

# Woodstock Local Area Plan Baseline Study



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### **Cover illustration**

An extract from the artwork produced by the pupils of St. Colmcille's National School for the Woodstock Local Area Plan public event in Inistioge on the 26th of November, 2005

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# 1. Introduction

## **Woodstock Local Area Plan**

Brendan McGrath and Associates has been commissioned by Kilkenny County Council to prepare a statutory local area plan for Woodstock, County Kilkenny. This baseline study is one outcome of the initial stage of the plan making process. The document is a collection of information about aspects of Woodstock that is relevant to formulating a land use plan. The baseline study, in conjunction with an ongoing consultation process, will therefore inform the preparation of the draft plan that will be presented to Kilkenny County Council in 2006.

## **The plan area**

The brief for the project outlines a plan area, corresponding closely to the extent of the walled estate of Woodstock House on the west bank of the River Nore. However, the brief requires the consultant to 'evaluate whether additional lands should or should not be included' in the plan area.

We are proposing modest additions to the plan area for a number of reasons. The proposed enlarged plan area (with a total area of 548 hectares) is illustrated in Figure 1. The additional areas which we are proposing are:- lands on the east bank of the River Nore, land contiguous with the Inistioge Local Area Plan, the eastern flank of Mount Alto and part of the southern side of the valley of the Brownsford Stream. The reasons for including these areas are as follows:

### *The east bank of the River Nore*

The valley floor and lower slopes of the Nore form a coherent geographical entity. It would be problematic making a plan for only one bank of the river, particularly as it is a requirement of the plan that there are objectives and policies to 'facilitate and promote the development of fishing along the river frontage'. As Inistioge Bridge is such a prominent and important part of the landscape of Woodstock it was considered essential that the bridge and its immediate landscape setting, not covered by the village local area plan, should be part of the Woodstock plan area.

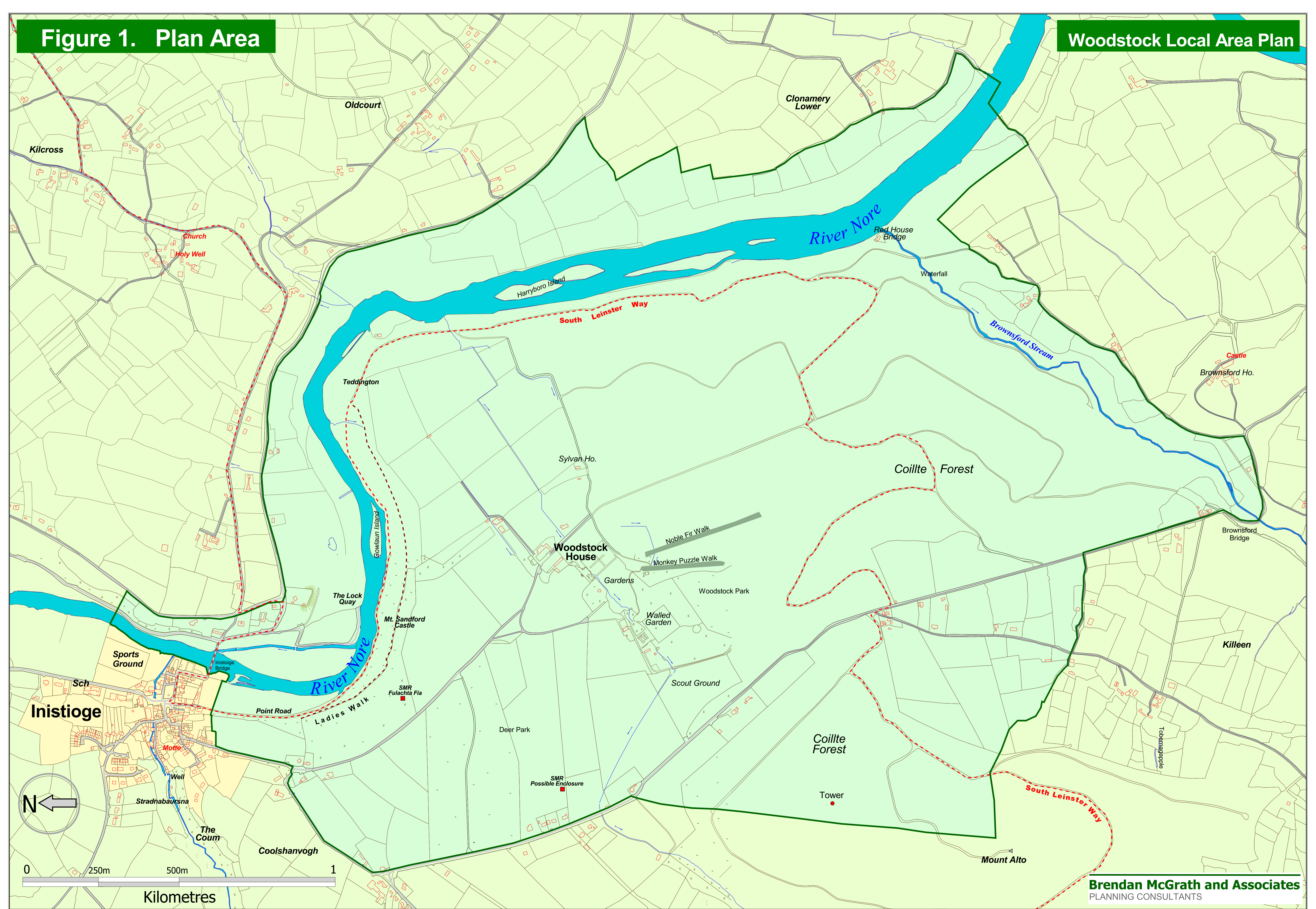
### *Land contiguous with the Inistioge Local Area Plan*

We consider it essential that there should be an integrated approach to the planning of Woodstock and the adjacent village of Inistioge and this requires that the two local area plans are contiguous. We have therefore incorporated into the plan area land not in the village plan but beside the village that is excluded from the plan area in the brief.

### *The eastern flank of Mount Alto*

The Woodstock estate is overlooked by Mount Alto and the Mount Alto Tower is part of the designed landscape of Woodstock demesne. As landscape conservation is such a key issue for this plan area it is desirable that all the main local components of that landscape should be part of the plan area.

Figure 1. Plan Area



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*The southern side of the valley of the Brownsford Stream.*

The plan area in the brief extends to the southern boundary of the Woodstock estate. However, there is a minor public road, which, via a forest road, provides vehicular access to the southern end of the estate at the Red House. We consider it prudent to bring the boundary of the plan area to include this access.

The baseline study that follows therefore relates to this more extensive area and this area is put forward as the area for the plan. There are many landowners in this area. The largest landowner is the Tighe Estate. Most of the estate lands are leased to Coillte Teoranta. The extent of this ownership approximates to the distribution of forest cover displayed in the aerial photograph (Figure 4). The main exception is a triangular shaped area that includes the ruin of Woodstock House, which is in the ownership of Kilkenny County Council. The farmland between Woodstock House and Inistioge is in multiple ownerships but the largest holdings are owned by Sean Cullen of Woodstock and John Murphy of Brownsford.

### ***Planning policy context***

The local area plan will be drafted in the context of existing planning policy; namely the regional planning guidelines, the Kilkenny County Development Plan, the Inistioge Local Area plan and planning guidelines issued by the Department of the Environment. The principal relevant guidelines and policies, as they relate to the plan area, are set out in the following sections.

#### **National Spatial Strategy 2002-2020**

In the NSS Woodstock lies within a triangular area of countryside comprising County Carlow and parts of neighbouring Kilkenny and Wexford. The triangle is delimited by national transport corridors that link the regional gateways and hubs (Waterford, Wexford and Kilkenny) and that connect them and the ports at Waterford and Rosslare to the national urban system. Therefore, while development of the area is currently constrained by its relative inaccessibility this situation will dramatically change as the NSS is implemented

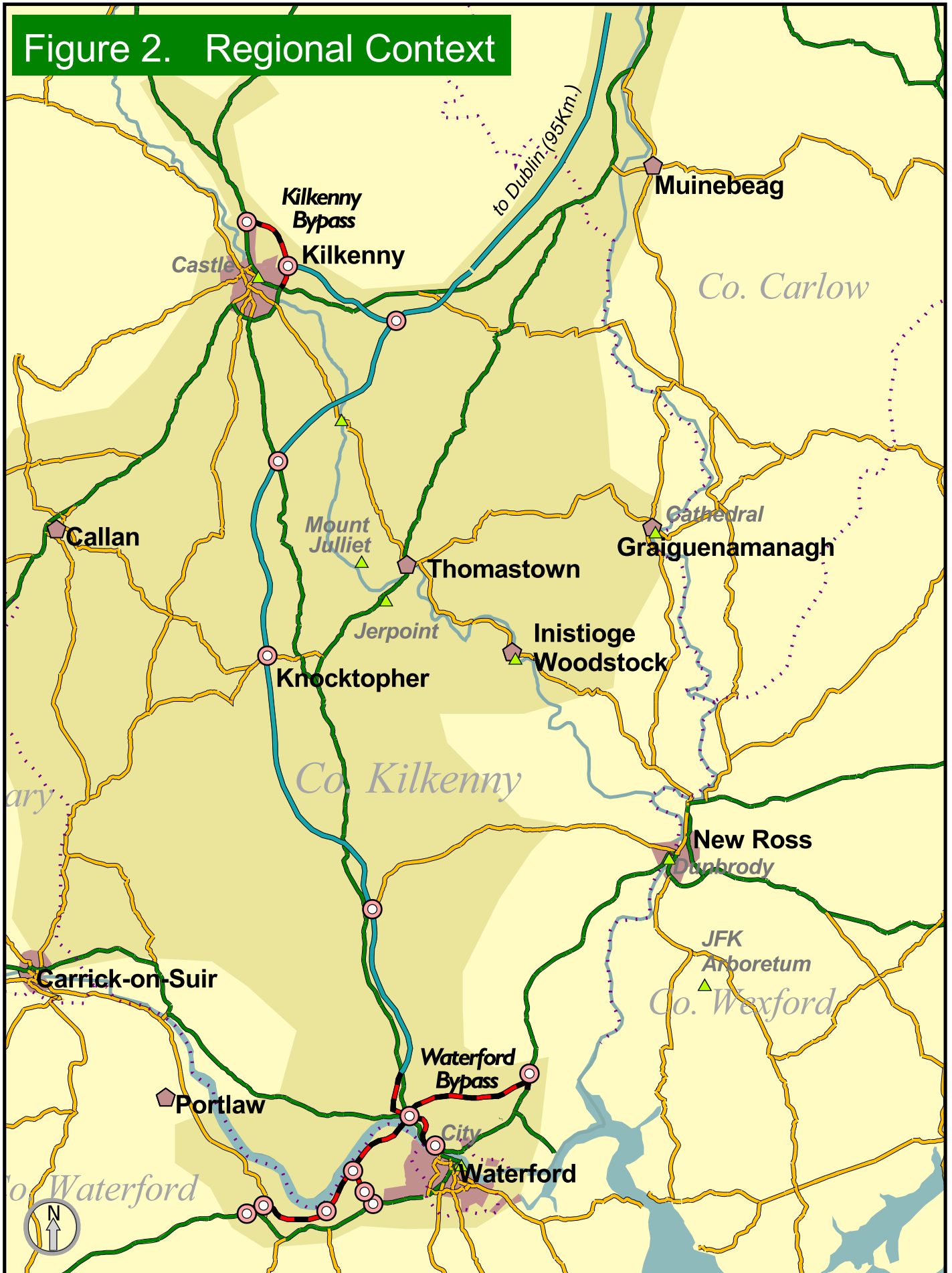
#### **South East Region Planning Guidelines 2004**

Woodstock lies outside the urban influence of any of the main regional towns, but within the regional sub-area identified as the Waterford-Kilkenny-Wexford Triangle. Figure 2 shows the western half of the Triangle, extending from Kilkenny, a regional hub, in the north, to Waterford, the regional Gateway, in the south, and including New Ross. For this sub-area the Guidelines identify 12 principal development issues. These are:-









- Development of critical mass of Gateway and Hubs as a priority
- Larger towns to be strengthened
- Smaller towns and villages to be strengthened
- Urban generated rural housing to be carefully monitored and controlled
- Links to national gateways and the regional hubs require improvement



**Figure 2. Regional Context**



**Key**

- |   |                                    |   |  |
|---|------------------------------------|---|--|
|  | Proposed M9                        |  | Less than 20 minute drivetime to M9 Motorway |
|  | Proposed Intersections             |  | Significant Tourism Locations                |
|  | Proposed Roads<br>(In development) |  | National Primary Route                       |
|   |                                    |  | Regional Road                                |
|   |                                    |  | Principal Towns                              |

Economic social and cultural infrastructure to be improved

- Exploit potential of location of Rosslare Europort
- Tourism development to be controlled and monitored
- Rural sustainability
- Scenic areas and sensitive coastal landscapes

The rural settlement policy of the Guidelines is particularly relevant to the plan area. This states that ‘subject to good planning practice in matters of location, siting, design and the protection of environmentally sensitive areas and areas of high landscape value, rural generated housing needs should be accommodated in the areas where they arise.’ The fundamental challenge according to the Guidelines is ‘how to make existing towns and villages more attractive locations to live in.’ The sustainable rural settlement policy framework of the guidelines has four broad objectives

- To sustain and renew established rural communities
- To strengthen the established structure of villages
- To ensure that key assets such as water quality, the natural and cultural heritage and the quality of the landscape are protected
- To ensure that rural settlement policies are appropriate to local circumstances.

In relation to second homes and holiday home development, the guidelines require that development plans ‘seek a balance between supporting a well-diversified rural economy and the protection of the environmental assets that attract visitors to an area’

## **Kilkenny County Development Plan 2002**

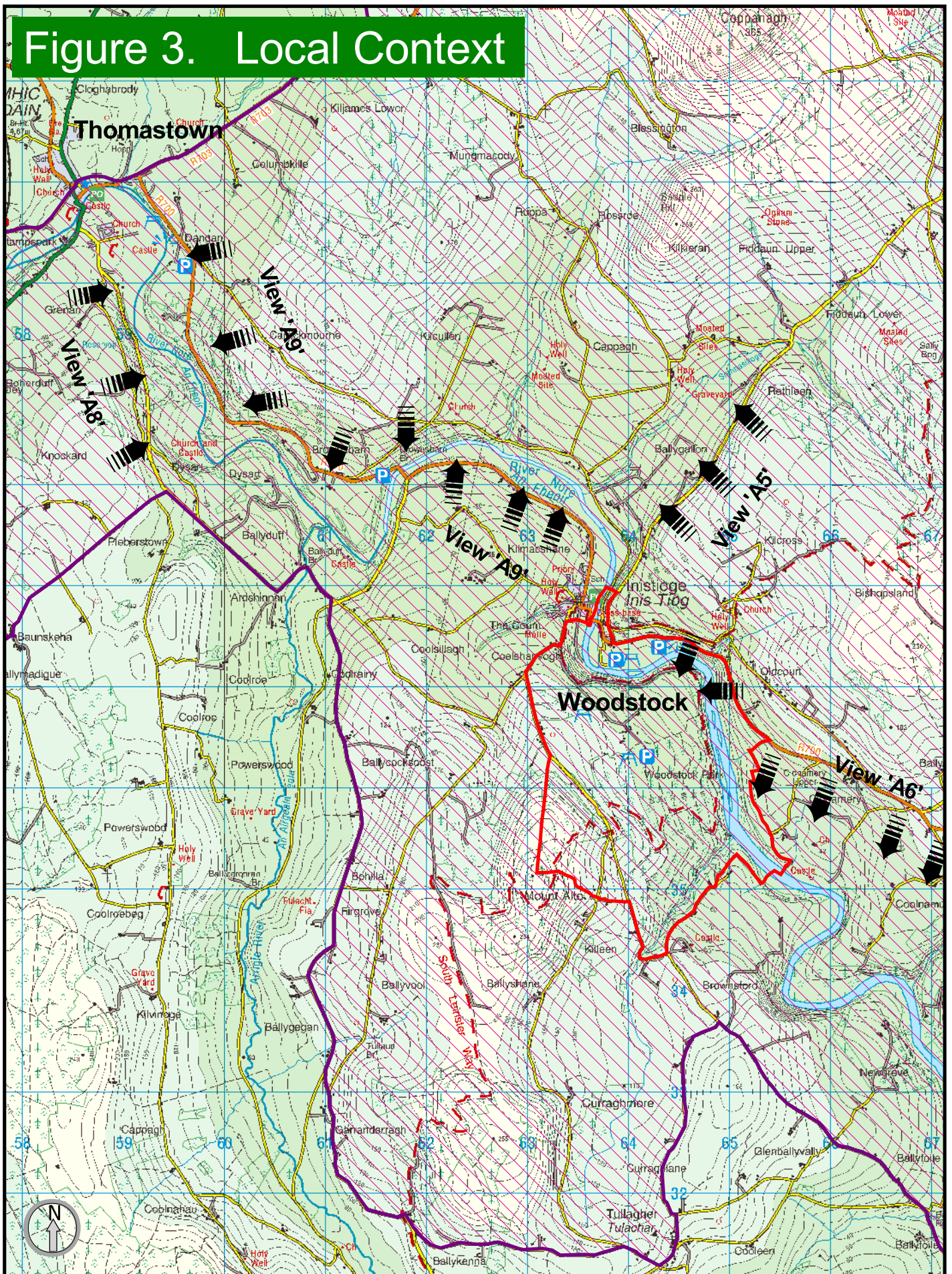
The plan area is part of a designated high amenity area which it is council policy to protect ‘as important elements of rural character which underpin rural development particularly tourism (policy 7.8.1). It is policy ‘to control all development within areas of high amenity so as to exclude from them any development which would be prejudicial to their natural beauty (policy 9.4.3)

It is council policy to encourage housing development to take place in designated towns and villages where infrastructural and social services exist or are planned to be provided (policy 7.8.1). Inistioge is a designated village in the Plan.


Although it is planning policy to protect the high amenity area, the plan also has a policy that ‘a positive presumption will be given toward the building of one-off houses, for occupation, by certain categories of applicant (policy 7.8.4.1). A variation of the plan (Variation No. 8) related to the Sustainable Rural Housing Guidelines (See below) is currently under consideration by the Council.

The plan has a specific objective ‘to continue and complete the Woodstock Gardens Restoration project, describing Woodstock as ‘one of the great gardens of Ireland’ in the Victorian era.

# Figure 3. Local Context



## Key

 High Amenity Area in the county development plan

 Woodstock Local Area Plan extent

 Views to be protected in the county development plan

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The plan has a policy to protect and conserve certain views and prospects. These include views over the plan area from the R700. Refer to Figure 3.

### **Inistioge Local Area Plan 2004**

The Inistioge Local Area Plan applies to the built-up area of the village on the west bank of the Nore. However, much of the plan is framed in the context of it being an estate village, whose past and future cannot be separated from the development of Woodstock Estate and the River Nore,

The plan has a number of sets of objectives that are directly relevant. The objectives for Woodstock in the local area plan are as follows:-

*To maintain Woodstock as a heritage garden for public enjoyment*

*To continue to restore and maintain Woodstock Gardens as a flagship heritage project and its promotion as a tourism resource for the area and the County generally.*

*To ensure that any developments within the Demesne lands will not be inimical to the redevelopment of the Woodstock gardens*

*To maintain and develop a series of walking routes through the Demesne lands which link back to the village of Inistioge*

*To facilitate the development of a master plan for the remainder of lands for the Woodstock demesne as a tourism resource for the area and the County in conjunction with all relevant stakeholders.*

The objectives for the River Nore are:-

*To facilitate and promote the development of fishing on the River Nore in conjunction with the Southern Regional Fisheries Board angling clubs and other relevant stakeholders.*

*To protect and improve access to the River Nore as the opportunity arises*

*To continue to support the Tidy Towns committee and other local development groups in the maintenance and improvement of the banks of the River Nore as the opportunity arises and finances permit, in consultation with the Heritage Service of the Department of the Environment, Heritage and Local Government and/or the local authority heritage officer.*

It is significant that the Inistioge Plan makes no specific provision to locate significant new tourism or recreation related facilities in the village itself and that it specifically excludes the provision of holiday home accommodation in the village (Objective under 2.3 *To ensure that new housing within the village is provided in order to cater for permanent residential population and not holiday homes*)

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## **Sustainable Rural Housing Guidelines for Planning Authorities 2004**

Given the rural character of the area and the pattern of development pressure, the 2004 rural housing guidelines are relevant to this area. The Guidelines propose a development vision for rural areas that:

- Aims to support the sustainable development of these areas in economic, social and environmental terms in a way that supports the rural economy and rural communities.
- Ensures that development of rural areas takes place in a way that is compatible with the protection of key economic, environmental and natural and cultural heritage assets such as the road network, water quality, important landscape, key identified areas with wind energy potential, habitats and the built heritage
- Promotes the development and consolidation of key settlements in rural areas

In considering Landscape, natural and cultural features (section 3.3.1) the Guidelines require that 'particular care should be taken to protect those features that contribute to local distinctiveness, including:

- The pattern of landscape features (land-cover, habitats, trees)
- Historic and archaeological areas and features
- Water bodies (including rivers lakes, estuaries and coasts; and
- Ridges, skylines, topographical features, geological features and important views and prospects.

The guidelines have specific policies for holiday and second home development. The guidelines distinguish three types of development

1. Housing schemes for letting purposes usually located within or in the vicinity of smaller towns and villages;
2. Resort-type development of former demesnes and estates with provision of dwellings either as permanent residences or for letting and
3. Individual second homes

Planning authorities are encouraged by the guidelines to

1. Emphasise a preference towards clustering of appropriately scaled holiday home development in or adjoining small towns and villages;
2. Adopt a plan-led approach in identifying the potential and preferred

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locations for appropriately scaled holiday home development in rural villages and towns and second home development in the countryside in general

3. In considering new dwelling provision in resort type development such as described above, planning authorities, in supporting high quality development predominantly intended for tourism purposes, should seek to ensure that this is of a scale compatible with the character of the surrounding area. The potential for such development to yield planning gains in terms of supporting the restoration of heritage items, including protected structures, should also be harnessed.

### **Architectural Heritage Protection Guidelines for Planning Authorities 2004**

The Woodstock Estate lies at the centre of the plan area. Woodstock House is a protected structure and therefore any development carried out on the estate must have regard to these Guidelines. Chapter 13 of the Guidelines, 'Curtilage and Attendant Grounds', is of particular relevance, as it sets out best practice in relation to the treatment of historic demesnes. The guidelines recommend either defining the attendant grounds in the Record of Protected Structures and specifying in the RPS all features for protection or establishing an Architectural Conservation Area. In relation to the conservation of gardens, where they contribute to the setting of a protected structure, the Guidelines recommend either the use of tree preservation orders or the designation of a Landscape Conservation Area.

### **Other documents**

#### **Woodstock Gardens and Demesne- Gazetteer and Restoration and Enhancement Plan 2000**

A 2000 study of Woodstock Gardens and Demesne, commissioned by Kilkenny County Council, provides a comprehensive description and assessment of Woodstock demesne as an historic property. The local area plan will take account of the findings and recommendations of this study. These include the following:-

1. The main aim of restoration and conservation should be to maintain the historic gardens at Woodstock as for public enjoyment
2. The authors considered that the following principles should apply to the restoration and enhancement of the demesne.
  - Interaction between Kilkenny County Council and Coillte Teoranta
  - The restoration and conservation process should be carried out to a very high standard with due respect to the historical integrity of the site
  - A complete restoration of the entire site would be unrealistic
  - The date bracket to which the restoration should be placed is the

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- period c1840 to 1900
  - The large archive of historic photographs can be used as an inspiration and guide to the level of restoration
  - Any restoration should be carried out following thorough historic research
  - Use the 1902 OS 6 inch map as a blue-print for re-planning the layout and path system
  - Do not allow new buildings to be built in the designated Core Area
3. The authors state that Woodstock House ‘is the principal focal point to both the gardens and the landscape park’ and ‘its survival is therefore fundamental to successful restoration of the historic gardens and the landscape park’.
  4. The authors state that the tree collection is the most important asset of the gardens at Woodstock
  5. The authors consider the Ravine or Lower Glen as an example of national importance of the late 18th and early 19th. century devotion to ‘the romantic wildness of nature’.
  6. The report identifies several buildings and features, not in the ownership of the council, as integral to the site. In this context they recommend the restoration of the former stable yard and that a modern use be found for the Lower Farmyard.

### **Notable Industrial Archaeological Sites in County Kilkenny**

The gazetteer information is supplemented by a survey of industrial sites in County Kilkenny. Inistioge Bridge (also on the RPS) is included in the highest grade of industrial site.

### **Notable Archaeological Survey of Ireland 1996**

The plan area includes two sites protected under Section 12 of the National Monuments (Amendment) Act 1994. These are a fulacht fia near Mount Sandford Castle and an enclosure near the eastern boundary of Woodstock Demesne (See Figure 1)

### **Landscape Appraisal of County Kilkenny 2003**

The county development plan has an objective to compile a landscape assessment of the county to evaluate the sensitivity of landscapes in the county to various types of development. That assessment has been carried out

The appraisal identifies Woodstock as being within an area of special landscape value. The plan area is covered by two identified landscape character units, the Nore Valley and the South Eastern Hills.

The Nore Valley ‘is perceived as being scenic and special in landscape terms, particularly to the north of Kilkenny City and the south-east around Inistioge and

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Thomastown...'

Critical landscape factors identified for the Nore Valley landscape character unit that are relevant to the plan area are as follows.

*Localised River views*

This character unit follows the path of the Nore River, which is easily accessible by road. Due to the low lying nature of this area, many view of the river valley are available from the local roads and from viewing points located along the valley trail. The main concern for natural linear features such as this is to avoid visual intrusion by development, which will interrupt and reduce the integrity of the river valley

*Undulating topography*

Undulating topography is presented at some sections of this character unit, where the land gently rises at floodplain slopes. This provides a physical shielding and visual enclosure of a built form within the river valley, where it does not break the skyline and thus, renders it visually unobtrusive of the overall landscape scale

*Shelter vegetation*

Shelter vegetation is represented at some stretches of this unit by the presence of natural and native woodland that grows on the floodplain of the river. In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms.

For the South Eastern Hills character unit, which covers the higher part of the planning area, including Mount Alto, the critical factors include Undulating Topography and Shelter Vegetation. Undulating topography 'encloses vistas and helps to provide a realistic scale and visual containment...' Shelter vegetation, afforded by certain sections of field hedgerows as well as some large coniferous and deciduous tree plantations' has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built form.'

### ***Recent development in the area***

There have been 27 planning applications in the area over the period 2000 to the present, involving 22 different sites. Applications for single houses constitute the main category of development. The Inistioge area is regarded as a highly attractive part of the county in which to live, with the price of housing and sites as high as anywhere in the county. The council has granted permission for a total of 8 new dwellings in the 6-year period.

The development picture partly reflects the tourism and recreational potential of



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the area. There have been a number of recent applications for development on sites in the immediate vicinity of Woodstock House on sites to the northeast of the House. These are:-

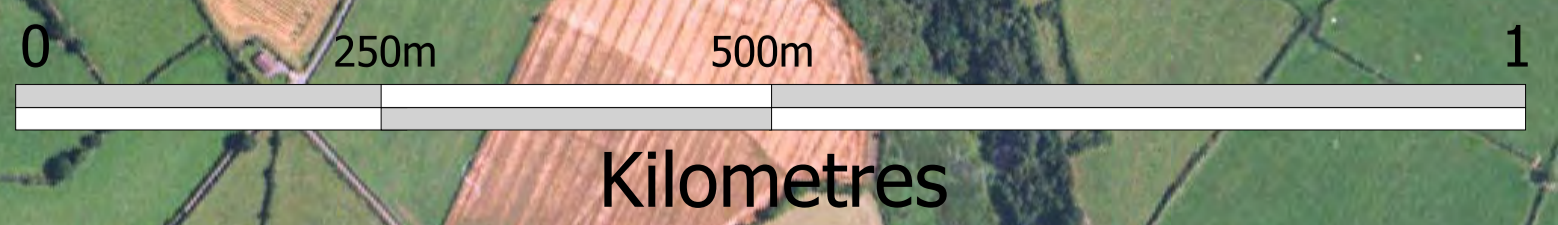
- Conversion of the Lower Farm, a 19th Century farm complex, into 8 self-catering holiday apartments (reference 03860)
- Conversion of part of a dwelling to use as a restaurant (reference 042063)
- Conversion of part of stable yard, attached to Woodstock House, to 2 holiday apartments (reference 05218)

Permission was given for the restaurant and that business is now operating. The application to convert the Lower Farm was withdrawn while the application for the stable yard was recently refused on appeal to An Bord Pleanala (PL.10.212123). Kilkenny County Council refused permission for this development on two grounds; the proposal was premature pending the adoption of a local area plan and the applicant had not demonstrated that the development would not adversely affect the character and setting of Woodstock House. The Board upheld the decision of the council but solely on the basis that that applicant had not provided sufficient information to enable an informed decision to be made about impact on a protected structure.

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Figure 4. Woodstock in 2000



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## 2.Landscape Issues

### ***Introduction***

The demesne of Woodstock was at the centre of a large estate and landholding. This estate stretched across the hills on either side of the valley of the river Nore at Inistioge. The appearance of this landscape today owes much to a dramatic topography clothed by its development from the seventeenth through to the nineteenth century to become a productive landscape for agriculture, fisheries and silviculture. Associated with this development was an infrastructure of weirs, river navigation for transportation, water to provide power for flourmills and sawmills. Water management by irrigation and drainage sought to optimise growing conditions and to ensure access to all areas as well as providing for ornamental and productive water features. The evolution of the demesne also impacted upon the appearance and economic activity of the adjacent town of Inistioge and the surrounding landscape.

### ***The Characteristics of an Irish Demesne***

A demesne was the land retained and managed directly by the landlord to provide for his own needs and to provide food and fuel for the household. It was also the site for agricultural, horticultural and silvicultural experimentation and development, the results of which could be disseminated to increase the productivity of tenanted lands. The demesne was developed as a place of delight, a setting for life, work and relaxation. Its recreational assets were made available in varying degrees to friends, employees and the local community. Productivity and pleasure were interconnected.

The demesne in Ireland was usually surrounded by a continuous wall immediately behind which was a belt of trees giving extra seclusion and operating in part as an outlying shelterbelt. Wall and planting could be breached in places to provide views out or to present the house to the outside world and wider landscape framed by trees or celebrated with avenues. Within the demesne wall could be found the *home farm* (both arable and pasture), orchards, kitchen garden with glasshouses, nurseries, fishponds, duck decoys, and woodlands managed in a variety of ways - coppicing, production of timber and for pleasure. To promote and ensure productivity and pleasure water was managed and incorporated into ornamental features within gardens and the landscape. Usually the whole represented a set piece of coherent landscape design.

Thus the demesne represented a landscape of production, experimentation and delight. There was a concern for longevity and sustainability of the lands. The demesne represented an asset to be guarded and conserved for future generations. Furthermore it also constituted a supreme piece of co-ordinated

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landscape design where, productivity, amenity and delight were interwoven, overlapped and mutually supportive.

### ***Layers of Landscape***

The Victorian pleasure garden at Woodstock and the complementary developments of the demesne for stabling agriculture and education and housing constituted the most recent significant layer of this palimpsest that is the landscape of Woodstock and its environs. It reinterpreted and added to a landscape that had developed throughout the eighteenth century. Prior to this date the area of the present demesne began to take shape, producing an overlay upon a strong, settled and productive landscape whose heritage is visible in the field patterns, the ancient churches and monastic settlements, tower houses and castles that line or overlook the valley of the river Nore. The castles and tower houses were secure residences set in a productive landscape. There are a chain of remains that stretch from Thomastown past Grennan Castle, Dysart Castle and Friars Chapel, Fammass Church, the site at Ballyduff through Inistioge village with its religious houses and medieval towers, past the demesne of Woodstock to the tower houses of Brownsford, overlooking the river and to Clonamery, on its artificial mound at the river's edge, with the church of Clonamery, dating back to 10th century, sited above on its platform. Within the immediate surroundings of these ruins the landscape has been shaped and the water managed for both production and for delight and recreation. The castle at Clonamery has a subsidiary mound strategically placed for the views along the river, the earthworks around Grennan Castle, very evident today, formed part of the what probably constituted a moat but functioned as fishponds and a water garden - security, function and pleasure as a single design.

The river is the spine of this co-ordinated landscape and has been shaped by a long history of management and adaptation. It and its tributaries in the vicinity of Inistioge have been used and managed for the generation of power the production of willow in the osieries, for irrigation, for fishing and for navigation, again production, economic activity, sport and pleasure. Fish, eel and salmon weirs have been coordinated with the demands of navigation. Much of this shaping of the river can be seen along the eastern edge of the demesne with the weirs, quays, osieries and the harnessing of water.

### ***Woodlands***

A formative and substantive part of the Woodstock demesne was the woodland. This covered the area from the approximate position of the current ruin of the eighteenth-century house southwards to the Brownsford stream, bounded by the Nore to the east and the present demesne boundary to the west. A survey drawing of 1732-3 by Thomas Cave shows this woodland was laid out, divided into quadrants bisected by rides the lines of which are clear today. The present central, tarmac road through the estate follows the main north-south axis as far as

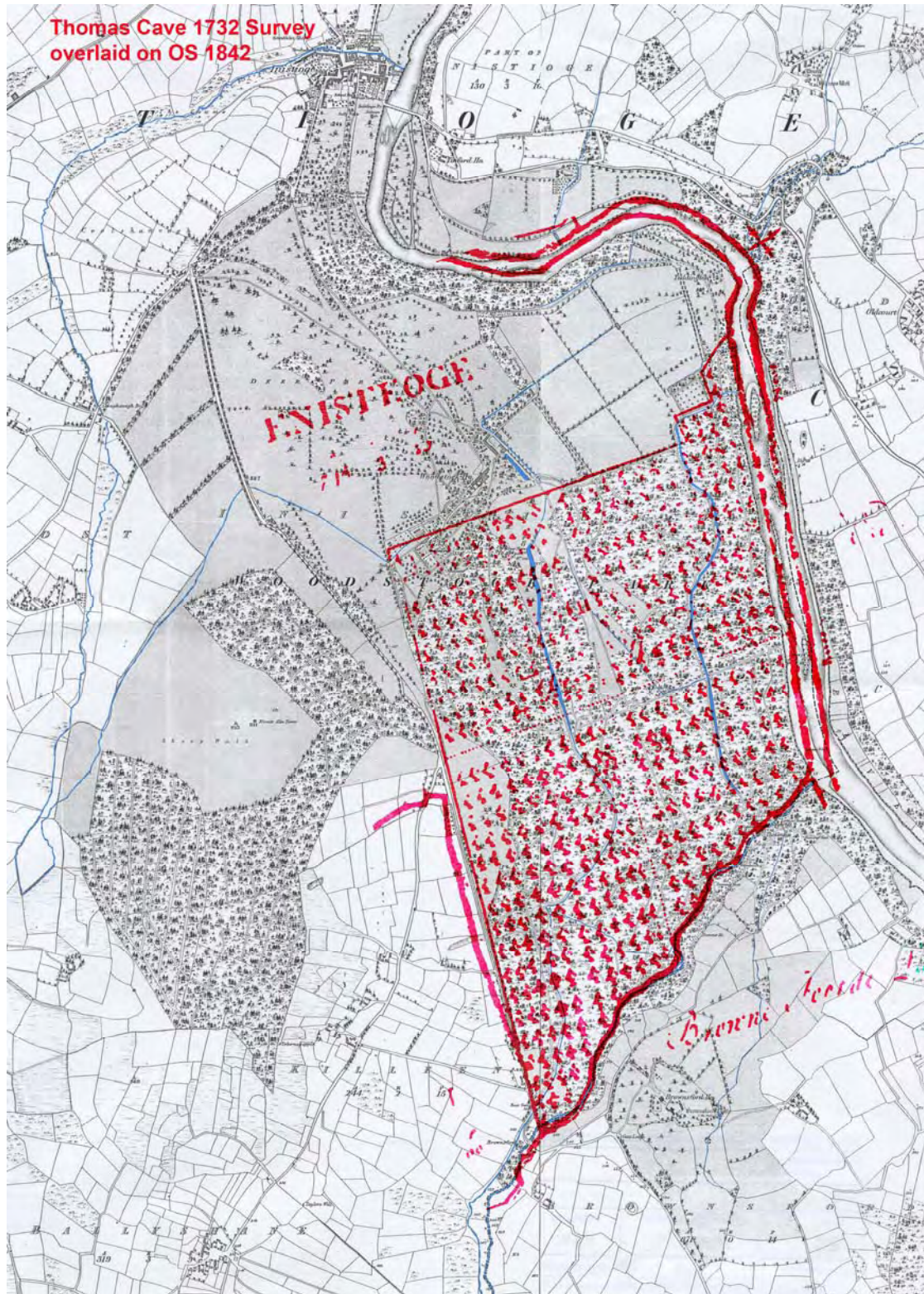
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the intersection. The axis continues as a minor track that later becomes engulfed in undergrowth as it rises over the topography towards the south end of the demesne from where, above Brownsford

Figure 5A Cave 1732 survey

**Figure 5a Cave 1732 survey**



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Stream, extensive views of the landscape could have been taken. The cross-axis is also evident in a track, footpath and the divisions in the present Coillte plantation. At the north-eastern corner of the survey the boundary of the woodland breaks from its line and zigzags around the boundaries and enclosures associated with the earlier house that was located in the vicinity of the present house called Teddington. Here is a walled garden, an earlier kitchen garden and, after the new house was built, an orchard.

Thomas Cave produced his survey for Sir William Fownes. Sir William's grandfather, also William, was earlier in correspondence with Edward Cooke in 1724, concerning this woodland, its value and management.

*But I think I have a project for Willy beyond anything yet and that is wood of Inisteague, it stands upon 200 acres of ground and is very thick, so cutting away what is superfluous and craggy and owning but 500 trees up an acre at 10s per tree in 30 years will come to 50,000 this I take to be moderate compensation considering they are all oak most 15 years growth now and half of them 20 or so that if Willy lives to 44 or most 50 he will as certainly have that sum of the trees are now standing ... this is what I call a mine above ground, and wants noting but a wall to secure it and therefore as no time is to be lost, if you are of opinion with me – I will take a lease of the wood from my father til Willy comes of age and in the mean time with Willy's money build a stone wall round it, which may probably come to 400l ...*

Clearly this oak plantation was conceived as a commercial entity and was thought about in terms of careful management to maximise the quality of the crop and ensure its longevity by keeping it secure. If the wall referred to in the letter was built, it coincides at times with the demesne wall existing today and at other places forms part of the enclosures inside the demesne. At the northwest corner of the pleasure gardens, behind the large walled garden, sections of the enclosing walls maybe part of this woodland boundary. This may account for the fact that this corner does not respect either the orientation of the walled garden or the line of the house and its wings.

The townland of Inistioge was bought from the Duke of Ormonde in 1703. As indicated in the above letter, half the wood was planted in circa 1704 and the rest 5 years later. This corresponds to a period of concern for the state of woodland and timber supply in Ireland. An act for planting and preserving timber trees and woods was passed in 1698 and came into force in 1703. There followed another act in 1708 as the first of a series throughout the eighteenth century. Furthermore a fourth edition of John Evelyn's famous *Sylva* was published in 1706, the first edition for nearly 30 years of this famous and popular treatise, first written to bring attention to and remedy the urgent need for woodlands in Britain.

Part of the letter from Brownrigg to William Fownes in 1736 is concerned with the management of the woodland: *The only material instruction I can give you, is to have your wood clear'd of brush and cut down the crookedest of the trees in order to give air to the rest, I'm assured by a gentleman who has the chief management of the forest of Orleans which is the largest in France, that being this ordered will*

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*grow more in five years than otherways in fifteen, I objected that being thus exposed strong winds might have too great a power over the trees, he assured me to the contrary and went with me to his country seat where he shew'd me a wood 14 years old, the trees from 30 to 35 ft high and not thicker than the small of my legg. Tis 3 years since he thin'd them, I never saw straighter trees, and before he had taken this method they were stunted and of very little value. My reason for being so particular is that you were undetermined how to act, some advising you to this and others against it, but you'll be the best judge by seeing whether the trees by the old castle at the end of the wood which ere thin'd are more forward than the rest. William Tighe writes in 1802 that: *Belonging to Woodstock, there are about 300 acres of wood, but not much gross timber: much has been cut within a few years, leaving reserves, one to every square perch [circa 25sqm]... part of these standards became rampiked by exposure, but in sheltered places they succeeded well. It is essential in standards, to chuse those that havev the best and closest heads. But the most advantageous mode of managing woods is neither by standards nor by cutting smooth [clear-felling], as is the usual practice, but by thinning away annually the worst trees, and those that impede the growth of others: a moderate oakwood in the poorest land, would in this way, pay at least 20s an acre annually.**

The plantation was mainly oak with holly as the predominant understorey. However, there were later areas of beech and the woodland on the steep slopes down to the Nore was more varied. Within the woodland area today there are a number of oaks, which from their size, appear to date from the original plantation. Furthermore there are a very large number of young Sweet Chestnut trees that are self-seeded in the woodland and these may be descendants from those brought from France in 1735/36. In a letter from Brownrigg to Sir William Fownes he writes on 1st January 1736: *If you wd have more of the chesnutts let me know and I'll secure them for the next year.*

Not withstanding this commercial orientation, the woodland served other purposes. It became the backdrop and setting for the new house when "Willy" came to build it after his marriage to Lady Elizabeth Ponsonby in 1739 and using her dowry to finance the project. The house was built facing southeast just beyond the northern boundary of the plantation. Areas of the wood were carved out to provide for building the new kitchen garden and to sculpt the setting for the mansion with the creation of glades to provide vistas and to shape the spaces around the house. These areas may have provided the timber required for the construction of the house. The northwest corner is where, over time, the greatest variety of species have been introduced, due in part to the creation and development of the arboretum and its enclosure in to the pleasure gardens in the nineteenth century.

Elsewhere on the demesne there is a considerable tree heritage. Apart from the collection of exotics of the arboretum and the noble fir and monkey puzzle avenues, there are collections of trees that are remnants of avenues and rows of trees that give definition to walks, enclosures and vistas visually orchestrating the framing of the house and its approaches as well as controlling and augmenting views out.



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Entering the demesne from the lower Inistioge gate there were champion beeches noted by Bassett in 1884: *Close to the gate-lodge begins a row of giant beeches, whose trunks suggest great organ-pipes.* From there, trees were used to define and augment the riverside drive that stretches from the Inistioge gate to the Red House. Again in Brownrigg's letter of 1736 he comments that *the road to Inisteague I'm certain has its beauties.* Further he writes that: *It surprises me how you could do so much in so short a time, I have your new walk in my mind's eye and find it delightful.* This walk may be that shown on the 1st edition OS map leading from Teddington along the water's edge. Here and along the river there are sweeps of large limes that define the riverside drive and may have led all the way to the Red House. A significant number of mature beeches are to be found on the wooded slopes of the valley that add much to the seasonal changes of colour and texture that clothe the serpentine sweep of the steep slope of the valley downstream from Inistioge.

Both the drive from the upper Inistioge gate and the earlier drive entering from the northwest corner of the demesne, approached the front of the house through the open deer park, bounded to the east by the woodland that cloths the steep slopes down to the Nore and to the west by the demesne wall lined with trees as it rises along a shoulder of Mount Alto. In this expanse there were isolated individual and clumps of trees. Lines of trees, to left and right, gathered the panorama to focus on and frame the view of the house. To the right the line leads due east from the demesne wall takes a turn due south and then turns again to form an avenue running due east and on axis to the centre of the house. This then joins a plantation that frames the house to the right. To the left a line comes up from the woodland at the valley's edge, turns through ninety degrees before cranking due south to join the massing the planting which frames the house and its wings to the left. Today the cranked section survives as a venerable row of limes that was later added to, continuing the straight line away from the house with Monterey pines. A single lime survives in the fields to the right. Where each line from left and right meet the plantations there are oaks of considerable stature. To the left a single specimen survives and to the right the single oak is at the end of a line of three oaks which border the track leading around to the west of the house to enter the pleasure grounds could be the remains of an avenue of oaks that accompanied this track. An initial cursory assessment indicates they are between 300 and 400 years old.

As seen from the maps, these lines of trees were not symmetrically disposed about the central axis of the house. However, the strong slope downhill from west to east meant that they appeared from the drive more balanced - the up-slope rows appearing nearer and the down-slope further away than they were. The changing forms, colours and textures of trees from the regimented line of the limes terminated by the oaks to the plantations on either side of the house was consciously composed so that the approach to Woodstock was presented to the visitor as a single coordinated design of house and landscape. The approach was along the drive entering the gate at the crossroads. The drive followed the contour at 350ft before lining up on the axis of the house. Later it divided around the expanse of lawn the constructed plateau in front of the mansion's entrance

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façade. The house is central to the understanding and reading of the gardens and terrain of the demesne and its relationship to the wider landscape.

Later in the eighteenth century demesne was entered through new gates above directly above Inistioge. This brought the drive to the east side of the axis of the house where later it was accompanied by a line of Monterey pines - survivors have been recently liberated by the clear-felling of part of the "nursery plantation".

The small plantations framing the house to the east and west provided some shelter to the house and gardens and created a screened location for the ancillary buildings for the home farm, garden and stabling.

The stone walled enclosures of the fields that formed the pastures of the home farm stretching away from the house to east down towards the river were lined by oaks as indicated on the first edition OS map by the remnants seen today. Along the river, on flat shores and islands were the osieries. Today the survivors of the willows are growing in unharvested profusion.

### ***Water Management in the Demesne and its Environs***

*The Gardens can find no equal in the United Kingdom, and the grounds, laid out with every diversity that wood and water can bestow, are perfectly beautiful.* (Lord William Pitt Lennox writing of his visit to Woodstock in 1865)

The river Nore forms the backbone of the landscape. It flows through a deep valley bordering the demesne lending a dramatic topography to the site of Woodstock. The river is tidal with the extreme high tide up to the northern boundary of Inistioge townland and the neap tide line below the bridge. The Nore has been navigable up to Inistioge with unexecuted projects to extend this up to Kilkenney and beyond. Just below Inistioge Bridge, an old canal cuts the first corner of the river thereby bypassing the salmon weir. Along the Nore a number of quays have been built in the demesne that provided access to the river for transport and pleasure.

A number of tributaries flow into the Nore in the townlands adjacent to Woodstock. A 1667 map of Inistioge shows the now named *Mill Stream* dividing and flowing down either side of what is now the square. Possibly this configuration gave the town its name. At this time, a medieval tower stood in the river at the end of this island. The map shows the river being used to drive a mill. Subsequently, the eponymous Mill Stream was used for a corn mill and then channelled to enter the Nore along the town boundary to the north. The edge of the river was pushed forward to its present position.

At the bend of the river, opposite Teddington, a stream descends the steep wooded cut. Above a leat is taken from the stream to feed a pool and another corn mill, the outflow being guided separately to the Nore. At the beginning of the

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eighteenth century, this stream became an element within the developing demesne designed landscape. Brownrigg writes to William Fownes in response to a letter of November 1735. *I am delighted with the account you give of your self and your improvements... The cascade opposite the house is so wild and natural that everybody of taste must like it.* Later, informing Fownes of the trees he is sending from France the shipment contains *two cypress trees which I would have you plant by the cascade, and if they take plant a row or two on each side... There is no tree that has a more solemn or venerable air, I think if they take 'twill add greatly to the beauty of the cascade.* 150 years later in his guidebook to Kilkenny City and County, Bassett notes: *At the opposite side of the river there is a cascade in the midst of a most artistically devised shrubbery of laurel. The water supplying it comes from a grist mill, two hundred yards up the hill.* And today at Teddington one is very aware of the sound of the cascade amplified by the acoustic shape of the gulley and the curve of the topography of the bend of the steep valley of the river. Bassett also observes whilst taking the drive from Inistioge to the Red House that: *Innumerable springs trickle their crystal contents over moss-covered rocks and shelving fern-beds.* Some of these streams where the outlet into the Nore of the varied system of water management on the demesne.

The demesne was bordered on its southern edge by the more substantial Brownsford Stream. Its course took it at times through a deep sheltered and wooded dell with cascades making an appealing location for the late eighteenth-century preoccupation with the picturesque and the sublime. Here a landscape was made with paths, rustic bridges, viewing platforms, seats, shelters and the Swiss Cottage.

Two aqueducts brought water into the demesne. One springs from cuts made on the slopes of the northern flank of Mount Alto at the same point as the rising of the Mill Stream. It was led around, just below the 550ft contour and enters the demesne from the west and descends to the gardens of Woodstock House. This was an important source of water for the gardens, although it is currently block where it goes under the road at the demesne boundary. The aqueduct fed a cistern housed in a garden building at the west end of the pleasure grounds. It was then lead down through the site of the glasshouses, behind the walled garden to provide a source of water for features in this area and finally reappearing as a small cascade down towards the house before being culverted in front of the garden façade.

The second has its origin beyond the southwest edge of the demesne alongside the Brownsford Stream. It was fed by a number of small streams that bordered fields. The constructed watercourse runs approximately along the 350 foot contour line, initially parallel to Brownsford Stream but then entering the demesne at the Ross Gate, where it is currently being used as a feature in the garden of the Lodge. Its course continued into the demesne parallel to the drive from Ross Gate, both followed the contour. The stream broadened out in to a narrow serpentine lake. In 1863, Mr Fish describes this water feature as it emerges from the woodland into a clearing close to the house. *Between that glade and a third is a lake of water in the foreground, which is so managed that though of small size*

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*you might imagine it extended to great dimensions in the masses of wood; whilst the diversified foliage of the Pine, the Oak, and the Maple, &c., as reflected from its silver waters was very striking and pleasing.* Along side this lake the Silver Fir Avenue was planted in 1878.

The lake then drained across the clearing in front of the house and then flowed bordering the road towards the farm buildings. Above this road there was another water feature, a long canal-like pond that appears on both the 1840's and the 1901 OS maps. There is insufficient evidence to be sure what watercourse fed this pond. Whether, the Mount Alto aqueduct, a portion of the outflow of the serpentine lake, or a watercourse that ran in the ha-ha bounding the pleasure gardens nearest the house. Jupp and Reeves-Smith suggest that the pond acted as a reservoir for a sawmill and at some time later a turbine was located in its vicinity.

Also in the pleasure gardens was a fountain. This may have been fed from the cistern supplied by the Mount Alto aqueduct.

Beyond this area the watercourse proceeded by the side of the road and past the farm building before descending along the boundary of the deer park on the north side of a small plantation in which there is a grove of Portuguese Laurels. Here there is a small cistern and sluice. Today this channel is dry and blocked with rubbish. It descends the slope and runs along the boundaries of the meadows of the home farm. At one time it drained across the field boundaries northwards to be collected in a broad channel constructed along a drive which follows the border between fields and the woodland of the steep sides of the Nore valley. This channel, with its substantial embankment to the down-slope side, continued down to the vicinity of Teddington and may have been arranged to create a cascade. However, by the time of the first edition OS map it was cut and a separate constructed channel led the water down directly to the Nore. The 1901 map shows a further drainage channel taken from the watercourse near the farm building and led down the intermediate field boundaries.

In 1802, William Tighe wrote that Sir William Fownes adopted a water meadow system at Woodstock before 1750. Thus the Ross aqueduct and the serpentine lake may have been built as part of this project. It was thought that there were advantages for water meadows supplied with water that had passed through farmyards. The pond and the narrow serpentine lake water features may also have functioned as fish ponds, supplied ice in the winter for the icehouse near the house, as well as the provision of power for sawmill and later turbine.

Another broad channel of the same dimensions as the serpentine pond stretched nearly the whole length of the woodland from south to north, from Brownsford Stream to the meadows of the home farm and running just below the 180ft contour, again accompanied by a track. This is shown containing water in the 1st edition OS map but its full extent was not recorded. It may have been fed from an aqueduct taken from the Brownsford Stream where it cuts the 180ft contour but the density of the undergrowth in this part of the woodland has, as yet, prevented confirmation. On the 1840's map a watercourse that runs down the side of the

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central clearing in the woodland intersects the second serpentine. At the north end it fed the waterfall that is shown descending to the Nore. The creation of the channel would have been a major undertaking and thus destined for some strong intended use. At this stage of the research, its functional purpose is not clear. It may have been associated with the provision of fresh water to the early house that was located near Teddington. Notwithstanding this, it was clearly a substantial element and feature in the designed landscape of the demesne.

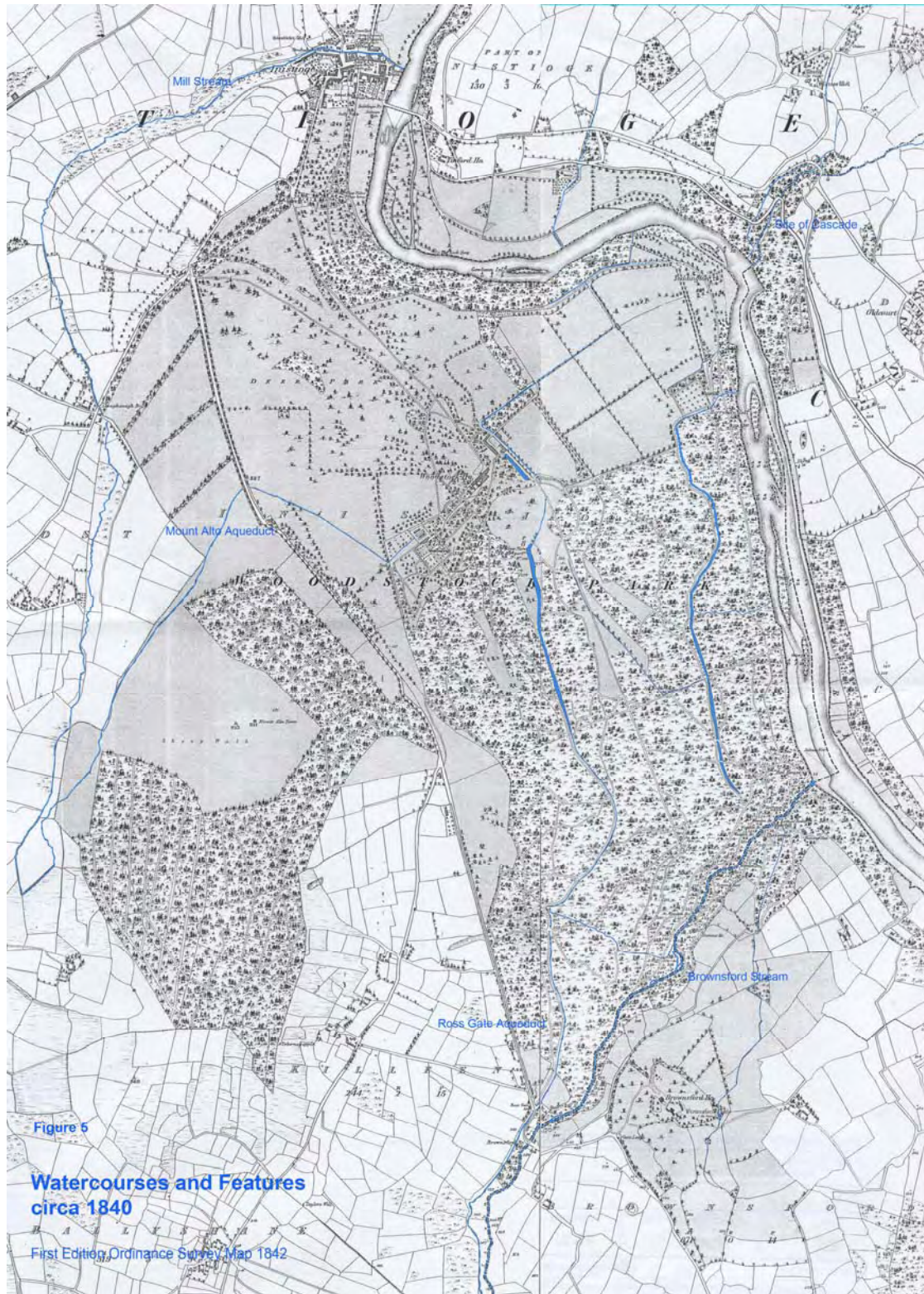
The serpentine ponds take their shape because of the topography and the expediency of the following the contours. However the upper one has a significant length that is straight with an embankment that may have served as an elevated walk through the woods.

The Mount Alto aqueduct is currently blocked where it passes under the boundary road of the demesne. The other aqueduct entering by Ross Gate has been maintained and repaired beyond the demesne boundary and used as a feature in the garden of Ross Lodge. It then flows bordering a field and when entering the woodland has been cut to allow the water to find its own way down back into Brownsford Stream. The channel continues but is dry and the embankment is cut at intervals. In addition the embankments of both the long serpentine ponds have been cut at a number of points and are predominately dry.

The channel bordering the deer park is dry and a site for dumping rubbish, however the lower part of the adjacent small plantation is waterlogged and water flows from it after leaving the small plantation. This watercourse is later filled at the boundary of the fields. To the north, near the woodland drive a spring has emerged and is led into the woodland, following briefly the existing channel before it plunges directly down to the Nore.

During the current felling in the woodlands, directly south of the house, box drains have been revealed and destroyed by machinery and now there is a substantial standing water. Throughout the demesne watercourses change and deviate substantially from those indicated on the current OS maps. The original co-ordinated system of watercourse and drainage has been compromised through neglect of maintenance. Recently drainage has and is being dealt with in an ad hoc and local manner - shifting immediate problems only to appear elsewhere, significantly changing the hydrology of areas of the woodland and the agricultural land. Erosion is occurring to land, tracks and roads throughout the woodland.

**Figure 5b Water Courses and Features**



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## ***Buildings and Related Structures of the Demesne***

Woodstock house which today stands as a ruin was constructed in the 1740's. It was sited strategically for orientation, aspect, shelter, to command views from its interior and to present itself to the surrounding countryside. From this focus the existing landscape was re-formed, exploiting its locality's assets and shaping new ones. It exploited connections to the wider landscape. It forged associations by looking out onto framed views of earlier artefacts like Clonamery Castle and the central feature of the terrain, the deep wood-clad valley of the Nore. The house is fundamental to an understanding and reading of the demesne and its gardens. Stabilised as a ruin or partially or fully reconstructed, it remains central, to the future use and development of the gardens and the surrounding demesne.

Surrounding the house are a collection of built structures, dating from the construction of the house itself or from a number of other building campaigns, that are associated with the additions of the wings or the development of the gardens in the second half of the 19th century. The surviving fragments of the stables and the farmyard and buildings are well sited and suitable for development and reuse while respecting the historic fabric.

The constructions and buildings associated with both the productive and the pleasure gardens adjacent to the house are well documented (save for minor inaccuracies and misinterpretations) in the Gazetteer produced by Jupp and Reeves-Smith.

There are a number of houses on the demesne of historic importance. By the river there is Teddington at the site of the earlier mansion, and the Red House that acted like a lodge for arriving by boat. There is a house along the boundary road of the demesne approximately due west from Woodstock house and another structure along the northwest flank of the demesne wall that is marked on the 1840's map as the pound and now occupied as a house with outbuildings. Then there are lodges at the Ross Gate and the upper and lower Inistioge Gates. The style of these ranges from Neo-classical to Regency Gothic. The lower Inistioge lodge is of particular interest with its terraced garden with retaining walls of granite ashlar. This needs to be further documented. Associated with this was the school located just outside the gates. Inside the demesne, to the west of the house stands the gardener's cottage. Probably built in the 1860's with steep pitched roof and dormers it breaks through the wall to keep the yard of glasshouses, pits, cold frames and bothies under surveillance.

As Lewis writes in 1837: *In the grounds there are various picturesque rustic cottages, and several banqueting-rooms commanding from different positions the rich, bold, and varied scenery which here adorns the banks of the river.* The picturesque cottages are the Red House and Teddington, and the banqueting houses are the Swiss Cottage and Mount Sandford Castle. The Swiss Cottage, of which little remains today other than an avenue of yews, approaching steps and the platform, is located overlooking Brownsford stream from the south. The cottage is recorded in a watercolour by George Miller and various other visitors have described the location. Mr Fish writing in 1863: *we reach the Swiss cottage -*

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*a private picnic rendezvous for the proprietors and their friends. ... The position is beautifully picturesque and romantic, close to a precipice overhanging a dashing waterfall. Before reaching the glen fine views are obtained of the distant Carlow mountains, and southwards, near New Ross. At the northern end of the demesne looking north from amidst the trees of the steep side of the Nore valley, is the substantial roofless structure of Mount Sandford Castle. Its large gothic window frames a view of the Nore and the bridge at Inistioge. The bridge presents its decorated southern façade of paired ionic pilasters framing each of its ten arches to view from this point. It breaches the inner demesne wall that here winds through the steep wooded slopes. Beneath this large room with its fireplace is a lower grotto-like level with another gothic arch. A blocked window looked south on the inner side of the wall perhaps along a path that led to the building. Crudely carved into the lower arch is the date 1765. Close by, the carriage drive which runs along the wooded rim of the valley passes out through a large arched carriage gate before descending towards Teddington.*

Along the river a series of quays were built to serve various location. Both the quality of the construction and the present state of these varies enormously. Adjacent to, and presumably served by the Woodstock quay, is a structure which is marked on the 1901 OS map as a lime kiln. However, its form has much in common with a type of ice house. It is a battered circular stone structure, partly built into the hillside with a ramp leading to a short protruding vaulted passage. The interior is brick-lined and partially domed. A path leads to give access to the top of the structure.

The demesne wall is a substantial structure and a particular characteristic of Irish demesnes. About this the English visitor Mr Fish noted in 1863 with curiosity: *We see no objection to this, except exposing the substantial wall of the deer park, but could be concealed either by a covering of Ireland's evergreen creeper or a bank of turf. We can well imagine that this matter of fences is one of great importance; as, though there are some thirty-five acres of dressed ground, and a range of ornamental grounds averaging one mile in every direction from the mansion, and these are all substantially fenced, you never by any chance see a boundary until you come right up to it.* From the upper Inistioge gate with its ornamental piers, the demesne wall follows the boundary road to the southwest. It arrives at the location of the earlier entrance. Here there are substantial piers that presently support wrought iron gates. Standing at this entrance is a cast iron pump.

The wall then turns southwards up a shoulder of Mount Alto. Along this stretch the accompanying road was shown on the 1840's map as a tree-lined avenue. The wall then kinks more to the southeast at the position of the estate cottage and follows the contour of Mount Alto before descending to the Ross Gate. The wall has been breached in an ad hoc way at a number points to accommodate the construction of a number of one-off houses and to facilitate access for larger size of contemporary machinery. Along the wall, where access was required, simple yet elegant piers were built, some similar to those that adorn the lanes and field entrances of the original, wider estate in the surrounding lands.

To the east of the upper Inistioge Gate the demesne wall descends towards the



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Nore and snakes high up through the woodland on the valley slopes. A doorway pierces the wall where it descends the slope towards the river. It is punctuated by the Mount Sandford Castle and then later turns away from the river. At this point there is a large arched carriage gate. The wall then continues and forms the boundary to the "Rifle Ground" and finally returns up hill, bordering the road that leads from the meadows to the yards of the home farm adjacent to the house. A substantial boundary of ditches mounds and walls divides the woodland from the meadows. Along the east side there is a deep-cut straight road. To the down-slope side is a high embankment, suggesting that the road was to be screened from view from the original house located near Teddington. This drive was lined with lime trees (some surviving). The eastern boundary joins with the walled enclosure that was the original kitchen garden - more latterly it became an orchard and still contains a number of overgrown wall-fruit trees. To the east end, at a lower level, there was another small irregularly shaped enclosure that contained a number of buildings. One of these may have been accommodation for a watchman who was mentioned in the accounts in 1813. The walled garden was sheltered by a screen of trees along the northern edge and to the south and east by the original woodland plantation.

Again inside the demesne there are other significant bounding structures. These form boundaries that separate the extended pleasure gardens and arboretum from the rest of the woodland and deer park. These are walls and ha-has. As mentioned earlier sections of the walls may be the original enclosure of the woodland suggested by Cooke in the 1720's. The wall that encloses the northwest corner of the productive gardens is of particular interest with its array of stone brackets.

The four lower fields of the home farm are bounded by stone walls that were accompanied by lines of oaks. At the intersection of all four fields there is a single building divided into four identical sections, each addressing a single field. These appear to have been animal houses. There is no evidence of chimneys.

Finally there is one other significant stone-built artefact and that is the target at the northern end of the *Rifle Ground*.

### ***Significant Structures Outside the Demesne***

There are five structures of architectural and historic significance that are strongly related to the demesne from outside its bounds. These are the tower houses of Brownsford and Clonamery (know also as Cluen or Clowen), the church of Clonamery, the bridge over the Nore at Inistioge and the tower on Mount Alto - the latter two both contemporary with the development of the demesne.

Lewis writing in 1813 that the mansion and demesne commanded *extensive views of the various interesting objects on its banks; on one side are rugged rocks in striking contrast with luxuriant woods clothing the lofty hills to their summits; and on the other are fertile and richly cultivated plains interspersed with*

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*thriving plantations; among these the ruins of the castles of Brownsford and Clowen, on artificial mounds overhanging the river, are seen to peculiar effect. The bridge at Inistioge was built in the eighteenth century after 1763 and, according to William Tighe writing in 1802, cost the public £900 and has ten arches, the southern side is ornamented by ionic pilasters; the architect was G. Smith: the bridge is flat, and the arches are equal, which is one reason that it has withstood the greatest floods, for the pressure being equally divided, the water having room to spread on one side, its force diminished; whereas the bridge of Thomastown has been several times carried away. The decorated facade of the bridge faces the demesne as if consciously helping to compose the views out from the demesne. The view from Mount Sandford Castle focuses on the bridge and more recently a view down through the woodlands has been established that can be seen drive out of the demesne towards the upper Inistioge Gate. On leaving and descending towards the village, Fish observed in 1863 that: ... the bridge, the river, its islands, and its banks, presents numberless points of interest fascinating to the lover of beautiful combinations, on which the eye of the painter would delight to linger.*

Mount Alto Tower sits on a prominence of the shoulder northeast of the summit of Mount Alto. Thus located it actually appears to crown the summit of the actual mountain when viewed from the demesne, from the other side of the Nore valley, and when approaching Inistioge from Thomastown or coming up from the Ballyduff Cross. Thus Lord William Pitt Lennox writes after his 1865 visit that: *At the back rises a wooded hill to the height of 900 feet, the summit crowned with an ornamental tower.*

The tower is a squat octagon with a pyramidal roof affording the interior a conical ceiling. The tower was recently vandalised in an attempt to remove the fine cut-stone from the gothic architrave to the doorway, the cornice and quoins. The single-space interior has a fireplace whose flue protrudes from the rear façade. Two stone seats frame the hearth. The building is so orientated such that the axis out through the doorway leads down the mountain through the centre of the walled garden along the central path of the formal winter garden parallel to the façade of the mansion, on down to the location of Teddington and across the river to the site of the early eighteenth-century cascade. Today the tower is not clearly visible from the centre of the winter garden because of the maturing of the arboretum trees. Even though there was a plantation on Mount Alto in the eighteenth and nineteenth centuries the tower would have been prominent above the tree line. Mount Alto tower was established as a belvedere, as a location to view a panoramic sweep of the countryside. As well as directing views down onto the axis of the gardens its two windows directed views perpendicular to this axis. In particular, sitting by the fire one can look out north along the Nore valley to Thomastown in the distance.

## **Views and Vistas**

Mr Fish's account of 1863 of his visit to Woodstock comments on the composition

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of views. ... *no sooner do we arrive at the garden front, which faces the south-east, than we see at once in what a favourable and commanding position the mansion is placed. The lawn and park already referred to gradually merge into the beautifully wooded hill of Mount Alto, which rises 1400 feet ... and this secures not only warmth and protection, but forms a splendid background to one of the most beautiful and diversified of landscape pictures. On the east side of the new balustraded gardens a large space was being cleared for a new bowling-green, bounded by a miniature winding lake, with Hydrangeas, pink and blue, and giant Ferns drooping of its waters, and these backed again by trees which join those on the crest of the bank, which here conceals all traces of the river.*

Here, standing in the winter garden, looking eastwards, the foreground of pond and shrubs join with trees lining the drive sunk below the retaining wall again in turn merge with the canopy of the woodland climbing out of the valley. The view was so composed as to conceal the view of the working farm below. The apparent foliage and canopy is continuous leading the eye to the distant panorama of the opposite face of the Nore valley and the slopes of Mount Brandon.

Fish continues: *Bringing the eye southwards, owing partly to the falling nature of the ground it passes over a wide piece of open lawn and a spacious glade, taking in a long reach of the river, rests on the old Castle of Cluen and the steep wooded banks the opposite of the stream, until extending your range it takes in a great extent of beautiful elevated country, dotted with cottages and farms, terminated in the distant mountains of Wexford.*

At some time, a broad yet blind avenue was purposefully cut through the original plantation and maintained. As the land descends to the southeast, the grass of the glade blended with the top of the canopy of the trees at the end of the opening to reveal and engage the architectural fragment of a previous era and frames it against the backdrop of distance views.

Fish turns again to see *another glade, but for its dying-out, would carry the eye to the point where the water of the glen joins the river near the Red House.* The third glade of this fan of vistas that radiate from the vantage point of the winter garden we have already noted. It was bounded by the serpentine pond but was to become the site of the Silver Fir Avenue to be planted in 1878. If the line of this avenue was to be continued through the woodland it would bring you over the contours to a view of that other Fitzgerald castle of Brownsford. The other end of this axis brings you to William Tighe's study.

Fish again turns *Further westward, and in a straight diagonal line from the drawing-room windows, is the Araucaria avenue backed on each side by masses of timber.* These avenues and glades along with the house, the winter garden and the lawns resemble a left hand laid on the landscape, the little finger yet to be formed. Another glade, if cut in the woodland to the southeast, could have revealed and framed the church of Clonamery. Of tenth century origins and adapted in later centuries the church stands on its prominence above the Nore. Finally looking out the entrance façade of the mansion, following back along the








axis of the original drive before it disappears around the contours and beyond, would have led us to another screen plantation set across the end of the demesne. This plantation appears on OS maps surveyed in 1838 and 1901.

The small plantations on the east bank of the Nore, those of Oldcourt and on Clonamery lands maintained today by Coillte, and those clothing the banks in the vicinity of Clonamery Castle and on the bend just down stream from the castle are important elements in the composition of views from the garden and along the riverside drive from Inistioge to the Red House as well as from other locations.

We have already mentioned the importance of the bridge at Inistioge and Mount Alto tower in establishing markers in the landscape and extending views to, from and across the demesne. The siting of the house, local and more distant planting at large and small scales, the cutting of glades in the early woodlands all helped to stitch together a network of the landscape its features and heritage. Much has been lost through neglect and a turning in on the fragments within the demesne lands.

# Figure 6. Landscape (b)

- Walls, Boundaries and Enclosures
- Tree Heritage
- Sites of Glades

<b>Boundaries</b>		<b>Tree Heritage</b>	
	Garden Walls		Important trees & tree lines
	Demesne & Inner Boundaries		Significant tree stands
	Field Systems & 'Ha Ha' boundary		Arboretum
<i>See text for descriptions of features</i>		<b>Glades</b>	
			Sites of glades

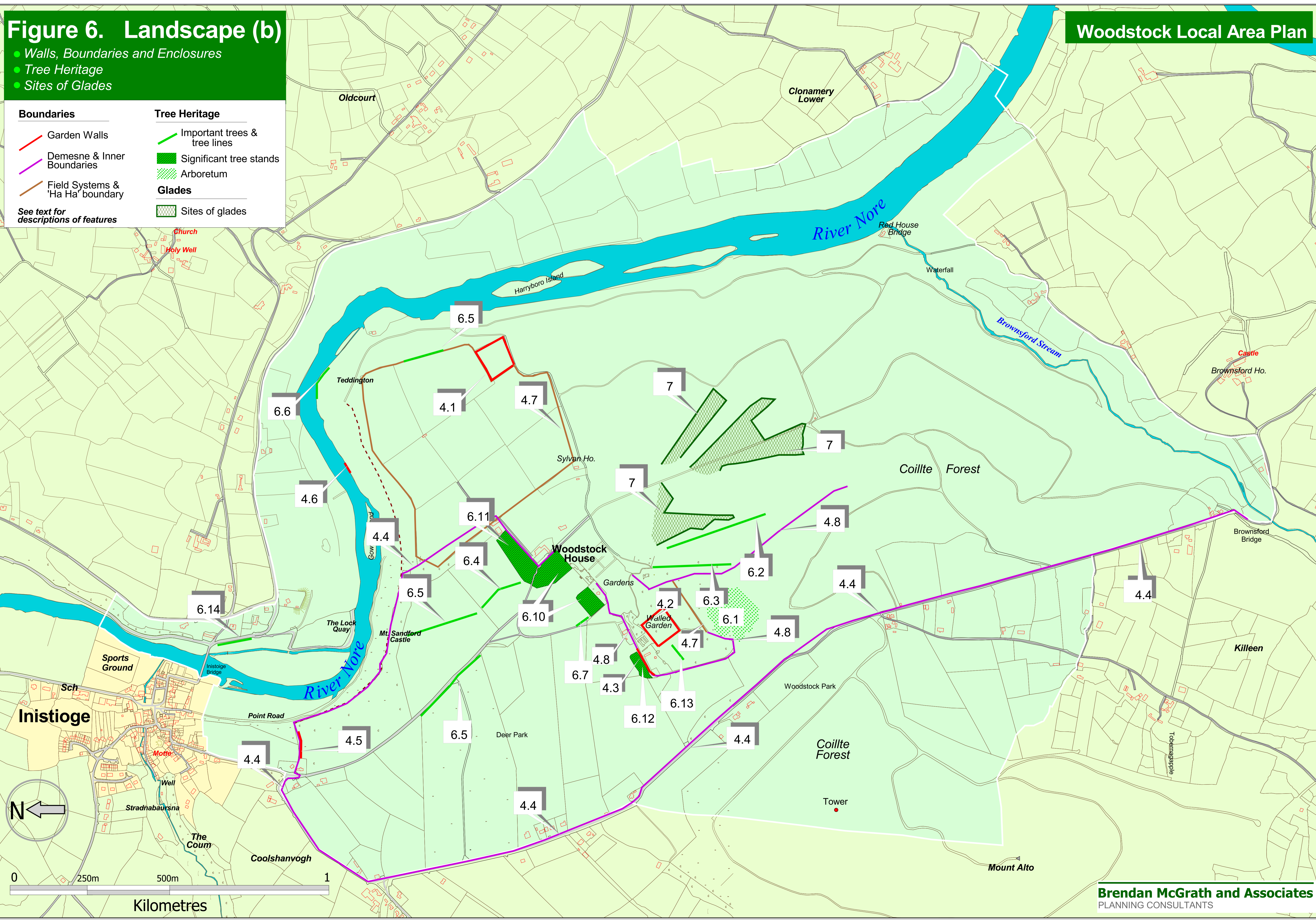
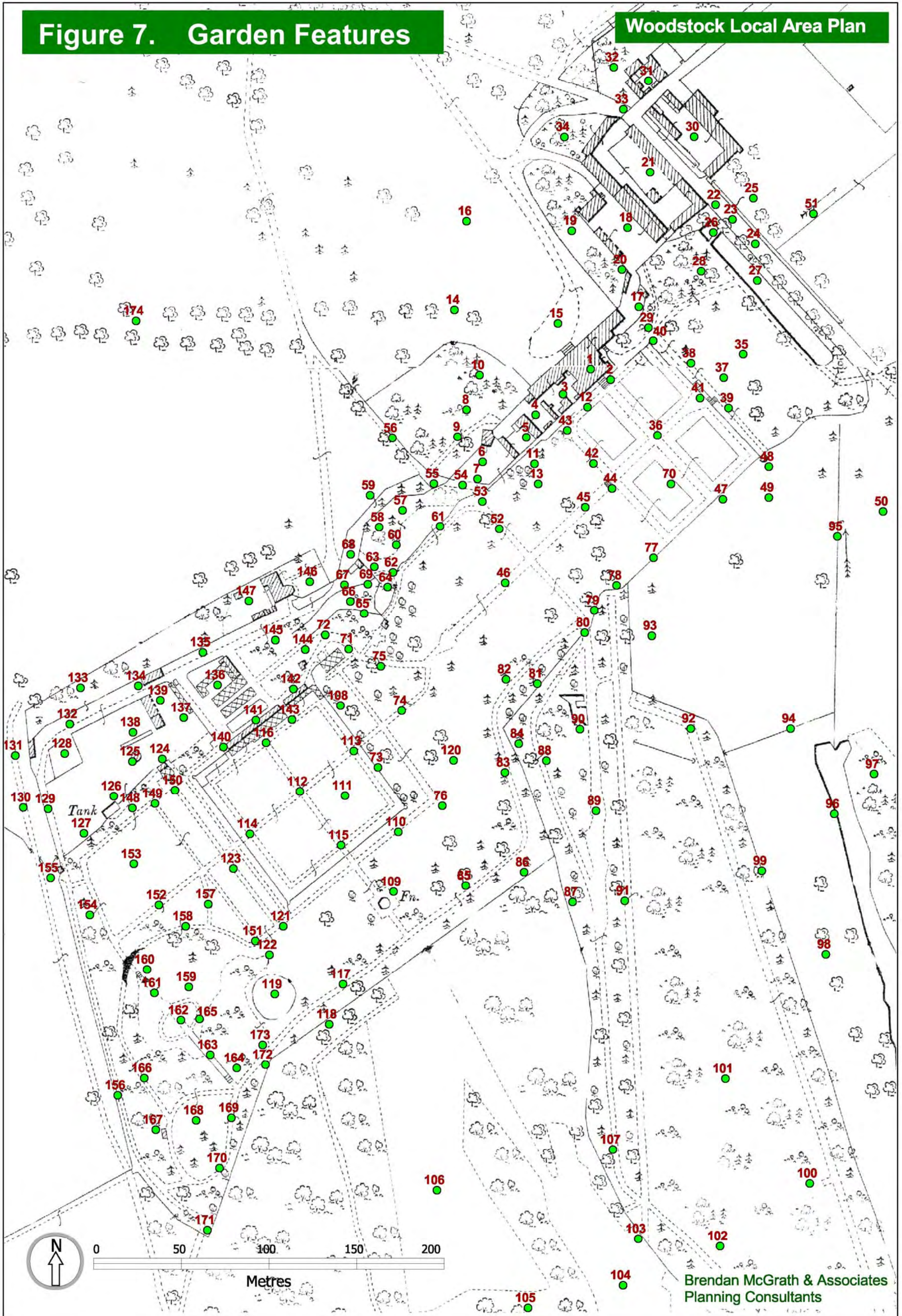


Figure 7. Garden Features



# GARDEN FEATURES

- |    |                                       |     |                                       |
|----|---------------------------------------|-----|---------------------------------------|
| 1  | The Main House and Wings              | 109 | Fountain and Vases (site)             |
| 2  | the Turner Staircase and Garden Beds  | 110 | Pathway                               |
| 3  | West Yard                             | 111 | The Walled Garden                     |
| 4  | Laundry Yard                          | 112 | Rose Pergola                          |
| 5  |                                       | 113 | East Walled Garden Gates              |
| 6  | Ice House Enclosure                   | 114 | West Walled Garden Gates              |
| 7  | Ice House                             | 115 | Pleasure Garden Gate                  |
| 8  | Ice House Grove                       | 116 | Walled Garden Glasshouses             |
| 9  | Trackway (site of)                    | 117 | Bulb Garden Path                      |
| 10 | Bank                                  | 118 | Ha-Ha (South End)                     |
| 11 | Lower Pleasure Ground Wall and Stream | 119 | Bulb Garden (site of)                 |
| 12 | Stream Stop                           | 120 | Arboretum                             |
| 13 | Former Yard                           | 121 | Turner Seat                           |
| 14 | Site of Former Avenue                 | 122 | Statue (site of)                      |
| 15 | Front Sweep and Avenue                | 123 | Flower Garden Terrace                 |
| 16 | The Lawn                              | 124 | Turner Conservatory                   |
| 17 | East Yard                             | 125 | Dove Cote                             |
| 18 | Stable Yard                           | 126 | Water Tank                            |
| 19 | Stable Yard Grove                     | 127 | Stream                                |
| 20 | Pedestrian Yard Entrance              | 128 | Compost Pit                           |
| 21 | Upper Farmyard                        | 129 | West Frame Yard                       |
| 22 | Saw Mill                              | 130 | Trackway                              |
| 23 | Steps                                 | 131 | Shed (site of)                        |
| 24 | Roadway and Revetment wall            | 132 | North Wall and Projections            |
| 25 | Stream Course and Boundary            | 133 | Woodland Screen                       |
| 26 | Site of Turbine                       | 134 | Lean-to Shed                          |
| 27 | Canal                                 | 135 | Shed (site of)                        |
| 28 | Farm Yard Screen                      | 136 | Glasshouse Complex                    |
| 29 | East Wing Screen                      | 137 | Cold Frames                           |
| 30 | Lower Farmyard                        | 138 | Cold Frames                           |
| 31 | North Yard                            | 139 | Shed                                  |
| 32 | Wood Screen                           | 140 | Garden Entrance                       |
| 33 | Road and Yard Gates                   | 141 | Hedge                                 |
| 34 | Farm Yard Screen                      | 142 | Potting Sheds and Stoke Hole          |
| 35 | Croquet Ground                        | 143 | Potting Sheds                         |
| 36 | The Winter Garden Terrace             | 144 | Garden Entrance                       |
| 37 | Croquet Lawn Steps                    | 145 | Tank                                  |
| 38 | Winter Garden Terrace East Wall       | 146 | Nursery                               |
| 39 | Pathway and Yews                      | 147 | Gardener's House                      |
| 40 | Steps by Terrace                      | 148 | Gardener's House Back Garden          |
| 41 | Armillary Sphere (site of)            | 149 | Tree Screen                           |
| 42 | Side Terrace                          | 150 | Yew Pair                              |
| 43 | Winter Garden Corner                  | 151 | Yew Pair                              |
| 44 | Lower Steps                           | 152 | Yew Walk                              |
| 45 | Upper Steps                           | 153 | Open Lawn                             |
| 46 | The Straight Path                     | 154 | Top Path                              |
| 47 | Winter Garden South Terrace           | 155 | Vaulted Tank                          |
| 48 | Turret                                | 156 | Deer Park Wall, Track and Beech Trees |
| 49 | Tree Mound                            | 157 | Link Path                             |
| 50 | Modern Car Park                       | 158 | Path                                  |
| 51 | Modern Bungalow                       | 159 | Sloping Lawn                          |
| 52 | Cross Path                            | 160 | Lower Steps                           |
| 53 | Culvert                               | 161 | Lady Louisa's Walk                    |
| 54 | Carriageway and Wall                  | 162 | Rose Garden                           |

# GARDEN FEATURES

- |     |                            |     |   |
|-----|----------------------------|-----|---|
| 55  | Pedimented Entrance        | 163 | Pergola Path (Lady Louisa's Walk Lower) |
| 56  | Carriageway                | 164 | Lower Steps (site of)                   |
| 57  | Fruit Wall                 | 165 | The "Great Araucaria" (site of)         |
| 58  | Northern Sector            | 166 | Summer House Path                       |
| 59  | Tree Screen                | 167 | Summer House (Knox's Bower)             |
| 60  | Northern Sector Garden     | 168 | Summer House Lawn                       |
| 61  | Footpath and Stream        | 169 | Loop Walk                               |
| 62  | Culvert                    | 170 | Monkey Puzzles                          |
| 63  | Pedestrian Gate and Wall   | 171 | Corner Gates                            |
| 64  | Bamboo Walk                | 172 | Boundary Wall                           |
| 65  | Tiled House and Grotto     | 173 | Former Hedge                            |
| 66  | Aqueduct (site of)         | 174 | North-West Avenue                       |
| 67  | High Garden Gate           | 175 | Deer Park                               |
| 68  | Vaulted Tank               | 176 | Lime Trees                              |
| 69  | High Garden                | 177 | Monterey Pines                          |
| 70  | Carriageway                | 178 | Main Gates                              |
| 71  | Axial Glasshouse (site of) | 179 | Main Gate Lodge                         |
| 72  | Rockery                    | 180 | Lower Park                              |
| 73  | Axial Glasshouse Path      | 181 | Main Avenue                             |
| 74  | Walled Garden Path         | 182 | Coolshanvogh Avenue                     |
| 75  | <i>Abies Alba</i> Path     | 183 | Riverside Gate Lodge                    |
| 76  | Mound                      | 184 | River Avenue                            |
| 77  | Terrace Wall               | 185 | Riverside Plantations                   |
| 78  | Avenue Stop Ha-Ha          | 186 | Sandford Castle                         |
| 79  | Fan Gate Ha-Ha             | 187 | Rifle Ground and Yard                   |
| 80  | Fan Gate Ramp              | 188 | Woodstock Quay                          |
| 81  | Sequoia Path Ha-Ha         | 189 | Lime Kiln                               |
| 82  | Sequoia Path               | 190 | Former Osiers                           |
| 83  | Monkey Puzzle Path (Lower) | 191 | Teddington Cottage                      |
| 84  | Miniature Ha-Ha            | 192 | Boat House                              |
| 85  | Monkey Puzzle Path (Upper) | 193 | Avenue (site of)                        |
| 86  | Perimeter Ha-Ha            | 194 | Old Orchard                             |
| 87  | Park Walling               | 195 | Waterfall                               |
| 88  | Rockery Path               | 196 |   |
| 89  | Sunken Walk                | 197 | Woodland                                |
| 90  | Rockeries                  | 198 | Serpentine Water                        |
| 91  | Monkey Puzzle Walk         | 199 | Formal Avenue (site of)                 |
| 92  | Silver Fir Walk            | 200 | Laffan's Quay                           |
| 93  | Back Lawn                  | 201 | Ice House                               |
| 94  | Drainage Ditch             | 202 | The Red House Quay                      |
| 95  | Pond Channel               | 203 | The Red House                           |
| 96  | Lady Betty's Pond          | 204 | Red House Bridge                        |
| 97  | Duck Pond Wood             | 205 | Wooden Bridge (site of)                 |
| 98  | Duck Pond Park             | 206 | Lennox Bower (site of)                  |
| 99  | Woodland Boundary          | 207 | Upper Wooden Bridge (site of)           |
| 100 | Sunken Feature             | 208 | Waterfall                               |
| 101 | Woodland                   | 209 | Swiss Cottage                           |
| 102 | Rustic Seat                | 210 | Summer Seat (site of)                   |
| 103 | Park Walling               | 211 | Wooden Bridge (site of)                 |
| 104 | Former Parkland            | 212 | Summer Seat (site of)                   |
| 105 | Woodland                   | 213 | Wooden Bridge (site of)                 |
| 106 | Former Parkland            | 214 | Summer House (site of)                  |
| 107 | Perimeter Path             | 215 | The Ravine (or Glen) Woods              |
| 108 |                            |     |   |



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## 3.Natural Heritage

### ***Approach to the study***

This report was prepared to contribute to the Local Area Plan for Woodstock being developed by Brendan McGrath and Associates.

The brief for the study was developed through discussions with Brendan McGrath and Associates, other consultants involved in the study and Kilkenny County Council.

It included the following:

- Biodiversity assessment of the area covered by the Local Area Plan to be informed by desk research, fieldwork and consultations.
- Production of guidelines to support sustainable development of the Local Area Plan lands.

The site contains obvious areas of biodiversity value dominated by the river and woodlands. These include

- The designated areas associated with the River Nore and its environs including the Ice House
- Woodstock Demesne
- Uplands adjacent to the demesne

The river and its environs are contained within the proposed candidate SAC No. 002162. River Barrow, Nore and Suir. Therefore it is linked to areas of biodiversity value north and south of the plan area. This large SAC is particularly well represented in Kilkenny. It is important for non-priority marine, freshwater and terrestrial habitats and species associated with its estuary and lower and upper reaches of the rivers (Natura 2000 form). The list of species includes those protected under the Birds (79/409/EEC) and Habitats Directive (92/43/EEC) as well as species requiring protection under the Wildlife (Amendment) Act 2000, international agreements such as the Bonn and Bern Conventions or are listed in publications reviewing rare plants and animals; (Curtis and McGough 1988); Whilde, (1993); (Stewart and Church, 1993).

The list of important species includes rare species of plants, invertebrates, mammals and a rare fish (smelt) and amphibian (frog).

Listed habitats and species of potential importance at this site include the following priority and non priority- type habitats listed in the Natura 2000 form.

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-padion, Alnion incarae, Salicion albae) (91EO)

Petrifying springs with tufa formation (Cratoneurion ) (7220)

Watercourses of plain to montane levels with the Ranunculion-fluviatilis and Callitricho-Batrachion vegetation (3260)

Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)

Old sessile woods with *Ilex* and *Blechnum* in the British Isles (91AO)

Mudflats and sandflats not covered by sea water at low tide (1140)

Animal species (listed in the Habitats Directive) which could be associated with the site are:

Daubenton's bat

Otter

Salmon

Sea lamprey

Brook lamprey

River lamprey

Twaite shad

Allis shad

Fresh water pearl mussel

Fresh water pearl mussel ssp *durrovensis*

White clawed crayfish

Freshwater snail *Vertigo moulisiana*

Plant species listed in Annex 2 of the Directive which could potentially be at this site include the Killarney fern. Other rare plants (not listed in the Habitats Directive) which are associated with the SAC include autumn crocus, nettle leaved bellflower, the sedge *Carex divisa*, basil thyme, red hemp-nettle, meadow barley, greater broom-rape, saw wort, clustered clover, wild sage and bird cherry. Bird species listed under the Birds Directive which could be important at the site include barn owl and birds of prey.

As well as assessing the significance of the lands within the SAC, there is a requirement to maintain the ecological connectivity between the SAC and surrounding landscape. The following landscape features which are important for maintaining connectivity are highlighted in Article 10 of the Directive:

“Such features are those which by virtue of their linear and continuous structure (such as rivers with their banks or traditional systems for marking field boundaries (*i.e. hedgerows*) or their function as stepping stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species.”

The Habitats Directive was brought into force in Ireland through the European Communities (Natural Habitats) regulations 1997 (SI /97/094). This specifies the role of local authorities in protecting such areas through regulating development. The Planning and Development Regulations 2001 (S.I. 600 of 2001) made under the Planning and Development Act, 2000 provides for the recognition of “European sites” (SAC's and SPA's) by planning authorities. All planning

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authorities must indicate such sites in their development plans and have regard for the impact of development on their biodiversity interest. Major infrastructural development within areas designated as SAC's is generally not allowed unless for reasons of overriding public interest.

As a result of representations from farming organisations the boundaries of this SAC are being redrawn. It is likely that the boundary of the SAC in the vicinity of Inistioge will be revised to bring it closer to the river's edge on the east side of the river. (Marie Dormer, NPWS, pers.comm.).

The Habitats Directive also recognises the need for management of the wider countryside. The preamble recognises that "land use planning and development policies should encourage the management of features of the landscape which are of major importance to flora and fauna".

Criteria such as rarity and typicality, size, diversity (Spellerberg, 1995) were used to draw up the listings in the Habitats Directive. These can also be used to evaluate the relative biodiversity significance of all areas and species. These are informed by fieldwork, reports, or/and evaluations which have been drawn up by specialists.

In the context of spatial planning, criteria such as landscape/geodiversity interest, recreation potential and ecological connectivity must also be considered when assessing the lands being studied under the Local Area Plan. As some of these characteristics are being examined by other consultants the results of the biodiversity assessment should be capable of being related to other aspects of the baseline study. Similarly results from other aspects of the baseline study should be used to inform the biodiversity assessment.

The presence of designated areas of biodiversity interest means that survey work has been carried out along the river and some is on-going. In contrast to other non designated areas NPWS staff are particularly aware of the condition of habitats and species within the SAC and adjacent to it. Therefore there is a reasonable awareness of the value of some of the local habitats to biodiversity.

There is a long history of fieldwork along the river Nore and at Inistioge. Praeger published a series of records collected in Inistioge in 1918 (Praeger, 1918). An earlier paper recorded the flora of the Barrow and Nore and included records from Inistioge. (Hart, 1885). More recently a postgraduate student from TCD has studied the ecology of autumn crocus and nettle leaved bellflower at several locations at Inistioge (Smith, 2004) and a postgraduate student from the UK has carried out field studies into the ecology of pine marten in the woods at Woodstock (PJ O Donoghue, pers.comm.)

Inistioge Tidy Towns committee has commissioned a bat survey of the bridge (Bernie O' Dwyer, pers.comm.). Coillte has ceased actively managing woodlands within the proposed SAC (PJ O' Donoghue, pers.comm.). There have been discussions between Coillte, and Kilkenny County Council on the management of the maternity bat roost (Daubenton's bat) in the Ice House (Derbhla Ledwidge, Kilkenny Co Co.).

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As various types of woodland dominate landcover in the study area the review must be informed by an awareness of forestry management policies and approaches to woodland management. Until recently forestry management focussed on establishing and managing coniferous forestry. Concern with the environmental impacts of this type of forestry on biodiversity, water quality and landscape has resulted in a shift in policy. Support is now being given for the development of sustainable broadleaved forestry and strict guidelines have been developed to manage environmental and landscape impacts. These guidelines cover archaeology, biodiversity, protection of water quality and landscape. Local authorities have been given a role in some aspects of strategic management and the public can play a role in commenting on certain types of planting applications. In recent years the state has introduced the Native Woodland Scheme to support the establishment of new woodlands or regeneration at old sites. This scheme requires the preparation of a woodland management plan by a woodland ecologist and forester.

Coillte has become involved in a process to identify and manage areas of biodiversity interest within its woodlands to fulfil its obligations for certification under the Forest Certification Council. This has prioritised the management of “old woodland”, sites where woodland was also shown on 1st ed OS maps and features within forests which add to overall biodiversity. Fieldwork is being carried out in Forest Management Units to identify to identify 15% of forested land within each FMU which will be managed for biodiversity. The process of identifying such areas is currently on-going within the region which includes Kilkenny.

Considerable support has been given for research on biodiversity in plantation woodlands. The Bioforest Project ([bioforest.ucc.ie](http://bioforest.ucc.ie)) has examined the relative biodiversity interest of different types of plantations at different stages of their life cycle, impact of the development of forest plantations at various stages of their life cycles with the aim of providing more detailed guidelines to integrate biodiversity with plantation forestry.

The government has also started the first nationwide field survey of native woodland plant biodiversity ([www.npws.ie/en/PublicationsLiterature/OtherNPWSReports/](http://www.npws.ie/en/PublicationsLiterature/OtherNPWSReports/)). This will result in the characterisation and ranking of all types of native woodlands. The pilot for this national survey involved an examination of three alluvial woodlands within the plan area (Browne, 2002), one of which was on an island on the river. The field visits generated valuable lists of flora, and provided notes on the structure and condition of woodland and wetland habitats.

## ***Methodology***

### **Introduction**

The methodology reflected the characteristics of the site based on a reconnaissance visit, resources available, the time of the year, and the

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requirements of the Area Plan. These issues suggested that efforts should focus on preparing a habitat map for the Area Plan lands and research should be carried out on land use history. Methodologies to identify and map habitats have recently been developed by the Heritage Council (Heritage Council 2000 and 2003). Observations were also collected on birds as this group can be rapidly assessed during a site visit by an experienced observer.

Land use history informs the evaluation of the “naturalness” of the area. Many of the criteria used to evaluate biodiversity are related to naturalness. While field survey work can lead an opinion on “naturalness” documentary sources, maps, aerial photographs and local information on management practises are also required to inform this assessment.

### **Land use history**

Land use history was researched by examining historical maps and aerial photographs. These included Petty’s Down Survey Map for the Baronies of Gowran and Ibercon (c. 1670) and its associated inventories of landowners; Ordnance Survey maps (1842/1903); aerial photos (dating from the 70’s (b/w) and 2000 (digital in colour). Other sources included the Ordnance Survey Name Books for County Kilkenny, Lewis’s Topographical Directory (1839) and a report on woodlands of recreational interest in Co. Kilkenny (Harris 1995) which contained a review of woodland history in the county.

### **Desk research**

The NPWS site files for the following sites were examined:

Inistioge NHA (00837)  
Barrow Nore Suir SAC (No 2162)  
The Ice House NHA (no. 002094)  
Murphys of the River NHA (No. 00844)

Other sources of information included web sites for Coillte, NPWS, the FIPS data base and a preliminary survey of the ecological interest of Coillte lands to the south of the Demesne (McCorry 2005). The Tree Council of Ireland data base on Champion Trees was interrogated for results from Woodstock.

### **Habitat mapping**

Initially, aerial photography (black and white 1973’s photography and digital colour aerial photograph dated 2000) was examined and obvious habitats were mapped on a 1:5,000 base map. This stage of interpretation was followed by fieldwork in October 2005. Photographs and notes were taken of plant species of interest. Fieldwork involved a boat trip along the river within the study area and a site visit to Coillte woodlands in the company of PJ O’ Donoghue, the forester in charge of Woodstock. Browne et al (2002) provided information on certain woodland habitats.

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Woodland types within plantations owned by Coillte were mapped using information obtained from Coillte. Their inventories record the percentage of broadleaved trees in plantations. Almost all Coillte plantations were identified as WD3 (mixed broadleaved type with <25% broadleaves). This interpretation probably contrasts with the usual classification of Coillte plantations. It reflected the relatively young condition of many plantations, their situation within an old demesne and thus the presence of a woodland flora in many areas which is more typical of broadleaved woodland.

### **Rare species**

Efforts were made to identify nettle leaved bell flower and autumn crocus at typical locations for these species.

### **Birds**

Birds were recorded during the following dates:

20.10.2005.	11am to 4pm.	Weather Dry and sunny.
25.10.2005.	11am to 4.30pm.	Weather Sunny spells with showers, windy.

During each visit the observer walked slowly through the main habitat types and recorded all bird species which were seen and heard. Notes were added to a 1:5,000 map of the study area.

### **Mammals**

Notes were taken by field workers of the presence of mammals such as droppings, tracks and burrows.

### **Consultations**

Consultations were held with Lorcan Scott, Marie Dromey and Dr John Crosse NPWS; PJ O Donoghue, Coillte, Derbhla Ledwidge, Heritage Officer and Clare Murphy, Landscape Architect, Kilkenny County Council, also Dr Jimmy King, Central Fisheries Board (Lamprey survey in river), John Dunne and David McInerney. (South Eastern Regional Fisheries Board).

### **Constraints**

The resultant habitat map should be considered as a draft map. It has probably underestimated old grasslands (GS1) as not all fields were visited and information was not collected from landowners on grassland management. The scale did not allow for the representation of additional and important habitats such as the rock outcrops bordering the river ( ER1), a sand and gravel deposit on the eastern side

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of the river or distinguishing between older and modern buildings. Timing did not allow for a survey of autumn crocus in fields along the river. Problems were encountered in locating the boundaries of sub-compartments in Coillte plantations. In the absence of a resurvey of these boundaries the habitat map used the boundaries shown on the Coillte map.

Despite these constraints the consultants believe that the review has allowed for an adequate assessment of biodiversity for the purposes of preparing the Local Area Plan.

## **Results**

### **Introduction**

This section starts with a brief review of geodiversity. This is followed by a section summarising the biodiversity value of the Area Plan lands (illustrated by the habitat map, Fig. 8) and an account of the relative biodiversity interest of the lands (summarised in Fig. 9). Appendix 1 contains an account of all birds seen on site. Appendix 2 lists trees from the Arboretum which are contained in the specimen tree register compiled by the Tree Council of Ireland and accessed in the Botanic Gardens, Glasnevin. Comments are also provided on trends in site quality.

### **Geodiversity**

Geodiversity covers the diversity of bedrock, subsoils, soils and terrain and all the processes that give landscape its distinctive character. The geodiversity of the study area is particularly rich. There are two types of acid rocks in the study area, granite and schists which are visible in several locations. Most of the site is underlain by Ordovician sandstones and slates. Granite is found at the southern section of the site. The Ordovician rocks are particularly obvious beside “the river road” south of Inistioge. The exposed rock is an important feature of the landscape of the river and was commented on favourably by visitors in the 19th and early 20th century.

The valuable landscape near the river was formed by the interaction between these rocks and the river Nore. Natural processes are still responsible for the fall and rise in river levels as the Nore is tidal to Inistioge. The river cut a gorge in the rocks on the western side. Along the eastern side a series of terraces were formed of limestone sand and gravels carried down by the river from the limestone covered areas further north in Kilkenny. Some of the sand and gravel in these terraces and in the river bed was quarried until recently (c20years ago). An account of Inistioge mentions the presence of lead ore in rocks in the area and a granite quarry (Lewis, 1839). The location of these mines and quarries are unknown. Lead ore deposits are common at the junction between the schist and granite.

The rocks and subsequent quaternary history determined soil type, fertility and provide clues to the original natural vegetation. On the western side of the river

within the Demesne and above the river valley where soils are shallow and poor the original natural vegetation was probably an oak-birch and holly woodland. On the eastern side of the river in the well drained terraces formed of limestone sand and gravels, soils were derived from calcareous drift and a type of oak ash hazel woodland dominated dry areas. Alongside the river the original floodplain was covered in a willow dominated alluvial woodland.

## ***Summary of biodiversity interest***

### **Habitats**

The habitat map shows 21 habitats. This is an impressive diversity and reflects the diversity of landscape and management within the study area. Habitats include aquatic and semi-aquatic types such as:

- Tidal river (i.e the Nore)
- Eroding upland river (Browsford Stream)
- Drainage ditches (bordering fields)
- Reed and tall sedge swamps (on the edge of the river Nore)
- Wet willow alder ash woodland (on river islands and bordering the river)
- Artificial ponds (in the garden and within the abandoned sand quarry)

The SAC principally covers aquatic and semi -aquatic habitats. The wet woodland found on all the alluvial islands and on the low lying lands beside the river. This is a priority type woodland listed under the Habitats Directive.

Terrestrial types are associated with woodlands, farmland and built up areas. With the exception of woodlands on the slopes of Mt Alto all these woodlands can be classed as “old woodlands” as woodland is still present at locations where woodland was shown on the first edition OS maps. Woodland habitats differentiated by the cover of broadleaves include:

- ( Mixed ) broadleaved woodland (75% broadleaves)
- Mixed broadleaved/conifer woodland (25% -75% broadleaves)
- Mixed conifer plantation (broadleaves less than 25%)
- Conifer plantation (areas which had not supported broadleaves in the 19th century)
- Recently felled woodland (old nursery near the entrance to Woodstock)

A small area of oak-birch-holly woodland was also found south of the Brownsford Stream adjacent to Coillte lands. In general more natural woodlands were more likely to be found on less accessible and sloping sites. Small blocks of “oak woodland” identified in the Coillte data base were examined. They contained species typical of native woodland such as oak and holly and hazel. Timber was harvested <10 years ago. Oaks are all young and of poor quality and it is rapidly regenerating as a beech woodland with some cover of laurel. Woodlands on the eastern side of the river were more important for biodiversity than these blocks.



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Habitats in farmed and developed land include

- Improved grassland (very common throughout)
- Amenity grassland (in the gardens at Woodstock)
- Acid grassland (fields west of the river)
- Wet grassland (near the river)
- Scrub (principally in areas which are not farmed)
- Hedgerows (throughout)

These habitats are less natural than woodland and have arisen principally through more intensive management of the landscape.

In built up and amenity areas habitats include

- Scattered trees and parkland i.e. the Arboretum
- Recolonising bare ground
- Stone walls and other stonework
- Buildings and artificial surfaces (all surfaced and unsurfaced forest roads)

While these habitats generally support fewer native species and are therefore less natural, they are important for rare species such as bats or barn owl which use man made habitats for nesting or roosting. Some of the tree species present in the Arboretum are unusually good examples of rarely seen tree species. The Area Plan lands principally comprises semi-natural habitats of biodiversity interest.

The most important habitats (i.e. listed in the Habitat Directive) are

Wet willow alder ash woodland (a type of alluvial woodland which is a priority habitat)

Oak-birch-holly woodland (a non-priority type) adjacent to the Coillte woodland beside the Browsford Stream

The river which as part of an estuary, is a non priority type habitat.

All the woodlands can be classified as “old woodlands” as they are present at sites which were also wooded in the beginning of the 19th century. Old woodland such as that found in Woodstock comprises 6% of the total woodland estate owned by Coillte.

## Species

Fieldwork confirmed the presence of some of the rare species associated with the SAC within the plan area. Bird species of particular interest (listed in the Birds Directive which were seen during fieldwork are kingfisher (seen along the river). Other species of interest (on BirdWatch Ireland’s Amber list (Newton et al 1999) are cormorant, little egret and black-headed gull. Consultations revealed that goosander and osprey have been seen along this stretch of river.

Nettle-leaved bellflower was recorded during fieldwork in woodlands bordering the east side of the river. This was found frequently in Coillte plantations to the south of the Demesne (Mc Corry 2005). Consultations suggest that autumn crocus is still associated with the site (NPWS, pers.comm.)

Fauna species of interest reported by local contacts include many of the species typically associated with the SAC or rare in Ireland and the region such as:

Freshwater Crayfish (*Austropotamobius pallipes*),  
 Otter  
 Daubenton's bat (but no recent confirmation of presence)  
 Common Pipistrelle (*Pipistrellus pipistrellus*)  
 Long-eared Bats (*Plecotus auritus*) are known to be using the old ruins of Woodstock house as roosting areas.  
 Salmon  
 Twaite shad  
 Smelt  
 Leisler's bat (Woodstock House)  
 Lamprey (three species)  
 Sparrowhawk  
 Owl sp? unknown

In addition pine marten and red squirrel are seen frequently in the Demesne.

The plan lands contain many of the habitats which are typically associated with the river sections of the cSAC. It is distinguished from other typical sections of the SAC by the presence of 1) the rare plant autumn crocus 2) by supporting the highest locations for spawning shad and smelt, and 3) the high cover of mixed and old woodland.

## **Areas of highest biodiversity value (Class 1 and 2)**

### **Characteristics of biodiversity interest**

Areas of highest biodiversity value include the river, islands, adjacent flooded lands, the Ice House and wooded areas which have a long history of woodland cover. Included in this category is the small stand of naturally regenerating oak-birch-holly woodland situated in a field on the south side of the Brownsford Stream.

All these areas rank highly in naturalness. The river is the most natural feature in the site. While some of its banks have been raised to control flooding and most of the floodplain no longer supports the original type of alluvial woodland, willow dominated woodland is still found on all the alluvial islands and on low lying areas along the banks of the river. In parts of the site the floodplain has been abandoned for agriculture and the natural vegetation is returning. The majority of the important bird species associated with the Area Plan lands is found within the

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river, in adjacent fields or semi-natural wetlands.

All of the amber listed species which were recorded during this survey were associated with the River Nore and particularly the river islands. Birds either perch on islands or feeding in the shallow water around them. An osprey was seen fishing in this area in May 2003 (Pat Durkin. pers. comm.). This was most likely a bird returning to its breeding grounds in Scotland from its wintering grounds in west Africa. There is almost certainly a breeding colony of grey herons at Woodstock and it is likely that the little egret will join such a colony to breed at some stage in the near future.

The presence of good populations of salmon has resulted in the designation of the Nore as a Salmonid River. This implies that river water quality must be monitored regularly and management aspire to reach standards set down by EU Directives. While water quality is not satisfactory within the Nore (EPA 2002), there has been little deterioration in local water quality over the last five years. The nearest sampling point is Brownbarn Bridge. However due to the presence of the foul water outfall within the Area Plan lands it is likely that river water quality declines within the study area. River ecology is an important focus of on-going research and survey work. Records have been published of dippers near Inistioge (Lorcan Scott, pers.comm.).

The river is a focus for commercial, recreational fishing and swimming. Fishing for salmon has a long tradition in the area and fishing was originally managed solely by the Tighe Estate. Early OS maps show fish weirs and a fish hatchery. The ruins of a look out post survives downstream of Lock Quay. Fishing today focuses on salmon. This species is fished at various locations but particularly in front of Teddington's where the river is particularly deep. Trout are also fished for. There is concern among anglers about the excessive growth of trees along the banks of the river which restrict access and make angling difficult. Swimming takes place near the water at the Lock Quay where a lifeguard service is provided in summer.

Fieldwork and documentary research confirms the long history of woodland in this locality and probably in the Area Plan lands.

By the medieval period the principal remnants of native woodland in Kilkenny were found between the Nore and Barrow. Records from the suppression of the monastery in Inistioge in the 16th century, (referred to in the account of Inistioge in the Ordnance Survey Name Books) mention the presence of "great oaks" on the mountain and underwood (grazed woodland) in its vicinity.

Records from the following century (associated with the Petty's Down Survey and Parish Survey) confirm the presence of woodland in various properties.

Major clearances of these woodlands took place in the 17th and 18th centuries. Timber was transported down the rivers and cleared areas were not fenced thus allowing cattle to graze and prevent regeneration. Active management of areas with native broadleaved woodland involved thinning hazel and birch out of a wood to allow for the growth of larger trees. Trees and shrubs were planted including Scotch fir, beech, ash, oak and hawthorns. New plantations were

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developed in the late 18th century on Mt Alto, probably of Scotch fir.

Thickets of willow beside the river and on river islands were harvested for basket making.

Woodland present in the 19th century was actively managed. The Tighe family had a particular interest in demesne management and woodlands. They carried out substantial planting of native and non-native species within the demesne for commercial, aesthetic and recreational purposes. In contrast to the woodlands within the Demesne, the woodlands on Mt. Alto were more similar to plantations. They were dominated by conifers and the area around the Tower was not planted but maintained as a sheep walk. Plants such as pheasant berry and pendulous sedge were planted throughout the woodlands to provide food and cover for pheasants and improve visual amenity. The current extent of these species is a feature of plant biodiversity within the demesne.

The demesne woodlands were bisected by drains. A large open ditch probably brought water to the house from the Brownsford Stream. Another ditch (10mX3m) was probably developed to manage water run off and irrigation above the steep slope overlooking the river.

This type of management survived into the 20th century. However clear felling of the woodlands in the Demesne took place in the early 1920's. Trees were processed in a sawmill which was situated beside the site of the new house near Teddingtons. A period of natural regeneration occurred when no management of the woods took place. This changed in the early 1940's when the state forestry service took a long lease on the woodlands, acquired some land within the Deerpark and started to establish conifer dominated forestry throughout the Demesne and study area.

Throughout the Demensne and plan lands there are many indications of the presnce of old woodland. Species which are typically associated with old woodlands in this location such as sessile oak, hazel, holly, ash, guelder rose and tree fern are common. The abundance of ferns on stone walls in the village and its vicinity is striking. The old tracks and new forest roads are bounded by vegetation which resembles the old woodland flora.

### **Management trends**

Threats to the quality of these habitats and the status of important species can arise from the following types of development:

1. Removal of semi-natural vegetation, habitats and bankside tree species associated with the intensification of farming, improving access to the river for fishing or the development of buildings or infrastructure.
2. Planting of non-native plant species in areas currently dominated by semi-natural vegetation associated with gardening.
3. The deterioration of water quality due to inputs of silt, or pollution from point and diffuse sources

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4. Increase in the amount of foul water discharged into the river arising from Inistioge village
  5. Spread of the non-native plant Himalayan balsam in alluvial woodlands
  6. Increased access leading to disturbance to fauna, trampling of plants and spread of exotic species
  7. Litter and debris
  8. Removal of timber from river islands
  9. Disturbance to the colony of roosting bats in the Ice House
  10. Dredging of river gravels which would remove spawning habitat for shad and smelt
  11. Fertilising, ploughing up and reseeded of grasslands which support autumn crocus.

In the short term the biodiversity interest of these areas will be maintained. The designation of the river and its environs as a cSAC will improve the prospects for appropriate management of important habitats and species. All landowners within the SAC have already been contacted about this proposed designation. Coillte have responded by identifying the designated area on its forest maps and ceasing commercial forestry management of lands within the cSAC. In the medium term a management plan will be prepared for the entire SAC and particular prescriptions which will be developed for all habitats will be communicated directly or indirectly to all landowners.

It is more difficult to predict trends in water quality as it is affected by many factors. It depends on the development of a new tertiary treatment system in Inistioge, control of effluent discharges elsewhere on the river, measures to stabilise river banks through the restoration of a 10m strip of riparian woodland and the control of regional inputs of fertilizer from farming. In the short term it is more likely that water quality will either remain the same or decline further.

### ***Areas of medium biodiversity value***

#### **Characteristics**

Areas of medium biodiversity value are “less natural” than the previous sites and are less likely to support many rare and important plants and animals.

They include almost all the planted woodlands, the recently felled plantation, unimproved grasslands, the pond in the abandoned sand and gravel pit, hedgerows, lines of trees, scrubby areas and old stone walls and stonework.

The woodlands in this class contain a high diversity of native trees, shrubs and herbs such as sessile oak, ash, holly, hazel many of which are associated with native woodland. The rare plant nettle leaved bellflower is common in these woodlands.

They have particular potential for the restoration of more natural conditions. In

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most woodlands where some light is available there are saplings of native broadleaved trees and shrubs. The vegetation bordering wide forest roads and the original network of tracks shown on 19th century OS maps are important reservoirs of broadleaved woodland biodiversity.

While none of the rarer bird species which were seen on site during the brief survey were associated with woodlands they are associated with a high diversity of bird species. A total of 42 bird species were identified in the Area Plan lands (see Appendix 1). These were principally associated with woodlands and there was little difference between mainly coniferous and broadleaved woodlands. Particular species of interest included treecreeper and jay which are confined to broadleaves. Birds were seen feeding on holly and yew berries and linnets were seen feeding on the seeds of weedy species in the newly felled plantation.

The woodlands support a self sustaining population of pine marten, a rare and shy native mammal which is protected under the Wildlife Amendment Act 2000. They retain some ancient trees which were probably planted in the 19th century. A particularly fine specimen was seen in the woodland on the eastern side of the river. Oak (planted) are common throughout the Demesne.

Hedgerows and tree lines provide reservoirs for biodiversity and wildlife corridors particularly in areas which are dominated by intensively managed pastures. Some of the local hedgerows contain holly.

Scrubby areas and old stone walls provide habitat for plants not found in woodlands or grasslands. The Demesne wall supported ten species of native plant including tree fern. A small area of scrub west of the garden was dominated by gorse.

The gardens and arboretum are of medium biodiversity value compared to more modern gardens by virtue of their proximity to woodlands and the presence of rare trees. Pine marten have been seen in the gardens and arboretum. There is an exceptional diversity of birds (19 sp) including tree creeper, jay, siskin and redwing. It features some of the Champion Trees of Kilkenny (Council of Ireland web site). These include 2 coastal redwoods, a Monterey cypress and a beech all of which are c. 2m in diameter. These large have particular potential as nesting sites by birds of prey and roosting places for bats.

Leislars bats (17) were recorded from Woodstock House in 1987 (Lorcan Scott, pers.comm.). Four species of bat have been recorded around the bridge (soprano pipistrelles, common pipistrelles, daubentons & leislars) in 2003. However no systematic survey work has been carried out around the house and information is not yet available on the results of the bat survey on the bridge.

## **Management trends**

Threats to these areas include

1. The establishment of crops of trees which will not allow for the survival of native tree and shrub species.
2. Removal of the demesne wall to facilitate housing or road widening.

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3. The removal of all felled and dead timber thus removing habitat for invertebrates
  4. The abandonment of the network of trails which ran through the Demesne Woodland
  5. The establishment of plantations close to or within the original ditches.
  6. The planting of shade tolerant trees close to the Brownsford Stream thus reducing the value of this habitat
  7. Removal of mature trees without taking precautions to protect roosting bats.
  8. Spread of laurel and beech in the woodlands.
  9. Clearance of semi-natural vegetation (scrub or shrubberies) during the bird nesting season
  10. Agricultural management practises leading to removal, ploughing up and reseeded of old grasslands or hedgerows.

In the short term the biodiversity value of the Coillte lands within the Demesne will improve as Coillte is aware that the woods at Woodstock appear to have particular potential for biodiversity management. This implies that features of biodiversity interest will be mapped. Staff will be informed of these features. (Coillte web site). Future management may involve the restoration of conifer dominated areas to a more broadleaved type of woodland. Thus many of the threats to the biodiversity value of the woodland will be controlled. The biodiversity interest of the gardens and arboretum is linked to horticultural management practises in the gardens. The quality of the Demesne Wall is likely to deteriorate due to neglect and removal to facilitate development.

### ***Areas of lowest biodiversity value***

#### **Characteristics**

Areas of lowest relative biodiversity value include intensively managed grasslands on farms, intensively managed lawns and all modern buildings. Intensively managed grasslands include newly seeded pastures with few species and fields which are relatively species rich but receive high inputs of fertilizer which limit natural diversity. Closer examination of grasslands and contacts with farmers would have allowed for a more accurate classification of grasslands.

#### **Management**

Threats to the management of biodiversity in these include

1. Infrastructure development, housing etc.
2. Felling of large trees

The biodiversity interest of these areas is likely to remain the same or decline slightly.

#### **Conclusions**

As well as the SAC this area contains large blocks of woodland of biodiversity

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interest. The biodiversity interest of the woodland is greater than that associated with Coillte plantations, as it is an “old woodland”. Current forestry development policy is promoting the restoration of the biodiversity interest of such woodlands. Therefore any development within the Demesne should carefully consider its impact on the SAC and the long term implications for “old woodland” biodiversity within Coillte lands.

Figure 8 Habitat.



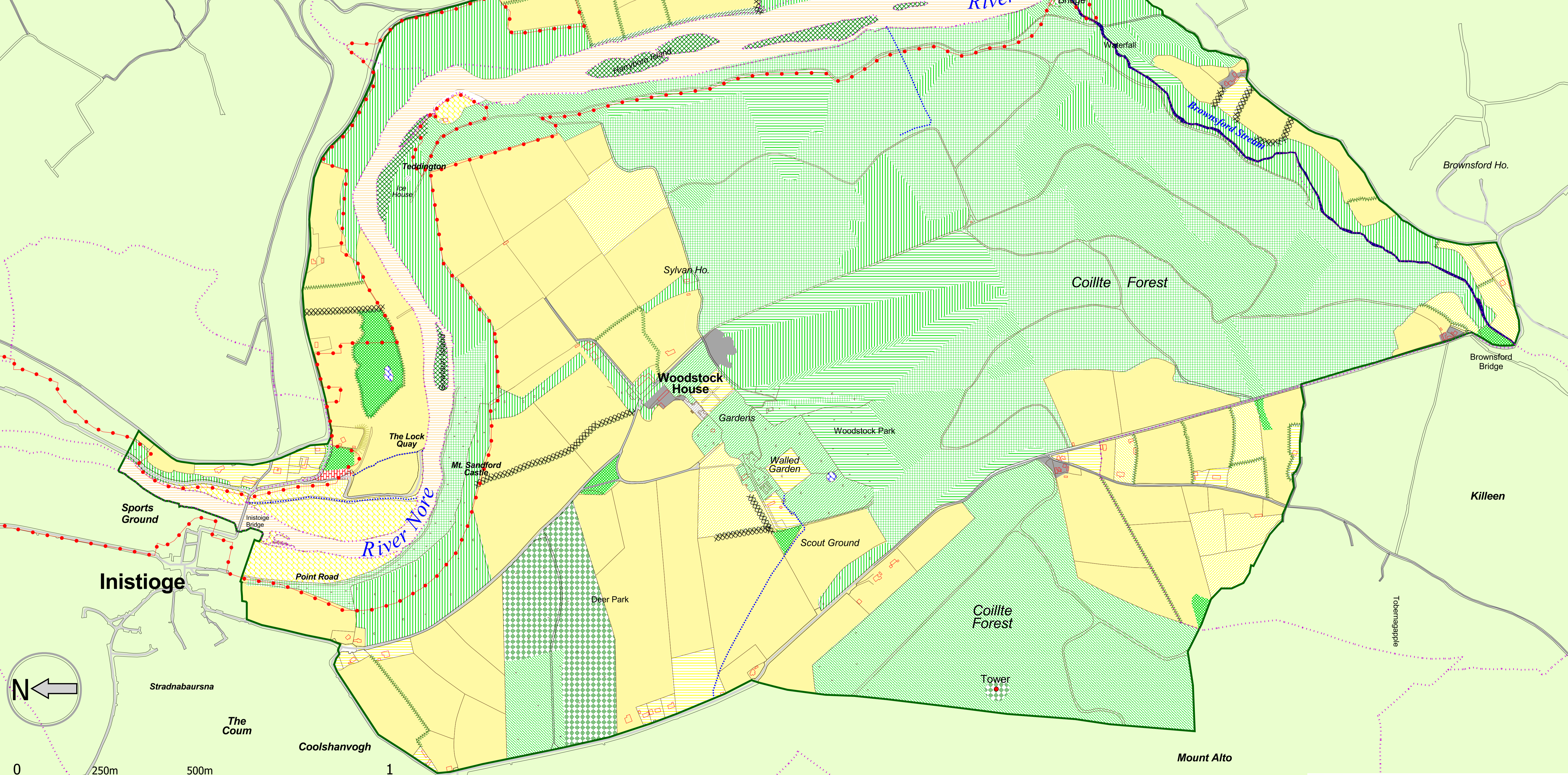
# Figure 8. Habitats

Woodland and Scrub	Grassland	Artificial & Disturbed
(Mixed) broadleaved woodland 75%+ broadleaved	Improved grassland	Stone walls and other stone work
Mixed broadleaved/conifer woodland 25%-75% broadleaved	Amenity grassland	Buildings and artificial surfaces (all surfaced and unsurfaced forest roads)
(Mixed) conifer plantation <25% broadleaved	Dry calcareous and neutral grassland	Recolonising bare ground
Conifer plantation	Dry meadows and grassy verges	Other artificial lakes and ponds
Scattered trees & parkland	Acid grassland	
Riparian Woodland	Wet grassland	
Wet Willow, Alder Ash woodland		
Scrub		
Ornamental non-native shrub		
Recently felled		
Treelines		
Hedgerows		

Other Features
Study Area
Buildings
Townland Boundary
Land Boundary
Principal Roads
Candidate Special Area of Conservation (cSAC) November 2005
Tidal rivers
Eroding upland rivers
Reed and tall sedge swamps
Drainage ditches

Habitats classified according to Heritage Council Classification (Fossitt 2000)



0 250m 500m 1

Kilometres

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# Figure 9. Biodiversity Assessment

**Biodiversity Key**

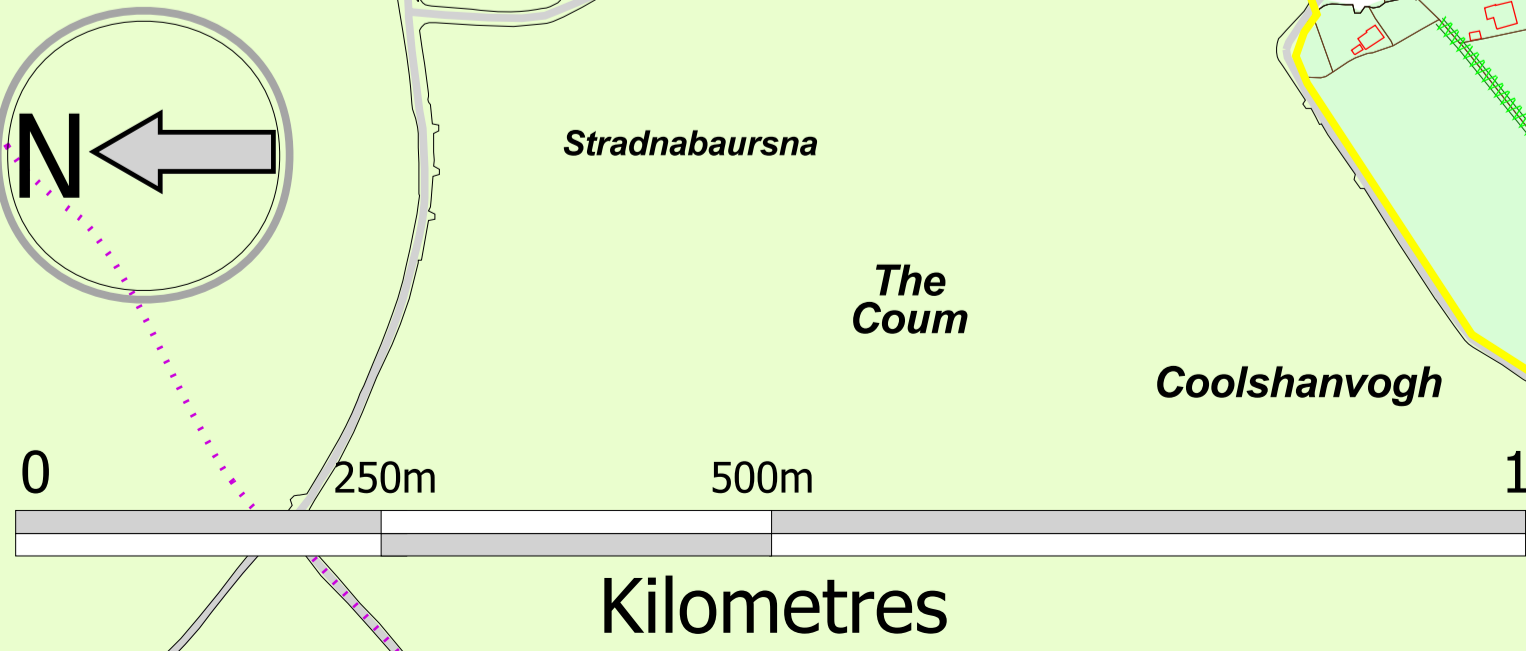
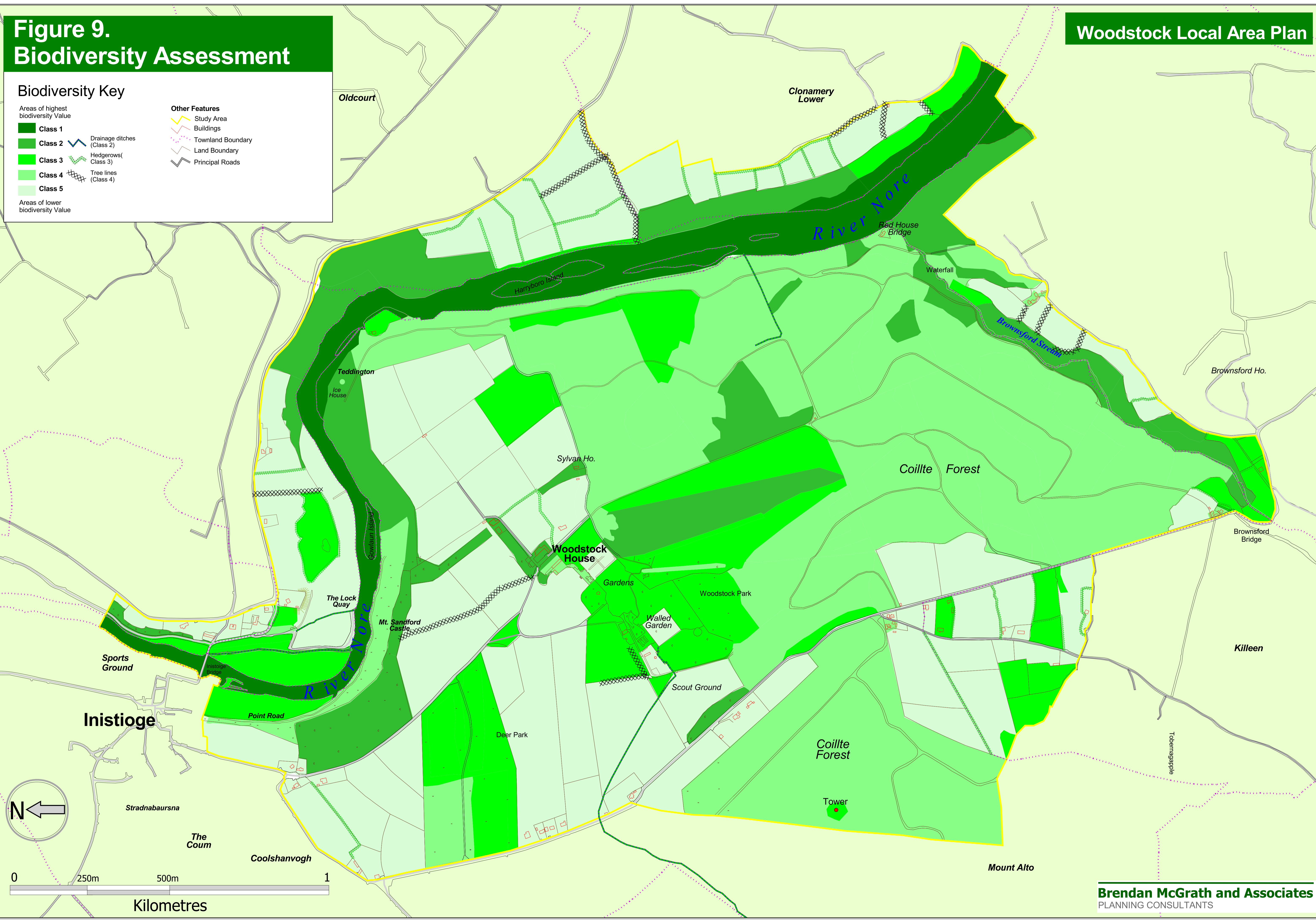
Areas of highest biodiversity Value

- Class 1
- Class 2
- Class 3
- Class 4
- Class 5

Areas of lower biodiversity Value

**Other Features**

- Study Area
- Buildings
- Townland Boundary
- Land Boundary
- Principal Roads
- Drainage ditches (Class 2)
- Hedgerows (Class 3)
- Tree lines (Class 4)



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## 4. Recreation

### ***Introduction***

Any reference to Woodstock Demesne generally conjures up images of the house and gardens. The fact that considerable resources have been expending on regenerating the gardens only serves to underline the point. However, if you look beyond the house and gardens to the extensive amenity provided by the greater Woodstock Demesne area you see an amenity that is largely underutilised. The potential for the natural and constructed development of the recreational amenity of the extended Demesne lands is significant.

There are essentially three main elements to the amenity provided by the extended Demesne lands and these are the house and gardens, the extensive lands including the wooded area and the River Nore. The interrelationship of these three elements is crucial to developing the tourism and amenity product.

### ***Woodstock House and Gardens***

The Woodstock house and gardens extend back to the mid-eighteenth century. While the house was originally constructed at this time all references to the construction of the gardens give credit to the influence of Lady Louisa Tighe as their designer in the following century. In fact, the gardens are being restored to that period of the mid-nineteenth century. While the gardens are extensive and in layout and design provide a pleasant environment for relaxation, the most significant asset is the arboretum with its wide selection of exotic trees and two significant avenues: the Noble Fir Avenue and the Monkey Puzzle Walk. The arboretum makes Woodstock House and Gardens unique.



Clare born architect Francis Bindon designed the original house. The two wings were added at the beginning of the nineteenth century. All that remains of the building is the façade of the original Bindon designed house. This is in a precarious state and is probably the biggest obstacle to the future reconstruction of the gardens. The future of house is critical to the development of the tourism product. The house in its current state adds nothing to the product, in fact it detracts from the gardens. Yet it puts the gardens and arboretum into context and as such is integral to the reconstruction of same.



What the house and gardens do lack is a playground. This does not have to be a steel and concrete construction, but one more suited to the location.

There are no precise figures available for visitor numbers generated by the gardens. The only figures available are based on the number of cars using and paying for the car park. The same fee applies to coaches as cars, so extrapolating visitor numbers from parking fees collected is extremely unreliable. In addition, access to the gardens would be free during the Arts Festival, Heritage Week and Tree Week. Furthermore, there is an assumption when calculating visitor numbers on this basis that every visitor travels by car or coach. No allowance is made for visitors local or otherwise who might arrive on foot or by bicycle. Any visitor figures would have to be seen and judged in this context. On the positive side, the figures available should be seen as a minimum. The visitor figures provided for the period 2002 – 2005 (Oct) show that apart from an increase of almost 7,000 in 2003 over 2002 they are holding at around the 30,000 per annum mark.

In 2004 Woodstock was the venue for a music concert organised by the Kilkenny Arts Festival in an attempt to move the festival out of the city. Ireland's answer to the seminal 60's rock concert attracted 11,000 visitors over two days. These visitors are in excess of the numbers already mentioned. While the concert was a success in many ways, it was not a commercial success.

Back in 1978 Woodstock provided the venue for an international scout jamboree attracting between four and five thousand scouts from all over the world. Nicknamed Mudstock because of the torrential downpour of rain this did not appear to deter the scouts. Personal accounts of the event suggest that a great time was had by all. An orienteering map of the area prepared for the event provided the basis for some of the information included in the South Leinster Way Map Guide.

In addition to the house and gardens, there are a number of outbuildings dotted throughout the estate some of which are restored. One such building, the Cart

house, is used as tearooms during the summer season.

Woodstock House and Gardens is twinned with Parc Glynllifon in Wales. The twinning was arranged in 2003 with a view to developing a joint marketing strategy. A joint promotional leaflet has been produced along with a tri-lingual – Irish, Welsh and English linked website. Exchange visits have been arranged between staff and local schoolchildren.

The twinning of Woodstock House and Gardens with Parc Glynllifon in Wales is indicative of the direction the house and gardens is taking as a potential tourist/recreation amenity. Gardens such as Parc Glynllifon and the Lost Gardens of Heligan should be examined as models for the future development potential of the house and gardens.

### ***Woodstock Demesne Lands***

The term Woodstock Demesne Lands is used to describe the extended plan area outside of the house and gardens. These lands consist of lands used for both forestry and agriculture. However, it also includes the banks of the River Nore, Mount Alto, Scouting Ireland owned land, and a number of private residences.

Scattered throughout the demesne lands are a number of structures of historical, ecological and architectural interest. These include Sandford Castle, the Ice House (now home of a colony of Daubenton's bats), the Red House, the ruins of a Swiss Cottage overlooking a water fall and river and many of the former outbuildings of Woodstock House.



The ruin of the Swiss Cottage

The waterfall at the ravine.

The walk along the Point Road. Part of the South Leinster Way

The bulk of the lands is owned by the Tighe family and is leased to Coillte for Forestry. A by-product of this is the extensive cover provided for forest walks throughout the lands with the South Leinster Way providing the spine. These walks criss-cross the demesne taking in the River Nore, the house and gardens and the waterfall. They vary in quality and level of difficulty from leisurely riverside and forest walks to hill walks through commercial forest. Some are even dangerous underfoot. The route of the South Leinster Way as it passes through Woodstock Demesne is seen as a highlight in a largely dull walking route. The multifarious land ownerships create difficulties for the proper maintenance and signposting of the walks. Local community activists availing of the financial resources provided by the Millennium Fund used the existing network of walks to create a Millennium Walk. One of the benefits of this funding was the creation of a map of the demesne lands identifying the walks and places of interest. This map is on display in the centre of Inistiogue village.



The Millennium Walk map located on the Square, Inistiogue.

There is also a South Leinster Way map and guide book published by EastWest Mapping. Unfortunately, this dates back to 1995 and probably needs updating. The Ordnance Survey has recently launched a comprehensive mapping tool on DVD for PC that provides aerial photography as well as mapping for the whole Woodstock Demesne area as part of its OS Trail Master series. The weakness of OS mapping of this area is that it misrepresents the route of the South Leinster Way as it approaches Inistiogue village. This weakness extends to this DVD.



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Ordnance Survey Orienteering DVD

The South Leinster Way Map and Guide Book

The proposed Nore Valley Walking Route from Kilkenny to Inistioge enters the village from the north and east of the river. It does not extend into the plan area. However, some linkage between the existing walks, including the South Leinster Way, and this proposed route should be facilitated.

The extensive lands leased to Coillte gives cause for some contention amongst the local community, because by default they are responsible for a considerable portion of the network of walks. As this is not their main focus of business the walks are poorly maintained and the perception is that this, combined with the lack of signposting, is a deliberate ploy to discourage walkers. When you consider the Coillte lands as both a work site and a place of recreational amenity, you can see the health and safety issues that arise. Nevertheless, the extensive network of walks throughout the demesne lands, if properly signposted and maintained, provides a variety of walks for all ages and level of ability. Some of these walks may also be suitable for horse riding and there is some anecdotal evidence that this is already the case.

There are perhaps two other significant sites within these lands worthy of mention. They are 9.5 acres owned by Scouting Ireland and an island north of the Lock Quay that doubles as a showground every August when it is host to a Traction Engine Rally.



The "showgrounds" home to the annual Traction Engine Rally

The land owned by Scouting Ireland is intended to be used as an amenity for the Scouts who hope to develop it primarily as a campsite.

## ***River Nore***

There is an expression that you can't step into the same river twice because of the constantly moving waters. With this in mind you cannot look at the stretch of Nore River contained within the plan area in isolation of the rest of the waterway. The River Nore is multi-functional insofar as it provides angling, swimming, a variety of boating and even a floating restaurant at Inistioge.

The River Nore is a sister river to the Barrow and the Suir. Known as the Three Sisters they flow into the sea at Waterford City. The Nore is 87 miles long originating in County Tipperary. It joins the Barrow north of New Ross. It is tidal south of the bridge at Inistioge. The river is part of the South Eastern River Basin District set up under the Water Framework Directive and responsibility for the tidal waters of the river come under the jurisdiction of the New Ross Port Company.

## **Angling**

The Nore is well known for salmon and trout fishing. The national problem of drift net fishing is preventing the salmon from coming up-river, which is effectively curtailing the salmon season on the river to just one month. The Nore north of Thomastown is identified as the best location for trout fishing. While Trout fishing can be carried out along the Nore at Inistioge, it has been suggested that it has been damaged by the introduction of the Dace fish into the river. No one appears to know who was responsible for this. The problem is that they compete with the trout for feeding and bait resulting in damage to the trout stock.

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Other issues that impact on the angling along the river include the leaching of agricultural residue creating an ongoing problem with phosphates in the river. In addition, occasional discharges from the Kilkenny brewery cause further pollution of the waterway. It is also suggested that overhanging trees inhibit access to the river along the bank. The New Ross Port Company is responsible for the control and maintenance of the tidal waters up to the bridge and there is anecdotal evidence that the Port Company used to cut back the trees on a regular basis. According to the Port Company, this practice has not been carried out for at least twelve years. While this hinders access to the river for anglers, it is suggested that it also creates a hazard for boat users on the river.

The Tighe family owns the fishing rights for this stretch of the river, but administration of the process of issuing permits for fishing is the responsibility of the Inistioge Anglers Association. They hope one day to purchase the fishing rights from the family.

While not strictly recreational, it is worth mentioning that some commercial salmon fishing takes place on the river at Inistioge. It is a form of drift net fishing called snap net fishing - a net hanging between two cots (small boats). The season for this type of fishing is the same as that of drift net fishing out at sea. These fishermen are faced with the same problems as anglers with few salmon getting past the drift net. It has been suggested that increasing leisure boat activity on the river may cause conflict with these fishermen because of the impact this will have on salmon fish activity and consequently their livelihood.

## **Boating**

The River Nore is navigable from Dublin via the Barrow to Inistioge. It is also navigable from Waterford. There is one report of a journey from Limerick to Inistioge via Dublin. The Galley Restaurant travels to Inistioge the 9.5 miles from New Ross about three times a month during the extended summer season of April – October.

### The Galley Restaurant

The river has also been used for kayaking from the Lock Quay to New Ross, but in recent years has lost out to the Barrow because of the challenge and better facilities provided by that river. North of the bridge canoes are hired out in Bennetsbridge and collected in Inistioge.

The main difficulty for boaters on the River Nore at Inistioge is the tidal nature of the river. At low tide the river at the Lock Quay can be dry, leaving a narrow tidal window for a boat to navigate as far as Inistioge village. It can be done: the Galley Restaurant goes as far as the bridge at Inistioge on a spring tide. There is also a deep pool across from the Lock Quay that can provide anchorage at low tide and boats can navigate as far as The Red House south of the Demesne. There is a quay located at the Red House where the Galley Restaurant has docked for private parties. This quay historically provided an access to Woodstock House for boating parties from Waterford and New Ross. There is also a quay just below the Inistioge bridge which is sometimes used. This quay is not visible at high water.

The Quay at the Red House accessible at all tides.

An attempt to make the river Nore navigable up as far Kilkenny was made in the mid-eighteenth century with the construction of a canal. The project was abandoned early on, but not before a channel to accommodate the canal was cut on the eastern bank of the river just above the Lock Quay. The remains of the construction of the lock gates along this channel can still be seen today.



The remains of the lock gates on the partially constructed Kilkenny Canal.

### **The Lock Quay**

The Lock Quay is located on the eastern bank of the river south of the bridge. The construction of the quay includes a quay wall and slipway. At low tide you can walk down the slipway and onto the river bed without getting your feet wet. While the quay provides a solid structure, it is rundown and dilapidated. There is no infrastructure provided other than the quay itself. Access to this quay off the R700 is narrow and quite dangerous with approaching traffic from the south coming off a bend. However, this is the same access to the showground field used for the Steam Traction Engine Rally during the summer.

Signage on the quay is broken and in poor condition. This quay provides an access to the river for small boats, but its potential as a docking point is limited by the narrow tidal window already mentioned with better anchorage offered by the pool opposite. It seems that the main recreational activity provided by the Lock Quay is swimming. This is supported by the fact that Kilkenny County Council provides lifeguards during the summer months.

“Dry Dock” The Lock Quay at low tide.



The Lock Quay with the river in flood.

## **Conclusion**

The confluence of three distinctive and significant recreational amenities (four if you include Inistioge village itself) in one place, while not necessarily unique, provides a major driver in the potential for maximisation of the tourism product in the area. Each have their weaknesses – the state of Woodstock house and its negative visual impact on the gardens; the narrow tidal window of the river at Inistioge; the threat to the fish stocks on the river; the potential conflict between any leisure boating activity and commercial fishing on the river: the conflict between commercial forestry and recreational amenity in the woodlands and the poorly signposted and maintained walks. They are significant weaknesses, and ones of varying degrees of resolvable difficulty. However, if they could be resolved the combined impact of a fully developed tourism product incorporating all of the areas mentioned would be significant. Such development needs to be coordinated and put together in a sensitive and complimentary manner.

In particular, areas that need to be looked at include:

- the Lock Quay, if better access can be provided, as a recreation and picnic area as well as a centre for water activities;
- improving and extending the navigation on the river;
- addressing the falling fish stocks;
- providing better and safe access for anglers on the river;
- co-ordinated management of the overall recreational amenity;
- integrating the Nore Valley Walking Route into the existing walks including the South Leinster Way,

- proper signposting and maintenance of the walks;
- re-instating Woodstock House thus placing the gardens and arboretum in architectural context;
- the provision of an adventure/safe playground within the grounds of the house and gardens and
- the provision of improved amenities/infrastructure such as improved picnic areas, toilet facilities etc.

There is an opportunity here for the development of an amenity for both tourists and locals alike that is natural and not artificial. The complimentary nature of the village, the house and gardens, the woodland and the river are integral to providing a relaxing environment for transient, overnight and long stay visitors.

Figure 10. Recreation

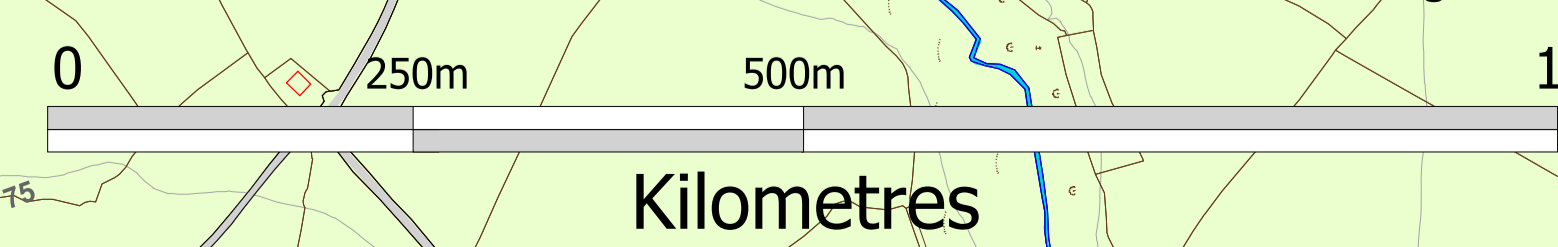
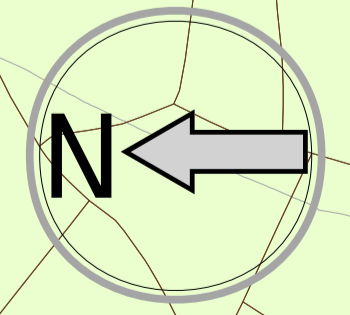
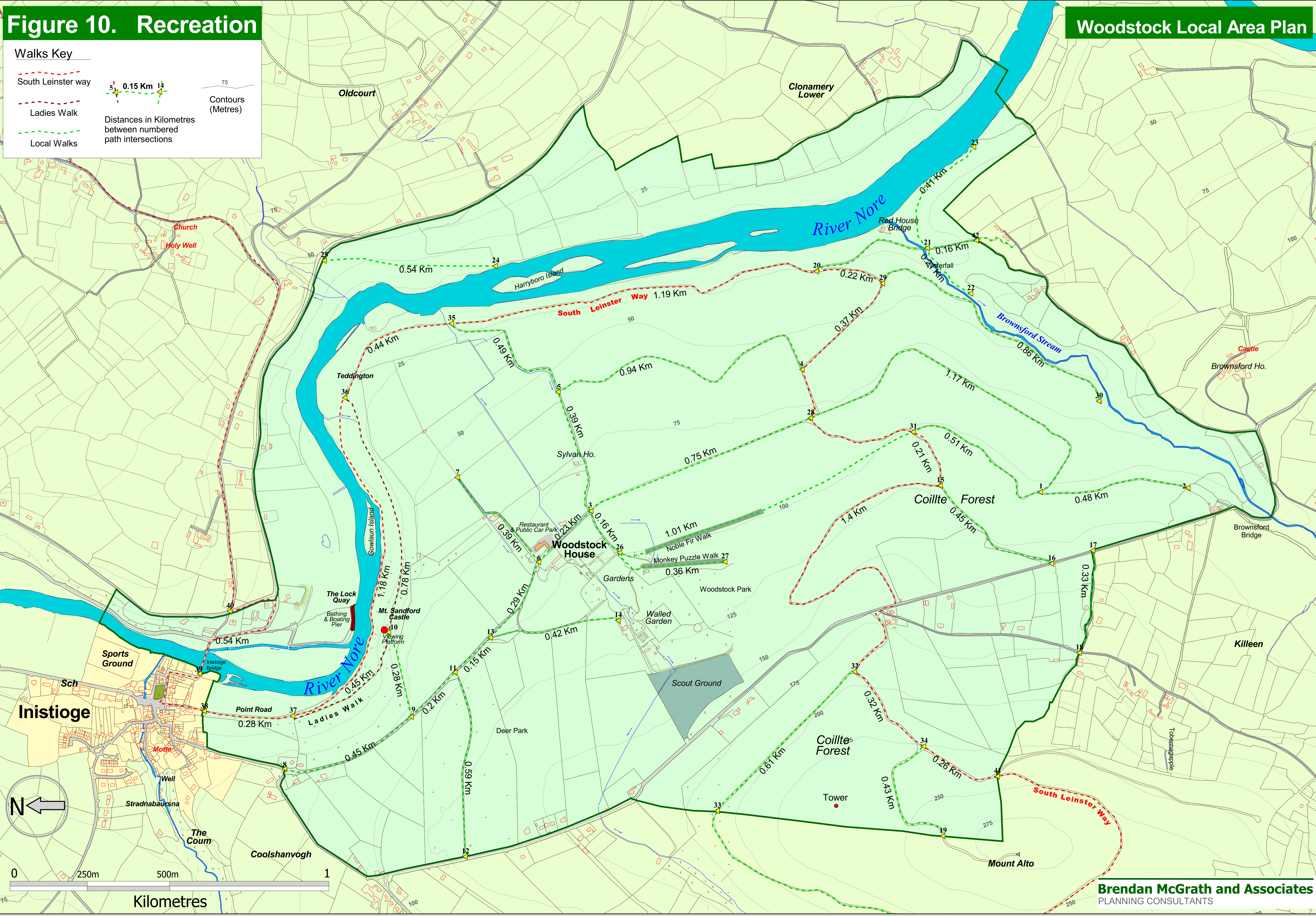
**Walks Key**

- South Leinster way
- Ladies Walk
- Local Walks

0.15 Km

Distances in Kilometres between numbered path intersections

Contours (Metres)





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## 5. Infrastructure and Development Capacity

### ***Introduction***

This section is concerned with the engineering and servicing issues related to existing and proposed development within the Woodstock LAP area. A key element of the brief for the LAP is the integration with existing services and also the provision of sustainable infrastructure, which is sympathetic to the sensitive setting and landscape character of the site.

### ***Topography and Environmental Setting***

West of the river the plan area slopes from west to east towards the River Nore and southwards towards the Brownsford Stream, a tributary of the Nore. Some of the slopes closer to the river and stream are steep and will restrict development in those areas (Figures 11 and 15).

Soils with the plan area are generally shallow. There are numerous mapped bedrock outcrops. The soils cover in the plan area comprises diamictons (tills) derived from Lower Palaeozoic sandstone and shales. There is a mapped sand and gravel deposit on the east bank of the River Nore. There is an abandoned sand and gravel quarry in this area. Along the River Nore soft alluvium soil is present (Figure 12).

The solid bedrock beneath the site is mapped as the Brownsford Member of the Maulin Formation. This is a metamorphic rock of Ordovician age and comprises grey psammities interbedded with dark blue-grey, semi pelitic schists and phyllites.

The Lower Palaeozoic rocks that underlie the site are generally impermeable and are considered to be aquitards, or unproductive rocks. Well yields within the plan area are known to be poor. Groundwater in the area either flows in the upper weathered zone, more permeable rocks of limited extent, fault or fracture zones and/or the overlying quaternary deposits. The flow is likely to be in localised systems with little continuity between them. The bedrock below the plan area is mapped as a locally important aquifer, (classification = LI) which is moderately productive in local zones only (GSI, 2002). Because of the shallow or absent soil cover in the area groundwater vulnerability is mapped as extreme under all of the plan area.

There is a mapped fault zone that crosses the site. This area should be the target for any further groundwater exploration investigations.

There are a number of small streams and ditches that cross the western part of the plan area. These generally flow from west to east towards the River Nore.

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Baseflow in streams is likely to be limited during drier periods and this needs to be accounted for in any rainwater harvesting schemes that may be proposed. One main ditch that crosses the site flows from Mount Alto. This ditch has a man-made stone lined base. Water in this ditch is currently stored in a reservoir above the tearooms, and supplies the garden area and tearooms. This scheme will need to be augmented if further development of the site occurs.

There is a mapped pond to the east of the Noble Fir Walk, and also some water features in the grotto area to the west of the Monkey Puzzle walk. The pond is currently largely overgrown. Some maintenance work is currently under way at the water features in the grotto.

The Brownsford Stream flows across the southern end of the plan area and discharges into the River Nore just below the red house.

## **Roads**

The road network of the plan area comprises:

- The Regional Route R700 (Kilkenny-New Ross). This is a relatively high trafficked Regional Road which carries both inter-town traffic and tourist traffic along the Nore valley. It is the main access route to and from Woodstock.
- The entrance to Woodstock is off the local road network. The cross-sectional widths of the road pavements are typical of Irish country roads and, while adequate for cars, are not sufficient to allow opposing HGVs to pass with ease. The countryside is hilly and the roads are characterised by steep gradients and sharp bends.
- The streets of Inistioge village are narrow and steep. Footpaths have not been provided due to the limited width available and on-street parking limits two-way traffic flow.
- Roads within the estate are narrow and generally follow the topography. The main access road is paved. The remainder are gravelled.

## **Existing Road Infrastructure**

### **Roads**

The Roads for which data is provided in the table overleaf are described on Figure 13.

It should be noted that the Local road from the R700 to the Main Gates of Woodstock (Road A) is particularly steep. It is also very narrow where it passes through the village and there are three right angles bends along its initial stretch. This impedes easy access to the estate and would be a constraint were visitor

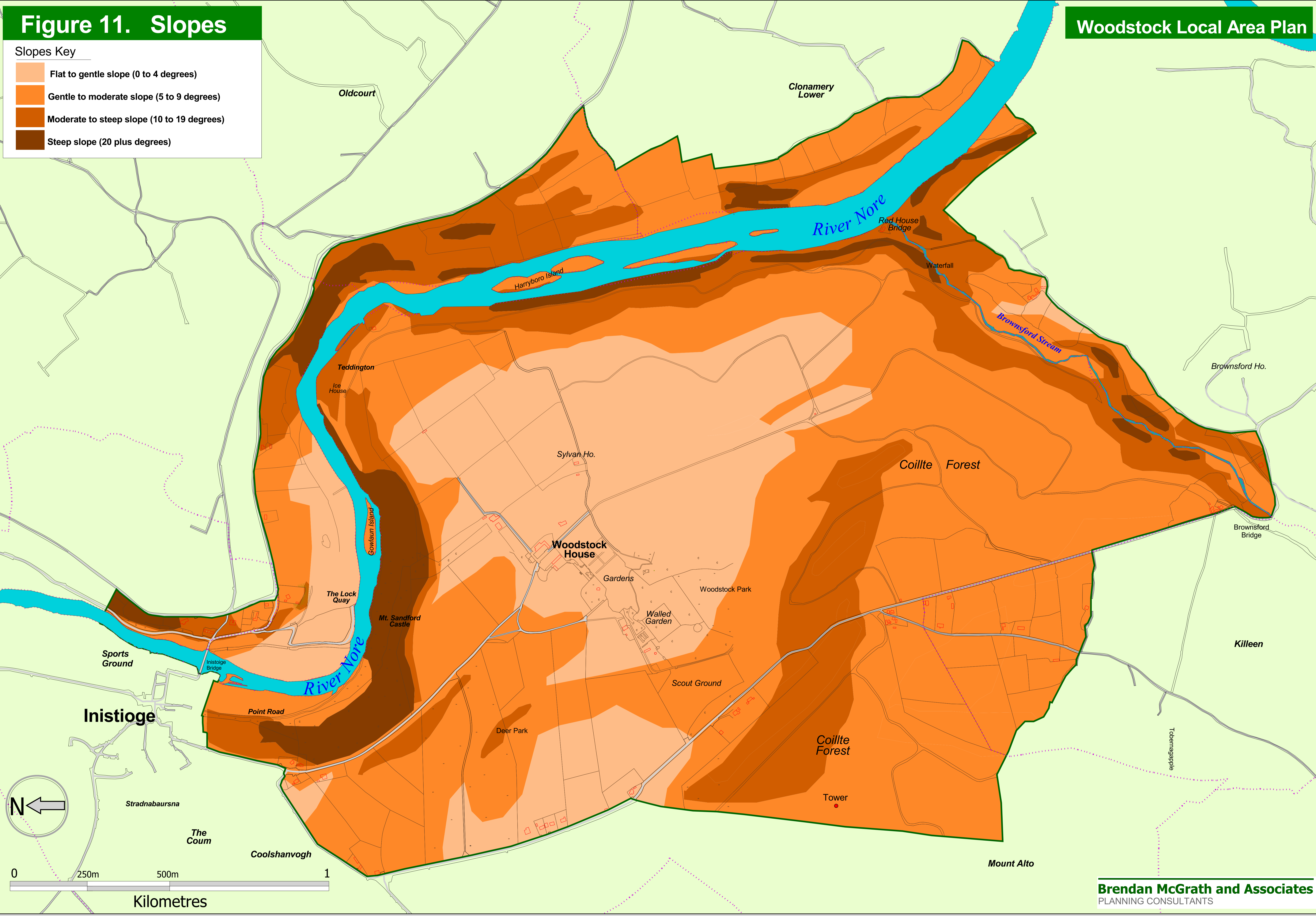
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numbers to increase significantly.

The R700 is the principal road link between Kilkenny and Wexford and carries a  
**Figure 11 Slopes**

# Figure 11. Slopes

**Slopes Key**

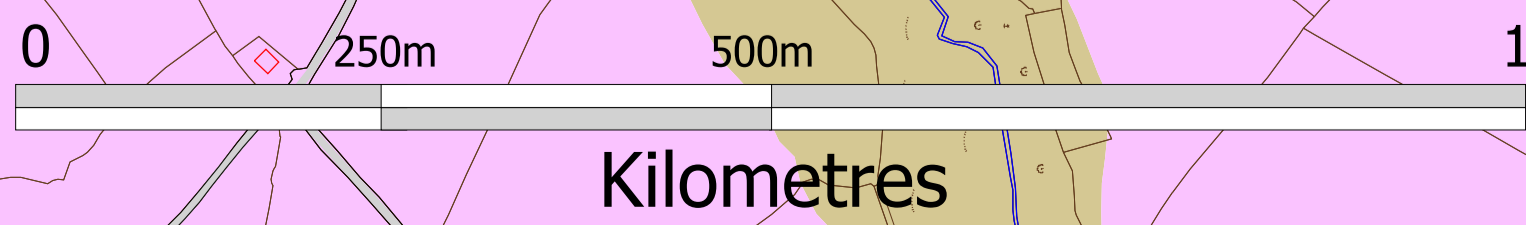
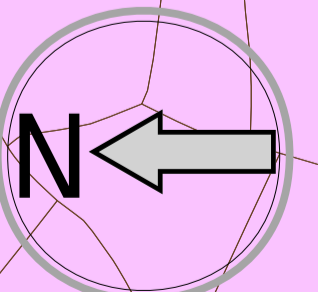
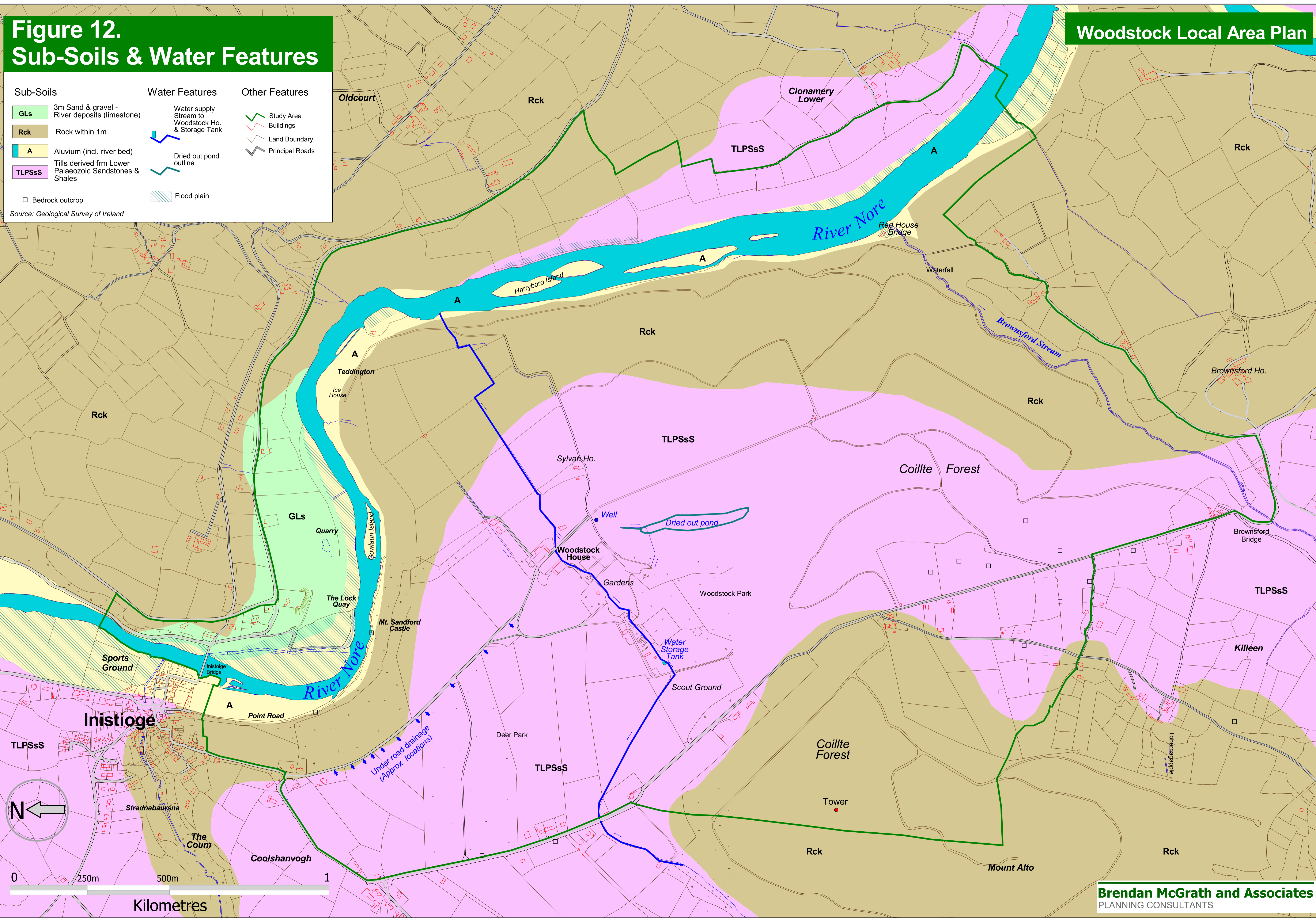
- Flat to gentle slope (0 to 4 degrees)
- Gentle to moderate slope (5 to 9 degrees)
- Moderate to steep slope (10 to 19 degrees)
- Steep slope (20 plus degrees)



# Figure 12. Sub-Soils & Water Features

Sub-Soils		Water Features		Other Features	
<span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> GLs	3m Sand & gravel - River deposits (limestone)		Water supply Stream to Woodstock Ho. & Storage Tank		Study Area
<span style="background-color: #D2B48C; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Rck	Rock within 1m		Dried out pond outline		Buildings
<span style="background-color: #FFFF00; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> A	Aluvium (incl. river bed)		Flood plain		Land Boundary
<span style="background-color: #FFC0CB; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> TLPSSs	Tills derived frm Lower Palaeozoic Sandstones & Shales				Principal Roads
	Bedrock outcrop				

Source: Geological Survey of Ireland



high volume of traffic relative to other regional roads in the area. From its junction with the N10 Kilkenny Ring Road to its junction with the N30 New Ross Relief Road the cross-section and alignment characteristics of the road remain surprisingly constant; the cross-section comprises of a single carriageway without hard shoulders and has an overall paved width of between 5m and 6m. There are frequent sharp changes in the direction of the horizontal alignment, the most pronounced being associated with man-made features such as Bennettsbridge Bridge, the rail bridge north of Thomastown, Brownsbarn Bridge, Inistioge Bridge and Ferrymountgarret Bridge. It is a road that requires continuous concentration by the driver. Opposing heavy goods vehicles sometimes have inadequate clearance to pass on bends and the Council has adopted a strategy of limiting such traffic. A condition was inserted in to the grant of permission to Arcon Mines, Galmoy that transport of its ores to New Ross port would not occur on the R700, the shortest route, but would instead occur on the national routes N10/N25, a significantly longer journey.

Within the study area at Inistioge the principal location of difficulty on the R700 is at the bridge. Its width, parapet to parapet, is insufficient to allow opposing heavy goods vehicles to pass; there is no footpath on the bridge (this is a factor which could limit development opportunities on the east bank of the river) and the swept path of a heavy vehicle turning the acute bend on the immediate western end of the bridge covers the complete carriageway, requiring other vehicles to stop and often to reverse. Repairs to the parapet walls attest to relatively frequent accidents at this location. Junction sight distances of minor roads forming intersections with the R700 are generally below standard within the study area. In general, the capacities of access junctions and road links will not be a problem on the R700. The issue will be the provision of geometric layouts that comply with road design standards.

It is the policy of the Council to exercise control over new developments requiring direct access to the regional roads of the County by restricting new access points to a minimum to preserve their strategic function and in the interests of traffic safety.

Road	Road Number	Name	Status	Paving	Carriageway width (m)	Vertical Gradient (%)	Suitability for various classes of vehicles
A	471 (LP)	Woodstock Rd	Public	Paved	5 m	12%	All vehicles but gradients and horizontal curvature restrict flow
B		Woodstock Access	Private	Paved	3.5 m	5%	Suitable for one-way flow of all vehicles. Two-way flow for cars OK with passing bays. Two-way flows of larger vehicles problematic
C	471 (LP)	Coolshanvogh Rd	Public	Paved	5 m	7%	All vehicles
D	471 (LP)	Mount Alto Rd (N)	Public	Paved	5 m	5%	All vehicles
E		River Road (N)	Private (1st 100m is Public)	Unpaved	3 m	6%	One-way flow of cars only and with difficulties
F		River Road (S)	Private	Unpaved	3 m	10%	One-way flow of cars and agri machinery only and with difficulty
G		Coillte Roads	Private	Unpaved	3 m	Varies	Varies. General one-way flow of cars, agri and forestry vehicles with difficulty for cars
H	682	Mount Alto Rd (S)	Public	Paved	5 m	5%	All vehicles
I	976	Brownsford Rd	Public (1st 900m - remainder private)	Paved	3 m	5%	One-way flow of car and agri vehicles
J	431A	Quay Access Road	Public	Paved	3m	<5%	One-way flow of car and agri vehicles

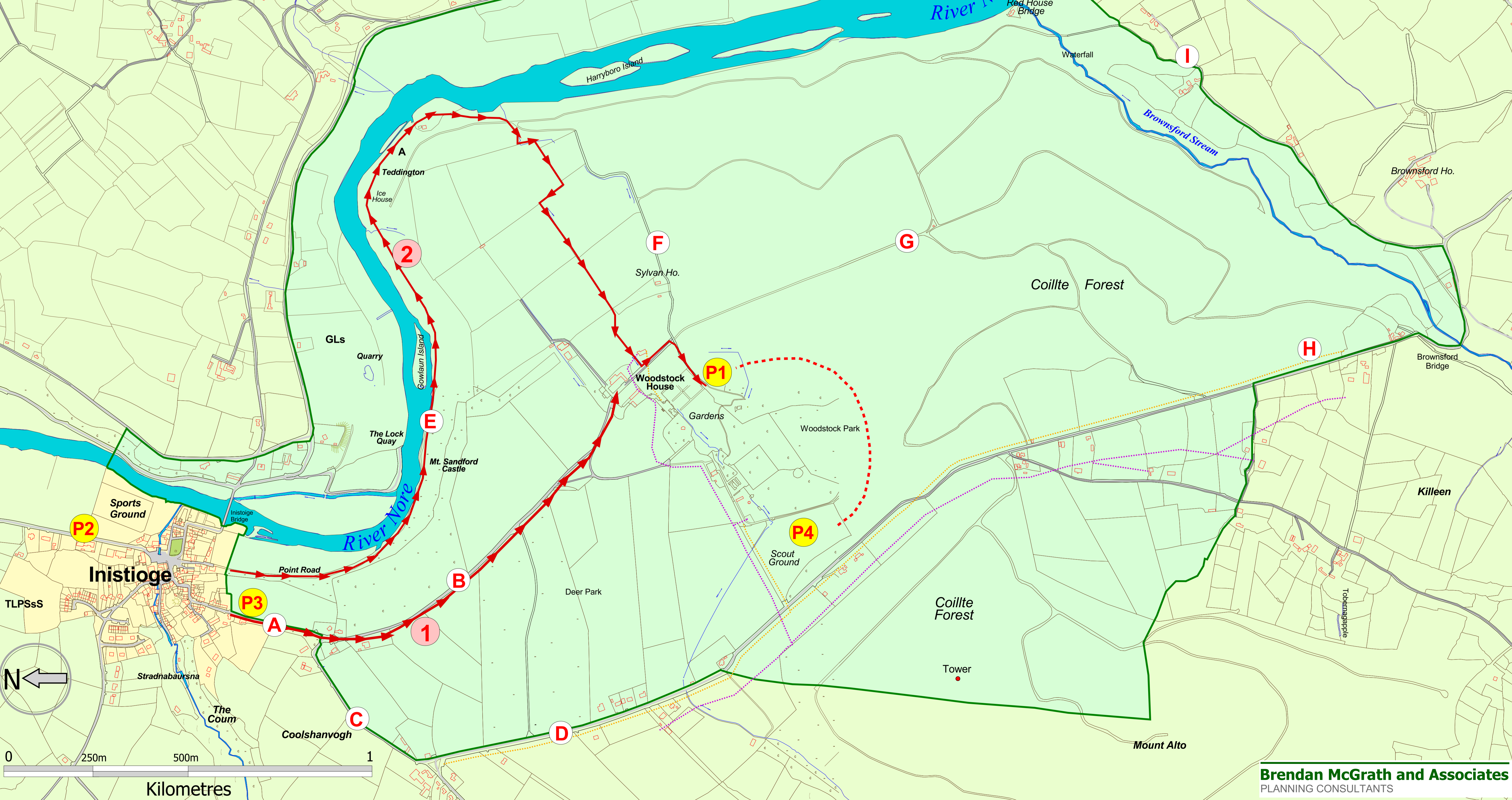
Table Existing Road Network

LP = Local Primary  
 LS = Local Secondary  
 LT = Local Tertiary

**Table 5.1 Roads**

# Figure 13. Roads Infrastructure

<p><b>Pedestrian Access</b></p> <p> Principal access</p> <p> Access via river paths</p> <p><b>Roads Network</b></p> <p> See Roads Network table in text</p>	<p><b>Parking</b></p> <p> Existing principal carpark. Paid parking €4 per visit.</p> <p> On-road parking in Inistioge village</p> <p> Used for occasional 'Event' parking</p> <p> Possible site for: a) Set-down parking b) Coach parking c) Event parking</p> <p> Link by road P4 to P1</p>	<p><b>Other Features</b></p> <p> Study Area</p> <p> Buildings</p> <p> Land Boundary</p> <p> Principal Roads</p> <p> ESB Connection</p> <p> Eircom Connection</p>
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0 250m 500m 1

Kilometres



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## Junctions

All junctions are at-grade priority junctions. All are geometrically deficient. In particular the access junction at the Main Gates of the Estate is well below standards. Particular problems with the layout included:

- Lack of visibility for (and of) right-turning traffic.
- Lack of stopping sight distance at the junction location and its co-incidence with sharp horizontal curvature.

There is very little right-turning traffic, however, since almost all of the visitors approach from the R700 direction. Conflict is therefore reduced and the junction operates generally without incident at its current traffic loading. The gates are narrow and allow one-way flow only. However they are offset from the road in excess of 30 m and therefore vehicles can queue in the access mouth to allow priority to an exiting vehicle.

## Parking

Inistioge village has on-street parking which is generally informal in layout. This parking is free and allows access on foot to the Estate.

Parking for 100 or so vehicles is provided adjacent to the house and gardens within the Estate. This is paid parking with a fee, currently set at €4, payable on exit. Parking for events has occurred in the field situated at the northwest of the Main Gates.

The locations of these parking areas are shown of Figure 13.

## Cycle tracks

There are no dedicated cycle facilities either within the park or on the roads outside. There is no evident warrant for cycle facilities external to the park. Cycling should be encouraged within the park trails.

## Pedestrian facilities

Pedestrian can access the Estate from Inistioge by following the riverside trail or by walking the Local Primary road 471 to the main vehicular access and using the estate access road thereafter. The riverside walk is an attractive pedestrian link between the village and the demesne though it suffers from poor signage, is unpaved, is prone to flooding and could not be considered safe outside daylight hours. Many pedestrians take the public road and, since there are no footpaths, must be cautious of approaching traffic. Within the Estate there is no separation of vehicles and pedestrians. The access road is reasonably straight and cars can achieve relatively high speeds on a road that is shared with vulnerable road users and where cross-sectional width is limited. This is a current problem. Pedestrians within the gardens are well catered for but the gradients are likely to be taxing on the elderly. Pedestrian access routes are shown on Figure 13.

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## **Transport Modes**

These are an estimated 25,000 vehicular trips to the estate gardens each year. It is not known what the composition of that vehicle stream is but it will be predominantly car traffic.

### **Car trips**

The layout of the Estate suits access by car. The road widths allow cars to access readily and the access road is paved throughout. Points of conflict occur at the following locations:

1. Inistioge: the available width is insufficient to allow 2 way travel comfortable due to on-street parking. One traffic stream must yield and re-starts are difficult due to the steep gradients.  
(Parking Management Plan)
2. Estate Gates: Priority is unclear at the gates  
(Local self-enforcing (but signed) one-way system)
3. Access Road:
  - The width does not allow two cars to pass.
  - (Use passing bays)
  - Sight distance poor on some bends and excessive in other areas.
  - (Shorten sight distances by planting in some areas and improve sight distance by removing vegetation in others)
  - Pinch point or approach the car-park  
(Local self-enforcing (but signed) one-way system)

### **Bus / coach trips**

Bus and coach trips do not form a large part of the current vehicle numbers. If significant volumes of bus and coach traffic are expected then widening of the access road to 2-lane would be warranted. Dedicated parking bays within the car park with access to a reasonable turning circle free of cars would be required. Coach travel through Inistioge village is quite difficult and would pose a constraint to the growth of coach trips to the Estate.

### **Heavy goods vehicles**

Access is required by Heavy Goods Vehicles for the following functions:

- the business of forestry,
- the business of agriculture,
- deliveries to the gardens.

Access is generally via other forestry roads off the public road network (the back road to New Ross). Segregation of HGV traffic from other road users is recommended as much as possible.

Campervans / motorhomes and cars towing caravans would use the tourist entry routes.

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### **Cycle trips**

Gradients are the greatest impediment to access by bicycle and the climb from Inistioge is severe enough to be of interest only to proficient cyclists. General access by bicycle is therefore not likely to be popular. Dedicated cycle facilities are not required on the access to the estate but can be shared with pedestrians.

### **Pedestrian trips**

The pedestrian linkages between Inistioge and Woodstock have been described above. Many people, both local and tourist, walk between both centres. Within the village the provision of footpaths would be difficult due to the restricted road width available but from the outskirts of the village to the entry of the estate a footpath can be provided, though it will be in excess of the recommended longitudinal gradient. From the access of the Estate to the car-park pedestrians share the same right-of-way as motor vehicles at present. Separation of vulnerable road users from motor vehicles would improve the journey 'experience' of both categories of user and would be beneficial to safety.

### **Transport Linkage**

The linkages that are provided by the various roads and transport forms and associated roads are represented graphically in the attached Figure 13.

The principal question raised by this figure is the amount of motor connectivity required between various elements within the Estate, especially the need or otherwise, for a vehicular link between the house/gardens and the river.

### ***Traffic Flows***

No data has been provided on traffic flows and it is unlikely that much, if any, data has been collected.

Flows on the R700 are likely to be in the region of 3000 AADT.

Using the quoted figure of 25,000 vehicle trips per year to the gardens the AADT on the access road would be 150, though peak daily flows would be much greater. The AADT of the park roads would be less than 100.

No information is available on pedestrian or cycle flows.

**Chart 5.1 Transport Links**

## ***Road Design***

In considering appropriate road design standards there are two distinct areas of consideration:

- Public Roads.– National Road design standards would apply to their design.
- Estate Roads.– These need not be designed to the standards of public roads and an appropriate standard would be “Park Road Standards” published by the US National Park Service .

Use of the design standards listed above for the intended roads and tracks will help achieve an aesthetic design. Those travelling within the park, be they walkers, cyclists or motorists, should enjoy the experience of travelling through the park and the design of the travelled route can help in this process by:

- opening up vistas to the traveller,
- bringing the traveller to features or areas of note within the park,
- providing a road whose curvature blends with the landscape,
- avoiding conflict points of alternative modes of transport,
- providing certainty of driving experience by use of a road layout with a consistent level of service.

The design of roadside furniture should be consistent within the park and on the public roads on its outskirts. The materials and ‘feel’ of the designs should be sympathetic with a parkland estate and should not be of a type used within an urban or high-speed road setting.

Use of general roadside lighting is not recommended unless it is intended that the park be used consistently during periods of darkness. Lighting should be provided at the entrance gates and at the car park to provide for occasional night time events.

If other ‘round-the-clock’ uses are expected then lighting will be required in those specific areas.

Signage design should be sympathetic to the parkland setting. The design of signing should be consistent within the park area both on the internal roads and the external public roads contiguous with the park.

This will ‘define’ the area of the Woodstock Park experience and will integrate its various elements, the Gardens, trails, the River Nore, the village and the walled estate.

## ***Time Dynamics***

It would be expected that visitor numbers will increase in time and background traffic levels will grow. Areas of traffic conflict will therefore extend and intensify with time.

On a daily basis the park hours for park visitors do not correspond with the peak times for general travel on the R700 or the local roads. This situation is unlikely to alter. Similarly peak travel to the park is at the weekend when commuter traffic is not present on the local and regional roads.

Seasonality is a major characteristic of traffic demand. Summertime will remain the peak visiting period, and all infrastructure will need to be open at that stage. During the winter some trails (e.g. the track beside the river which is prone to flooding) could be closed. The design hour for roads infrastructure will be the seasonal peak hour.

In the initial stages of peak development access by car through the park could be allowed with parking locations reflecting this ease of access. As visitor numbers increase access to all park areas by motor vehicle could be restricted and parking moved to the periphery.

The N9 High Quality Dual Carriageway (Kilcullen to Waterford) is in advanced planning. This interurban route will, when constructed, provide a dual carriageway to motorway standard from Dublin to Waterford. The EIS/CPO has been approved by An Bord Pleanála for the route and acquisition of land for construction has commenced. The Carlow Bypass section is now being tendered and is expected to open in 2009. The complete route is due to be open by 2012. Accessibility of the Inistioge area will be improved and travel times from Dublin and Waterford will be significantly reduced. The upgraded N9 network would not be expected to divert traffic onto the R700 and no increase is expected to arise directly from that source; however the decreased cost of travel attributable to the improved road network combined with an enhancement of the attractiveness of Woodstock could induce significant volumes of traffic onto the R700 locally at Inistioge.

## ***Water Supply***

Any plans to complete further development in the plan area will require an upgrading of the existing water supply network/system or the development of on-site water supplies.

The Inistioge town water supply network is shown on Figure 14. A spur of this scheme passes the front gate of the Woodstock estate. The scheme is at capacity at present and there are no immediate plans to augment the system/supply.

Apart from houses on the northern end of the plan area, most of the single houses in the plan area are supplied by on-site water wells. These generally have poor yields and tend to run dry during drier periods.

The garden supply is currently using a rainwater-harvesting scheme, which was described above. The gardens project has also drilled a groundwater exploration well on the southern side of the garden carpark. No details of this well are available yet.

Potential Sources of water at the site include the following:

- Groundwater;
- River/stream abstraction;
- Rainwater harvesting; and,
- An augmented town supply.

The water treatment requirements, storage requirements, distribution and metering system for any upgraded system should be considered carefully and, if possible, an attempt should be made to integrate this new system with the existing town supply.

#### Wastewater

Any plans to complete further development in the plan area will require an upgrading of the existing wastewater network/systems or the use of sustainable on-site systems.

The existing Inistioge town wastewater collection and treatment system is shown on Figure 14. The existing treatment system only has primary treatment with a discharge to the River Nore. The primary tank is on the eastern site of the River Nore (Refer to Figure 14). The scheme is at capacity at present and there are no immediate plans to upgrade this plant.

In general single houses in the plan area have on-site wastewater treatment systems with discharge to ground via percolation areas. Given the extremely vulnerable nature of the groundwater within the plan area these existing wastewater discharges need to be considered carefully when drilling new groundwater investigation or supply water wells.

The gardens project currently has a septic tank near the tearooms. This system will need to be upgraded and a percolation area or discharge to the river will be required.

Any future potential development at the site should be controlled so that full compliance with EPA wastewater manuals (Treatment Systems for single Houses (EPA, 2000), and Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (EPA, 1999)) is achieved. Any proposed discharge to the river or to groundwater (when >5 m<sup>3</sup>/day) should be licensed under the Water Pollution Regulations 1978-1999.

Depending on the scale of any future development, the required wastewater treatment and disposal options for wastewater generated within the plan area are outlined as follows:

- Continue to use on-site treatment systems for single houses/smaller developments;
- Upgrade of existing Inistioge wastewater treatment plant to accommodate new development within the plan area; or,
- Stand alone municipal collection and treatment system for Woodstock LAP area with discharge to ground/river via constructed wetland.

In order to provide a sustainable wastewater system for the plan area, it should

be possible to actively encourage the use of “front of pipe” solutions to separate wastes at source to reduce the biological load on any municipal plant. Examples include urine separation, faecal matter separators, and the provision of grease traps for domestic and commercial buildings.

### ***Surface Water Drainage***

Due to the impermeable nature of the underlying bedrock, the control and use of surface water runoff at the site will be an important element of Local Area Plan.

In order to reduce flood risk in the River Nore, source control measures should be used to prevent flooding and improve water quality before discharge. These include sustainable drainage systems (SUDS) systems such as storage and attenuation structures, attenuation ponds/constructed wetlands, swales, filter drains and green roofs.

Due to the lack of water resources or supply network around the plan area, it may be possible to use rainfall runoff and rainfall harvesting schemes to provide supplies for non-potable demands.

The following systems should be considered to reduce water consumption/demand:

- Water butts for collection of roof runoff. This water could be used in the gardens project area or for flushing toilets;
- Low flush and very low flush WCs within the garden project area;
- Grey water recycling.

### ***ESB and Telecom Services***

Existing ESB and Telecom services in the plan area are shown on Figure Y. Any future development will require extension of these services. Completing services runs in underground service trenches will limit any potential visual impact.

### ***Development Constraints***

The main development constraints within the plan area are summarised as follows:

- a. The extreme slopes in some areas of the site;
- b. The existing single houses and their on-site services (wells and septic tanks/percolation areas);
- c. Existing on-site streams, ditches and road drainage pipework;
- d. The floodplain of the River Nore and its designation as an SAC
- e. Road access to the site;
- f. South Leinster Way walking route; and,
- g. Existing surface service runs.

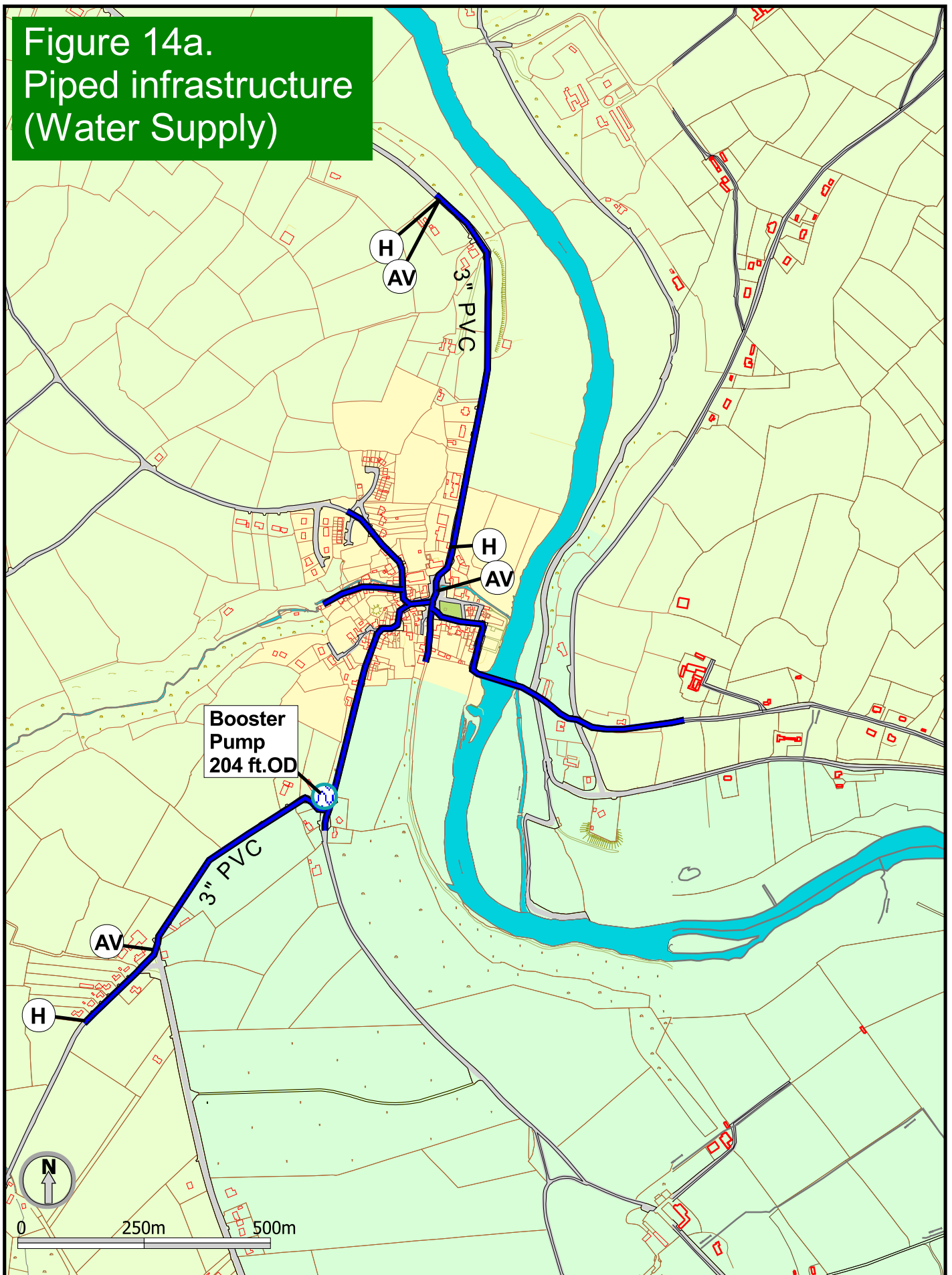


All of these features are shown on Figures 13 and 14.







### ***Conclusions***

Existing constraints have been discussed and some sustainable proposals for development within the plan area have been proposed. The key issues for the plan area will be the provision of adequate water and wastewater services and the integration of these with existing services for Inistioge Village.

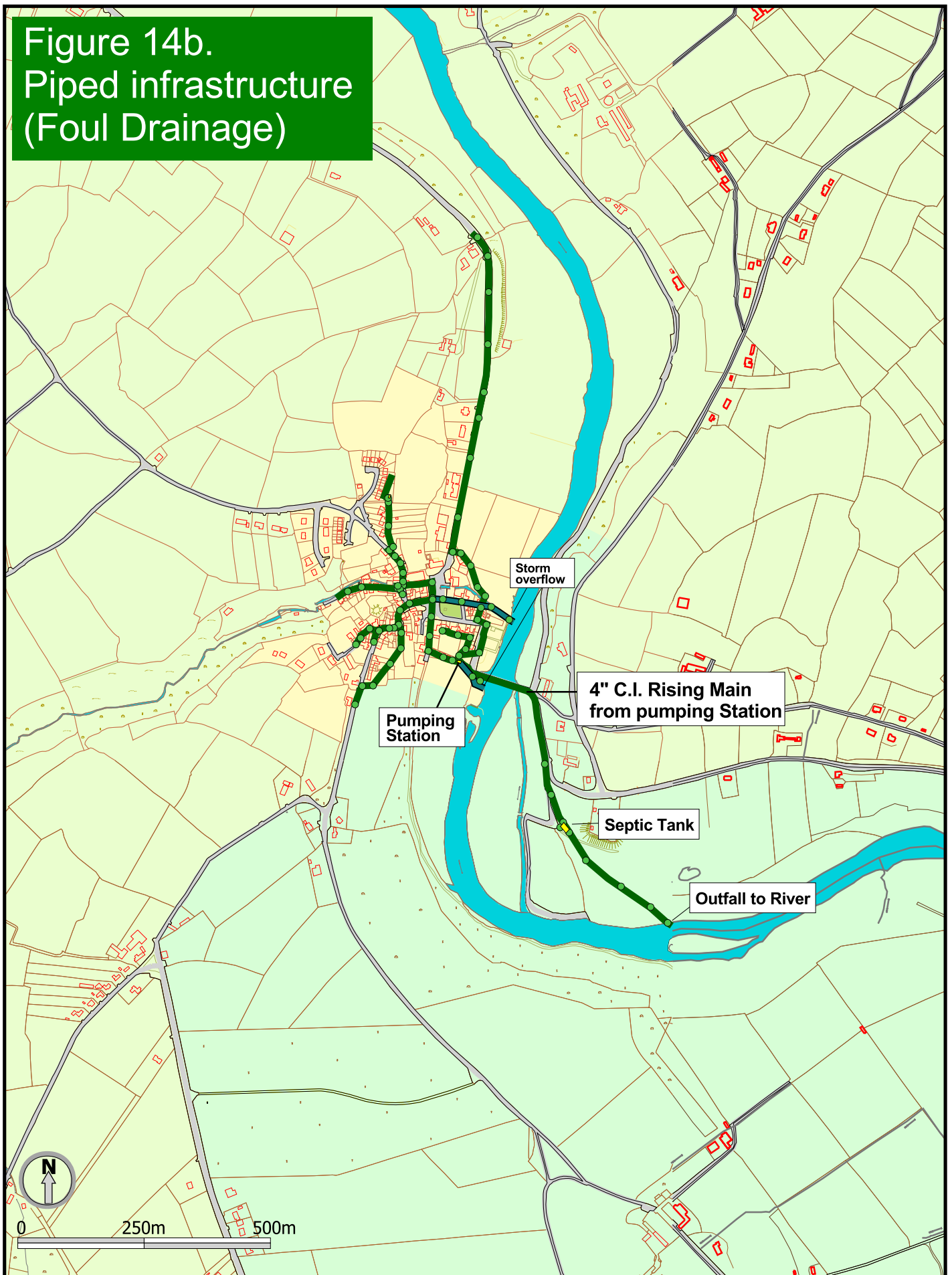
**Figure 14a.**  
**Piped infrastructure**  
**(Water Supply)**








**Key**

-  Water Main
-  Booster Pump
-  Inistioge Village (Development Area)
-  Woodstock LAP Area
-  (H)
-  (AV)









**Figure 14b.  
Piped infrastructure  
(Foul Drainage)**

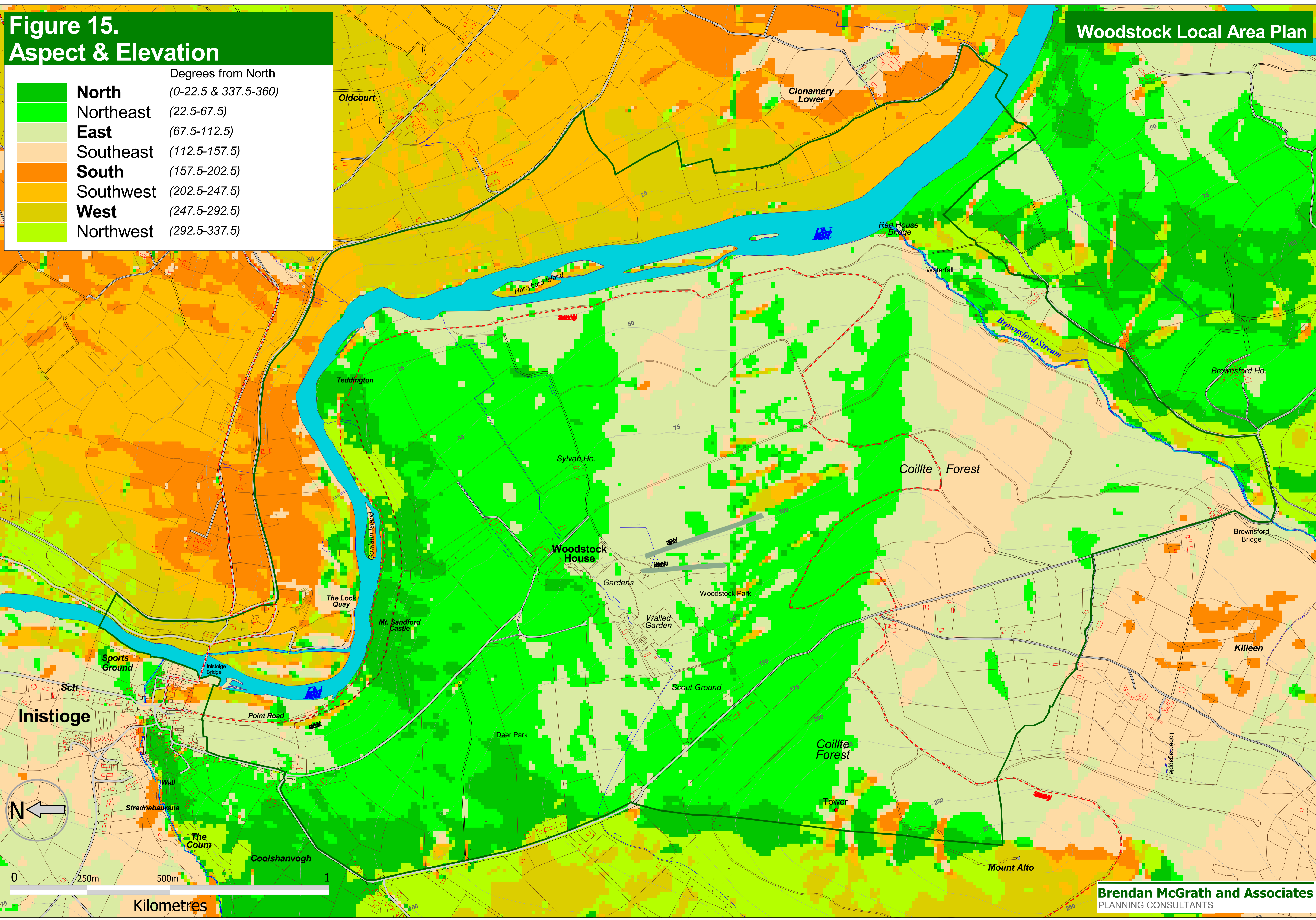


**Key**

-  Water Main
-  Surface Water Drainage (Storm Overflow)
-  Man Hole
-  Inistioge Village (Development Area)
-  Woodstock LAP Area

**Figure 15.**  
**Aspect & Elevation**

	Degrees from North
	<b>North</b> (0-22.5 & 337.5-360)
	<b>Northeast</b> (22.5-67.5)
	<b>East</b> (67.5-112.5)
	<b>Southeast</b> (112.5-157.5)
	<b>South</b> (157.5-202.5)
	<b>Southwest</b> (202.5-247.5)
	<b>West</b> (247.5-292.5)
	<b>Northwest</b> (292.5-337.5)



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## 6- Economics

### ***Introduction***

The attractive landscape around Inistioge and the unspoilt character of the village itself, makes the area a popular destination for both domestic and overseas tourists. The area is favoured for overnight stays, mostly of short duration, due to the presence of some very pleasant guest houses and a few good restaurants. It is also a popular destination for anglers fishing the River Nore. In addition, Inistioge is a regular stopping off point for visitors touring the South-East and for coach parties. The village complements other tourist attractions in County Kilkenny, including Kildare Castle, Jerpoint Abbey and Mount Juliet.

Although Inistioge is an attractive place to visit, it currently lacks a distinct tourist attraction that could draw more visitors and encourage them to stay longer. It is partly for this reason that Kilkenny County Council has invested over €1.6m in the ongoing restoration of the gardens. An additional €1.4m has been committed by Failte Ireland and this will be accompanied by further matching funds from the local authority. The gardens were planted with great enthusiasm by Louisa Tighe in the late nineteenth century. Although they have been long abandoned, they have the potential to be restored to their former glory and even to rival other similar demesnes such as Powerscourt in County Wicklow and Florencecourt in County Fermanagh. A portion of this investment has also been used to open a café and toilets, an important facility in encouraging visitors to extend the duration of their stay on the demesne. A privately owned restaurant has also just opened beside the entrance to the public car park. However, only the façade of the original house remains, having been burnt to the ground by the IRA in the nineteen twenties after serving as a billeting for the Black and Tans.

As well as the public investment in the demesne, Coillte, who lease a large area of the estate from the Tighe Family, have plans to jointly establish a spa type resort on the property with the assistance of private capital investment. Such a resort would have the potential to attract a much larger number of overnight stays than is currently the case. The accommodation, restaurants and bars that typically comprise spa resorts would likely encourage guests to remain on site.

If planned appropriately, any such facility would have the capacity to complement the public investment that has been made in the demesne. The viability of the resort would, in turn, also benefit directly from this public investment. Likewise, there is the potential for the resort to contribute to the restoration of the estate either directly, or simply through visitor entrance fees.

Nevertheless, the proposed resort represents one of a number of options for economic development in and around Inistioge. These could include the development of holiday homes on the Coillte estate or elsewhere, the development of an equestrian centre, or possibly, given recent investments elsewhere, the development of the forest estate as a golfing resort.

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## ***The Community of Inistioge and its relationship with Woodstock***

The village of Inistioge benefits from its role as a tourist destination and stopping-point. This is evident in the presence of four cafes or restaurants, three pubs, a hostel, holiday apartments, a small museum and an antique shop. Other village enterprises also benefit from the tourism trade, if less directly. Outside of the village, there are a good number of guest houses and bed and breakfasts who cater for those people who choose to stay for more than one day. The village and demesne are also located on the South Leinster Way.

Tourist activity creates revenue and employment for the local economy and for the county. It also provides a direct rationale for continued sensitive local planning and the preservation of the village's historic features. Local people benefit too from the same facilities, some of which might cease to be viable in a rural area without the tourist income. They also benefit from the fact that the heritage and well-preserved nature of the village, as well as the attractiveness of the surrounding countryside, contribute to a local sense of identity. Both are important factors in attracting new development and in-migration to the community. Nevertheless, there is a degree of resentment towards the more overt signs of affluence in the area from those who have not benefited from the tourism element. There is also strong pressure from landowners for new planning permissions.

The wider area around Inistioge is lightly populated and rural. Inistioge itself has a population of just 709 persons, while the nearest nineteen EDs in the Thomastown and Ida rural areas together have a population of 6,361. The area remains heavily dependent on agriculture which, as elsewhere in other rural areas, has been declining in terms of its economic and employment contribution to the local economy. While Kilkenny town has prospered in recent years, other regional centres such as New Ross have suffered from relative economic decline.

The demographic data below indicates that County Kilkenny does not have markedly different labour position to that of the state, although a comparison with the neighbouring, and more prosperous, county of Kildare, does indicate that the proportion of the adult population at work is less in County Kilkenny. Evidently, County Kilkenny also has a higher proportion of people involved in agriculture and other primary industries than would be the case for County Kildare or for the state as a whole. The county also has a higher proportion of people involved in the hotel and restaurant sector, but fewer people in the communications, finance and business category.

Participation rates in the rural area around Inistioge will inevitably be lower, because of out-migration to areas for greater employment opportunities and due to the higher relative age of the population typically found in rural areas and the proportion of people engaged in home duties.

**Table 6.1 Relative population of Inistioge**

	Co. Kilkenny	Kilkenny & environs	Carlow & environs	New Ross & environs	Thomastown	Inistioge
2002	80,339	20,735	18,487	6,537	1,600	266
1996	75,336	18,696	14,979	6,147	1,581	260
% change	6.6%	10.9%	23.4%	6.3%	1.2%	2.3%

**Table 6.2. Labour force and employment status**

Location	Total over 15 years	Labour force				Unemployed	Total not in labour force	Labour force particip. rate
		Total labour force	in work	at first job	Looking for first job			
Co Kilkenny	62,260	35,834	33,085	398	2,341	26,436	57.5	
<b>Percent of total &gt;15</b>								
Co. Kilkenny	62,260	57.6%	53.1%	0.6%	3.8%	42.5%	57.5%	
Co. Kildare	125,035	63.4%	59.5%	0.6%	3.3%	36.6%	63.4%	
State	3,089,775	58.3%	53.1%	0.6%	4.5%	41.7%	58.3%	

**Table 6.3 Employment by broad industrial group**

Location	agriculture & primary	Manufacturing	Construction /utilities	Wholesale/retail	Hotels & restaurants	Transport, Finance & commerce	Public/social
Co Kilkenny	3,809	4,940	3,823	4,462	1,835	4,092	8,448
<b>Percent of total &gt;15</b>							
Co. Kilkenny	10.7%	14.9%	11.6%	13.5%	5.6%	12.4%	25.5%
Co. Kildare	4.7%	16.3%	11.0%	14.0%	3.9%	18.6%	25.8%
State	6.3%	14.9%	9.8%	13.4%	5.0%	19.4%	25.1%

**Table 6.4 Socio-economic groups**

Location	Employer/ Professional	Non- manual	Skilled manual	Semi- skilled Manual	Unskilled	Own account	Agricultur e
Inistioge %	27.5%	13.1%	16.6%	8.1%	5.1%	14.0%	15.5%
Co Kilkenny %	27.0%	15.9%	11.6%	7.2%	5.1%	5.5%	12.5%
State %	30.5%	17.1%	10.2%	7.9%	4.9%	4.9%	6.7%

Note: excludes "unstated".

The restoration of Woodstock and any complementary tourism investment that this might encourage, has the potential to provide new employment in the local area, particularly in the hotel/restaurant sector, but in services too.

As it had been formerly abandoned, the contribution of Woodstock Demesne as a complementary tourist destination to Inistioge itself was, until recently, modest. More committed tourists would find their way to the demesne which is located over one kilometre outside the village. Others would simply have restricted themselves to short walks along the river. However, local people for whom the site provides an important recreation amenity would have been conscious of the demesne's existence. As such, it is an economic asset which makes a contribution to local welfare or quality of life. This contribution can potentially be quantified and is likely to be significant.

This contribution of the demesne, both to the community's economy and to local quality of life, would have been enhanced by the recent investment that has been made in restoration. One problem is that access to the demesne is confounded by the steep hill that has to be climbed by any would-be visitor. However, local people and most tourists have the option of using the new car park. Many overseas visitors to Ireland either bring or hire a car, although younger backpackers staying at the hostel could be deterred by the long walk. Coach parties can also be accommodated by the car park. Altogether there has been a gradual increase in visitor numbers as evidenced by gate receipts for 40,000 cars in 2004. There has also been a good flow of coaches over the summer.

Although much accommodation is found outside of the village, the pleasantness of Inistioge and the facilities it contains, will ensure that most visitors to the demesne also visit the village. In doing so, the investment in the demesne is certain to be complementary to the economic development of Inistioge. Jobs associated with accommodation, restaurants and tours will contribute to the diversification of local employment opportunities.

### ***National Tourism and Tourism Revenue***

Tourism statistics provide a baseline indication of the numbers of future tourists



and the basis through which to project future economic benefits. Indeed, the largest proportion of domestic and overseas tourist visits are made to attractions falling into the category of Gardens/Wildlife/Parks (approx. 23%), closely followed by the Historic sites and Monuments (approx. 22%). The former category is rather misleading, including as it does such popular attractions as Dublin Zoo and the Fota Wildlife Park. Nevertheless, a high proportion of visitors listed historic gardens as being amongst the key features that attracted them to Ireland, principal among which are Powerscourt and Mount Usher. Cultural and historical sites are of particular interest to American visitors (63%), although are rated almost as highly by visitors from Mainland Europe. On average, 78% of overseas tourists visit historic houses or castles during their stay (Bord Failte 2001).

As a whole, however, tourist numbers have been static. After good growth during the 1990s and late 1980s, tourism in Ireland would appear to have passed a watershed in that growth has slowed substantially, particularly outside of Dublin. Visits from Mainland Europe have been increasing, but those from the UK fell by 1% in 2004. The numbers of American visitors rose during the same year, but are well below their record levels of five years previously. Visitors from other long-haul origins have growth substantially, but from a very small base.

Nevertheless, over 6.4 million overseas tourists came to Ireland in 2004. Purchases of goods and services by overseas visitors amounted to €3.4bn in 2004 (including visitors from Northern Ireland), while domestic tourism contributed €1.04bn to the spending (Failte Ireland, 2005). Most expenditure is made on food and drink (33%), followed by accommodation (28%), shopping (18%), transport (9%) and sightseeing/tours (4%) (Failte Ireland, 2005). Altogether tourism contributes 3.9% of GNP. In addition, capital investment in tourism infrastructure contributes almost a further 1% to GNP. Moreover, one of the assets of tourism is that it is a very effective driver of regional economic growth, such that, while total direct international and domestic tourism spending as a percent of regional value-added is only 2.6% in Dublin, this contribution is 4.6% in the South East (Irish Tourist Industry Confederation, 2002).

Estimates of economic contribution must also take into account the multiplier effect of tourist expenditure. This occurs through the cumulative impact that such expenditure has as it reverberates through the economy. As well as the direct expenditure effect, there is also an *indirect* expenditure effect due to purchases on inputs to the tourism sector, as well as an *induced* effect due to the expenditure associated with earnings from the sector. This multiplier effect has been estimated at up to 1.8, which implies that each €1 of spend generates a total of €1.80 in expenditure. Although a lower net figure of unity has been estimated by Deane and Henry (1993) who are typically quoted in relation to the Irish tourism sector.

Employment multipliers are higher. Deane and Henry estimated that the direct employment effect of tourism expenditure is 7.6 jobs for every million euro spent (or the 9.6 jobs they estimated for each £1mn). In addition, an estimated 4.5 jobs are created through the multiplier effect of this spending. Tourism is a labour intensive sector that employs close to 231,000, or 152,000 is employment in licensed premises in excluded (8.4% of the workforce).

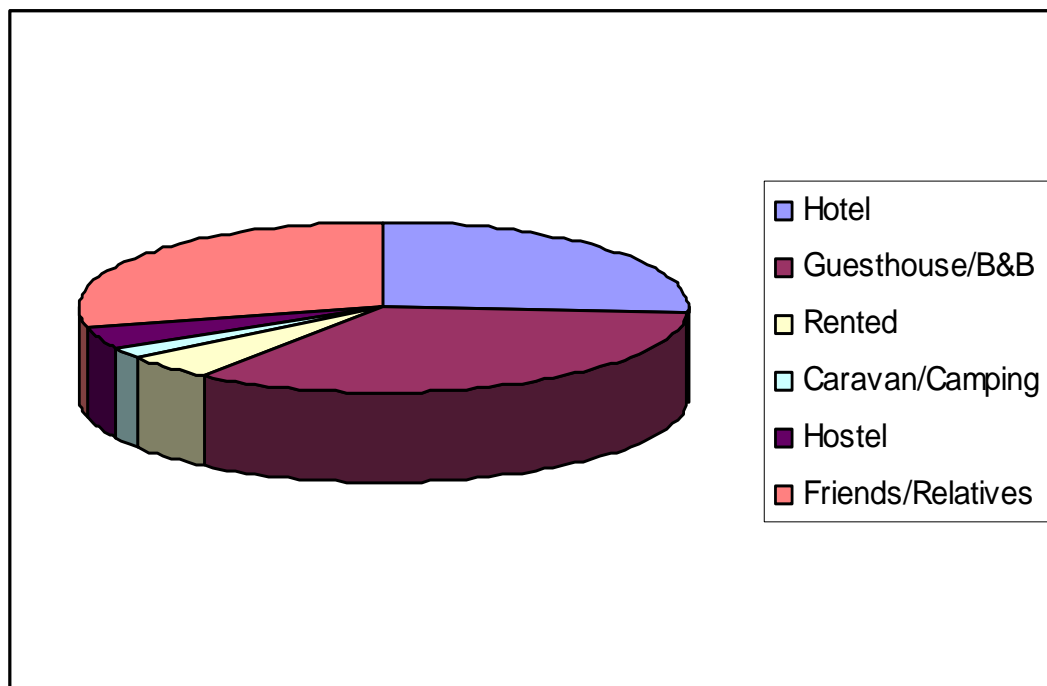
## ***Tourism in the South East***

Despite the static national situation, Woodstock does have the benefit of being in a familiar tourist destination. The demesne is located roughly midway between Kilkenny and Waterford. The former possesses the much visited Kilkenny Castle, the tenth most visited attraction in the state. It also holds a major comedy festival in June and arts festival in August. Waterford, meanwhile, hosts the Light Opera Festival in September, followed shortly afterwards by an Arts Festival. This year it hosted the Tall Ships Race. Other major attractions in County Kilkenny include Dunmore Cave, Jerpoint Abbey and Saint Canice's Cathedral. There are also gardens at Kilfane Glen near Thomastown.

In 2004, the South East Region attracted just over two million tourist visits (overseas and domestic). Of visits by tourists from overseas, County Kilkenny attracted 290,000 visits, or 30% of the total for the South-East. Visitors from Britain represent the largest proportion at 1,819,000, followed by 965,000 from Mainland Europe and 73,000 from North America. Although, as for the country as a whole, numbers of overseas tourists have fallen over the last five years, though 2004 was an improvement on 2003. The fall in activity holidays has been particularly marked, especially for angling. County Kilkenny also remains the ninth most popular destination, despite being less visited than neighbouring Waterford.

The average length of stay of overseas visitors in the county is just under four days out of a total average stay in Ireland of eleven days. Stays are longer for visitors from Mainland Europe and North America, although the latter tend to spread their trip around the country. Most stays are in hotels, although European visitors take the highest proportion of rented accommodation. Couples comprise the largest category of visitor composition with nearly half of visitors being aged over 45. Social Class C1 (white collar) accounts for 56% of visitors, a proportion that is increasing.

The South East is also the only region where the number of domestic visitors exceeds that of tourists from overseas. Nationally, there were seven million trips by domestic tourists in 2004 during which the number of long trips increased by 4% and that of short trips by 9% compared with the previous year. Furthermore, in contrast to visits by foreign tourists, visits by domestic tourists to the South East have increased by a sizeable 26% since 2000.

**Chart 6.1 Accommodation choices of overseas visitors**

According to the South East Tourism data, most domestic visitors come for the purpose of a holiday (56%). As might be expected, July-September represents the busiest period, accounting for 33% of visits, although visits are reasonably well spread throughout the year with 20% apparently occurring in the January to March period. The national data help to place these figures in perspective by demonstrating that most long trips, i.e. 59%, are made between July and September, but that short breaks are much more evenly spread during the year.

Inistioge is a rather up-market destination and one that is popular for short breaks. As such, it could weather the storm facing tourism providers more dependent on the overseas market. An increase in the number of local attractions and accommodation providers would clearly benefit this market. So too would opportunities for greater access to the surrounding countryside, including that offered by the restoration of the Woodstock Demesne.

### ***Potential economic impact for Woodstock and Inistioge***

Total expenditure by all visitors to the South East in 2004 amounted to €420mn. in 2004, of which €151mn. was by Irish visitors and €267mn. by visitors from overseas. This is equivalent to €136 per domestic visitor and €275 by overseas visitors, the difference being largely due to the number of nights stayed and the nature of the accommodation. In all, there were 3,851,000 overnights by visitors.

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In County Kilkenny, overseas tourism generated €61mn. This data provides a basis on which to predict the potential economic benefits associated with the restoration of Woodstock. The economic income would be in addition to those public benefits enjoyed by local people in terms of the contribution to local heritage and recreation.

At first glance, the indicators are not appealing in that the number of international tourists visiting garden type facilities outside of Dublin has been falling. Tourist attractions have noted a fall in the proportion of visitors touring the country for a week or more, and an increase in the proportion taking short breaks. This has had a detrimental impact on destinations such as Birr Castle and Gardens which is partly dependent on the touring circuit used by overseas tourists. The estate still attracts over 38,000 visitors per year, but has made a decision to market itself more for the educational visits associated with its telescope attraction rather than for its gardens. The former has the benefit of attracting visitors from the more stable domestic market and is less seasonal. Most income is still derived from the entrance fee of €9 than from the shop or café facilities which are regarded as a must-have.

Florencecourt, in County Fermanagh, is another similar attraction. Florencecourt is rather remote from the main tourist flow, but does possess the advantage of an intact mansion which is open during the summer and for spring/autumn weekends. The grounds themselves are rather small at 14 acres and include only a partially developed walled garden. Although very pleasant, the setting is more natural than manicured and only one full-time gardener is employed. Nevertheless, the estate does attract over 26,000 paying visitors each year, plus almost the same number of locals and out-of-season visitors. Only around one-quarter of visitors are from overseas, although another quarter are from elsewhere in Britain outside of Northern Ireland. As with Birr, the estate is diversifying into educational work, including environmental education, for which it receives an income from the educational authority. It is also popular for weddings, including for photos and parties in the garden.

A similar story of diversification is repeated elsewhere, for example at Stradvalley which hosts concerts as a means of revenue collection, and Belvedere near Mullingar which possesses a falconry centre. Most of these gardens are similar in character to Woodstock in that it is a long time since they have been intensively managed and most are now given over to parkland or natural woodland. There are not many examples of dramatic, intensively managed gardens in Ireland. Even the famous Mount Usher gardens are relatively small in area.

The relative asset that Woodstock possesses is its location in a popular tourist area given the proximity of Kilkenny, Waterford and Rosslare. Woodstock also has the capacity to tap into the heritage market and the long weekend stays. In this respect, it is worth noting the observations made above about the popularity of the area for long weekends and the fact that the South East attracts more domestic tourists than visitors from overseas. While a large proportion of these tourists are drawn to the coast, the market for weekend breaks in prestigious hotels or settings has been growing in line with increased affluence in the economy. The Regional Tourism Authority has also identified an objective of

promoting heritage based tourism under its Heritage Explorer Campaign. It also aims to increase the number of activity and short break visitors from the UK.

In addition, Woodstock is in a position to capitalise on the asset represented by its gardens, and to diversify in the same manner that has been achieved by other similar attractions. As well as walking and visitors' appreciation of the surroundings, the gardens and associated woodland are large in area and offer many opportunities for specialist tours, family visits, wedding events and possibly equestrian activities. Evidence is given in the accompanying report on Woodstock House of the generous tax breaks that are available for restoration of listed buildings. Should it ever be possible to restore the house, then additional potential uses and economic benefits could flow from its use for accommodation, weddings or conferences.

## ***Economic impacts in Inistioge and Woodstock***

### **Inistioge and Woodstock**

No figures exist on the number of people visiting Inistioge, but the car parking at Woodstock does record the income from cars which, in 2004, amounted to €30,000. In addition to this number would be coach parties which average around two per week in summer. We can assume, perhaps rather conservatively, that one half of visitors to Inistioge make their way to Woodstock and do so by car. If each car contains an average of two adults, this suggests that the total number of people visiting Inistioge is 42,000 including coach parties.

There are few places to shop in the village, but most visitors probably purchase a few items in the village and possibly around one-third stop for lunch. In this case, expenditure within the immediate locality is likely to be around €400,000 per annum. Given that there are six places to eat within the village and others nearby, this does not seem to be an unreasonable estimate.

In addition, Inistioge is located at the furthest tidal extent of the River Nore and is an important destination for anglers for game fishing. The season runs from March to September. Almost 90% of overseas anglers come primarily for angling and spend an average of 12 nights in Ireland. Nationally, it has been estimated that they contribute €6.43mn to the economy (Indecom 2003). Revenue is earned directly from angling which also contributes income to pubs and accommodation. There is also a significant increment to the capital value of land along the banks.

The fishing is somewhat superior just to the north at Thomastown, particularly for trout. Around 150 visiting anglers purchased daily permits here at a cost of €10 and €25 for trout and salmon respectively. Rates are lower in Inistioge where around 60 licenses were bought last year for either trout or salmon at €15 per month or €10 per day. These payments are in addition to the €30 that might be spent on a 21 day license or the €38 of an annual license for the Nore, Suir and Barrow. Furthermore, new visiting anglers tend to spend €175 for the use of a

guide or a day's tuition. Given that nationally around 40% of anglers are new visitors, we can assume that at least the same proportion of visitors to the area are new and require a guide for one day of an average five day stay in the area. On this basis, anglers in Inistioge probably spend €12,000 directly on angling (including tackle) while those fishing in Thomastown probably spend €30,000. In addition, the Indecom report found that anglers spend an average of €136 per day which implies a spend of a further €140,000 on food and accommodation. Non-angling spouses would inflate the figure again.

It is worth noting though that the number of visiting overseas anglers has continued its precipitous decline in parallel with declining catches. The future of the activity as a local revenue earner is uncertain. The Nore spring salmon run is now almost non-existent, while the autumn catch is unpredictable. Local sources report that numbers of visiting anglers in 2005 have been nearly half those of the previous year.

## **Accommodation**

There is only a limited amount of accommodation at present in and around Inistioge and this is certainly a limiting factor in relation to the economic benefits that tourism can potentially provide. The South East Tourism brochure lists nineteen places to stay in a triangle formed by Inistioge, Thomastown and Grainguennamanagh. The list includes one hotel in Thomastown and a mixture of guesthouses, farmhouse B&Bs, self-catering and the hostel. There are probably as many premises again that are not listed with the tourist board. Not all the people staying in these establishments would be tourists. Neither are Inistioge and Woodstock the only local destinations that tourists would be interested in visiting. There are also, for instance, the attractions of Jerpoint Abbey and the River Barrow Valley. However, the converse argument could be made for people visiting Inistioge, but staying in Kilkenny or other towns outside the immediate area.

In that there are around forty places to stay in the area, this suggests approximately 12,800 overnights each summer assuming just two couples per establishment for 20 days each month over four months. At an average of €30 per night per person, this suggests a summer accommodation income of around €384,000, or possibly €500,000 over the course of a year. Together with evening food and drink, again at an average of €30 per head, this implies an income of close to €1million. The figure is likely to be an under-estimate given many guesthouses would have four or more rooms, that many adults would be accompanied by children, and that some would be spending in excess of €50 each on every evening meal.

Adding together the spending of day and overnight visitors, leads to a total, of at least €1.2mn of expenditure. The Deane and Henry estimate of an expenditure multiplier impact of unity means we can avoid any further extrapolation. However, the employment multiplier estimate referred to earlier would suggest that this spending supports 14 jobs. In fact, this has to be underestimate given that there are around 40 places to stay and so around as many people again

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employed in these and the restaurant and accommodation sector in the immediate Electoral Division alone.

In principle, it should also be permissible to add the expenditure made on other paying tourist facilities, for example golf or equestrian activities, cycle hire or perhaps also car hire. However, it is difficult to appreciate whether it is these facilities or Inistioge itself that are the principal attractions which draw people to the area. Too much extrapolation could result in some double-counting. What is clear, is that Inistioge is an important complementary attraction. An increase in the number of visitors is unlikely to displace visitors from elsewhere.

The same argument can be made for the Woodstock. Continued public investment in the gardens could certainly result in a doubling of the number of people visiting the Demesne, including much of the one third we had assumed to currently restrict themselves to the village alone. The increase in the number of visitors alone would result in an increase to local expenditure. However, it takes time to tour a large garden. Many visitors are likely to prolong their stay if a one hour trip to Woodstock begins to seem an inadequate length of time to view the Demesne. As a consequence, it is quite possible that the restoration of the gardens alone could ultimately lead to a near doubling of the €1.2mn currently estimated to be spent by visitors within area. Naturally, any restoration of the house itself, the addition of souvenir shops or, perhaps, a conference facility would significantly inflate this figure further.

### ***Potential future economic benefits***

There is a variety of possible developments that could be contemplated in the Demesne and surrounding area in the future. Given patterns elsewhere, one possibility would be to develop a less popular section of the grounds as a golf course. There are quite a number of high quality courses in Ireland including those at the Headford and Dunmore Demesnes and the prestigious Carlton Demesne. Green fees on the 18 hole courses at the Carlton Demesne are €135 per person in summer and €70 in winter. At this rate, a golf course could bring in €1.5mn per year in fees alone with at least a similar amount being spent on equipment hire, food or bar sales.

However, a golf course option would not be welcomed by everybody. There are already ten golf courses in the vicinity, including, of course, Mount Juliet. Whether or not the market is saturated, it is certainly not under-developed. Furthermore, while the wooded grounds could be developed into a very attractive course, a large number of trees would need to be completely removed before expensive investment in landscaping could even begin. There would also be the problem of the hilly terrain that would likely limit a facility to a single nine-hole course. On the other hand, there would though be considerable benefits in terms of local accommodation given that over 10,000 people could be playing such a course over a year. This, in itself, could return a further €1.5mn to the local economy. Significant employment benefits would occur too.

However, for the estate to realise its full economic potential, accommodation

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would need to be available on-site. Without such accommodation, Woodstock, as traditional demesne, would be failing to capture its full revenue earning capacity. Not surprisingly, for this reason, the Carlton Demesne course will soon be accompanied by an eighty bedroom hotel.

The same would be true of the development of an equestrian facility. Here again, there are examples of equestrian resorts that capitalize on a demesne landscape, including the provision of on-site accommodation. The Castle Leslie Centre in Monaghan, for example, has 35 horses and charges up to €900 for a week's full board. At this rate, such a facility in Woodstock would be capable of bringing in €750,000 per year. The sum would be less than a golf course, but the activity would be in-keeping with the demesne landscape and guests would be attracted by the historical and cultural associations.

Even in the absence of golfing or equestrian activity, the provision of up-market accommodation within a restored house would itself bring in a substantial income. Naturally, it would require a correspondingly substantial investment in restoration, although there are various alternatives as to how this could proceed in terms of the extent to which the historic fabric is restored or recreated. Were the main house to be restored, together with an extension to accommodate 80 bedrooms, this alone would bring in an income of over €5mn per year. The annual income would need to be discounted over 15-25 years and compared with the up-front cost of restoration. The addition of a modest conference facility that could handle attendance of 200 delegates in about 20 meetings per year, would also achieve a direct income of at least €200,000 per annum. Net income from a restaurant or catering would be additional.

There would also be benefits for the surrounding area. Should guests choose to eat out once every couple of days, this would input an additional €860,000 or more. There would be further benefits in terms purchases from local suppliers (e.g. food wholesalers, inputs) by both the House and local restaurants. In addition, there would be the employment of around 30 people to be considered as well as their induced spending. Many employees could be expected to live locally, at least as far as Thomastown.

Such alternatives can be compared with the proposed Coillte development in terms of the benefits they would bring to the county or the local area. The Coillte development would provide more overnights than could be accommodated in a restored Woodstock House, at least if the latter is to maintain its architectural integrity. Indeed, the proposal is for a 160+ bedroom establishment. Assuming an average of 60% occupancy as above, overnights would generate more than €10mn in annual income to the resort. Additional income would accrue to the owners in the form of meals or drinks taken within the resort, supplementary fees paid for certain activities, or possible opportunities for non-resident membership.

However, in comparison with the public development of Woodstock House, or its restoration by a public/private partnership, much of the income to the proposed spa resort is a private return on investment, rather than an economic benefit that can be fed back into the Demesne. More relevant as an economic benefit to the area, would be the approximately €1.5mn per year could in terms of people eating



outside the establishment alone. Including income to suppliers and the induced expenditure of around 100 employees, the local impact would amount to several million euro. Furthermore, the employment, could imply a local increase in population of around 200 persons once families are included, assuming that half these employees choose to live in the Inistioge/Thomastown area. Such an increase in population, added to the existing base of 709 in Inistioge, or 6,361 in the local area, represents a significant expansion. It is also likely to be reflected in increased local demand for housing and school places.

Therefore, the economic return to society from a spa development could inject proportionately less by size than the expenditure from a smaller hotel or equestrian/ conference facility based around Woodstock House. This assumes that income from a spa accrues to private investors, while that for a restored Woodstock House is retained as a public benefit by being re-invested in the gardens. There would, however, be greater benefits in absolute economic terms from a spa and, particularly in terms of employment due to such a facility and the wider range of activities it might offer. These relative benefits have to be considered in relation to the respective environmental and cultural impact on an historic landscape and the welfare benefits that existing users realise.

## **Summary**

Inistioge is both an attractive place to live and to visit. The Woodstock Demesne complements the village by providing a recreation amenity to local people and an additional attraction to visiting tourists, both domestic and from overseas. It appears that at least €1.8mn is inputted to the local economy by tourist visits. Although this figure is assumed by the calculations above to be an underestimate.

The restoration of the Demesne will enhance the amenity benefit that the estate provides to local people. The size of the estate is such as to have the capacity to absorb additional visitors. This, together with the fact that much of the estate is currently in a state of neglect, means that an increase in the number of visits by tourists could be achieved without undermining the attractiveness of Woodstock as an amenity to local people.

The re-development of Woodstock House or, alternatively, the construction of a spa resort within the Tighe Estate, has the potential to at least double the tourist-related income for the local community. Naturally, this potential is dependent on how the development is handled, particularly that it should not detract from the views currently available in the Demesne, reduce existing levels of access, or be allowed to encourage a rash of other new development that is insensitive to the local landscape. There is also the prospect that any development could contribute directly financially to the restoration of the Demesne and could reduce the expanse of the wider estate currently under dense commercial softwood forestry.

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## Appendix 1

### Notes on bird species compiled during brief field visits in October 2005

**Cormorant** *Phalacrocorax carbo*.

This large fish-eating bird breeds mostly on the coast and some come up the rivers in winter to look for food. Several cormorants were seen roosting in tall beech trees at high tide.

**Little Egret** *Egretta garzetta*.

The Little Egret was once very rare in Ireland but its numbers have increased dramatically and it now breeds in Waterford and Cork ( Hillis P. 2004). It is amber listed because the Irish breeding population is found at less than 10 sites. Sightings at inland sites such as the River Nore are still unusual but increasing.

**Grey Heron** *Ardea cinerea*.

The Grey heron is a common and widespread breeding bird and is always found nesting near water. There is almost certainly a heronry at Woodstock but a visit in March would be required to locate it.

**Mute Swan** *Cygnus olor*.

One pair of Mute Swans was seen along the River Nore at the southern end of the study area.

**Mallard** *Anas platyrhynchos*.

Mallard were common along the River Nore. Mallard were seen feeding on the muddy banks of the Nore at low tide.

**Sparrowhawk** *Accipiter nisus*.

The Sparrowhawk is the most common bird of prey in Ireland. It lives in all types of woodland but was not seen during the survey. However, it definitely breeds in the area and several old Sparrowhawk nests were found.

**Pheasant** *Phasianus colchicus*.

The Pheasant is at much at home in the wooded areas as in the open fields. In this survey it was only seen in open fields.

**Moorhen** *Gallinula chloropus*.

The Moorhen is a common breeding bird on lakes, ponds and slow-moving rivers. Only one was seen in the study area at low tide.

**Black-headed Gull** *Larus ridibundus*.

Black-headed gulls were seen feeding on the river at low tide. They are common on the river outside the breeding season.

**Lesser Black-backed Gull** *Larus fuscus*.

These large gulls breeding around the coast and wander inland in the autumn in search of food. Up to 15 were seen in the study area.

**Wood Pigeon.** *Columba palumbus*.

Wood Pigeons were seen in woodland on all parts of the site. This is a common breeding species in the area.

**Kingfisher** *Alcedo atthis*.

One Kingfisher was seen flying low and fast over the River Nore. These river specialists are on the amber list because there has been a decline in their range in Ireland in the past 25 years.

**Skylark** *Alauda arvensis*.

Skylarks were not seen using the site but were heard as they flew overhead on migration.

**Swallow.** *Hirundo rustica*.

The Swallow is a common Summer migrant. They usually nest in farm buildings where there are plenty of insects nearby. Some nests were found in the farm buildings near Woodstock House. While no swallows were recorded during this survey, they clearly nest at this site. The Swallow is amber listed in the BoCCI.

**Grey Wagtail** *Motacilla cinerea*.

This bird is never found far from water and two Grey Wagtails were seen on the River Nore near Inistioge.

**Pied Wagtail.** *Motacilla alba yarrellii*.

Two birds were seen near the River Nore on each visit. The Pied Wagtail is a widespread, common resident, breeding in a wide variety of open habitats.

**Dipper** *Cinclus cinclus*.

The Dipper is usually associated with fast flowing streams, however, it was not seen on the stream to the south of the study area. One bird was seen on the Nore.

**Wren.** *Troglodytes troglodytes*.

This was one of the commonest birds on the site and was recorded in all wooded areas.

**Dunnock.** *Prunella modularis*.

The Dunnock was recorded in most of the woodland. This is a widespread and common resident.

**Robin.** *Erithacus rubecula*.

The Robin was recorded throughout the site. It was found in all types of woodland and is a very common breeding bird in the area.

**Blackbird.** *Turdus merula*.

Blackbirds were recorded in all the woodland areas. It is a very common resident in the area.

**Song Thrush.** *Turdus philomelos*.

The Song Thrush was recorded in all woodland types including the conifer plantations. This is a common breeding bird in the area.

**Redwing.** *Turdus iliacus*.

These are winter visitors and they feed on berries when they arrive here from Iceland and Scandinavia. Birds were seen feeding on Holly berries throughout the study area.

**Mistle Thrush.** *Turdus viscivorus*.

Mistle Thrushes were seen only in the gardens on each visit. They were seen feeding on the berries of the Yew trees. They are fairly common residents. They are particularly

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attracted to areas of short grass where they can search for earthworms.

**Goldcrest.** *Regulus regulus.*

The Goldcrest was recorded in all woodland types and was equally common in the conifer plantation as in the other mixed woodlands. These are common residents which roam wooded areas throughout the winter in search of insects.

**Long-tailed Tit.** *Aegithalos caudatus.*

Long-tailed Tits were recorded in all types of woodland as they moved about in flocks in search of insect food.

**Coal Tit.** *Parus ater.*

The Coal Tit was recorded in all wooded areas and was quite numerous in the conifer plantation. It is a common resident and is found in mixed flocks in winter.

**Blue Tit.** *Parus caeruleus.*

The Blue Tit is a very common resident in the area. It was recorded in all woodland types on the site.

**Great Tit.** *Parus major.*

This is a common resident in the area and was found in all wooded areas. It joins other members of the titmouse family to form loose flocks in winter.

**Treecreeper.** *Certhia familiaris.*

Treecreepers were seen in areas of mixed woodland and in the garden area but not in the conifer plantations. Evidence of their roosting sites was found on the Wellingtonia trees throughout the site. These are common woodland residents in the area.

**Jay.** *Garrulus glandarius.*

The Jay is a very localised breeder in Ireland, usually breeding only where Oak trees are present. Jays were present in mixed woodland types. They were feeding on acorns or Sweet Chestnuts. They were easy to see which is unusual, the Irish Jay is usually very shy.

**Magpie.** *Pica pica.*

These are common breeding birds in the area and can be found in all habitats.

**Jackdaw.** *Corvus monedula.*

This is a common resident which nests in cavities in trees and old buildings. They were common throughout the site and were seen feeding on Sweet Chestnuts.

**Rook.** *Corvus frugilegus.*

The Rook is a common farmland bird in the area. They were seen throughout the site.

**Hooded Crow.** *Corvus corone cornix.*

This is a common breeding bird in the area and was seen in almost all habitats. It was seen foraging on the muddy riverbank at low tide.

**Raven.** *Corvus corax.*

The Raven is a widespread but thinly distributed breeding bird in Ireland. One bird was heard calling over the site.

**Starling** *Sturnus vulgaris.*

The Starling is a common and widespread breeding bird in Ireland. It was seen mostly on

the open fields and in the gardens.

**Chaffinch.** *Fringilla coelebs.*

The Chaffinch is a very common resident in the area. They were seen throughout the mixed woodland and conifer plantations on the site.

**Linnet.** *Carduelis cannabina.*

Linnets are local residents, breeding in hedgerow and scrub woodland. In winter they feed on seeds. Linnets were seen on an area of clear felled plantation where plants such as Rosebay willowherb were common proving food for the Linnets.

**Redpoll.** *Carduelis flammea cabaret.*

The Redpoll is a scarce resident in the area, usually breeding in young conifer plantations where Birch is present. Two or three were seen feeding on Alder cones along the river banks.

**Goldfinch.** *Carduelis carduelis.*

The Goldfinch is a fairly common breeding species in the area. Outside of the breeding season it forms into flocks and goes in search of the seeds. Goldfinches were seen only in an area of clear-felled forestry.

**Siskin.** *Carduelis spinus.*

The Siskin is a localised breeding bird in Kilkenny, usually nesting in conifer plantations. Numbers are boosted by winter immigrants which are attracted to the seeds in Alder cones. A flock of 40 was seen in the gardens on both visits and a smaller flock was seen in young forestry.

**Bullfinch.** *Purrhula pyrrhula.*

The Bullfinch is a common breeding bird in the area, breeding in woodland and in hedgerows. One or two were seen in all woodland types including the conifer plantation.

**Crossbill.** *Loxia curvirostra.*

The Crossbill is a scarce breeding bird in Ireland. It breeds sporadically in conifer plantations. A flock of 7 was seen at stand of Sitka Spruce. The Crossbills are usually attracted to the cones of Larch trees.

## Appendix 2 Champion Trees at Woodstock

(taken from Tree Council Register kept at Botanic Gardens)

## Appendix 2. Champion Trees of Woodstock

Longitude	Latitude	Common Name	Latin Name	Girth Classes	Girth (m)	Girth Height	Height	Landscape	General Appearance	Dead Wood	Storm Damage
-7.061292706	52.47538261	Silver Fir	Abies alba	A	5.3899 99866	1.5	43	Parkland	Excellent	None or very little	Some Damage
-7.061479021	52.47472235	Silver Fir	Abies alba	A	4.9800 00019	1.5	29.5	Parkland	Fair	Lots and/or extensive dieback	Loss of Large limbs
-7.057343119	52.47564956	Silver Fir	Abies alba	A	4.5599 99943	1.5	37	Parkland	Fair	Lots and/or extensive dieback	Some Damage
-7.059437595	52.47354612	Silver Fir	Abies alba	A	4.4000 00095	1.5	34	Avenue	Excellent	None or very little	Some Damage
-7.058716847	52.47183334	Silver Fir	Abies alba	A	4.1500 00095	1.5	40	Woodland	Good	Some	No obvious damage
-7.058303761	52.47371761	Noble Fir	Abies procera Glauca Group	A	3.6300 00114	1.5	37	Avenue	Excellent	None or very little	No obvious damage
-7.05858263	52.47426475	Noble Fir	Abies procera Glauca Group	A	3.9100 00086	1.5	32.5	Avenue	Excellent	None or very little	No obvious damage
-7.05786568	52.472503	Noble Fir	Abies procera Glauca Group	A	3.7999 99952	1.5	38	Avenue	Excellent	None or very little	No obvious damage
-7.057557402	52.47198784	Noble Fir	Abies procera Glauca Group	A	3.7300 00019	1.5	41	Avenue	Excellent	None or very little	No obvious damage
-7.057741667	52.47229274	Noble Fir	Abies procera Glauca Group	A	3.5999 99905	1.5	38	Avenue	Excellent	None or very little	No obvious damage
-7.058032598	52.47268352	Noble Fir	Abies procera Glauca Group	A	3.5299 99971	1.5	35.5	Avenue	Excellent	None or very little	No obvious damage
-7.059379124	52.47450535	Monkey Puzzle	Araucaria araucana	A	3.6199 99886	1.5	28.5	Avenue	Excellent	None or very little	No obvious damage
-7.059368769	52.47407218	Monkey Puzzle	Araucaria araucana	A	3.5999 99905	1.5	26	Avenue	Fair	None or very little	No obvious damage
-7.059151813	52.47271871	Monkey Puzzle	Araucaria araucana	A	3.3199 99933	1.5	25.5	Avenue	Excellent	None or very little	No obvious damage
-7.059345642	52.4728137	Monkey Puzzle	Araucaria araucana	A	3.1600 00086	1.5	24.5	Avenue	Excellent	None or very little	No obvious damage
-7.05926675	52.47303236	Monkey Puzzle	Araucaria araucana	A	3.1199 99886	1.5	25.5	Avenue	Excellent	None or very little	No obvious damage
-7.059292158	52.47335253	Monkey Puzzle	Araucaria araucana	A	3.1099 99895	1.5	26.5	Avenue	Good	None or very little	Some Damage
-7.059506253	52.47432166	Monkey Puzzle	Araucaria araucana	A	3.0899	1.5	27	Avenue	Excellent	None or very little	No obvious damage

					99914									
					2.3599									
-7.059355578	52.47382706	Monkey Puzzle	Araucaria araucana	A	99895	1.5	27	Avenue	Excellent	None or very little	No obvious damage			
		Cedar of			5.5500									
-7.057886976	52.47605714	Lebanon	Cedrus libani	A	00191	1.5	34.5	Parkland	Excellent	None or very little	No obvious damage			
		Cedar of			5.4099	1.3999								
-7.056772818	52.47581427	Lebanon	Cedrus libani	B	99847	99976	27.5	Parkland	Excellent	None or very little	No obvious damage			
			Chamaecyparis											
-7.056821348	52.47097911	Lawson Cypress	lawsoniana 'Erecta'	A	5	1.5	33.5	Woodland	Excellent	None or very little	No obvious damage			
			Chamaecyparis		1.8200									
-7.060987624	52.47529158	Sawara Cypress	pisifera	A	00052	1.5	22.5	Parkland	Excellent	None or very little	No obvious damage	42 layer		
			Chamaecyparis											
-7.06104524	52.47462085	Sawara Cypress	pisifera 'Plumosa'	A	2.25	1.5	20	Parkland	Excellent	None or very little	No obvious damage			
			Chamaecyparis											
			pisifera 'Plumosa		1.2000									
-7.061822961	52.47488693	Sawara Cypress	Aurea'	A	00048	1.5	11	Parkland	Good	None or very little	No obvious damage			
		Japanese Red			3.9200	1.1000								
-7.060623581	52.47486115	Cedar	Cryptomeria japonica	C	00076	00024	31.5	Parkland	Excellent	None or very little	No obvious damage	large lin		
		Japanese Red	Cryptomeria japonica		4.1199	0.8999								
-7.060564634	52.47438332	Cedar	Elegans Group	B	99886	99976	23.5	Parkland	Excellent	None or very little	Some Damage	girth tak		
					4.6500	0.6000								
-7.060156648	52.47421961	Gowen Cypress	Cupressus goveniana	C	00095	00024	22.5	Woodland	Excellent	None or very little	No obvious damage			
			Cupressus lusitanica		4.6599	0.8000								
-7.063674343	52.47328334	Mexican Cypress	var. benthamii	B	99847	00012	23	Woodland	Good	Some	No obvious damage			
			Cupressus lusitanica		3.5299									
-7.059432828	52.47266791	Mexican Cypress	var. benthamii	A	99971	1.5	29	Woodland	Excellent	None or very little	No obvious damage			
		Monterey	Cupressus		6.4600	1.2999								
		Cypress	macrocarpa	B	00038	99952	17.5	Woodland	Excellent	None or very little	No obvious damage			
		Monterey	Cupressus		3.9500	1.3500								
-7.06344657	52.47401935	Cypress	macrocarpa 'Lutea'	B	00048	00024	25	Woodland	Excellent	None or very little	No obvious damage			
					6.5500	1.2999								
-7.063142215	52.47639968	Beech	Fagus sylvatica	B	00191	99952	29.5	Parkland	Excellent	None or very little	No obvious damage			
			Fagus sylvatica			0.6999								
-7.059645988	52.4751849	Weeping Beech	'Pendula'	B	3	99988	19.5	Parkland	Excellent	None or very little	Some Damage			
			Fagus sylvatica var.		3.4600	0.8000								
-7.058238796	52.47613715	Fern Leaf Beech	heterophylla	B	00038	00012	21	Parkland	Excellent	None or very little	No obvious damage			
		Mountain	Hesperopeuce											
		Hemlock	mertensiana	A	3.25	1.5	23	Parkland	Excellent	None or very little	No obvious damage			
					3.6199									
-7.058812363	52.47656145	European Larch	Larix decidua	A	99886	1.5	24	Parkland	Excellent	None or very little	No obvious damage			
					5.5599									
-7.061215826	52.47645636	European Larch	Larix decidua	A	99943	1.5	25.5	Parkland	Good	Some	Loss of Large limbs			
					2.3199									
-7.059561646	52.47250593	Norway Spruce	Picea abies	A	99933	1.5	33	Woodland	Excellent	None or very little	No obvious damage			



		Norway Spruce	Picea abies	A	3.3099 99943	1.5	30	Parkland	Excellent	None or very little	No obvious damage	
-7.059398651	52.47506346	Oriental Spruce	Picea orientalis	A	3.5599 99943	1.5	23	Parkland	Excellent	None or very little	Some Damage	
-7.060861612	52.47477566	Morinda Spruce	Picea smithiana	A	3.0799 99924	1.5	30.5	Parkland	Excellent	None or very little	No obvious damage	
-7.059778542	52.4742511	Montezuma Pine	Pinus montezumae	A	2.9000 00095	1.5	30	Woodland	Excellent	None or very little	No obvious damage	
-7.059967176	52.474879	Hartweg's Pine	Pinus montezumae var. hartwegii	A	2.0599 99943	1.5	26.5	Parkland	Excellent	None or very little	No obvious damage	
-7.060337184	52.47565363	Monterey Pine	Pinus radiata	A	5.6300 00114	1.5	41	Parkland	Dying/Dead	Lots and/or extensive dieback	Loss of Large limbs	with ivy
-7.058090171	52.47596115	Monterey Pine	Pinus radiata	A	4.5199 99981	1.5	33	Parkland	Excellent	None or very little	No obvious damage	
-7.059772325	52.47359402	Monterey Pine	Pinus radiata	A	5.6999 99809	1.5	31	Woodland	Fair	Some	Some Damage	
-7.057812741	52.47119447	Scot's Pine	Pinus sylvestris	A	3.7100 00038	1.5	31	Woodland	Good	Some	Some Damage	
-7.057557726	52.47612356	Willow Podocarp	Podocarpus salignus	A	1.2699 99981	1.5	17	Parkland	Excellent	None or very little	No obvious damage	
-7.060184572	52.47478466	Coastal Redwood	Sequoia sempervirens	A	7.6500 00095	1.5	40.5	Parkland	Excellent	None or very little	No obvious damage	
-7.060040807	52.47411413	Coastal Redwood	Sequoia sempervirens	A	7.7800 0021	1.5	39.5	Woodland	Excellent	None or very little	No obvious damage	
-7.059881107	52.47385482	Coastal Redwood	Sequoia sempervirens	A	6.3299 99924	1.5	41.5	Woodland	Excellent	None or very little	No obvious damage	
-7.057587818	52.47100456	Coastal Redwood	Sequoia sempervirens	A	5.7199 9979	1.5	38	Woodland	Excellent	None or very little	No obvious damage	
-7.059588498	52.47230016	Coastal Redwood	Sequoia sempervirens	A	5.4200 00076	1.5	41	Woodland	Excellent	None or very little	No obvious damage	
-7.056113647	52.46980445	Coastal Redwood	Sequoia sempervirens	A	5.4000 00095	1.5	34	Woodland	Good	Some	Some Damage	
-7.059420062	52.47485215	Wellingtonia, Giant Sequoia	Sequoiadendron giganteum	A	5.6799 99828	1.5	39.5	Avenue	Excellent	None or very little	No obvious damage	
-7.05939526	52.47495011	Wellingtonia, Giant Sequoia	Sequoiadendron giganteum	A	5.6100 00134	1.5	42	Avenue	Excellent	None or very little	Some Damage	
-7.060587811	52.47533346	Wellingtonia, Giant Sequoia	Sequoiadendron giganteum	A	5.2800 0021	1.5	39.5	Parkland	Excellent	None or very little	No obvious damage	
-7.059089076	52.47198727	Wellingtonia, Giant Sequoia	Sequoiadendron giganteum	A	4.7899 99962	1.5	40	Woodland	Excellent	None or very little	No obvious damage	
-7.060831097	52.4755024	Yew	Taxus baccata	A	3.7899 99962	1.5	18	Parkland	Good	Some	Some Damage	
-7.059979874	52.47575245	Western Red Cedar	Thuja plicata	B	4.5199 99981	1.5	30.5	Parkland	Excellent	None or very little	No obvious damage	

-7.059668152	52.47334933	Western Red Cedar	Thuja plicata	A	4.6300 00114	1.5	38.5	Woodland	Excellent	None or very little	No obvious damage
-7.060459666	52.47501663	Western Red Cedar	Thuja plicata 'Zebrina'	A	3.9700 00029	1.5	24.5	Parkland	Excellent	None or very little	Some Damage
-7.060671879	52.47444269	Western Red Cedar	Thuja plicata 'Zebrina'	B	3.3299 99924	0.8999 99976	24.5	Parkland	Excellent	None or very little	No obvious damage
-7.061061602	52.47545754	Western Red Cedar	Thuja plicata 'Zebrina'	A	2.2899 99962	1.5	20.5	Parkland	Excellent	None or very little	No obvious damage
-7.060629527	52.47454329	Japanese Thuja	Thuja standishii	A	2.7799 99971	1.5	20	Parkland	Excellent	None or very little	No obvious damage
-7.060064392	52.47433154	Hiba	Thujopsis dolabrata	A	1.5499 99952	1.5	23.5	Woodland	Excellent	None or very little	No obvious damage
-7.061409694	52.47519191	Himalayan Hemlock	Tsuga dumosa	A	3.25	1.5	23	Parkland	Good	None or very little	Some Damage