, known collectively as *Natura 2000*.
- 7.2.2 This has lead to species on the Annex being designated as 'European Protected Species'. All bat species, otters great crested newt are classed as 'European Protected Species' under the 'Habitats Directive'.

UK Law For The Protection Of Species - Wildlife and Countryside 1981 (as amended)

- 7.2.3 The Wildlife and Countryside Act 1981 (WCA 1981) consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain. It is complimented by the Wildlife and Countryside (Service of Notices) Act 1985, which relates to notices served under the 1981 Act, and the Conservation (Natural Habitats, &c.) Regulations 1994, which implement Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive).
- 7.2.4 The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places



used for shelter or protection, or intentionally disturbing animals occupying such places. Animals listed within this schedule include all bats and their roosts, great crested newt and birds and their nests. Four species of reptile are also protected against killing and injuring. These are common lizard, slow worm, grass snake and adder.

7.2.5 The Act contains measures for preventing the establishment of non-native species, which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities. Invasive plants listed within Schedule 9 include Japanese Knotweed and Giant Hogweed.

Countryside and Rights of Way Act 2000

7.2.6 The Countryside and Rights of Way Act 2000 (CROW Act) relates to public access, areas of outstanding natural beauty and nature conservation. The key change in this Act, with regard to species protection, is the update of the Wildlife and Countryside Act 1981 (as amended). Where the WCA 1981 stated that any intentional disturbance, destruction, killing, injuring etc, the CROW Act has also added the phrase 'reckless'. This change therefore allows prosecution for not undertaking reasonable measures to ensure that species and their habitats are protected. Before the CROW Act, the term 'intentional' was used and therefore ignorance could be argued for otherwise illegal activities.

Protection of Badgers Act 1992

- 7.2.7 Protection of Badgers Act 1992 states that "A person is guilty of an offence if, except as permitted by or under this Act, he interferes with a badger sett by doing any of the following things:
 - Damaging a badger sett or any part of it
 - Destroying a badger sett
 - Obstructing access to, or any entrance of, a badger sett
 - Causing a dog to enter a badger sett; or
 - Disturbing a badger when it is occupying a badger sett
 - Intending to do any of those things or being reckless as to whether his actions will have any of those consequences".
- 7.2.8 There are specific guidelines as to what is 'disturbance' and this depends on types of work and vehicles used and what distances are involved.



Non-Statutory Designations Of Species - Biodiversity Action Plan

- 7.2.9 The Biodiversity Action Plan is the product of the Convention of Biological Diversity or the Rio Convention in 1992. The Convention sought to produce the first treaty that provided a legal framework for biodiversity conservation. It provided the tool required for the creation and enforcement of national strategies and action plans to conserve, protect and enhance biological diversity.
- 7.2.10 In 1993, the UK government consulted with over three hundred organisations throughout the UK and held a two day seminar to debate the key issues raised at the Biodiversity Convention. The product of this was the launch of Biodiversity: the UK Action Plan in 1994.
- 7.2.11 There are now 436 BAPs for different areas, 391 species action plans and 45 habitat action plans. Local Biodiversity Action Plans (LBAP) are becoming increasingly important for biodiversity conservation at a local level. A significant number of local BAPs are now in existence and their primary purpose is to focus resources by means of local partnerships to implement conservation action for the priority habitats and species and locally important wildlife and sites.
- 7.2.12 The Vale of Glamorgan Action Plan was developed in 1990 and has a list of habitat and species of conservation concern in the Vale.

Birds of Conservation Concern 2002-2007

- 7.2.13 There are also non-statutory designations for birds to indicate their conservation status. The most widely used and most recent is the Birds of Conservation Concern (2002-2007). This was set up by the major governmental and non-governmental organisations including Birdlife International, Royal Society for the Protection of Birds, English Nature and the Wildlife Trusts. This divides the bird species into red, amber and green lists, according to conservation status. The organisations assessed 247 birds; 40 were placed in the red lists, 121 were amber listed and 86 were put on the green list. The red listed birds are those in most need of protection due to their unfavourable conservation status.
- 7.2.14 There are several qualifying criteria for the red list but all species show severe decreases in numbers or habitat. One qualifying criterion for the red list is that the numbers have had to decrease by 50% between 1974 and 1999. The amber listing represents those birds that have a moderate decline in the last 25 years, moderate being between 25% and 49%, as well as those with a moderately reduced distribution. Bird species on the Green List are not of conservation concern but are closely monitored for any change in population status.



International Designations For Habitats

Ramsar

- 7.2.15 The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 138 Contracting Parties to the Convention, with 1368 wetland sites, totalling 120.5 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance.
- 7.2.16 In the UK, most Ramsar sites are designated due to wintering wildfowl and wader interest within the wetland habitat. With regard to birds, the following criteria is applied:
 - A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.
 - A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

European Designations For Habitats

7.2.17 There are two main European habitat designations in the UK. Special Protection Areas (SPAs) are designated for birds, whereas Special Areas of Conservation are designated for habitats and species of European importance.

Special Areas of Conservation

7.2.18 Special Areas of Conservation (SACs) are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 169 habitat types and 623 species identified in Annexes I and II of the Directive. The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Areas that are put forward for designation are immediately protected, and are classed as candidate Special Areas of Conservation (cSAC).

Special Protection Areas

7.2.19 Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Directive on the conservation of wild birds (79/409/EEC), also known as the Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds, listed in Annex I to the Birds Directive, and for regularly occurring migratory species.



7.2.20 These two designations form a European network of sites, known as Natura 2000. As part of the Habitats Directive and an amendment to the Birds Directive, an additional level of protection was issued to these sites. The precautionary principle must be considered for these sites; that is projects can only be permitted having ascertained no adverse effect on the integrity of the designated site.

UK Designations For Habitats

Statutory

- 7.2.21 The Wildlife and Countryside Act 1981 (as amended) provides for the notification of Sites of Special Scientific Interest (SSSI) areas of special scientific interest by reason of their flora, fauna, or geological or physiographical features by the country agencies. The Act also contains measures for the protection and management of SSSIs. SSSIs are protected from any 'Potentially Damaging Operations' and have increased protection with the Countryside and Rights of Way Act 2000.
- 7.2.22 Other statutory designations include national nature reserves and local nature reserves.

Non-Statutory

7.2.23 There are various designations that are made on a local level that do not have a statutory basis, but have local nature conservation interest. Different local authorities have different designations and include County Wildlife Sites (CWS) and SINCs (Sites of Important Nature Conservation). These designations must be evaluated as part of a planning proposal.

7.3 Assessment Methodology

7.3.1 The assessment involved an initial scoping exercise to identify possible issues followed by a range of ecological surveys to gather site specific information. This information was then assessed using standard Environmental Impact Assessment guidelines, as published by the Institute of Ecology and Environmental Management (IEEM, 2002).

Scoping Report

7.3.2 The initial scoping consultation was undertaken in conjunction with the Local Authority's Biodiversity Officer and in accordance with the **Hensol** Development Brief.



Ecological Evaluation

- 7.3.3 Following the initial scoping exercise a number of ecological surveys were conducted on the site to gather information on the site's ecology. The primary survey involved an extended Phase 1 Habitat Survey, which comprised a Phase 1 Habitat Map to JNCC guidelines, a desk study and a protected species audit which sought to assess the habitat potential for protected species (Appendix 20).
- 7.3.4 The second stage involved undertaking specific surveys of those species that were identified as having potential presence on the site. These include:
 - Bats
 - Reptiles
 - Otter and Water Voles
 - Great Crested Newts
 - Birds
 - Others (white-clawed clayfish, dragonfly & damselfly and badgers)
- 7.3.5 The methodologies and reports are contained at Appendix 20.

Terminology

- 7.3.6 The ecological impact assessment methodology is taken from the standard guidelines of the Institute of Ecology and Environmental Management (IEEM). Tables 1 and 2 on the following pages describe the magnitude and significance of an impact on ecology.
- 7.3.7 In determining the magnitude of the impact, an initial assessment was made of the impact on the receptor. Following this, the mitigation proposed was assessed and the magnitude adjusted to include the effects of the mitigation.

7.4 Existing Baseline Conditions

Existing Habitats

Habitat Description

- 7.4.1 The Phase 1 Habitat survey identified a number of main habitats on site including wetland, grassland and woodland. Miscellaneous habitats included areas of hard standing, buildings and amenity grassland.
- 7.4.2 Wetlands areas consisted of two main lakes known, for the purpose of this assessment, as Hensol Lake and the Lower Mill Pond. Streams feeding these lakes as well as associated reed beds and aquatic vegetation are also included under the



- term wetland. The lakes are proposed sites of importance for nature conservation and are significant water features at a county level.
- 7.4.3 Hensol Lake is the larger of the two waterbodies, with a large surface area fringed by reed beds. The western edge of the lake lies adjacent to a small woodland block, with the eastern edge more open and abutting the main estate.
- 7.4.4 The Mill Pond is currently a matrix of different successional stages. Its southern end has been recently dredged and is mainly open water. In its middle, an unusual mid successional swamp exists dominated by reed and horsetail beds. The northern end is carr, which is water restricted for much of the year to a small central channel. The mid swamp is ecologically rich and provide habitat for a variety of species.
- 7.4.5 Grassland areas are predominately improved with poor floristic species diversity. They are currently grazed at low density with a hay crop taken from some of the fields. The development 'footprint' of the current application does not impact on the area of improved grassland identified at the southwestern edge of the site which has now been developed for the Sports Pavilion and Training Pitches.
- 7.4.6 Woodland habitats include broad-leaved parkland, plantation woodland as well as associated understorey and carr vegetation. Avenue planting within the body of the main estate is also included under this term. The treescape is of a high quality and its structural diversity and distribution on the site make it an ecologically rich block.

Habitat Quality

- 7.4.7 The peripheral land on the Hensol Estate has not been subject to intensive management allowing development of a variety of habitats of considerable ecological importance.
- 7.4.8 The broadleaf woodland to the west of Hensol Lake coupled with the associated wetland features provides a botanically and structurally diverse habitat that supports a variety of wildlife features. In addition, the wet woodland and swamp habitats surrounding the Lower Mill Pond has developed into an interesting matrix of wetland habitats with various sub-units existing at different transitional stages.
- 7.4.9 Parkland and avenue planting within the main estate includes many trees capable of supporting significant invertebrate communities as well as roosting bats and birds.
- 7.4.10 The improved and semi-improved grassland areas **that remain within the application site** are not botanically important. However they do provide limited cover and foraging habitat for a number of species.



Mammals

Bats

- 7.4.11 At least six species of bat **were found to** use the site for commuting, foraging and roosting purposes. The species identified included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, Noctule *Nyctalus noctula*, Natterer's' *Myotis nattereri* and Daubenton's *Myotis daubentonii*. An unconfirmed recording of either Brandt's *Myotis brandtii* or Brown long-eared *Plecotus auritus* was also made.
- 7.4.12 Of the species identified, Nathusius' pipistrelle is the rarest with no previous confirmed sightings in the area and a limited distribution in Wales. The number of times the species was recorded on site may be indicative of a nearby roost. The other species are relatively widespread and common in the UK.
- 7.4.13 Bat activity was mainly concentrated along the margins of the site, particularly around Hensol Lake and the adjacent woodland. Bats were also present within the main body of the estate, utilising avenue planting and grassland areas for foraging.
- 7.4.14 Three buildings were confirmed as being roosts on site. A number of other buildings were suspected roosts. A number of mature trees were also noted as having roost potential and the treescape was assessed as being an important area for bats. The stone arched bridge on the southwestern boundary of the site was also confirmed as a myotid bat roost.
- 7.4.15 Subsequent to the granting of permission in 2006 licences were sought from WAG for the demolition of the buildings identified to be removed. The licences were granted and the demolition works were implemented, as were the mitigation measures required by the licences. No further demolition is intended and no further licence applications are therefore anticipated.

Otters

- 7.4.16 Both lakes within the Hensol estate **were found to be** utilised by the otter Lutra lutra with evidence indicating that the species is resident and comprises of at least one breeding unit.
- 7.4.17 Activity was found to be concentrated around the upstream end of Hensol Lake and along the eastern bank of the Mill Pond. A number of lying up-holts and possibly a natal den were identified within the site boundaries. The folly on the island on Hensol Lake was identified as an important feature being regularly used by otters.



- 7.4.18 It **was** considered that more than one breeding female may be present and that the connecting stream lying between Hensol Lake and the Mill Pond may be the boundary of two territories.
- 7.4.19 It **was** concluded that the habitat quality, along with ample food resources, provided optimal conditions for the species.

Water Voles

7.4.20 No evidence of water voles was recorded on site. However some habitat potential for the species was identified and re-colonisation was noted as being possible if conditions were to change. While no direct evidence was found of mink anecdotal evidence suggested that they were present. Their presence or otherwise was expected to be the most significant factor in determining water vole presence/absence. Also important was the presence/absence of connected water vole populations beyond the site.

Badgers

7.4.21 There was some evidence of badger activity on site with digging and snuffle holes recorded. No evidence of setts were recorded. However, it was accepted that the site is complex and that it was entirely possible that a sett existed but had not been located. There was, however, a high confidence that no sett existed within 30m of the development 'footprint'.

Reptiles and Amphibians

Great Crested Newts

7.4.22 A survey for great crested newt *Triturus cristatus* found the species to be absent from suitable waterbodies within the site boundaries and within a 500m radius of the site. Smooth newts *Triturus vulgaris* were found along the edges of the Lower Mill Pond.

Reptiles

- 7.4.23 Two reptile species, slow worm *Anguis fragilis* and grass snake *Natrix natrix*, were recorded on the site. Sightings were mainly concentrated along marginal vegetation adjacent to both lakes.
- 7.4.24 Several size classes of slow worm were observed indicating the species is probably breeding and over-wintering within the site boundaries. The species does not bask openly and relies on a good vegetation structure. Therefore, tall grassland and lightly wooded areas were regarded to be the most important habitat for the species.



- 7.4.25 Grass snakes have a close association with water and feed almost exclusively on amphibians. This species therefore will tend to utilise the wetland areas for foraging and possibly the woodland for over-wintering opportunities.
- 7.4.26 Common lizard *Lacerta vivipara* and adder *Vipera berus* were not recorded during the survey possibly indicating a low population in the area. Anecdotal evidence suggested that adder may have been formerly present but **that they had** been absent for many years.

Birds

- 7.4.27 Ornithological records for the Hensol area span the past twenty **five** years with the observation of at least 95 species within and around the site. Ornithologically speaking the site is species diverse and important within a county context, providing both wetland and terrestrial habitat for bird species.
- 7.4.28 Records suggest the presence of 14 Schedule 1 species (Wildlife and Countryside Act 1981 (as amended)) and 50 designated species (Birds of Conservation Concern).
- 7.4.29 Key species occurring on site include king fisher, lesser spotted woodpecker, tawny owl and several raptor species. A major heronry is located within Coed Llwyn Rhyddid, a small broad-leaved woodland near the site and it is assessed that the Hensol waterbodies make a significant contribution to this concentration.
- 7.4.30 Bird numbers are likely to vary seasonally and there exists good potential for enhancing current habitats through rotative management.

Invertebrates

Fresh Water Invertebrates

- 7.4.31 A non-obtrusive check was made for white-clawed crayfish *Austropotamobius* pallipes but no evidence of the species was found.
- 7.4.32 A check was also made for fairy shrimp *Chirocephalus diaphanus*, but no evidence of the species was found.

Terrestrial Invertebrates

7.4.33 Four dragonfly species were recorded in the wetland areas. One species, the hairy dragon fly *Brachytron pratense* is regarded as scarce and features in the Vale of Glamorgan BAP. Two species, the Emperor *Anax imperator* and Golden-ringed *Cordulegaster boltonii*, are regarded as restricted/local.



7.4.34 Six damselfly species were recorded with one species, the Banded demoiselle, regarded as restricted/local. This species is featured in the Vale of Glamorgan BAP.

7.5 Potential Effects And Mitigation

Construction Phase Effects

Habitat Loss

- 7.5.1 The demolition of buildings included the demolition of one building (the soft room annex) that **was** a confirmed summer bat roost. It was necessary to obtain a consent from the Welsh Assembly Government (WAG) to undertake this operation and such a licence was granted prior to the demolition taking place.
- 7.5.2 A limited number of trees have been identified for felling, whilst others have been identified as requiring tree surgery. A number of new specimen trees will also be planted as part of landscaping works. Given that the treescape has been identified as important in its own right, and for supporting invertebrates, birds and bats, any removal or surgery on trees will affect ecology.

Noise

- 7.5.3 Noise has been discussed in a separate chapter with no major issues identified in relation to residential receptors. Construction best practice has been recommended which includes restricted working hours and the siting of heavy machinery away from residential areas.
- 7.5.4 There will **continue to** be, however, a short-term increase above the ambient level for the duration of the **remaining** construction period. This may affect a variety of species including breeding birds, otters and reptiles. Noise can affect regular activities and may cause species to abandon the site.
- 7.5.5 A circular path existed historically around Hensol Lake **which is being** maintained during the **construction phase of the** development. The path will significantly improve the recreational utilisation of the waterbody and may result in an increased risk of disturbance of wildlife during and after construction.

Vibrations

7.5.6 Vibrations from increased construction traffic will have impacted mainly on reptiles as they are sensitive to ground vibrations. This impact will be temporary and only during the construction period. Vibrations will have caused reptiles to move out of impacted areas.



Lighting

- 7.5.7 Security lighting for construction areas may cause light pollution and affect nocturnal or crepuscular species like badgers, otters and bats. Light pollution may cause a species to avoid areas, possibly fragmenting territories or in some cases may attract foraging species e.g. common pipistrelle. However, the last use of the site as a hospital involved substantial use of security lighting to the extent that, in many respects, the lighting proposed for the hotel will inevitably be more subtle and subdued. Accordingly the impact upon nocturnal species will more than likely be no more adverse than has been the case in recent years.
- 7.5.8 Lighting issues will be a long-term impact on the site

Air Quality

7.5.9 Air quality issues are discussed in Chapter 11. However, no major impacts on ecology are envisaged with best practice procedures proposed such as dust damping.

Operational Phase Effects

Landscape Management

- 7.5.10 Post-construction management is proposed for the Mill Pond as it is at a point where it requires management action. Continual lack of management will result in much of the area reverting to dry habitat. The development presents an opportunity to increase the visual amenity of the lake and to bring it into good management. The management will be developed in detail in the Management Plan but the broad principles to be adopted will be:
 - The preservation of a range of successional states.
 - A rolling management program that enables the above.
- 7.5.11 This management will involve invasive management techniques in order to reverse natural succession. Therefore a range of short-term impacts are envisaged for the aquatic community.
- 7.5.12 In the upper stream, a programme of coppicing will be in place to facilitate a range of stream shade conditions. The upper stream area is highly important to otters.
- 7.5.13 General landscape management will include the management of wildflower meadows and marginal edge habitat, which are ecologically important. Continual disturbance may restrict ecological value.



Recreational Use

- 7.5.14 No substantial changes to the dimensions or depths of the main waterbodies are envisaged. Hensol Lake historically had its capacity reduced to take it below a threshold (below 250,000m3) where it qualified as a Reservoir under the Reservoirs Act 1975. In the last ten years, the Lake has developed a marshy fringe. It is intended to generally retain and provide viewing and exercise points at appropriate locations around the lake. This will result in Hensol Lake retaining its historical function as a wildlife and recreational area with "residents" and visitors utilising the lakeside pathways. Whilst such use will potentially impact upon sensitive species such as breeding birds and otters, the degree of impact is likely to be significantly less than that experienced when there were some 1,400 people either living or working on the site, plus visitors on weekends in particular, using such facilities.
- 7.5.15 The recreational path that will **continue to** circumnavigate Hensol Lake will create a similar impact at a similar scale.

Lighting

- 7.5.16 The proposal will necessitate the need for lighting, particularly around residential buildings, pathways and roads. Therefore, there will be limited light pollution but of a far less intensive scale than that experienced during the hospital use when the roads and wards were, for security reasons, illuminated **when necessary** on a 24 hour, 365 day per annum, basis.
- 7.5.17 Lighting can discourage nocturnal and crepuscular species from using traditional commuting and foraging routes. Continuous long-term lighting can also affect species behaviour, particularly that of territorial birds, which can mistake artificial lighting for natural light.
- 7.5.18 Positive effects of lights include attracting common bat species that forage on insects attracted by artificial light.

Construction Phase Mitigation

Habitat Loss

- 7.5.19 Areas of remaining grassland on the site will be maintained and enhanced to provide a structurally diverse and species rich sward aimed at attracting mammal, bird and reptile species. Marginal areas of vegetation adjacent to hedge and tree line will be managed and enhanced to offer edge habitat for small mammals and reptiles.
- 7.5.20 Trees and hedges to be retained on the peripheries of the 'footprint' will be protected by fencing throughout construction. A monitoring programme, during



construction, will be established to ensure that boundaries and 'no-go' areas are known and respected.

- 7.5.21 The broad principles adopted for mitigation during the periods of demolition, which are now largely completed, have been that;
 - Demolition was undertaken generally, but not necessarily exclusively, in the winter.
 - Roof voids were partially exposed (under the supervision of a licensed bat worker) two weeks prior to demolition.
 - Retained and new buildings were restored or built with features beneficial to bats (i.e. access slits to roof voids) and the incorporation of artificial features such as 'Norfolk bat bricks'.
- 7.5.22 For trees, the working presumption has been and will remain that all trees requiring felling or surgery will be individually assessed by a qualified ecologist prior to work taking place. The potential for bat roosts will be assessed and, if potential is identified, work will only be conducted under licence from the WAG.
- 7.5.23 Work will be timed to avoid sensitive periods for birds and bats with normal good practice observed. As some of the woodland blocks are relatively young and developing, a scheme is proposed in the Management Plan for the placement of a substantial amount of artificial bat and bird roosts to enhance numbers, security and diversity. New planting will be used to strengthen and enhance habitat corridors.
- 7.5.24 The loss of bat roosts in buildings **that have been demolished has been** mitigated for by the erection of bat boxes. Norfolk bat bricks will be included in any new buildings to provide additional roosting space.

<u>Noise</u>

- 7.5.25 The impact from the increase in noise **has been and will remain** short-term and mainly from construction traffic. **Even so** there is evidence that birds and mammals can become habituated to noise once this noise is constant and regular.
- 7.5.26 The retention and upgrading of the proposed recreation path around Hensol Lake may cause local disturbance to wildlife. However, it is envisaged that disturbance from the upgrading of the path will be short-term and will not adversely affect wildlife in the long term. Again working hours will be restricted so as not to affect the activities of nocturnal/crespulcar species.

Vibrations

7.5.27 Reptile species are mobile. Therefore it is envisaged that they will move away from sources of vibrations.



Lighting

7.5.28 Restrictive lighting will be used so that light pollution onto ecologically sensitive areas such as wetlands and hedge/tree lines is minimised.

Operational Phase Mitigation

Landscape Management

- 7.5.29 The management of the Mill Pond will take place on a rotational basis and will aim to restrict management to less sensitive times for important species. The timings of the management are detailed in the Management Plan.
- 7.5.30 Coppicing along the upper stream areas will be done on a long-term rotational scheme thereby minimising disturbance to otters. The connecting stream in the walled garden will also be preserved and enhanced to allow the continual transit of species like otter along the corridor.
- 7.5.31 The management of wildflower edges and marginal vegetation is discussed in the Management Plan. Seasonal cutting regimes will be employed in an effort to increase the ecological value of edge habitat.

Increased Visitor Numbers

- 7.5.32 To reduce disturbance to Hensol Lake and associated fauna, cover and security will be strengthened on the western side. This is detailed in the Management Plan and will consist of fencing, coppicing to promote low lying shelter for species such as otter, and protection of the folly island.
- 7.5.33 To mitigate against the upgrading and continued use of the recreational path around the western edge of Hensol Lake, the western bank will be protected in appropriate locations from disturbance by fencing, with the marginal fringe of swamp maintained intact along this edge. Coppicing will be used to create a zone of dense low cover on the landward side of the marginal fringe. The marginal fringe will be enhanced by the provision of areas of gravel banks on the lakesides that are expected to increase levels and diversity of waterbird utilisation.
- 7.5.34 A wildlife information board will be erected notifying the public of the ecological value of the Lake and surrounding woodlands. Particular emphasis will be placed on the local otter population and the importance of protecting parts of the woodland and wetlands for its exclusive use.



Lighting

7.5.35 The lighting plan for the site will be designed **to take** account **of** areas that are known to be wildlife corridors. Directional lighting will be used to minimise light pollution particularly onto Hensol Lake and its associated wetlands as well as the bat flight corridors identified on site.

7.6 Assessment

Habitat Loss

Improved Grassland

- 7.6.1 The magnitude of the loss of **the remaining** improved grassland habitat on the site is deemed medium. The ecological impact significance is deemed to be very minor due to the fact that it is a loss of habitat that has minimal local conservation value.
- 7.6.2 Mitigation for this impact includes the enhancement of other areas of improved grassland to semi-improved grassland that is more attractive to plant and animal species. New areas of wildflower meadow are to be created as part of the landscape plan.
- 7.6.3 The magnitude and impact significance of the loss of improved grassland habitat is therefore deemed **low; very minor**.

Bat Roosts In Buildings

- 7.6.4 The demolition of **the** buildings that **were found** to be, or to have potential to be, bat roosts accounts for the loss of between 20-49% of the habitat, deeming the magnitude to be medium. The impact significance of the loss of these roosts is deemed minor.
- 7.6.5 Mitigation for the loss of roosts **has** included the erection of bat boxes and the use of Norfolk bat bricks for new buildings.
- 7.6.6 Therefore the magnitude and impact significance of the loss of building roosts is deemed **low**; **minor**.

Treescape

7.6.7 The treescape is to be largely retained with only a small proportion of trees requiring felling for health or operational reasons. The magnitude of loss is low and the impact minor.



- 7.6.8 Mitigation includes management of the existing tree stock to ensure its continued good health and the planting of new high quality trees as part of the landscaping.
- 7.6.9 Therefore the magnitude and impact significance is deemed **low**; **minor**.

Increased Disturbance

Wetlands/Recreational Footpath

- 7.6.10 The development does not directly effect the waterbodies during the construction phase. However, increased recreational demand and landscaping requirements need to be considered and their magnitude is assessed as medium. The impact significance is considered moderate as there is expected to be some impact on otter activity.
- 7.6.11 However species recovery is expected on the cessation of construction and once species become habituated to a slightly higher disturbance level.
- 7.6.12 Therefore the magnitude and impact significance is deemed low; moderate.

7.7 Statement of Effects

- 7.7.1 The proposed new build development at Hensol is essentially modest and consists primarily of the re-use of most of the existing features. The only constructional 'footprint' that was originally proposed to impact upon soft green areas was restricted to the area of grassland of limited nature conservation value that has subsequently been developed for the Sports Pavilion and Training Pitches. The high quality buildings on the site are being re-used and their restoration will be both sympathetic and enhancing to the bat populations known to be present. No problems were anticipated with the demolition of the low quality buildings that were demolished yet not considered to have any significant ecological value.
- 7.7.2 The greatest change in relation to the ecology of the site will result from the altered land management practice needed to achieve the high quality, recreation aspirations of the new use. Careful management planning is required to ensure the preservation of ecological characteristics in what will be an inevitably 'tidier' landscape.
- 7.7.3 The other long-term effect will be an increase in disturbance to wildlife from the future recreational and residential users. This will be managed by the creation of sanctuary areas that will be kept free from disturbance.



7.8 Ecological Conclusions

7.8.1 It is difficult to imagine a re-use of the Hensol Estate that will not change the ecological character that has developed there over time. It is fundamental to the proposed scheme that a high quality landscape (and associated ecology) is not only preserved on site but is also actively enhanced and maintained. Whilst the immediate ecological effects have been assessed as very minor it is fully acknowledged that the longer term implications are potentially greater. The need for a formalised, widely supported Management Plan through a formal Section 106 Agreement provides a critical mechanism whereby ecological interests and site requirements can be balanced and Hensol can continue to be an area of county significance for nature conservation and an area of national/international significance in relation to the protected species it hosts.



Magnitude

Magnitude	Examples
High	Loss of 50% or more of a habitat or species from the site;
	Other effects (e.g. disturbance or damage arising from pollution) including indirect impacts having an adverse impact equivalent in nature conservation terms to a loss of 50% or more of the habitat or species.
Medium	Loss of 20-49% of a habitat or species from the site;
	Other effects (e.g. disturbance or damage arising from pollution) including indirect impacts having an adverse impact equivalent in nature conservation terms to a loss of 20-49% or more of the habitat or species.
Low	Loss of 5-19% of a habitat or species from the site;
	Other effects (e.g. disturbance or damage arising from pollution) including indirect impacts having an adverse impact equivalent in nature conservation terms to a loss of 5-19% or more of the habitat or species.
Very Low	Loss of less than 5% of a habitat or species from the site;
	Other effects (e.g. disturbance or damage arising from pollution) including indirect impacts having an adverse impact equivalent in nature conservation terms to a loss of less than 5% of the habitat or species.



Significance

Significance	Examples	
Major	Adverse effects upon the integrity of an internationally designated site;	
	Permanent loss affecting the ability of the site to support an internationally important habitat and its associated species;	
	Permanent loss of any protected or nationally important rare species (as defined in Schedules 5 and 8 of the Wildlife and Countryside Act 1981 and the IUCN Red Data Book) through loss of habitat, severance or disturbance;	
	Permanent loss of some or all of a priority habitat or species, as defined in the EU Habitat Directive, such as that the presence of the species or the integrity of the habitat is threatened;	
	Permanent loss to those resources within a site of national importance where the presence of those resources was the reason for the site's designation.	
Moderate	Damage to an international or national site that comprises the ability of that site to support the habitats or species for which it was notified, but partial or total recovery is likely soon after cessation of the impact;	
	Permanent loss of nationally scarce species (as defined in the Red Data Book) through loss of habitat, severance or disturbance;	
	Damage to a priority habitat or species but recovery is likely soon after cessation of the impact.	
Minor	Affects a small part of a site of international or national importance and to such a limited extent that the key elements of the ecosystem are sustained fully;	
	Negligible or insignificant impacts on protected or rare species or their habitats, such that their populations on site or the habitat available is not measurably affected;	
	Permanent loss of or damage to a habitat or species that has local conservation value.	
Very Minor	No measurable adverse impact on a site of international or national significance or protected or rare species or their habitats;	
	Loss of or damage to a habitat or species that has minimal local conservation value.	



8. ARCHAEOLOGY & CULTURAL HERITAGE

8.1 Introduction

- 8.1.1 The purpose of this chapter is to consider the potential effects of the proposals to redevelop Hensol Castle and parts of its surrounding parkland on the archaeological and cultural heritage of the site.
- 8.1.2 For the purposes of the archaeological evaluation, the assessment area extends to a distance of 1.5km radius centred on Hensol Castle. This incorporates the present grounds as well as a margin around them. This was done to evaluate the immediate vicinity and so as to allow an assessment of the potential for unidentified archaeological sites to be present within the proposed development area.

8.2 Assessment Methodology

- 8.2.1 A desk-based survey was undertaken to review recorded archaeological information, documentary sources and historic maps held within readily accessible public archives. This information allowed the compilation of a catalogue of known archaeological sites within and around the development area, and the reconstruction of the recent history of land use in the area. The public archives that were consulted include;
 - The Royal Commission on the Ancient and Historical Monuments of Wales, Aberystwyth
 - The National Library of Wales, Aberystwyth
 - Glamorgan Record Office, Cardiff
 - Glamorgan and Gwent Archaeological Trust, Swansea
 - CADW
- 8.2.2 A detailed inspection of the fabric of Hensol Castle and a walkover survey of its grounds were also undertaken in March 2004 to allow an assessment of the significance and condition of cultural heritage features and also to check for the presence of any other previously unrecorded cultural heritage features or remains.
- 8.2.3 While some of the sites identified in this assessment are recorded in the existing monument archives, a number of them have been added based on consultation of aerial photographs and historical map evidence during this assessment. Sites and monuments considered to be of cultural heritage interest in the assessment area have each been assigned a Site Number unique to this assessment.



Evaluation of Cultural Heritage Resources

- 8.2.4 In assessing the effects of the proposals upon cultural heritage resources, it is necessary to consider the importance of the resources, as well as the magnitude of impact. Professional judgement and a degree of flexibility are relevant to the assessment process. There are occasions when insufficient information is known to make informed judgements and an assessment of risk is all that can be offered.
- 8.2.5 Welsh Office Circular 60/96 sets out the criteria for assessing the importance of historic remains and monuments. It is primarily a guide for Statutory protection, but it forms a good basis for the assessment of any sites or monuments of archaeological sites and monuments.
- 8.2.6 The criteria which are attached at Appendix 21 have been used as a guide for judgements of importance used in this chapter. The following categories are used within this report:
 - **National**: the highest status of site e.g. Scheduled monuments, Listed Buildings Grade I and II*, well preserved historic landscapes;
 - **Regional**: the bulk of sites with reasonable evidence of occupation, ritual, industry etc., Listed Buildings Grade II, reasonably preserved historic landscapes;
 - Local: sites with some evidence of human activity, but in a fragmentary or poor state, buildings of local importance, dispersed elements of historic landscapes;
 - **Unimportant**: destroyed, non-antiquities, random stray finds, buildings of no architectural merit; and
 - **Uncertain:** insufficient evidence to judge importance.

Assessment of Impact Magnitude

- 8.2.7 Construction impacts upon the archaeological resource can consist of permanent impacts, temporary impacts and residual impacts.
 - Permanent impacts consist of those where the archaeological resource will be completely destroyed through the main construction programme and its attendant activities. Unlike some other types of receptors, archaeology is a finite resource, and the ground-breaking and building works of the developmental construction phase will result in permanent impacts.
 - Temporary impacts are those that could potentially prevail in the short-term during construction, e.g. due to arrangements for features and facilities such as topsoiling, bunds, work compounds and heavy plant access. Provided that the temporary works do not include ground-breaking works on known sites of cultural heritage interest, it is likely that the significance of their impact on cultural heritage will be negligible.



- Residual or post-construction impacts include minor visual effects on cultural heritage and the effects of landscaping (creation of banks, bunds etc). In terms of the archaeological resource this applies to the impact (both direct and indirect) on monuments and remains.
- 8.2.8 Impacts upon cultural heritage resources can take one of two forms:
 - Direct a tangible physical impact, for example demolition of a building or removal of archaeology through ground works. In cultural heritage terms, direct impacts are invariably permanent; and
 - Indirect these do not physically affect the resource, but may alter its setting or utility. Examples of indirect impacts include visually intrusive structures or the restoration of views. The effects of noise and light pollution are also indirect impacts.

Assessment of Impact Significance

- 8.2.9 The significance of impact reflects both the importance of the heritage resource and the degree to which the resource would be affected (i.e. magnitude). Significance is determined as follows:
 - Major Beneficial
 - Moderate Beneficial
 - Minor Beneficial
 - Neutral
 - Minor Adverse
 - Moderate Adverse
 - Major Adverse
- 8.2.10 Table 8.1 **below** defines these terms.

Table 8.1: Definition of Significance of Impacts

Significance	Comment
Major beneficial	The proposals would:
	 Provide potential, through removal of damaging or discordant existing impacts (direct or indirect) on regionally or nationally important heritage resources, for significant or extensive restoration or enhancement of characteristic features or their setting.
	Remove existing visual intrusion, such that the integrity, understanding and sense of place of a highly valued area, a group of sites or features of national or regional importance is



	re-established.
Moderate	The proposals would:
beneficial	Enhance existing historic landscape/townscape character through beneficial landscaping and/or good design.
	Restore or enhance the form, scale, pattern or sense of place of the heritage resource through good design.
	Remove or reduce existing impacts affecting nationally important heritage resources or their setting/context.
Minor beneficial	The proposals:
	Remove or reduce existing impacts (direct and indirect) affecting locally or regionally important heritage resources or their setting/context.
Neutral	The proposals:
	Have no appreciable impacts, either positive or negative, on any known or potential cultural heritage assets
Minor adverse	The proposals would:
	Result in loss of or damage to locally important heritage resource.
	Compromise or degrade the setting or context of locally or regionally important heritage resources.
Moderate adverse	The proposals would:
	Result in damage to regionally important heritage resource.
	Severely compromise or degrade the setting or context of regionally important heritage resource.
	Compromise or degrade the setting or context of nationally significant resource.
Major	The proposals would:
Adverse	Result in damage to nationally important heritage resource.
	Result in severe damage to, or loss of regionally important heritage resource.
	Severely compromise or degrade the setting or context of nationally important heritage resource.

- 8.2.11 The interpretation of these terms is as follows:
 - Minor significance not noteworthy or material in planning decision making
 - Moderate significance noteworthy, material
 - Major significance extremely noteworthy, material
- 8.2.12 A full description of existing baseline conditions of the site **is** attached at Appendix 22.



8.3 Summary of Archaeological Potential

- 8.3.1 The paucity of known archaeological information for Hensol Castle, its park or the proposals area should not be taken to imply the lack of possible archaeological remains on the site. The lack of evidence is much more likely to reflect the lack of recent development within the park and the wider local area in general. The negative results of the archaeological watching brief carried out during the construction of the sports barn at the Vale hotel and country club are however noted.
- 8.3.2 Currently the earliest evidence of human activity or settlement in the area can be traced to the Bronze Age, whilst there is also evidence of a possible hill-fort of Iron Age and a Dark Age 'Llys' (Court) in the vicinity. The surrounding landscape thus contains fragmentary evidence of settlement from the prehistoric period onwards and this pattern of former human activity undoubtedly existed across the development site, although the information to precisely locate any such remains no longer survives.
- 8.3.3 Whilst the castle and estate were the product of the post-medieval period, it is probable that the main house has medieval origins as there is clear linguistic evidence that Hensol derives from 'Hen Sail' or old house and that the current Hensol Castle is therefore on the site of an earlier building. The park / estate was apparently built up through the acquisition of smaller landholdings throughout the 16th, 17th and 18th Centuries. The site has the potential for archaeological remains of medieval settlement and agricultural activity.
- 8.3.4 The baseline survey, likewise, has not recorded any information relating to the survival of buried archaeological remains pertaining to the early post-medieval development of the house and its park. Little is currently known about any early post-medieval precursors to the present castle, although there is cartographic evidence for the former existence of a range of probable early buildings within the southern courtyard of the castle in the early 19th Century. Nothing is currently known about any associated buildings or gardens that this earlier house may have possessed. More importantly, little more is currently known about the apparently early and important landscaped park created under the Talbots in the mid-18th Century.
- 8.3.5 The site thus has the potential for buried archaeological remains pre-dating the establishment of the high-status house and its park, although the subsequent enlargement of the 'Castle' in the 18th and 19th Centuries, the creation of the landscaped park and the constructional activities relating to the creation of the mental hospital will all have caused a greater or lesser degree of impact to any earlier remains. The lack of known high-status sites in the area and the probable damage caused by later activity are likely to mean that the proposals area is unlikely to contain important undisturbed buried archaeological remains pre-dating the



establishment of the house and its park. Remains that may survive are thought to thus have the potential to be of either local or regional significance.

Summary of Statutorily Protected Sites and Monuments

Scheduled Ancient Monuments

8.3.6 There is one scheduled ancient monument located within the assessment area:

Site No.	Name/type
3	Caer Gwanaf: two entrenchments interpreted as a prehistoric enclosure.

Listed Buildings

8.3.7 Four statutorily Listed structures are located within the assessment area:

Site No.	Name/address
5	Hensol Castle, Hensol Estate Grade I
7	Hafod Lodge, Hensol Estate Grade II
23	Llwyn-Rhyddid farmhouse Grade II
25	Hensol Castle Bridge Grade II

Summary of Non-Statutorily Protected Sites and Monuments

Designed Landscapes and Gardens

8.3.8 Hensol Castle grounds are designated Grade II on Cadw's Register of Parks and Gardens in Wales (Ref PGW(Gm) 41 (GLA)). This is a non-statutory designation that nonetheless may **constitute** a material consideration in the **determination of** planning applications.

'Locally Listed' Buildings

- 8.3.9 The local authority has also determined that a number of structures within the area are of adequate interest to be considered as being Listed, by virtue of being 'curtillage' structures to the Grade I Listed castle. These include:
 - The earthen dam of the main lake and associated boathouse and island folly (81)
 - The walls, glasshouses and watercourse of the walled kitchen garden (83)
 - And all 'pre-1948' hospital structures, including:



- The main radial group of C-shaped wards and central hall / chapel to the south of the castle
- The three 'Lowest Grade' pavilions at the north of the lake
- The superintendent's house 'Ty Hensol' at the north-east corner of the site
- The walled courtyard enclosing two single-storey Stores ranges located to the north of the castle
- The two ranges of single-storey workshops to the north of the walled garden and
- The hospital mortuary to the north -east of the walled garden.
- Ancillary ranges to the immediate south-east of the proposals area

8.4 Assessment

Identification of Impacts on Buried Archaeological Remains

- 8.4.1 The **current revised** development proposals involve **a single** principal and distinct projects: the addition to Hensol Castle to form the new spa with associated staff accommodation. **and car parking.** The project will involve ancillary development including new landscaping works, tree planting and car parking. All of these activities will have a permanent impact on potential buried archaeological deposits caused through intrusive works during the construction phase.
- 8.4.2 In addition, the temporary construction activities (site compounds, material storage sites, movement of heavy machinery, development of haul routes etc) also have the potential to cause a permanent impact on potential buried archaeological deposits.
- 8.4.3 A full assessment of the magnitude of all of the Development Impacts cannot be finalised until detailed design and engineering information is available. Until that information is available the assessment of magnitude is based on a presumption that the engineering requirements of all construction activities will require the removal of all made ground /engineering soft spots and therefore the removal of all surviving archaeological deposits.
- 8.4.4 The evidence presented in the baseline survey suggests that the development site is unlikely to retain undamaged buried archaeological remains of national importance (no visual presence, no database records, no cartographic evidence, evidence of minor significance from archaeological evaluation works to the south of the site and probable post-medieval truncation). It is nevertheless probable that construction works will impact on some archaeological remains. Remains that may survive are thought to have the potential to be of either local or regional significance and potential impact can thus be mitigated by a programme of 'preservation by archaeological record' and 'preservation in situ' (presented below). In the unlikely event of remains of national importance being discovered at any point, they might be



preserved either in situ or by record. It is thus considered that the archaeological issues could be appropriately dealt with through the placing of an archaeological condition on consent.

Potential Impacts on Buried Archaeological Remains

Construction	Potential	Impact	Assessment of	Suggested
Impacts	Impact	Magnitude	Impact Significance	Mitigation
New spa building & terrace	Permanent	Major	Neutral to Moderate adverse. Impact on potential remains of unknown importance	Archaeological evaluation secured by Planning Condition
Spa Car Park	Permanent	Major	Neutral to Moderate adverse. Impact on potential remains of unknown importance	Archaeological evaluation secured by Planning Condition
Staff Accommodation	Permanent	Major	Neutral to Moderate adverse. Impact on potential remains of unknown importance	Archaeological evaluation secured by Planning Condition
Service Yard	Permanent	Major	Neutral to Moderate adverse. Impact on potential remains of unknown importance	Archaeological evaluation secured by Planning Condition
Walled Garden	Permanent	Minor	Minor adverse. Impact on potential remains of unknown significance	Archaeological evaluation secured by Planning Condition
New Roads & Access Routes	Permanent	Minor if based on fill from Spa excavation	Neutral to Minor adverse. Impact on potential remains of unknown significance	Archaeological watching brief secured by Planning Condition
Landscaping	Permanent	Minor to Major where terracing and breaking ground is involved.	Neutral to Moderate adverse. Impact on potential remains of unknown significance	Archaeological watching brief or evaluation secured by Planning Condition.
Tree Planting	Permanent	Minor to Major	Neutral to Minor adverse in localised areas; Neutral to Moderate adverse in concentrated areas. Impact on potential remains of unknown significance.	Archaeological watching brief on minor impacts. Possible evaluation in advance of major impacts.
Installation of new Services outside of Grade I 'castle'	Permanent	Minor to Moderate	Neutral to Moderate adverse. Impact on potential remains of unknown importance	Archaeological watching brief or evaluation secured by Planning Condition.
Below-ground works within Listed 'castle' (Services etc)	Permanent	Minor	Minor to Moderate adverse. Impact on potential remains associated with Grade I building	Archaeological watching brief secured by Planning Condition



Construction	Potential	Impact	Assessment of	Suggested
Impacts	Impact	Magnitude	Impact Significance	Mitigation
Construction compounds/haul routes etc	Permanent	Neutral to Major	Neutral to Moderate adverse. Impact on potential remains of unknown significance	Ensure that haul routes and construction compounds are on existing metalled roads / hardstandings or construct temporary metal surfacing or use constructional fill laid over heavy geotextile

Residual Impacts on Buried Archaeological Remains

8.4.5 Subject to no remains of national importance being discovered, the initiation of a programme of archaeological investigation and recording should produce significant information that will elucidate the pre-history of the house and its parkland setting. The net residual impact would thus be Minor Beneficial.

Identification of Impacts to Listed Buildings and Historic Landscape

8.4.6 The impacts **on** the Listed Buildings and the Registered historic landscape are best assessed by assessing the individual elements or areas identified in the Baseline assessment.

Hensol Castle (5),

- 8.4.7 Hensol Castle is Listed Grade as a nationally important 18th and mid-19th-century mansion, with a number of well-preserved interior spaces. It is also considered to be of regional interest on account of its after-use as a mental colony from 1927. Many parts of the building were significantly altered during the building's conversion to institutional use, although the work of 1927 to 1935 was carried out to a very high standard and externally it is often difficult to distinguish the work of the 1920s-30s from that of the 1790s or 1840s-50s.
- 8.4.8 In many areas, notably the central cross-range and much of the ranges to the east and west sides of the southern courtyard, the internal and external works carried out during the building's conversion were carried out in such a comprehensive manner as to make the earlier form is irrecoverable. The building has suffered greatly from later works carried out from the 1950s to the 1990s.
- 8.4.9 In terms of an assessment of importance, the following criteria have been applied:
 - Well-preserved 18th and 19th-century fabric: High (National) Importance
 - Moderately altered 18th and 19th-century fabric: Moderate (Regional) Importance
 - Well preserved 1920s-30s fabric: Moderate (Regional) Importance



- Fragmentary 18th and 19th-century fabric: Minor (Local) Importance
- Moderately altered 1920s-30s fabric: Minor (Local) Importance
- Fragmentary 1920s-30s fabric: Negligible Importance
- and appear to be designed so as to minimise their impact in the locations Most later work: Negative Importance (detracting)
- 8.4.10 The proposals for works to the castle consist of two main elements: 1) refurbishment and reuse of the existing building and 2) new-build elements. Both have been informed by a thorough assessment of the building's historic fabric and the preparation of a Conservation Statement.
- 8.4.11 The proposed works to the existing building have been designed as far as is practicable to enhance the well-preserved 18th and 19th-century spaces, restore subsequently-divided 18th and 19th-century spaces and remove later features that detract from the most important spaces / fabric. This would be seen as having a Major Beneficial impact in the nationally important areas concerned. The proposed woks will nevertheless involve some localised impacts to more fragmentary 18th/19th-century and a large number of less-localised impacts to the 1920s-30s fabric. These will remove much of the building's later institutional character. These impacts would be assessed as constituting a Moderate Adverse impact on regionally of locally important fabric.
- 8.4.12 The new-build proposals principally consists of the construction of a large, stone-faced spa building to the north of the northern courtyard and the construction of new glazed ranges within the existing southern and northern courtyards. The new spa has been designed to reflect the scale, massing and the existing courtyard arrangement of the existing building. All of the new-build elements are in a contrasting modern vernacular where they interface with the existing fabric. The direct physical impact of the major new-build features is therefore assessed as Minor Adverse.
- 8.4.13 The proposed alterations will have a beneficial effect in bringing the building back into a sustainable use and they will do much to remove features that currently detract from an appreciation of the building. They will nevertheless alter the existing (largely institutional) character of the building. They will no doubt also temporarily expose, and in same areas, remove evidence of the building's evolution and former uses. Once lost, such information is gone forever. The overall impact (without mitigation) would thus remain Moderate Adverse, notwithstanding the beneficial works.
- 8.4.14 These adverse effects could be largely mitigated through archaeological building recording works during the proposed works. Such works might consist of a



photographic record of the building following the 'soft strip' of post-1950s fabric (inserted walls, suspended ceilings etc), followed by a watching brief and recording during more invasive works. The record of the earlier institutional fabric and the new information about the building's evolution and history that would be gained as a result would bring the overall assessment of the impact of the physical works on the building to **Minor Beneficial**. Impacts on the castle's setting are considered below.

Hafod (Gate) Lodge (7)

- 8.4.15 Hafod Lodge lies at the north-eastern entrance to the park. It is a Grade II Listed building of c.1840-50, attributed to Wyatt and Brandon. It is included within the Registered Park / Garden. It is excluded from the proposals and would thus not be directly affected by them. The proposed alterations to the park and the castle will cause a Moderate Adverse impact to the lodge's historic setting. The constructional works may have a temporary Minor Adverse impact on its visual setting. Following the completion of works, the restoration of the avenue planting on the main drive and the restoration of woodland planting to the north of the castle, the proposals will ultimately have a Minor Beneficial impact on the lodge's visual setting. This beneficial visual impact will be reduced to Neutral by the erosion of the lodge's wider historic setting and by the visual effect of probable increased traffic flows. Without further mitigation, the impact of the proposals would be Minor Adverse during construction and Neutral upon completion.
- 8.4.16 The residual impact is thus assessed as Minor Adverse during construction and Neutral upon completion.

The Ornamental Bridge And Driveway (25)

- 8.4.17 The ornamental bridge and driveway also lie on the north-eastern side of the park, connecting the castle and Hafod Lodge. The bridge itself is also Grade II Listed and both the bridge and driveway lie within the Registered Park / Garden. The driveway dates to at least 1799 and whilst the bridge is thought to date to Brandon and Wyatt's work of c.1840-50, it may possibly retain earlier fabric within.
- 8.4.18 As with the Lodge, the proposed alterations to the park and the castle will cause a moderate adverse impact to the historic setting of both the bridge and the driveway. The bridge will not be directly impacted by the proposals, although care will be needed to ensure that it is not damaged by heavy construction traffic during the construction phase. The constructional works may also have a temporary minor adverse effect to its visual setting, although following the completion of works, the restoration of the avenue planting on the main drive and the planting to the north of the castle, the proposals will ultimately have a minor beneficial impact on the bridge's visual setting.



Hensol Castle Park (8)

8.4.19 The impacts on the Registered Park / Garden are broken down by character area. The overall impact on the park will be discussed at the end.

The Main Lake, Dam, Island Folly, 'Tulip Walk' And Associated Treescape; Mill Pond (81)

- 8.4.20 All of these features lie within the Registered Park / Garden and constitute the Park's most important (un-Listed) built features. The dam and folly are considered by the local authority to be 'Listed' by virtue of being important curtilage structures ancillary to the Grade I Listed castle. Generally the only works to directly affect any of these features are works of limited restoration. The direct impacts are thus assessed as being generally Moderate Beneficial. Regarding the dam, it is proposed to reinforce and regrade it with additional material, effectively preserving the dam's historic fabric in-situ beneath additional material, whilst increasing its structural performance. Semi-mature ornamental woodland is to be planted to the south of the dam. This woodland planting will restore a significant gap between the ornamental woodland 'pleasure grounds' to the west of the castle and the woodland and 'Tulip Walk' to the north of the lake, thereby restoring a major feature of the castle and lake's historical setting that has been subject to gradual erosion over the last seventy years. This would mitigate any adverse impact from the reinforcement of the dam. The cumulative direct physical impact to the main lake and associated structures and treescape would thus be viewed as Neutral.
- 8.4.21 The proposed demolition and construction works to the north of the castle will cause a series of temporary and permanent indirect impacts to the historic and visual setting of the lake, folly, dam and boat house. These impacts will be Moderate Adverse during the construction phase. In the longer term the permanent state the initial adverse impacts will be mitigated by the maturity of the significant new landscaping works to be implemented to the north of the new extension.
- 8.4.22 Cumulatively the proposals will ultimately thus have a Moderate Beneficial impact on the main lake's visual setting. Without further mitigation, the impact of the proposals on the main lake, its associated structures and features their setting would thus be assessed as **Moderate Adverse** during construction and Moderate Beneficial upon completion.
- 8.4.23 Were further mitigation required, it is suggested that a photographic record of the dam 'as existing' be made, together with a detailed topographical survey of the dam, allowing its future restoration, should this ever be considered desirable.



8.4.24 The proposals will have no significant effect on the Mill Pond or its immediate setting.

The Immediate 'Pleasure Grounds', Parkland, Buildings And Car Parking In The Setting Of The Castle (82)

- 8.4.25 The proposals will have no significant impacts or effects on the immediate 'pleasure grounds' to the east, west or south of the castle. The area of former 'pleasure grounds' to the north of the castle **have been** affected by the construction of the **foundations for the** new spa and associated car-parking, terrace and service area. The footprint to be occupied by the **spa and its immediate curtilage** is somewhat larger than that **previously** occupied by **the former** 20th-century buildings and associated terracing, although the footprint of the new spa **itself** is roughly equal to the buildings to be removed.
- 8.4.26 The constructional activity has resulted in changes to the original topography, although much of the landform that was present in 2005 was the result of terracing carried out in the early 1930s and it retained little relationship to the historic topography of the former 'pleasure grounds', excepting at the extreme northern end. The area has also lost most of its historic ornamental woodland planting, again except at the extreme northern end. Whilst the historic setting of the castle is thus somewhat degraded in this area, the further alterations to the landform that will either occur or have already taken place will resulting in a minor adverse impact to the historic setting of the castle and a moderate adverse impact to the previous 1930s setting.
- 8.4.27 The few surviving trees of importance are to be retained and the planting of a large number of further semi-mature ornamental trees is proposed. This woodland planting will restore a significant gap between the ornamental woodland 'pleasure grounds' to the west of the castle and the woodland and 'Tulip Walk' to the north of the lake, thereby restoring a major feature of the castle's historical setting that has been subject to gradual erosion over the last seventy years. Without considering the removal of the 1930s buildings (discussed below), the cumulative direct physical impact to the historic 'pleasure grounds' to the north of the castle would thus be viewed as Neutral.
- 8.4.28 The **implemented** demolition and construction works to the north of the castle caused a series of temporary and permanent indirect impacts to the historic and visual setting of the castle, the main lake, dam, the walled garden, context parkland, main drive and bridge. These impacts were Moderate Adverse during the construction phase. Any permanent adverse indirect impacts to these heritage receptors will be mitigated to Minor Beneficial in the long term through the loss of



the 20th-century features and the re-planting of the semi-mature ornamental woodland.

8.4.29 Because of the changes to the remaining area of historic topography to the north of the castle, without further mitigation, the proposals will ultimately thus have a Moderate Adverse impact on the former pleasure grounds' during construction and a Minor Adverse impact upon completion. The indirect impacts on the setting of other cultural heritage receptors will be more beneficial in the longer term.

The Historic Kitchen Garden/Walled Enclosure (83)

- 8.4.30 It is proposed to return the walled garden back to productive use, principally for the growth of vegetables, cut flowers, herbs, fruit and shrubs. The walls and central watercourse are to be restored and an old, blocked up entrance near the southwest corner reopened to allow access to the garden for Hotel and Spa guests. Entrances for garden staff would be through an existing opening and a new opening, both in the north wall. The existing stone bridge crossing the water course is to be restored and two further crossing points recreated. The historic path network would be largely restored. Two surviving small masonry structures will be retained and restored. The restoration of the three dilapidated glasshouses is proposed, with new metal or timber frames being constructed on the existing stone bases. All of the structures abutting the north (outer) side of the north wall are proposed for removal. It is anticipated that the further details of the hard and soft elements proposed in the restoration of the walled garden would be subject to a planning condition to any consent.
- 8.4.31 It has been suggested that the garden and its structures are of sufficient interest to merit the recording of the existing structures prior to restoration or removal (Appendix 23). This would reduce any residual impact to Neutral to Major Beneficial.

Steeply Sloping Meadows To The North Of The Lake (84)

- 8.4.32 These fields are to be retained as pasture and will not be subject to any direct impacts.
- 8.4.33 Whilst these fields lie within the historic curtillage of the park, they lie outside the designated area. They do, however, lie within the Registered Park / Garden's designated 'essential setting'. They overlook most of the park and the constructional works, most notably the proposed staff accommodation and the proposed spa and associated car parking. They will be subject to a minor adverse indirect impact during construction. Any permanent adverse impact following



completion will be reduced due to the screen planting proposed around the new developments. The residual impact should thus be **Neutral**.

Incidental Woodland (85)

- 8.4.34 No development is proposed within any of the incidental woodlands and they will thus not be subject to any direct impacts. They will fall under a management regime for the first time in recent years, which will result in a minor beneficial impact.
- 8.4.35 All of the incidental woodlands lie within the Registered Park / Garden. They will be subject to minor adverse indirect impacts during construction. Any permanent adverse indirect impact following completion will be reduced due to the screen planting proposed around the new developments. No further mitigation is proposed.
- 8.4.36 The overall residual impact should thus be **Neutral**.

Context Parkland, In Grass, Including A Playing Field To The West Of The Mill Pond (86)

- 8.4.37 This parkland pasture lies on the north-eastern side of the park, between the Castle and the Mill Pond, with a small additional area to the north of the Mill Pond. Bisected by the main drive, with its avenue planting, it is an important part of the Registered Park / Garden and forms an important element of the setting of the castle and Listed Hafod Lodge and bridge. The areas concerned, the driveway and associated avenue planting, date to at least 1799.
- 8.4.38 The only direct physical works proposed are the restoration of the avenue planting along the driveway and the construction of additional car parking adjacent to the proposed spa. The restoration of the avenue planting will result in a Major Beneficial impact in the long term. The proposed new car parking will be restricted to the western edge of the pasture, nearest to the proposed spa, in an area already altered through 1930s re-landscaping and by the now demolished modern nurse's training centre and its associated terracing. The constructional activity will thus result in changes to the existing topography, although in the areas to be affected the present landform retains little relationship to the historic topography. The few surviving trees of importance are to be retained and the planting of a number of further scattered semi-mature ornamental trees is proposed. This will reflect the former sparsely wooded parkland fringe planting that existed here. The direct physical impact of the removal of the nurse's training centre and the creation of the new car-parking would be regarded as Moderate Adverse during construction and Neutral following completion.



- 8.4.39 The proposed demolition and construction works will cause a series of temporary and permanent indirect impacts to the historic and visual setting of the castle, the walled garden, the main drive and the bridge. These impacts would be regarded as Moderate Adverse during the construction phase. Any permanent adverse indirect impacts will be mitigated through the re-planting of the scattered semi-mature ornamental woodland planting and screen planting. The permanent indirect impacts would thus be regarded as Neutral.
- 8.4.40 Because of the changes to the remaining areas of historic topography, without further mitigation, the restoration of the avenue planting and the construction of the new car parking will cumulatively result in a Moderate Adverse impact on the context parkland during construction and a **Neutral to Minor Beneficial** impact upon completion.
- 8.4.41 Were further mitigation required, it is suggested that a photographic record of the area 'as existing' be made, together with a detailed topographical survey of the existing landform, allowing its future restoration, should this ever be considered desirable.

The 20th-Century Hospital Layout, With Associated Open Space And Treescape (87)

- 8.4.42 The 20th-century hospital layout consists of the following elements:
 - The main radial group of C-shaped wards and central hall / chapel to the south of the castle
 - The three 'Lowest Grade' pavilions at the north of the lake
 - The walled courtyard enclosing two single-storey Stores ranges located to the north of the castle
 - The two ranges of single-storey workshops to the north of the walled garden and
 - The hospital mortuary to the north -east of the walled garden.
 - Ancillary ranges to the immediate south-east of the proposals area
- 8.4.43 The proposed works to the main radial group of C-shaped wards and central hall / chapel to the south of the castle will primarily involve, **now that the** detracting later buildings **have been demolished**, the conversion of the remaining buildings to residential use. The 1930s landscaping will remain little changed. The removal of the later buildings **has resulted** in a Moderate Adverse indirect effect on the remaining buildings during the demolition period but, ultimately, it will result in an indirect permanent Moderate Beneficial impact **once the conversion works are completed**. The conversion works will alter the current institutional interiors, resulting in a permanent Minor Adverse impact.



- 8.4.44 The walled courtyard enclosing two single-storey stores ranges located to the north of the castle, the two ranges of single-storey workshops to the north of the walled garden and the Ancillary ranges to the immediate south-east of the proposals area are all proposed for demolition. The loss of these buildings will result in a permanent direct Moderate Adverse impact to the currently intact collection of interwar mental hospital buildings which are regarded as being of regional importance.
- 8.4.45 The proposals will retain all of the earlier residential blocks, but remove all of the remaining early hospital ancillary ranges. Without further mitigation, the overall impact on the 1930s hospital buildings and their landscaping will cumulatively be regarded as a temporary Moderate Adverse impact during the construction phase and a Minor Adverse permanent impact, notwithstanding the beneficial impacts/effects. These adverse impacts can be mitigated further through archaeological building recording works during the proposed works. Such works might consist of a photographic record of the building following the 'soft strip' of any post-1950s fabric (inserted walls, suspended ceilings etc). The record of the earlier institutional fabric will compensate for the permanent loss of the buildings affected, although it will not greatly reduce the impact itself. The overall assessment of the impact of the physical works on the building will thus remain Minor Adverse.

Modern Housing (89)

8.4.46 The pair of modern two-storey, detached staff houses which are situated to the north-east of the walled garden and adjacent to the northern boundary of the Registered Park / Garden have been demolished and are being replaced by a single detached dwelling. Ty Hensol is to be retained and reused. None of the buildings had any architectural merit, but they were/are well screened within an area of existing incidental woodland. Their replacement in part and reuse in part will have a Neutral impact.

8.5 Conclusions

- 8.5.1 In considering the potential effects of the proposals on the archaeological and cultural heritage of the development site, the following activities have been undertaken:
 - A desk-based survey was undertaken to review the information held within accessible public archives.
 - The compilation of a catalogue of known archaeological sites within and around the development area, and the reconstruction of the recent history of land use in the area.
 - A walkover survey of Hensol Castle and its grounds.
 - Detailed surveys of the castle and walled kitchen garden.



- An examination of national and regional policies with regard to archaeology and planning.
- An assessment of baseline evidence.
- An assessment of construction impact on the potential archaeological resource.

Archaeology

- 8.5.2 The studies for this assessment have revealed little documented evidence for known archaeological sites or finds pre-dating the post-medieval period. However, this paucity of known archaeological information for the **site** should not be taken to imply the lack of possible archaeological remains **up**on **it**. The lack of evidence is much more likely to reflect the lack of recent development within the park and the wider local area in general, although the negative results of the archaeological watching brief carried out during the construction of the sports barn at the Vale Hotel and Country Club are noted.
- 8.5.3 Currently the earliest evidence of human activity or settlement in the area can be traced to the Bronze Age, whilst there is also evidence of a possible hill-fort of Iron Age and a Dark Age 'Llys' (Court) in the vicinity. The surrounding landscape thus contains fragmentary evidence of settlement from the prehistoric period onwards and this pattern of former human activity undoubtedly existed across the development site, although the information to precisely locate any such remains no longer survives.
- 8.5.4 Whilst the castle and estate were the product of the post-medieval period, it is probable that the main house has medieval origins as there is clear linguistic evidence that Hensol derives from 'Hen Sail' ('old foundation') and that the current Hensol Castle is therefore on the site of an earlier building. The park / estate was apparently built up through the acquisition of smaller landholdings throughout the 16th, 17th and 18th Centuries. The site has the potential for archaeological remains of medieval settlement and agricultural activity.
- 8.5.5 The baseline survey, likewise, has not recorded any information relating to the survival of buried archaeological remains pertaining to the early post-medieval development of the house and its park. Little is currently known about any early post-medieval precursors to the present castle, although there is cartographic evidence for the former existence of a range of probable early buildings within the southern courtyard of the castle in the early 19th Century. Nothing is currently known about any associated buildings or gardens that this earlier house may have possessed. More importantly, little more is currently known about the apparently early and important landscaped park created under the Talbots in the mid-18th Century.



- 8.5.6 It is clear that the site has the potential for buried archaeological remains pre-dating the establishment of the high-status house and its park, although the subsequent enlargement of the 'Castle' in the 18th and 19th Centuries, the creation of the landscaped park and the constructional activities relating to the creation of the mental hospital will all have caused a greater or lesser degree of impact to any earlier remains. The lack of known high-status sites in the area and the probable damage caused by later activity are likely to mean that the application site is unlikely to contain important undisturbed buried archaeological remains pre-dating the establishment of the house and its park. Study of all available evidence implies that there was no house of high status on the site prior to the 17th Century and that there are no major lost elements of the earlier parkland landscape awaiting discovery. Whilst evidence of the evolution of the house, gardens and landscaped park will no doubt survive below-ground, none of these is likely to be either particularly well preserved or of the highest importance.
- 8.5.7 This lack of detailed information provides an unclear baseline against which to make an impact assessment but suggests that if any archaeological remains do survive on the site they will be of either local or regional importance. Strategies relating to them can be addressed through a series of on-site archaeological measures secured by planning condition. These could include archaeological evaluation (with further archaeological works as necessary) in advance of certain construction activities and an archaeological watching brief in conjunction with other activities. The design of these works will be subject to a review of detailed design and geo-technical site-investigation information and the preparation of a Written Scheme of Investigation to address the requirements of the local authority brief for archaeological works. The commissioning of such a programme of mitigation will elucidate the pre-history of the house and its parkland setting. The net residual impact will thus be Minor Beneficial.

Built Heritage

- 8.5.8 The application site consists of a **part of a** large and important 17th-19th-century mansion and its associated landscape park. This mansion and park were sold in 1927 for use as a mental hospital. This change of use resulted in significant alterations and additions being made to the fabric of the castle and its parkland setting, resulting in a lowering of the importance of the landscaped park. The earlier hospital structures are nevertheless regarded as being of some importance because of their social-historical connotations.
- 8.5.9 This assessment has identified five principal built heritage receptors:
 - Hensol Castle and its immediate setting (Grade I Listed Building)



- Hafod (Gate) Lodge, the Ornamental Bridge and its immediate setting, including driveway (Grade II LB)
- Hensol Castle Park (Grade II Registered Park / Garden)
- The walled kitchen garden to the north of the castle
- The built fabric and landscaping of the post-1927, pre-1948 mental hospital
- 8.5.10 In terms of an assessment of importance, the following criteria have been applied:
 - Well-preserved 18th and 19th-century fabric: High (National) Importance
 - Moderately altered 18th and 19th-century fabric: Moderate (Regional) Importance
 - Well preserved 1920s-30s fabric: Moderate (Regional) Importance
 - Fragmentary 18th and 19th-century fabric: Minor (Local) Importance
 - Moderately altered 1920s-30s fabric: Minor (Local) Importance
 - Fragmentary 1920s-30s fabric: Negligible Importance
 - Most later work: Negative (detracting) Importance
- 8.5.11 The proposals for works to the castle have been informed by a thorough assessment of the building's historic fabric and the preparation of a Conservation Statement and the proposed works to the existing building have been designed as far as is practicable to enhance the well-preserved 18th and 19th-century spaces, restore subsequently-divided 18th and 19th-century spaces and remove later features that detract from the most important spaces / fabric. The internal works will thus have a beneficial impact on the more important pre-20th-century spaces and fabric of the building, but they will alter the existing (largely institutional) later fabric of the building that is of some local or regional social importance.
- 8.5.12 The new-build elements of the castle have been designed to reflect the scale, massing and the existing courtyard arrangement of the existing building and minimise their impact in the locations where they interface with the existing fabric. The direct physical impact of the major new-build features is therefore assessed as Minor Adverse, whilst the constructional works may have a temporary Minor Adverse indirect impact on the castle's visual setting during the construction period and immediately thereafter. The proposed alterations will nevertheless have a beneficial effect in bringing the building back into a sustainable use and they will do much to remove features that currently detract from an appreciation of the building. Hafod Lodge and adjacent bridge (both Listed Grade II) will scarcely be directly affected by the proposals.
- 8.5.13 The historic park / garden will be affected by the construction of **the** new spa and associated car-parking to the north of the castle. The area to the north and northeast of the castle is already degraded from its 18th/19th state by the loss of the



original wooded 'pleasure grounds' to the north and north-east and by 1930s and 1970s terracing and buildings. The construction of the **Sports Pavilion and Training Pitches to the south of the site has already** affected an area of 'Transitional' open space consisting **previously** of largely unmanaged grassland located between the boundary of the Vale Hotel and Country Club to the south and the main radial group of C-shaped wards and central hall / chapel to the **north**. This area was formerly part of the large area of context parkland pasture that swept up to the castle and beyond, but it is **then became** visually isolated from the castle by the radial wards and their associated 1930s landscaping. Because of its relative visual and physical isolation, and because of this area's proximity of the modern hotel complex adjacent, it **was** indicated in the Development Brief that this area **was** suitable for new development. The new development will be screened from the castle, lake and 1930s radial blocks by the existing woodland around the lake and by **the** proposed **wildflower seeded embankment**.

- 8.5.14 The negative impacts are mitigated within the proposals partly through works of general restoration and management. The proposals also entail the restoration of the avenue planting on the main driveway, the restoration of the walled kitchen garden and the planting of semi-mature ornamental woodland to the north and north-east of the castle. This later proposal will restore a significant gap between the ornamental woodland 'pleasure grounds' to the west of the castle and the woodland and 'Tulip Walk' to the north of the lake. This will reinstate a major feature of the castle's historical setting that has been subject to gradual erosion over the last seventy years.
- 8.5.15 The proposed works retain the principal 'pre-1948' ward blocks, central hall / chapel, mortuary, 'Ty Hensol' and associated 1930s landscaping. They supplement the removal of what were detracting later buildings.
- 8.5.16 The proposals will thus entail works that are both beneficial and adverse with regard to the historic fabric of the castle, park and former hospital. Whilst some of the proposed impacts are individually 'material' in planning terms (i.e. Moderate Adverse), none has been identified that **is** greater than this. Overall the impact of the proposals on the castle, park and other historic buildings will be regarded as not more than **Minor Adverse** at worst. It could as easily be argued that they will be neutral or even minor beneficial.
- 8.5.17 The proposed works will in many areas temporarily expose, and in some areas, remove evidence of the evolution and former uses of the site and its buildings. Once lost, such information is gone forever. It is thus proposed that the adverse impacts can be partially mitigated further through archaeological building recording works during the proposed works to both the castle, other historic features, as well



as to the 20th-century mental hospital structures. Furthermore, in those parts of the park to be affected, it is suggested that a photographic record of the area 'as existing' be made, together with a detailed topographical survey of the existing landform, allowing future restoration should this ever be considered desirable. The only other additional mitigation suggested will be the routing of heavy construction traffic away from the listed bridge at the north-east corner of the site.



9. TRANSPORT

9.1 Introduction

- 9.1.1 This Transport Assessment is produced in support of the applications submitted for amendments under sections 73 and 73A of the T&CP Act 1990 to the approved scheme for the redevelopment of Hensol Castle. It forms part of the technical documentation accompanying the applications.
- 9.1.2 The existing situation in terms of highway and public transport networks is set out in Section 9.2 of this chapter. Although originally described in 2005 little of any material significance has changed since that date.
- 9.1.3 Section 9.3 provides details about the development proposal relevant to highways and transport, including access arrangements. Section 9.4 presents information regarding committed developments. Section 9.5 details the predicted trip generation in relation to the development proposal. Section 9.6 analyses the likely traffic impact that this will have on the road network surrounding the site. Section 9.7 provides information concerning parking and on-site movement.
- 9.1.4 It is anticipated that a Travel Plan will be required prior to occupation. Section 9.8 outlines issues and initiatives likely to be included in a Travel Plan.
- 9.1.5 Conclusions are brought together in Section 9.9.

9.2 Existing Situation

Highway Network

- 9.2.1 The M4 motorway lies in a west to east orientation and is located approximately 1 km north of the Hensol Castle site.
- 9.2.2 Junction 34 of the M4 motorway provides the principal means of access to the development site. From junction 34, access to the site is gained via an unclassified road, which travels in a southerly direction, where it forms the major arm of a priority T-junction at Tynyplanca Farm.
- 9.2.3 The minor arm of this priority T-junction travels in a westerly direction for approximately 400m where it forms the second priority T-junction which bears south towards the Vale of Glamorgan Hotel, Golf and Spa Resort. The major arm (Hensol Miskin Road) bears north towards the existing Hensol Castle site access.



9.2.4 Within the site there is a network of existing roads that served the former hospital.

Public Transport

Bus Services

9.2.5 There is a bus stop located immediately opposite the existing Hensol Castle site access. The bus stop is served by the N° 320 bus service which is operated by Cardiff Bus. The service operates Monday to Saturday with a frequency of approximately 120 minutes. Table 9.1 provides a summary of this service.

Table 9.1: Summary Of Bus Services

Service	Operator	Douto	AM	Inter-	PM Peak
No.	Operator	Route	Peak (0800-0900)	Peak (0900-1700)	(1700-1800)
320	Cardiff Bus	Cardiff-St Fagans- Peterson-Talbot Green-Tonteg	No Service	5	1

9.2.6 It can be seen that access to the site via bus is, at best, infrequent.

Train Services

9.2.7 Pontyclun is the nearest train station to the site. There are 3 trains operating out of Pontyclun Station during the am peak hour, 0748, 0806, and 0839 arriving in Cardiff Central Station at 0803, 0820 and 0856 respectively. There are 2 trains operating to Pontyclun from Cardiff Central Station, 17.21 and 1739 arriving in Pontyclun at 17.33 and 17.51 respectively. The train station is located 3km north-west of Hensol Castle and is therefore not within acceptable walking distance of the site. However, it is within acceptable cycle distance and could also be accessed by car with the remainder of the journey to Cardiff carried out by train.

Footways

- 9.2.8 On the western side of Hensol-Miskin road, there is a footway of approximately 1.25m in width which serves Hensol Villas. This footway extends into the site and leads up to Hensol Castle. There are no other footways within the surrounding area.
- 9.2.9 There are few local facilities within walking distance of the site. However, that is more than compensated for by the extensive range of sporting and recreational facilities at the adjacent Resort which are generally available for public use.

Cycle Routes

9.2.10 Currently there is no cycle infrastructure within the immediate vicinity of the site. However, given the site's rural location the opportunity for recreational cycling, especially within the grounds of the site, is considerable.



Personal Injury Accidents

- 9.2.11 Personal Injury Accident (PIA) data has been obtained for the 36-month period from January 2001 to December 2003. The PIA data and the location of the accidents are included in Figure 3 at Appendix 24. There is no reason to believe that this is non-typical of more recent data.
- 9.2.12 The accident statistics, received from the Vale of Glamorgan Council, revealed that during the period in question only 3 slight personal injury accidents occurred within the vicinity of the Hensol Castle access. This represents an excellent road safety record.
- 9.2.13 The proposed development is unlikely to adversely affect the accident statistics and the excellent accident record on the road network surrounding the site is likely to continue.

9.3 Development Proposals

- 9.3.1 The details of the development proposals are described in Chapter Three of this Environmental Statement. Briefly however, the redevelopment of the site comprises the following:
 - The conversion of the Grade 1 listed castle and associated service courtyards to a Spa Hotel.
 - The construction of additional serviced accommodation for the spa hotel to the immediate north of the castle building.
 - The demolition and clearance of a large number of unsympathetic "modern" buildings **originally** located in the main to the south of the Castle **(all such demolition has now taken place).**
 - The restoration of the walled garden.
 - The conversion of the former southern ward blocks to residential apartments.
 - A small element of new-build staff accommodation to the north of the walled garden.

Proposed Access

- 9.3.2 The development **is proposed to have a single primary** access point **from** the existing access to Hensol Castle **adjacent to Hensol Villas**.
- 9.3.3 Traffic generated by the hotel, staff accommodation and residential apartments will use the existing access to Hensol Castle at Hensol Villas, whereas "internal" movements between the existing Vale of Glamorgan Hotel, Golf and Spa Resort and the hotel/spa to be created at the castle will use a secondary access route direct from the current main Resort access drive.



9.4 Committed Development

- 9.4.1 Outline planning consent was granted in January 2004 for the Dragon International Studios at Llanilid, which is located to the north of the M4 and 1.5km east of Pencoed. Proprietary work has commenced and a new motorway junction on the M4 (Junction 34a) is to be constructed to the west of Junction 34. To date the construction of that junction has not yet commenced and there is no obvious indication that it is imminent.
- 9.4.2 This new M4 junction will accommodate traffic generated by the Dragon International Studios. It is considered that these trips fall outside the scope of this assessment and will not have any significant impact on the highway network surrounding the Hensol development site. They have therefore been excluded from this transport assessment.

9.5 Trip Generation And Assignment

- 9.5.1 This assessment considers the total number of vehicular trips generated by the proposed development and compares this with the previous use of the site as a hospital where, as is indicated below in paragraph 9.5.7, there were some 600-700 patients and 700 staff using the site.
- 9.5.2 In context of this TA, a vehicular trip is a trip to or from the proposed development. The total number of vehicular trips is considered for the observed peak hour periods. The agreed peak hour periods are between 08:00 to 09:00 and 17:00 to 18:00 on Thursday, 17:00 to 18:00 on Friday and 11:45 to 12:45 on Saturday.
- 9.5.3 The number of vehicular trips can therefore be derived, which enables the impact of traffic generated by the development proposal on the local highway network to be assessed, along with the identification of any mitigation measures.
- 9.5.4 In support of robust analysis, this Transport Assessment provides a comparison of trip generation produced by the previous site, with calculated trip generation likely to occur with effect of the proposed development arrangements.
- 9.5.5 In addition, traffic movements generated by the proposed development have been analysed using a 15-year design period after completion of the development. A medium growth factor has been applied to the vehicular baseline flows.



- 9.5.6 An independent traffic survey company was commissioned by RPS Transport to undertake manual classified traffic counts for the 3 junctions located on country lanes in the vicinity of Hensol Castle. The survey was conducted on Thursday 10th (0730-0930: 1630-1830), Friday 11th (1630-1830) and Saturday 12th of June 2004 (1000-1300). The locations of the traffic counts are shown on Figure 4 (Appendix 25).
- 9.5.7 The trip generation and assignment diagrams are contained in Appendix 25.

Previous Use

Hensol Hospital

- 9.5.8 At its peak during the 1970 80's the total number of patients in the hospital was between 600 and 700, with over 700 staff working **there**at. Initially, nursing staff were bussed into the site but, as car ownership increased, staff utilised their own vehicles. Shift patterns for nursing staff operated over a 24-hour period. The incoming shifts arrived at 6.40am, 1.10pm and 8.40pm, with outgoing shifts leaving at 7.00, 1.30pm and 9.00pm. Maintenance staff arrived during the am peak 8.00am 9.00am and departed between 4.00pm and 5.00pm.
- 9.5.9 Additionally, although there are no historic survey results available, there is strong empirical local evidence that the former hospital generated substantial visitor traffic on weekends, and Sundays in particular, virtually all of which was conveyed by private car. During its operational phase, therefore, the hospital was an extremely high generator of vehicular movement.

Hensol Hospital - Following Closure in March 2004

- 9.5.10 Following closure of the hospital in March 2004, the NHS Trust used the site for administration / training purposes, where between 50 and 60 staff worked. There were also additional 10 30 personnel per week attending training courses at the site. The Castle was also used as a conference centre, which would have generated additional trips, during that time.
- 9.5.11 Traffic counts were carried out during June 2004, which included the trips associated with the uses listed above. However, the hospital had by then closed. Therefore, in order to provide a true representation of the previous use as a hospital, the 'Trip Rates Information and Computer Systems' (TRICS) database was analysed. The database was analysed to obtain trip rates for the hospital. Unfortunately, there were no hospitals of this type within the database. However, the database did contain trip rates for nursing homes. Such uses were chosen because they have similar residential and nursing care characteristics to the previous hospital.



- 9.5.12 The hospital accommodated up to 700 patients. Therefore, the trip rates identified have been scaled to represent the former hospital at its maximum occupancy level.
- 9.5.13 The trip rates and resultant traffic generated by the secure hospital are shown in Tables 9.2 and 9.3 **below**. Complete details of the TRICS assessment are provided in the Appendix 25.

Table 9.2: Hospital Trip Rate (Per Resident)

rubic 0:2: Heopital Hip Rate (i el Resident)				
Peak	Trip Generation (Per Resident)			
Period	In	Out	Total	
Thursday 0800-0900	0.14	0.10	0.24	
Thursday 1700-1800	0.06	0.11	0.17	
Friday 1700-1800	0.06	0.11	0.17	
Saturday 1145-1245	0.07	0.06	0.13	

^{*}Based on Nursing Homes

Table 9.3: Hospital Trip Rate Generation (700 Residents)

Peak	Trip Generation (700 Residents)		
Period	In	Out	Total
Thursday 0800-0900	98	70	168
Thursday 1700-1800	42	77	119
Friday 1700-1800	42	77	119
Saturday 1145-1245	49	40	89

^{*}Based on Nursing Homes

Proposed Development

Hotel Spa

- 9.5.14 In relation to the hotel spa element of the proposed development, existing data was obtained from the Vale of Glamorgan Hotel, Golf and Spa Resort. This represents the best local example of the likely trip generation rates associated with the proposed hotel spa.
- 9.5.15 The proposed 46 bedroom hotel spa will be targeted at the residential spa market. The spa, at its maximum capacity, will be able to accommodate 140 treatment sessions per day. It is anticipated that residents of the hotel spa will occupy 84 of the available treatment sessions with day spa visitors occupying the remaining 56 sessions.



- 9.5.16 Typically 80% of residential hotel spa visitors will arrive between 2pm and 5pm to take advantage of the spa facilities. The remaining 20% will arrive between 5pm and 8pm, approximately 10% of whom will arrive between 5pm and 6pm (peak hour).
- 9.5.17 Experience from the Vale of Glamorgan Resort has shown that the residential users will leave by 4pm following their day of treatment. Therefore, the spa is not too busy for incoming residents. Table 9.4 **below** illustrates the trips generated by the residential spa users for the observed peak hours.

Table 9.4: Hotel Spa Generated Trips (Residential Users)

Peak	Trip Generation (Residential Users)			
Period	In	Out	Total	
Thursday 0800-0900	0	0	0	
Thursday 1700-1800	2	0	2	
Friday 1700-1800	2	0	2	
Saturday 1145-1245	0	0	0	

9.5.18 Day spa visitors will arrive between 9.30am and 11am each day, with approximately 30% arriving between 9.30am and 10am. All of the day visitors will depart before 5.30, approximately 30% of whom will leave between 5pm and 5.30pm (peak hour). Table 9.5 below illustrates the day visitor generated trips for the observed peak hours.

Table 9.5: Hotel Spa Generated Trips (Day Visitor Users)

Peak	Trip Generation (Day Users)			
Period	In	Out	Total	
Thursday 0800-0900	0	0	0	
Thursday 1700-1800	0	17	17	
Friday 1700-1800	0	17	17	
Saturday 1145-1245	0	0	0	



Conference Facility

- 9.5.19 The conference facility associated with the hotel will have a maximum capacity for 20 people. This equates to a maximum of 20 arrivals and departures per day. However, it is considered unlikely that this will be the case since not all those attending a meeting / conference will arrive separately. A more realistic figure will be 15 arrivals and departures.
- 9.5.20 However, it is estimated from experience gained from the **previous** Hensol Castle conference facility that 50% of meetings / conferences start between 9am and 9.30am, and will therefore affect the am peak, but it is **very** unlikely that all these meetings will conclude **between 5pm and** 6pm. Therefore, it has been estimated that only 20% of all meetings / conferences will finish during the 5pm to 6pm peak hour. Table 9.6 **below** illustrates the **predicted** conference facility generated trips.

Table 9.6: Conference Facility Generated Trips

Peak	Trip Generation (Conference Facility)			
Period	In	Out	Total	
Thursday 0800-0900	7	0	7	
Thursday 1700-1800	0	3	3	
Friday 1700-1800	0	3	3	
Saturday 1145-1245	0	0	0	

9.5.21 The total trips generated by the hotel spa and conference facility is shown below in table 9.7.

Table 9.7: Hotel Spa and Conference Facility Generated Trip

Peak	(Hotel S	Trip Generation (Hotel Spa and Conference Facility)			
Period	In	Out	Total		
Thursday 0800-0900	7	0	7		
Thursday 1700-1800	2	20	22		
Friday 1700-1800	2	20	22		
Saturday 1145-1245	0	0	0		



Residential Development

- 9.5.22 Trip generation rates for the proposed residential units have been obtained from the 'Trip Rates Information and Computer Systems' (TRICS) database.
- 9.5.23 These resultant trip rates have been factored in line with the scale of the development to derive the likely trip generation of the development for the **60** residential units **even though the revised proposal is for 58 units only**.
- 9.5.24 The trip rates and resultant traffic generated by the residential proposals are shown in Tables 9.8 and 9.9 below. It should be noted that they assume the development of the originally approved 60 units instead of the currently proposed 58 units. Accordingly, the figures shown below and in the TRICS assessment provided in Appendix 25 represent a "worst case" scenario.

Table 9.8: Residential Development Trip Rates (Per Unit)

Peak	Trip Generation (Per Residential Unit)		
Period	In	Out	Total
Thursday 0800-0900	0.21	0.56	0.77
Thursday 1700-1800	0.48	0.26	0.74
Friday 1700-1800	0.48	0.26	0.74
Saturday 1145-1245	0.33	0.35	0.68

Table 9.9: Residential Development Trip Generation (60 Units)

Peak Period	Trip Rate (60 Units)				
	In	Out	Total		
Thursday 0800-0900	12	34	46		
Thursday 1700-1800	29	15	44		
Friday 1700-1800	29	15	44		
Saturday 1145-1245	20	21	41		



Timeshare Development

- 9.5.25 Trip generation rates for the **formerly** proposed timeshare **holiday village** development have been obtained from the 'Trip Rates Information and Computer Systems' (TRICS) database **and they have also** been factored into the assessment even though the time-share component of the proposal has been replaced by the approved and constructed Sports Pavilion and Training Pitches.
- 9.5.26 The trip rates and resultant traffic generated by the **original** timeshare proposal are shown in Tables 9.10 and 9.11 on the next page **and yet again, therefore, they represent very much a "worst case" scenario as the implemented alternative scheme will generate very much less traffic than the originally approved timeshare holiday village proposal. Complete details of the TRICS assessment are provided in the Appendix 25.**

Table 9.10: Timeshare Complex Trip Rates (Per Unit)

Peak	Trip Rate (Per Timeshare Unit)				
Period	In	Out	Total		
Thursday 0800-0900	0.06	0.06	0.12		
Thursday 1700-1800	0.16	0.09	0.25		
Friday 1700-1800	0.16	0.09	0.25		
Saturday 1145-1245	0.10	0.10	0.20		

^{*} Based on holiday accommodation derived from TRICS

Table 9.11: Timeshare Complex Trip Generation (40 Units)

Peak	Trip Rate (40 Units)				
Period	In	Out	Total		
Thursday 0800-0900	2	2	4		
Thursday 1700-1800	6	4	10		
Friday 1700-1800	6	4	10		
Saturday 1145-1245	4	4	8		

^{*} Based on holiday accommodation derived from TRICS



Staff Accommodation

9.5.27 The trips associated with the proposed staff accommodation units will be generated internally and will not have a significant impact upon the local highway network. Therefore, these internal trips have not been included in this trip generation assessment.

Total Development

9.5.28 The total development trips, which includes the hotel spa, conference facility, residential (and **now not proposed** timeshare **holiday village** units) are illustrated below in Table 9.12.

Table 9.12: Total Development Generated Trips

Peak	Trip Rate (Total Development)			
Period	In	Out	Total	
Thursday 0800-0900	21	36	57	
Thursday 1700-1800	37	39	76	
Friday 1700-1800	37	39	76	
Saturday 1145-1245	24	25	49	

Comparison of Previous Use and Proposed Development

9.5.29 A comparison of Tables 9.3 (previous use) against Table 9.12 (proposed development worst-case position), shows that the total number of car trips decreases from 168 to 57 in the Thursday am peak hour; decreases from 119 to 76 in the Thursday and Friday pm peak hour; and also decreases from 89 to 49 in the Saturday am peak hour. That reduction takes no account of the reduction in visitor numbers at weekends which has not been built into the calculation because the numbers are not available.

9.6 Transport Impact

9.6.1 The impact of the development proposal, in terms of its effect on the operation of the local highway network, has been considered for the 3 junctions located on country lanes in the vicinity of Hensol Castle. These junctions have been identified as being potentially sensitive to any traffic increases. (Refer to Figure 4 in Appendix 24).



- 9.6.2 Operational analysis of these junctions, for each observed peak hour, was undertaken using PICADY 4.1 computer-modelling tool. This is used to predict capacities, queue lengths and delay at give-way junctions, so that any possible mitigation measure can be identified.
- 9.6.3 This procedure was repeated for predicted traffic growth rates over the years 2006 and 2016, with application of a medium growth factor to the vehicular baseline flows. This was in accordance with the Vale of Glamorgan Council requirement that all traffic movements generated by the proposed development must be supported by a robust analysis using a 15-year design period after completion of the development.
- 9.6.4 PICADY was therefore carried out for the following scenarios which, it will be seen, again represent a "worst-case" scenario because the amended proposals are reduced to just 58 residential apartments and the timeshare proposal has been replaced by the sports pavilion and training pitches which have a far closer operational relationship to the Vale Resort than they will have to the Hensol Castle Hotel and Spa.
 - **Development Scenario 1:** Total Development (43 Room Hotel spa, 60 Residential Units, 40 Timeshare Units) in the base year of 2004;
 - **Development Scenario 2:** Total Development (43 Room Hotel spa, 60 Residential Units, 40 Timeshare Units) in the base year of 2006;
 - **Development Scenario 3:** Total Development (43 Room Hotel spa, 60 Residential Units, 40 Timeshare Units) in the base year of 2011;
 - **Development Scenario 4:** Total Development (43 Room Hotel spa, 60 Residential Units, 40 Timeshare Units) in the base year of 2016.
- 9.6.5 The output from PICADY provides a number of measurements relating to the operation of the junction. Of particular interest is the 'Ratio of Flow to Capacity (RFC), maximum queue length in PCU', and delay in minutes per vehicle.
- 9.6.6 The main indication of the performance of a junction is given by the RFC value for each arm of the junction. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait in the approach. This is reached when the RFC attains a value of 1. A maximum RFC value of 0.85 is normally accepted as being within capacity as this reduces the risks of delays due to traffic count inaccuracies, also analytical and modelling assumptions.
- 9.6.7 Complete results of the PICADY assessments are provided in Appendix 26. A summary is provided in Table 9.13 below.



Table 9.13: Maximum RFC & Queue Length Values For Am & Pm Peak PICADY Analysis

7 thary old								
	2004		2006		2011		2016	
	Max. RFC	Max. Q	Max. RFC	Max. Q	Max. RFC	Max. Q	Max. RFC	Max. Q
Junction 1	0.446	0.8	0.451	0.8	0.468	0.9	0.485	0.9
Junction 2	0.341	0.6	0.345	0.6	0.359	0.6	0.375	0.7
Junction 3	0.244	0.3	0.247	0.3	0.258	0.3	0.267	0.4

9.6.8 For each of the development scenarios, predictions show that all 3 junctions operate well within their operational capacity and cause no detrimental effect to the operation of the existing local highway network.

Highway Safety

9.6.9 It is considered that given the relatively low number of trips generated by the proposed development, when compared with the trips generated by the site in its former capacity as a hospital, the current accident record will not be adversely affected.

9.7 Parking and On-Site Movement

Parking

9.7.1 The number of parking spaces associated with the different elements of the proposed development has been calculated with reference to the South Wales Counties Parking Guidelines – 1993 Revision. However, due to the characteristics of the site, some additional spaces are required to accommodate the overspill generated by the proposed hotel spa and conference facility.



- 9.7.2 The existing Vale of Glamorgan Hotel, Golf and Spa Resort experiences a lack of parking spaces at peak times. The 2006 permission allowed for two additional car parks with a capacity of 48 and 80 spaces respectively to be provided to the south of the then proposed timeshare complex within 150m of the Vale of Glamorgan Hotel, Golf and Spa Resort. Those spaces have been provided as a part of the replacement and implemented Sports Pavilion/Training Pitches approval so the current amended proposals maintain the overall same parking provision even though the holiday village no longer forms a part of the overall site masterplan.
- 9.7.3 Table 9.14 below lists the number of parking spaces required for each element of the proposed development (including for the timeshare proposal which is no longer included within the scheme).

Table 9.14: Parking Spaces Requirement*

rabio or in a arking opacoo requirement						
Accommodation Type	Number of	Parking	Visitor			
Accommodation Type	Units (Beds)	Spaces	Spaces			
Staff	64 (1 Bed)	64				
Residential	60 (2 Bed)	120	12			
Timeshare	20 (2 Bed 117m2)	40				
	16 (3 Bed 121m2)	48				
	4 (4 Bed 180m2)	12				
Hotel Spa Conference	43 Rooms	43				
	30 Non Residential Staff	10				
	85 Non-Residential					
	Visitors	85				
	Sub Total	422	12			
	TOTAL	434				

^{*} Based on the South Wales Parking Guidelines 1993 Revision.

- 9.7.4 The non-residential visitors to the spa (85) are likely to remain on site for a full day of treatment. Therefore, a space per visitor is required.
- 9.7.5 There is also an area to the south of the castle which has been used in recent times by conference facility visitors. This car park has a capacity of 35 spaces and is proposed to remain as part of this development.
- 9.7.6 The residual amount over and above the standard requirement is proposed largely at the southern end of the site, adjacent to the Resort Health Club, its primary purpose being to accommodate overflow requirements during the staging of major events at the resort.

Site Movement - Residential and Hotel Spa Conference Development

9.7.7 The internal vehicular movement will be accommodated on the existing road network within the Hensol Castle site. It is proposed that the existing carriageway network within the site be converted to a shared use surface with a minimum carriageway width of 5.5m, which will allow vehicles and pedestrians to interact in a safe manner.



Site Movement – Approved and Implemented Sports Pavilion and Training Pitches

- 9.7.8 Although not forming a part of this application access to this implemented development is via the main access drive to the existing Vale of Glamorgan, Golf and Spa Resort.
- 9.7.9 This access has been constructed.

9.8 Outline Travel Plan

Introduction

- 9.8.1 A Travel Plan is a management tool that allows a coordinated strategy to bring together transport, business and leisure travel issues and achieve a more sustainable travel choice. A successfully implemented travel plan can offer substantial gains towards the sustainable transport objectives of Central and Local Governments. Travel Plans can provide:
 - Reductions in car usage, particularly influencing levels of single-occupancy car travel, with increased numbers of journeys made by public transport, walking and cycling;
 - Improved road safety and personal security, particularly for pedestrians and cyclists; and
 - More environmentally friendly methods of delivery and freight movements.
- 9.8.2 It is considered that a Travel Plan will be required in relation to the proposed Hensol Castle development. This will ensure that the specific needs and requirements of each use are met, and thus increase the likely take-up of travel plans.
- 9.8.3 Included in the following sections is a framework of initiatives that could form the basis of the Travel Plan.

Background

- 9.8.4 The site lies in an area fairly sparse of public transport accessibility. There is only one bus service within the vicinity of the site. Cycle and pedestrian facilities are also limited.
- 9.8.5 The purpose of the travel plan is to educate, influence, and provide people with these opportunities. In the context of the Hensol Castle site, the plan will be orientated towards influencing the travel behaviour of commuter journey, business travels and visitors.
- 9.8.6 The greatest opportunity to influence existing travel patterns to/from the site lie within the residential element of the proposal, since this not only represents the largest



- proportion of the site but is also the largest trip generator during the peak hours, where a reduction in road traffic is most beneficial.
- 9.8.7 It is key that future occupiers are advised, from the outset, of the benefits that a travel plan can bring to them such that they actively participate.

Proposed Initiatives

9.8.8 Outlined in the following sections are initiatives that could be included within the Travel Plan.

Public Transport

- 9.8.9 To improve accessibility to the area by sustainable transport, a community vehicle, in the form of a high quality mini-bus or people carrier for use by all the households at Hensol Castle, could be provided. The objective will be to provide a locally controlled community vehicle service to destinations at times agreed by occupants of the development, e.g. to the railway station.
- 9.8.10 A resident will be appointed as a travel co-ordinator to co-ordinate the use, timing and management of the community vehicle. This will include the identification and implementation of a drivers' rota.
- 9.8.11 IT facilities will be provided in each of the newly erected dwellings to express and co-ordinate each resident's travel wishes. The community vehicle will be parked on site.

Live/Work Units

- 9.8.12 Encouraging residents to occasionally work from home, by implementing work units within the layout of the new residential dwellings is an effective method of reducing the need for travel by household members and substitute potential vehicle trips by walking.
- 9.8.13 However, in the case of this site it should be recognised that it is anticipated that a significant proportion of the residents will either use the units as second homes or be retired. There is unlikely to be a need, therefore, for work units within the dwellings.
- 9.8.14 These measurements are seen as an important way of increasing the accessibility of the site by non car modes for people without access to the car either by choice or at a particular time, or who perhaps may wish to make a 'one way' journey e.g. the nearby train station. Social exclusion is minimised while reliance and usage of the private car is reduced.



9.9 Conclusions

- 9.9.1 A Transport Assessment (TA) has been prepared in support of the amendments to the Planning and Listed Building Consents for the proposed development of the Hensol Castle. The proposed development is within historic grounds of some 60 hectares. The proposal takes the form of 58 residential units, staff accommodation units, and the refurbishment of the existing Hensol Castle into a 46 bedroom hotel/ spa.
- 9.9.2 The site is currently accessible by 2 modes of travel: bus and private car. Therefore, this assessment has considered only the vehicular trips generated by the proposed development, since the opportunity for travel to the development by means other than the private car is limited. The impact on the local highway network of the trips generated by the proposed development has been assessed and no significant effect on the capacity of the surrounding highway network has been found even when the "worst-case" scenario is assessed (that is when it is assumed that there will be 60 apartments, 64 units of staff accommodation, and 40 timeshare units).
- 9.9.3 The proposed primary vehicular access to/from the site will be made via the existing priority junction at the Hensol Castle access to the north of Hensol Villas. A secondary access will be provided from the main existing access drive into the Vale of Glamorgan Resort.
- 9.9.4 It is anticipated that, in due course, a detailed Travel Plan will need to be provided. A framework of initiatives has been produced which will be included within such a Travel Plan, and will encourage travel by modes other than the private car.



10. NOISE

10.1 Introduction

10.1.1 This chapter summarises the findings of the noise assessment undertaken as part of the EIA process. The broad approach adopted for the assessment has been to establish the baseline noise situation, identify any locations which might be sensitive to emissions from the proposed development, and to identify key activities associated with the proposal. Noise levels from the proposed development have then been assessed in the context of the existing situation and the relevant standards and guidelines.

10.2 Methodology

10.2.1 The existing conditions at the site **were** investigated through discussions with the local authority, interrogation of the Environment Agency database and by on-site monitoring to determine baseline levels.

Local Authority Consultation

10.2.2 Telephone enquiries were made to the local Environmental Health Officer who confirmed that the Authority has no particular concerns regarding noise in this area.

Monitoring of Baseline Levels

- 10.2.3 A noise survey was undertaken during three visits to the site between 24th and 27th May 2004. The weather conditions were warm, dry and still.
- 10.2.4 LAeq, L10 and L90 were measured using the quaternary shortened form of measurement. The details of the monitoring equipment used, definitions of terminology and the results of the surveys are presented in Appendix 27. The visits to site included peak traffic flow periods which were considered to be representative of noise and air quality daily fluctuations.
- 10.2.5 Monitoring locations were set up at the following positions as shown on Figure 2 (Appendix 27):
 - Location 1 approximately 10m to the east of Hensol Castle, on a grassed area.
 This location was used to determine baseline noise levels currently on the site, away from external noise sources. This is on the development site and in a position near to the proposed Hensol Hotel and Spa development.
 - Location 2 located approximately 10m to the south of the Mortuary Buildings, used to determine baseline noise at the roadside likely to be used as access for



staff accommodation (now replaced by a new private hospital under construction).

- Location 3 located some 25m north east of the existing Vale of Glamorgan Hotel and Leisure facility. This position was used to determine the current background noise levels for the Vale of Glamorgan Hotel and Leisure facility.
- Location 4 located in line of sight of the existing Vale Resort access drive.
 This position was used to determine noise levels from the access road likely to be experienced by the proposed apartments.
- Location 5 positioned in the front garden of No. 8 Hensol Villas to determine current noise levels experienced during peak traffic periods.

Existing Potential Sources Of Noise

- 10.2.6 The existing potential sources of noise from road traffic at the site are as follows:
 - The A4119 and local B roads to the east and southeast of the site.
 - The M4 motorway 800m to the north of the site.
- 10.2.7 The potential source of noise (vehicular) from the M4, A4119 and associated B roads is understood to be the main concern for this development.
- 10.2.8 The A4119 is a single carriageway road carrying local traffic between Llantrisant and Pendoylan. This road is relieved by the M4 to the north. Increased traffic along this and joining B roads is to be expected following the development, for employment and recreational use, as well as by those that will reside there. A short-term increase in HGV traffic is to be expected during construction and redevelopment of the site.

10.3 Results

Existing Noise Levels

- 10.3.1 The ambient levels recorded between 24th 27th May 2004 show that sound levels within the site (Locations 1 & 2) are similar to those recorded adjacent to the Vale Hotel, Golf and Spa Resort (Location 3 & 4), proposed for residential apartments. Ambient noise levels recorded at the east boundary B road at 8 Hensol Villas (Location 5) were marginally higher. The graph in Appendix 27 shows that traffic (L10) is the dominant sound.
- 10.3.2 Noise levels recorded at Location 5 (8 Hensol Villas) have a LAeq of 51.4dB(A). The LAeq increased from 47.2dB to 54.6dB which demonstrates an influence of commuter traffic at this time. Of equal significance is the high background noise levels of 47.2dB (L90), 14dB higher than recorded on the site, illustrating the influence of M4 motorway traffic at this location which was audible to the human ear.



- 10.3.3 The main influence of noise levels at Position 4 throughout the 24 hour monitoring period was intermittent vehicle traffic (approximately 2 cars every minute) travelling along the southeast access B road. This is illustrated by the dominant short term noise levels (L10), recorded on average 5dB higher than LAeq levels.
- 10.3.4 The LAeq at the Locations 2 & 3, representative of proposed residential developments, were 49.0dB and 44.8dB respectively. Noise levels at Position 3 were influenced by children playing in the Hotel Creche facilities.
- 10.3.5 There is no evidence to suggest that more recent noise measurements will reveal different noise levels.

10.4 Impact of Development

- 10.4.1 In considering the granting of planning permission for the proposed development any Local Authority has to balance the enjoyment of the visitors and residents against the nuisance to other people. For leisure and hotel activities, the authority may consider it reasonable to consider higher noise emission levels than they will from, for example, an industrial development. This may be subject to a limit on the hours of use and the control of noise emissions (including from public address systems) during unsocial hours. This is in accordance with National Assembly guidelines (Welsh Office, 1997).
- 10.4.2 The level of annoyance induced by noise depends not only on sound pressure level but also on tonal characteristics and variations of these over time. Also to be considered are non-acoustical factors such as social, psychological and economic factors that influence the perception and tolerance of the public to noise.
- 10.4.3 During the daytime few people are seriously annoyed by activities with LAeq levels below 55dB(A) (WHO, 2001). At the monitoring position of Hensol Villas, Position 5, this level was not exceeded. Noise levels measured indicated that commuter traffic and noise from the M4 motorway influenced background and peak levels.
- 10.4.4 Based on the presently available information the development is not expected to result in any significant noise or emission generating activities, apart from any occasional 'special events'. This will result in an associated temporary increase in noise levels, but tolerance of such events is to be expected due to the benefit to the community and local economy.
- 10.4.5 Vehicular traffic of persons travelling to and from the development will cause increase in rush hour traffic as well as throughout the day and night and hence road noise levels, the extent of which will depend on the method of travel, working hours and number of residences.



10.4.6 For the proposed residential use planned within the site (Ref: Location 1, 2 & 3) traffic generated sound levels are not likely to reach 55dB(A) here, other than the occasions when vehicles enter the residential area. However, for properties near to the **Resort access drive** (Location 4) noise levels may rise above the perceptible threshold and therefore acoustic measures commensurable with the level of noise will be necessary. With reference to Table 10.1 **below**, sound insulation in the form of thermal double glazed windows will be adequate to protect residents against traffic pollution sources.

Table 10.1: Typical Noise reduction of a dwelling façade with windows set in brick walls (difference in dB(A) inside and outside)

Noise Source	Single Glazing	Thermal Glazing	Secondary Glazing
Road Traffic	28	33	34

Source: PPG 24

10.4.7 The following noise levels should be used as a guide when designing soundproofing for the proposed residential development.

Table 10.2: Guideline Values For Community Noise In Specific Environments

Specific Environment	Health Effect	LAeq (dB)
Outdoor living area	Annoyance	55
Night – bedroom with window open	Sleep disturbance	45

Source: WHO 2001

Impact During Construction

- 10.4.8 In general, the public appear to appreciate the benefits of residential development in preference to industrial development. Furthermore, during the daytime few people are seriously annoyed by activities at a noise level below 55dB(A). At the monitoring positions closest to the current residences on the site itself (location 5), this level was not exceeded during monitoring.
- 10.4.9 There will be an associated temporary increase in noise levels during construction. This will however be short term, and tolerance of such events is to be expected. During the construction phase it is anticipated that a portion of construction traffic will be HGV vehicles using the eastern boundary B road as access to site, thus passing Hensol Villas.



- 10.4.10 Any planning permission granted may be subject to a limit on the hours of vehicular movement and the control of noise emissions during unsocial hours i.e. construction traffic should be limited between the hours of 08.00 and 18.00hrs (not including cars). This is in accordance with Vale of Glamorgan Council and National Assembly guidelines (1997).
- 10.4.11 The Design Manual for Roads and Bridges (Vol 11) includes a description of a study into the disruption due to construction noise that shows that half the people within 50m of the site boundary were seriously bothered by construction nuisance, but beyond 100m less than 20% were seriously bothered. Therefore from the figure at Appendix 2 that shows the site boundary it can be deduced that construction works will not cause annoyance to residence at Hensol Villas. Neither will work in the southwest of the site near to the Vale of Glamorgan Hotel and Leisure Facility. No properties are currently in direct line of sight of the construction plant considered to be most affected. Current tree lines will minimise nuisance in most areas. However, it should be noted that trees and woodland, although providing visual relief, do not attenuate noise.

10.5 Mitigation

Construction Period

- 10.5.1 During construction, some noise and vibration may be caused. However, the degree of impact will depend on construction techniques used and can be minimised with forethought in the design. Some additional road traffic should be expected during development from vehicular construction traffic – this will however be short term.
- 10.5.2 Appropriate measures to minimise the dust generated on the site and on the access roads will be adopted.
- 10.5.3 Consultation with local residents will be initiated at an early stage to minimise opposition to the disruption that the construction of the development will cause, and assurances made of the consideration that the developers will take to the inevitable associated noise and dust. For example, the method of construction and restriction of movement of construction traffic on and off site will have already been addressed as much of the proposal has already been implemented or part implemented.
- 10.5.4 In order to mitigate the potential impact on noise levels, to which residents at Hensol Villas and the forthcoming development may become exposed, the following good practices **have and** will **continue to** be considered:



- Planning transportation of materials to avoid rush hour and school run traffic,
- No heavy vehicles using the roads on weekends or after 6pm,
- No noisy activities before 8am or after 6pm.
- 10.5.5 Building demolition, ground excavation and material crushing has already been undertaken with no known complaints with regard to noise. The degree of impact has depended on the construction techniques used and has clearly been minimised with forethought in the design. BS 5228 'Noise and Vibration Control on Construction and Open Sites' recommends procedures for noise and vibration control in respect of construction operations in order to protect those persons living and working in the vicinity of such sites.

Hensol Castle (Hotel, Spa and Restaurant)

10.5.6 Planning consideration of car parking and alterations to private roads should be given so that no significant noise generating activities are situated adjacent to sensitive areas of the buildings i.e. bedrooms and living rooms. Any entertainment licence should be granted with due consideration to the nearby residences. Organisation and timing of public events should include noise impact as a consideration for access and egress from the facility. Any event should not be carried out during unsocial hours without due regard so as not to disturb residents - this is consistent with good practice.

Residential

10.5.7 There is no significant impact on noise envisaged from this development. For properties planned near to the southeast boundary access road (Location 4 for noise) noise levels may rise above the perceptible threshold of 55dB and therefore acoustic measures such as thermal double glazed windows will be adequate to protect residents against traffic pollution sources.



11. AIR QUALITY

11.1 Introduction

11.1.1 This chapter summarises the findings of the air quality assessment carried out as an integral part of the Environmental Impact Assessment.

11.2 Air Quality Objectives

- 11.2.1 The UK Air Quality Strategy (UKAQS) document was first published in March 1997, thereby implementing the EC Framework Directive. This document identified eight key pollutants that should be considered within the scope of air quality management in the UK and set objectives to be met for each of the pollutants. These pollutants are:
 - Benzene;
 - 1-3 Butadiene:
 - Carbon Monoxide;
 - Lead:
 - Nitrogen Dioxide;
 - Ozone (subsequently omitted from the Air Quality Standards Regulations);
 - PM₁₀, (particulate matter of ten microns diameter or less that is respirable);
 and
 - Sulphur Dioxide.
- 11.2.2 The UKAQS provides the framework within which air quality is assessed in Wales, although not all the pollutants covered within the scope of the strategy are relevant for this application.
- 11.2.3 The strategy was revised in January 2000, following a Government review. The standards and objectives found in UKAQS are given legal status in Wales by the Air Quality (Wales) Regulations 2000, the Air Quality (Amendment) (Wales) Regulations 2002 and the Air Quality Limit Values (Wales) Regulations 2002.
- 11.2.4 The basis of the air quality assessment for the development of the site is nitrogen dioxide, as an indicator of traffic emissions and PM10's also associated with traffic, and of particular health concern for local residents and visitors to the site.



11.3 Methodology

11.3.1 The existing conditions at the site **were** investigated through enquiries to the local authority, interrogation of the Environment Agency database, examination of then current air pollution monitoring data for the South Wales region, and by on-site monitoring to determine baseline levels.

Potential Existing Sources Emissions

- 11.3.2 The sources of emissions at the site were found to be:
 - The A4119 and local B roads to the east and southeast of the site.
 - The M4 motorway 800m to the north of the site.
- 11.3.3 The potential source of emissions (vehicular) from the M4, A4119 and associated B roads is understood to be the main concern for this development. The main boiler house (Building No. 33) and other ward boiler rooms were redundant at the time of survey and not considered to be of concern. Since the time of the survey the main boiler house and the ward boiler installations have in any case been demolished.
- 11.3.4 The A4119 is a single carriageway road carrying local traffic between Llantrisant and Pendoylan. This road is relieved by the M4 to the north. Increased traffic along this and joining B roads is to be expected following the development, for employment and recreational use, as well as by those that will reside there. A short term increase in HGV traffic **was** expected during construction and re-development of the site.

Local Authority Consultation

- 11.3.5 The local Environmental Health Officer confirmed at the time of the survey that the Authority had no particular concerns regarding air pollution in this area. There is no knowledge of any new concerns having arisen since that date.
- 11.3.6 Air quality in the area generally complies with the government's standards and therefore no air quality management area exists in the Council area. It is considered that there is little risk of the objectives being exceeded within the Council area for the foreseeable future.
- 11.3.7 However, **as** no air quality measurements had been undertaken by the Council in this vicinity comparisons **were** made with air quality measurements recorded at regional air quality stations at Cardiff, Cwmbran and Port Talbot (see Appendix 28).
- 11.3.8 Overall air quality in the area is expected by the local authority to improve further over the coming years as no developments are planned that will significantly



increase the pollutants concerned, and national and local initiatives provide continuing reductions in industrial and road traffic emissions. No significant planning permissions have been granted in the vicinity of the site since the survey date to change that expectation.

Monitoring of Baseline Levels

- 11.3.9 An air quality survey was undertaken between 17th and 28th May 2004 at the locations listed below as shown on Figure 2 at Appendix 29.
 - **Location 1 –** road side, near to 17 Hensol Villas, representative of air quality along the eastern boundary B road.
 - **Location 2** main access road to the site, representing background air quality for the site affected by general activities.
 - Location 3 positioned on the down pipe to the Physiotherapy Office representative of the air quality on the site affected by general activities.
 - **Location 4** positioned near to H Ward representative of air quality on site affected by the south east access B road.
 - Location 5 (PM10 only) outside the residential property of Hensol Mill, representative of air quality affected by both access B roads.
- 11.3.10 The visits to site included peak traffic flow periods which were considered representative of air quality daily fluctuations.
- 11.3.11 Temperature, relative humidity, wind speed, nitrogen dioxide, and particulate levels (PM10) were measured. The method for particulate monitoring was recorded using the quaternary shortened form of measurement for traffic flow. Monitoring equipment used in the survey included:
 - TSI Dusk Trak PM10 serial no.22167
 - Diffusion Tubes for N02 ambient monitoring
 - Met weather station
- 11.3.12 The measuring systems were calibrated before and after each survey and no variation occurred.
- 11.3.13 The weather was dry and fine and conditions were ideal for air quality monitoring. Wind speed was measured at -7 to 11 m/s and temperature between -10 to 19° C.
- 11.3.14 Motor vehicle emissions are the major source of benzene, 1-3 butadiene, lead, NO2. Nitrogen dioxide was monitored as an indicator of road traffic emissions. The air quality objective for nitrogen dioxides levels is to be below 40ug/m3.
- 11.3.15 Continuous monitoring of respirable dust on site was conducted using a light scattering device and nitrogen dioxide using diffusion tubes exposed to ambient



- levels for a period of 2 weeks. Each particulate sample was recorded for a 15 minute period on site.
- 11.3.16 Roadside measurements are indicative of maximum relative exposure (locations where highest concentration of PM10 and NO2 are expected). Although these locations are not 'hot spots' they are representative of emissions from roadside traffic at kerbside locations. The details of the monitoring equipment used and the results of the surveys are presented in Appendix 29.

11.4 Baseline Air Quality

Nitrogen Dioxide

- 11.4.1 The principal source of nitrogen dioxide emissions is road transport. As an example, road transport is estimated to account for more than 75% of nitrogen dioxide emissions. The Air Quality Objective for nitrogen dioxide is 40ug/m³ (annual mean).
- During the assessment, which was pre-commencement of the approved works pursuant to the 2006 consent, the levels of nitrogen dioxide were well below the National Standard of 40ug/m3 at all times during monitoring. The maximum level recorded was 8.83ug/m3 at Location 1 and the minimum, 6.60ug/m3, at Location 3. This low level of nitrogen dioxide indicates that other pollutants of concern from road traffic in the area are low.
- 11.4.3 It is considered that exceedences of the annual mean objective are only likely within about 5 metres of the kerbside outside of major conurbations (DETR, 2003). If there are no exceedences of the objectives at the most polluted locations (i.e. Location 1 & 4) then it can be reasonably concluded that there should be no exceedences elsewhere.

Dust

- 11.4.4 Particulate matter is a major concern, as it has been linked with both increased morbidity and premature mortality. The objective level is a mean of 50 microgrammes PM10 (respirable dust) per cubic metre, or 0.04 mg/m3.
- 11.4.5 During the 3 day period of monitoring, which was before development commenced on site, the overall measured mean level recorded was 0.073mg/ m3. The mean PM10 levels recorded by location peaked at 0.079mg/m3 (Location 2) and the lowest reading was 0.070mg/m3 (Location 3). The results suggest that daily fluctuations, although high, bare little correlation to road side influences. For example, on Wednesday 26th May 2004 roadside levels averaged 0.086mg/m3 and



- background levels were 0.090mg/m3 (morning). In contrast, roadside levels in the afternoon increased to 0.083mg/m3 while background levels were 0.067mg/m3.
- 11.4.6 In general, it is likely that the high levels of particulate recorded is attributed to a long dry weather period experienced for several weeks leading up to and during the monitoring visits. It should be borne in mind that the site itself is surrounded by pasture land that could significantly contribute to the dusty conditions, and this will have influenced readings when the wind speed rose.

11.5 Impact Of Development

- 11.5.1 Monitoring carried out, both background and kerbside, indicated that particulate levels exceeded the national air quality objective for PM10's (50ug/m³) at all locations and on every day (averaging 0.073mg/m³). Upon analysis, the high levels of particulates recorded bore no correlation to the proximity of traffic bourne pollution sources. In addition, background and kerbside air quality levels for nitrogen dioxide were well below the annual mean objective of 0.040mg/m³ (50ug/m³), considered to be a measure of vehicle based pollution emissions.
- 11.5.2 Exceedences of the annual mean nitrogen dioxide objective are only likely within about 5 metres of the kerbside or hard shoulder of dual carriageways outside major conurbations (LAQM TG03). If there are no exceedences of the objectives at the most polluted locations, then it can be reasonably concluded that there should be no exceedences elsewhere. Therefore, and as anticipated, air quality on the Hensol Castle estate and at the kerbside of the east and southeast B roads is:
 - a not considered significant
 - b not influenced by local vehicle movements; and
 - c bears no correlation to vehicle traffic levels on the local access B roads.
- 11.5.3 The development of the site has and will continue to cause an increase in traffic flows to and from the site from the levels experienced after the closure of the hospital. However, predicted levels as is indicated in the Transport Section of this ES are lower than that experienced when the hospital was in full use. Examination of the monitoring data showed that even if traffic levels were to double such increase would not be a significant risk likely to cause an exceedence of the nitrogen dioxide air quality objectives. At the traffic levels predicted, therefore, no unacceptable air quality impacts are predicted either during the remainder of the construction period or during the operational phase of the proposed development.



Construction

- 11.5.4 There has more than likely been an associated temporary increase in air quality levels during construction. This has, however, been short term and whilst tolerance of such events was predicted at the time of the original survey that has been shown to be justified as there are no records of complaints during the initial construction period. During the construction phase it was anticipated that a portion of construction traffic would be HGV vehicles using the eastern boundary B road as access to site, thus passing Hensol Villas.
- 11.5.5 The 2006 planning permission required via condition number 30 the prior approval of measures to suppress dust and to wash vehicle wheels to ensure that the amenities of the local residents and highway safety were not compromised. This is in accordance with the Construction Industry's Best Practice Guidelines and is expected to be imposed on any new permission granted.

11.6 Mitigation

Construction Period

- 11.6.1 Appropriate measures to minimise the dust generated on the site and on the access roads have been adopted during the initial construction phase and are understood to have been successful.
- 11.6.2 Continuing liaison with local residents will be maintained to ensure that the measures taken are appropriate. The following good practices will be maintained:
 - Road washing,
 - On-site wheel wash facility,
 - · Visual inspections for dust blown activities on a regular basis,
 - Dampening down of dusty activities.

11.7 Conclusion

11.7.1 Air quality monitoring has indicated that NO₂ levels (as an indicator of traffic emissions) were very low and it is unlikely that the proposed works will cause a significant increase in the levels recorded. That has been demonstrated throughout the initial demolition and construction phase when no significant problems have been experienced.



- 11.7.2 There are no issues with regard to air quality in the area and **no** deterioration in quality levels **is expected**, although there is no local information for this area.
- 11.7.3 Based on the presently available information the development is not expected to generate any significant emission generating activities. Any such activities will be associated temporary increases (i.e. construction or planned events), but tolerance of such events is to be expected.
- 11.7.4 The **ongoing** construction period will be managed to ensure that inevitable associated dust is kept to a minimum. In particular there will be a restriction of movement of construction traffic on and off site. The main likely dust-generating activity, the movement of waste arising from the site of the new spa to the two receptor locations, **has been** contained entirely within the application site and at a considerable distance from the nearest private dwellings at Hensol Villas. Accordingly, no unacceptable dust nuisance **has occurred** off-site.



12. WASTE

12.1 Introduction

- 12.1.1 This chapter summarises the findings of an investigation and assessment of waste arising from construction and post construction activities at Hensol Castle, Vale of Glamorgan.
- 12.1.2 The development will transform a redundant site into a high quality hotel and timeshare complex and luxury residential apartments. The initially anticipated construction work included re-development of existing structures (part completed), earthworks for construction of staff accommodation and a holiday village (now no longer proposed), the renovation of the former ward blocks into apartments, the renovation of the castle and the construction of the new spa extension (part completed), and the demolition and clearance of unsympathetic modern buildings (totally completed). Such works will have and will continue to generate various types and quantities of inert, non-hazardous and hazardous materials on the site which will have needed to be managed as part of the redevelopment programme.
- 12.1.3 The aim of this report is to identify:
 - Sources of waste on the site.
 - Waste minimisation measures.
 - Opportunities to re-use waste materials (both generated within the site and from other sources).
 - Disposal routes for unavoidable waste.

Planning Constraints

Welsh Assembly Position on Waste Management

- 12.1.4 The Welsh Assembly Government has formulated a strategy for dealing with various types of waste generated from different sources. "Wise about Waste" is the National Waste Strategy for Wales, 2003 which sets out a series of targets for different wastes from Municipal and Commercial sources. Within the Strategy all businesses are encouraged to:
 - Identify wastes arising;
 - Achieve waste minimisation and landfill reductions;
 - Reduce quantities of hazardous waste;
 - Support the use of recyclable materials; and



- Ensure other (including food) wastes are minimised and composted as much as possible.
- 12.1.5 Recommendations given in this Environmental Statement have been based on guidelines presented by the Environment Agency (EA), the Construction Best Practice Programme (CBPP) and the National Assembly's Waste Strategy 2003.

Scoping Opinion Issued By The Local Planning Authority

- 12.1.6 The initial scoping opinion of the Vale of Glamorgan Council Planning Department required that the Environmental Statement considers "impacts from the disposal of waste, including through the transportation of waste and waste production from the site during and post construction."
- 12.1.7 The Waste Policy Unit has recently drafted a Waste Strategy but this will not come into effect until August 2004. However, the Vale of Glamorgan operates a bin bag kerb-side collection policy which will has been taken into account when designing the residential apartments. The Waste Operations Manager for the Vale Council recommended that if this is not appropriate for the development type, consideration should be given for an on-site recycling facility. That has not been proven to be necessary.

Monitoring of Baseline Levels

- 12.1.8 The following investigations (included at Appendix 3**0**) were carried out to determine potential wastes arising during and post construction:
 - Preliminary risk assessment to determine activities (during construction and operation) likely to generate significant wastes.
 - Site surveillance waste audit (Appendix A of Appendix 30),
 - Review of current hazardous installations (Appendix B of Appendix 30),
- 12.1.9 Baseline levels are not established for operational conditions. The treatment of wastes during operation will be addressed by means of a waste management questionnaire to be completed during detailed design and used to compile a best practice manual for the operational management.

12.2 Existing Conditions

Potential Sources of Waste From The Development

12.2.1 The categories of wastes shown in the table **below** have been identified.



Ref:	Main Activity	Source of waste	Waste Type		
Constr	Construction				
1a	Demolition	Buildings	Traditional		
1b			Pre fabricated		
1c			Industrial – fuel tanks		
1d			Interior fabric – unknown		
2a	Removal of	Road surfacing			
2b	Ground Surface	Walk ways			
3a	Removal of	Subterranean	Ducts and pipe work		
3b	Services	Visible elements			
4a	Excavations	Soil & topsoil	Inert		
4b	and Earthworks		Non-hazardous		
4c			Hazardous		
5	Greenery	Trees & shrubs			
Operat	tion				
6a	Site Run-off	Carparks			
6b		Roads, paths and other hard			
		standing areas			
7a	Waste Water	Hotel, restaurant and Canteen,	Sewerage		
	discharge	residential			
7b		Swimming Pool and Spa	Chlorinated		
8a	Solid Waste	Luxury Apartments	Municipal		
8b		Hotel & Restaurant	Commercial		
8c		Garden and Allotments	Compost		
8d		Facilities	Packaging – containers,		
			polystyrene, soap containers		
8e			Office – paper ,cardboard,		
			plastic		



8f			Asbestos (Hazardous)
8g			Packaging used for COSHH
			materials (hazardous)
9a	Liquid Waste	Restaurant	Cooking oil's
9b		Facilities	COSHH material
9c			Engine oils and associated
			contaminated parts
			Fluorescent tubes

Demolition and Construction

12.2.2 The table at Appendix C (please refer to Appendix 30) schedules the type of materials present on the original site and the respective quantities of each that would be generated through the construction activities. The actions that have and will be taken to re-use or recycle these materials in order to minimise the waste generated are identified.

12.3 Mitigation – Best Practice

Design

- 12.3.1 During the engineering design of the proposed development, where practicable and environmentally beneficial, engineers have sought to and will continue to seek to use recycled materials and products and support the use of easily recyclable materials in preference to those which are not. For example, the design specifications have required demolition materials and extracted wastes from the spa area to be retained on site for the re-use in the creating of finished levels for the two car parks and the landscaping schemes.
- 12.3.2 In order to ensure that all significant environmental aspects of the development project, including waste, are adequately addressed, an environmental management plan has been developed and implemented during the early construction and operational phases. This document was drawn up at the early design stage and acted as a tool to influence engineering design decisions on waste management and other environmental aspects throughout the life of the proposed development.
- 12.3.3 To help build waste minimisation into the design of the project construction specifications **have** incorporated targets for the reduction of waste sent to landfill. Each Company involved with the development scheme **has been** required to



outline its intentions for waste reduction and for the re-use or recycling of specific materials and products on-site.

Design Of Buildings

12.3.4 Runoff generated from rainfall on roofed areas of the site (grey water) is not at risk from contamination and will be wasteful to dispose to the sewer network for treatment. The project will take advantage of a separate collection and disposal system or a sustainable urban drainage system. This will be incorporated into the site drainage plan.

Choice Of Building Materials

12.3.5 Recycled materials will be utilised where appropriate.

Inefficient Use of Raw Materials

- 12.3.6 Through the detailed design of the proposed works, minimising the size and number of structures can reduce the amount of raw materials needed in the construction.
- 12.3.7 The optimisation of the structures around their required function will deliver significant reductions in use of raw materials.

Demolition & Construction

- 12.3.8 Where possible the development proposal has avoided during demolition and initial construction production of unnecessary waste and has ensured that such wastes generated are managed in accordance with the legal requirements for production, handling, storage, record keeping and final disposal of wastes.
- 12.3.9 The following are examples where waste **has and** can be minimised during demolition and construction:
 - Segregating the different types of waste that arise from the works. This will
 make it easier to supply an accurate description of the waste for waste transfer
 purposes.
 - Where practicable, compounds for storing materials and waste skips will be located away from environmentally sensitive areas on site, such as drains, water bodies and site boundaries close to housing/offices.
 - Labelling of all waste skips –to make it clear to everyone which waste type is to be disposed of in that skip.
 - Identification of purchasers for recycled timber, metals, bricks, tiles and other materials that cannot be accommodated on site.
 - Concrete **has and can continue to** be crushed and reused as sub base or fill. Broken out concrete will be considered to be a waste material if it is discarded, intended to be discarded or it is required to be discarded for any reason. As



- such activities will be subject to the Duty of Care and Waste Management Licensing regime.
- Being aware that gypsum and plaster are unlikely to be considered inert waste.

Operation

- 12.3.10 During operation and when adopting new schemes which involve generation of waste, the development will ensure that waste avoidance and the potential for recycling are given proper consideration during the early planning stages wherever practicable.
- 12.3.11 The following are examples where waste can be minimised during operation:

Waste Separation And Recycling:

12.3.12 All waste generated by the development and which cannot be separated, compacted, stored on site, will be sent to a waste transfer station for recycling. Waste compactors are likely to reduce waste volumes by 50% and save considerable costs for removal. Glass waste can be crushed before being sent for recycling.

Recycling And Reuse

- 12.3.13 The applicants will, wherever practical, endeavour to:
 - Use air-conditioning units that utilise reusable filters.
 - Use recycled paper for stationery and promotional materials.
 - Re-use paper for internal correspondence.
 - Ensure packaging material is recycled
 - Take away Newspapers, bottles, crates and cans for recycling
 - Re-use old linen for cleaning cloths.
 - Supply guest rooms with two waste baskets for recyclables
 - Store excess grey water for use in the garden areas.

Purchasing

12.3.14 Detergents and cleaning liquids that are biodegradable and are bought in bulk will reduce packaging waste.

Waste Water Treatment And Recycling

12.3.15 All waste water from dwellings, hotel bathing, laundry and kitchens will be recycled through an effluent treatment plant installed on site.



Composting

12.3.16 Where practicable food waste from the kitchen will be composted using on-site self contained systems to reduce disposal costs. Where feasible, excess compost will be used on the golf course or sold to local farmers and other appropriate uses.

12.4 Control of Waste - Duty of Care

- 12.4.1 Any substance or object that is discarded, intended to be discarded, or required to be discarded is waste and as such is subject to a number of regulatory requirements. The Duty of Care Regulations require that all waste is stored and disposed of responsibly, that it is only handled or dealt with by individuals or companies that are authorised to deal with it, and that a record is kept of all wastes received or transferred through a system of signed Waste Transfer Notes.
- 12.4.2 Any liquid waste stored on site will be clearly labelled and contained within a bunded area.
- 12.4.3 A Waste Management Licence or Pollution Prevention Control permit is required to burn waste on the site. There are categories of exemptions for waste burning on site. However, the Vale of Glamorgan Environmental Health Officer has specified no burning on construction sites.
- 12.4.4 Materials requiring treatment or recycling such as scrap metal or broken out concrete on the site are likely to be waste and will be subject to the waste management regime and the Duty of Care. **Any** crushing plant **will** have a Part B authorisation/permit from the Local Authority.
- 12.4.5 If the material has hazardous properties it may need to be dealt with as 'Hazardous Waste' and will require specific controls for storage and disposal. In addition, discarded COSHH containers may be treated as hazardous waste.

Exempt Activities

- 12.4.6 Lower risk waste management activities such as some reclamation and recycling activities are usually not seen as a threat to the environment or human health. They are therefore exempt from the need to obtain a Waste Management Licence (WML). There are around 45 categories of exemption, most of which are subject to specific constraints on waste types, quantities, capacities and duration of storage. Most exempt activities need to be registered with the appropriate Regulator.
- 12.4.7 Activities which are normally exempt from WML are listed within Schedule 3 of the Waste Management Licensing Regulations 1994 (as amended). Specific guidance



on activities exempt from Waste Management Licensing can be obtained from the local Environmental Health Officer.

Packaging

12.4.8 If the development manufactures, converts, pack/fills, sells or imports more than 50 tonnes of packaging or packaging materials, and has a turnover of more than £2 million per year, it will be required to register with the Environmental Regulator or a registered Compliance Scheme and must achieve targets for recycling or recovering waste. These requirements relate to any product that is passed on or sold to customers with the packaging including complementary biscuits, toiletries and bottled products in a mini bar.

Japanese Knotweed

- 12.4.9 Although no evidence of Japanese Knotweed has been identified on the site it is known to be prevalent throughout South Wales and is likely to be present in derelict and marshy areas.
- 12.4.10 Japanese Knotweed is an invasive plant which, if found, will need to be eradicated from the development site. It has extremely powerful growth potential and has been recorded to penetrate and subsequently destroy concrete and tarmacadam surfaces. Therefore, if it is not treated sufficiently, it will have a significant deleterious impact on the development.
- 12.4.11 There are a number of treatment options available for the eradication of Japanese Knotweed, based on its excavation and treatment by herbicides. These are detailed in publications by the Environment Agency (2001) and the Welsh Development Agency (1998) and summarised in Appendix D of Appendix 30 of this Statement.



13. GROUND CONDITIONS

13.1 Introduction

- 13.1.1 The development of the **original** hospital complex caused subtracted re-contouring of the original ground levels particularly in the disturbed area between the Castle and the walled garden. As a consequence, parts of the site were underlain by thin made ground followed by glacial deposits and bedrock of the Triassic Mercia Mudstone Group.
- 13.1.2 **At the original application stage** the detailed ground conditions **wer**e predicted to comprise;

Glacial Deposits

- 13.1.3 Underlying a thin layer of topsoil or peat a complex sequence of glacial deposits exist of Quaternary (Devensian) age. The investigations indicated the following types of materials.
 - **Glacial till** these materials comprise glacial till deposits of firm, red and dark brown mottled orange, sandy clay with occasional gravel and thin layers of black organic clay.
 - Fluvioglacial sand and gravel these deposits record a variety of fluvioglacial environments, the majority being outwash deposits. They have been preserved as modified terrace like features on the lower slopes of the river valley. These soils comprise medium dense and dense light brown and red clayey sand with varying proportions of rounded to sub-rounded sandstone gravel, cobbles and occasional boulders. The geometry and location of these gravel bodies above, below, and within the lacustrine deposits indicate that they represent team flows into the glacial lake during times of ice melting.
 - Lacustrine deposits These deposits were encountered in boreholes to depths of between 9.30 metres and in excess of 20 metres. These glacial silt and clay deposits probably accumulated in temporary lakes, locally impounded by morainic deposits and topographical obstacles or in fluvioglacial environments. The deposits comprise firm and/or stiff to very stiff red-brown, grey and green, silt and clay with sub-ordinate fine grained sands and sporadic thin gravel lenses. They vary from well bedded and thinly laminated to structureless.

Mercia Mudstone Group

13.1.4 The site is underlain by bedrock of the Mercia Mudstone Group (formerly known as the Keuper Marl) which regionally has a near horizontal dip and rests unconformably on the underlying Carboniferous series. The site lies on the north limb of the east-west trending Cardiff - Cowbridge anticline. The folding profile is



- complicated in this area with thrusts on the north limb which locally transect second order east-west trending anticlines.
- 13.1.5 The bedrock was encountered in Boreholes at depths of between 9.70 metres and 11.10 metres. The strata consisted of very stiff maroon, very thinly laminated silty clay with slickenside surfaces indicative of faulting present in some boreholes.

Hydrogeology

- 13.1.6 Groundwater is typically encountered at shallow depths in the made ground and/or glacial till and then sealed off when the impermeable clay and silt lacustrine deposits are encountered. Where fluvio glacial sand and gravel deposits are encountered standing ground water is indicated within two metres of the ground surface.
- 13.1.7 The underlying geology in the general area of the site comprises a series of aquifers and aquicludes/aquitards. The Murcia Mudstone group is the main aquifer in the vicinity. The Environment Agency classifies this as a minor aquifer, with groundwater controlled by fracture flow.

13.2 Proposed Excavations

- 13.2.1 The **original** proposals for **the** develop**ment** included excavations up to 6 metres deep. **Those have now largely been completed** within the **vicinity of the** outer courtyard of the existing Castle complex. Those building works are located at sufficient distance from the existing building fabric so as not to cause unstable conditions to the surrounding **listed** building both in the temporary and permanent works.
- 13.2.2 It was deemed from working with similar ground conditions on the nearby hotel and leisure complex that the ground material i.e. gravels and clays were suitable for deposition for suitable earthworks on site. The excavated material has therefore been used to re-contour the disturbed land between the north of the castle and the walled garden, in the bund landscaping in the vicinity of the Sports Pavilion and Training Pitches, and for the purpose of creating the required levels for other infrastructure projects at the site.



14. HYDROLOGY AND DRAINAGE

14.1 Hydrology

- 14.1.1 The dominant hydrological feature of the site is Hensol Lake. It is a man made reservoir supported by an earth dam and is fed principally by a stream and a number of ponds on the adjoining golf course to the south. The spillway central to the dam became defunct in the early 1960's when the previous owner decided to reduce the volumetric capacity of the reservoir so as to affect less onerous conditions as required in the Reservoir Act. This was achieved by the construction of a replacement spillway which significantly lowered the water level.
- 14.1.2 The Act requires the reservoir to be inspected by an Independent Panel Civil Engineer on an annual basis and the procedure that is now in place will continue for the future.
- 14.1.3 The replacement spillway follows a route parallel with the toe of the earth dam before connecting to the original spillway and it is intended to cap the spillway and re-grade the ground. It is a requirement that no planting will be allowed in this area.
- 14.1.4 The spillway(s) connect to a watercourse which passes through the Walled Garden before discharging into the Mill Pond. A stream discharges from Mill Pond and continues in an easterly direction until it eventually outlets into the main River Ely some miles away.

14.2 Storm Water Drainage

- 14.2.1 There is a separate system of drainage on the site. The storm water from the buildings, hard standing and roads discharges into a culvert which conveys another stream from the golf course to the south. The culvert also discharges into the Mill Pond.
- 14.2.2 A limited amount of investigation has been carried out to establish the network of drains and it is proposed to undertake a review of each drainage leg during the course of the redevelopment.

14.3 Foul Sewerage

14.3.1 Plans/drawings have been made available from the previous owner and the network of the main sewers is known. The drains slope generally from the south west to the road entrance in the east where a single pipeline passes beneath the public



- highway and conveys the effluent to a traditional percolating filter sewage treatment plant. The system is fed by gravity with the exception of the leg serving the houses on the public highway which is pumped.
- 14.3.2 The Hotel Leisure and Golf Complex built **8** years ago connects to the foul system and **is** discharged by gravity into the sewerage system to the south of the site.
- 14.3.3 The main pipelines have been the subject of CCTV investigations and have been generally found to be in good condition. Similarly to the storm water pipelines, individual sewer legs will be checked in detail during the course of the redevelopment and it is likely that much of the system local to the buildings will be replaced.
- 14.3.4 The Treatment Plant was built in the 1920's to serve the hospital complex and the immediate environment. It was later extended to accommodate planned extension to the hospital complex but much of this development was not carried out.
- 14.3.5 The Treatment Plant has been the subject of vigorous investigations and, as a consequence, new operational systems have been put in place. The performance of the plant has improved to the extent that the quality of discharge into the River Ely passes the Discharge Consent Conditions laid down by the Environment Agency.
- 14.3.6 Monitoring of flows has been undertaken and it has been established that the Plant has more than adequate capacity to deal with the present flows. Assessments are currently being carried out and the indications to date are that the Treatment Plant in its present form will be adequate to serve the proposed development.
- 14.3.7 Further improvements are being considered although these relate solely to the economic costs of running the plant in the future.



15. CONCLUSIONS

15.1 The aim of this Environmental Statement has been to assess the potential environmental impacts of the **amended and reduced** proposals for the comprehensive redevelopment of Hensol Castle and its associated land. The main conclusions of the assessment are outlined below.

Planning Policy

- 15.2 Proposals for the reuse of this site will be assessed in accordance with the policies contained within Planning Policy Wales (PPW) and the emerging Vale of Glamorgan Unitary Development Plan (UDP). Policy COMM 2 of the UDP is particularly relevant as it deals with the reuse of redundant hospitals. This policy acknowledges that a number of alternative uses may be found for the buildings and land within the curtilage. However the policy makes it clear that a comprehensive redevelopment is required and that a piecemeal approach will not be acceptable.
- 15.3 A development brief **was** prepared for the site and approved by the Council for development control purposes. Whilst it is a non-statutory document, and it does not form part of the Development Plan in terms of Section 54A of the Act, it is nevertheless acknowledged to have some weight insofar as the determination of the applications is concerned.
- An assessment of the performance of the development proposals against the policies contained within PPW and the **adopted** Vale of Glamorgan UDP has been undertaken. It is considered that the proposed development accords with the policies and provisions of both the Vale of Glamorgan Unitary Development Plan and Planning Policy Wales. This conclusion is supported by the evidence provided within this environmental statement in relation to issues such as landscape, visual impact and archaeology.
- 15.5 That conclusion is of course reinforced by the existence of planning permission 2005/00087/FUL of 22nd December 2006 which has been implemented in part and covers a scope of works that exceeds that now applied for. It is also reinforced by the fact that the current proposal seeks merely to secure permission for proposed amendments which are relatively minor in nature or amendments, which again are relatively minor, which have already been implemented. Even though the latter have been implemented they have been completed in the full knowledge of the Council's Conservation and Building Control staff, albeit that they have correctly advised the need to secure these retrospective planning and LBC permissions. The unauthorised works to the spa have also benefited from a Listed Building Consent granted



under reference 2008/01115/LBC which retrospectively dealt with changes to the castle and its extension.

Landscape & Visual Impact

- The aim of the landscape and visual impact assessment was to provide information on the landscape and visual characteristics of the Hensol Castle site and to determine the impact that the proposed development will have upon the immediate parkland environment and the surrounding landscape.
- 15.7 The assessment concludes that:
 - The development proposals can be accommodated without compromising the historic fabric of the park and will result in a significant enhancement of the landscape resource;
 - The impact on publicly accessible views from the surrounding landscape will generally be negligible and there will be a significant improvement to many of the key private views within the site; and
 - The landscape mitigation strategy that represents an integral part of the development proposals will result in a significant enhancement to the landscape character of the Grade 2 listed Park.

Ecology & Nature Conservation

The impact of the proposal on the ecological and nature conservation interests of the site has been assessed using the guidelines of the IEEM (Institute of Ecology and Environmental Management, 2002). The greatest change in relation to the ecology of the site will result from the altered land management practice needed to achieve the high quality, recreation aspirations of the new use. The immediate ecological effects have been assessed as very minor. However, it is acknowledged that the longer-term implications are potentially greater. A formalised, widely supported Management Plan will, however, provide a mechanism whereby ecological interests and site requirements can be balanced and Hensol can continue to be an area of county significance for nature conservation and an area of national/international significance in relation to the protected species it hosts.

Archaeology

The baseline survey, undertaken as part of the archaeological assessment, has not recorded any information relating to the survival of buried archaeological remains pertaining to the early post-medieval development of the house and its park. Also, little is currently known about any early post-medieval precursors to the present castle.



- 15.10 It is clear that the site has the potential for buried archaeological remains pre-dating the establishment of the high-status house and its park, although the subsequent enlargement of the 'Castle' in the 18th and 19th Centuries, the creation of the landscaped park and the constructional activities relating to the creation of the mental hospital will all have caused a greater or lesser degree of impact upon any earlier remains. The lack of known high-status sites in the area and the probable damage caused by later activity are likely to mean that the application site is unlikely to contain important undisturbed buried archaeological remains pre-dating the establishment of the house and its park.
- 15.11 Study of all available evidence implies that there was no house of high status on the site prior to the 17th Century and that there are no major lost elements of the earlier parkland landscape awaiting discovery. Whilst evidence of the evolution of the house, gardens and landscaped park will no doubt survive below-ground, none of these is likely to be either particularly well preserved or of the highest importance.
- This lack of detailed information provides an unclear baseline against which to make an impact assessment but suggests that if any archaeological remains do survive on the site they will be of either local or regional importance. Strategies relating to them can be addressed through a series of on-site archaeological measures, such as archaeological evaluation in advance of certain construction activities, and the implementation of an archaeological watching brief in conjunction with other activities. The commissioning of such a programme of mitigation will elucidate the pre-history of the house and its parkland setting. The net residual impact will thus be Minor Beneficial.

Transport

- Assessment indicates that the site is currently accessible by 2 modes of travel: bus and private car. Therefore, the assessment has considered only the vehicular trips generated by the proposed development, since the opportunity for travel to the development by means other than the private car is limited other than the courtesy transport to be made available in conjunction with the hotel and spa. The assessment, having looked at the impact on the local highway network of the trips generated by the proposed development, concludes that there will be no significant effect on the capacity of the surrounding highway network.
- The proposed vehicular access to/from the site will be made via the primary access, the existing priority junction to the north of Hensol Villas, and via a secondary access direct from the approach drive to the existing Vale of Glamorgan Hotel, Golf and Spa Resort. It is anticipated that, in due course, a detailed Travel Plan will need to be provided. A framework of initiatives has been



produced which will be included within such a Travel Plan. Their aim will be to encourage travel by modes other than the private car.

Noise

- 15.15 The assessment has considered the potential for noise impacts associated with the proposals on noise sensitive receptors, and with reference to baseline conditions. Such baseline conditions have been obtained through noise surveys carried out at representative locations near to the site. They have also been informed by the fact that much of the initial demolition and construction work has been completed.
- 15.16 The assessment demonstrates that there will be no significant noise or emission impacts due to construction or operation of the site.

Air Quality

- 15.17 The air quality assessment concludes that the development of the site will cause an increase in traffic flows to and from the site from the levels currently experienced but a reduction from that experienced when the hospital was in full use. Examination of the monitoring data shows that, even if traffic levels were to double, such increase would not be a significant risk likely to cause an exceedence of the nitrogen dioxide air quality objectives. At the traffic levels predicted, therefore, no unacceptable air quality impacts are predicted.
- 15.18 The assessment also concludes that there is likely to be an associated temporary increase in air quality levels during construction. This will however be short term, and tolerance of such events has been acceptable to date.

Waste

15.19 An assessment of the waste arising from construction and post construction activities at Hensol Castle concludes that the proposals will generate various types and quantities of inert, non-hazardous and hazardous materials on the site which need to be managed as part of the re-development programme.

Overall Conclusions

- 15.20 It is therefore concluded that the proposal presents a most appropriate opportunity to **continue to** renovate and bring back into beneficial use a very important Grade 1 listed structure.
- 15.21 Additionally, the proposals **have** removed from the historic parkland surrounding the castle a significant number of inappropriate and relatively modern buildings and structures, many of which **we**re located in prominent positions and detracted



- significantly from the visual appearance of the site and the basic conservation objective of preserving and/or enhancing the character and appearance of the parkland itself.
- 15.22 Whilst new uses and buildings are proposed for the site, they are proposed to occupy the least sensitive parts of it. That part of the proposal is not inconsistent with the Development Brief.
- 15.23 The proposal to convert some of the former ward buildings to residential use is considered to be the only viable option for those buildings bearing in mind the economics of conversion, the lack of demand for employment-based uses, and the constraints imposed upon the buildings by virtue of both their listing and their location within a prominent part of the historic park. Additionally, as their conversion as proposed is considered not to be contrary to planning policy, there is no need to apply the "enabling" test described by English Heritage which, in any case, does not apply to Wales.