KILDARE COUNTY COUNCIL

ENVIRONMENTAL IMPACT STATEMENT

FOR

RIVER BARROW ABSTRACTION

NON-TECHNICAL SUMMARY

NDP
NATIONAL DEVELOPMENT PLAN

eis

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NON-TECHNICAL SUMMARY OF ENVIRONMENTAL IMPACT STATEMENT

RIVER BARROW ABSTRACTION

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		Initials	Date	Initials	Date
Revision	Reason for Revision				
A					
B					
C					
D					

WHAT IS AN ENVIRONMENTAL IMPACT STATEMENT?

Planning Regulations require that certain types of projects – such as this river abstraction – must have an Environmental Impact Statement (EIS) as part of the planning process. The purpose of the EIS is to publicly provide information about the effects of the project on the environment before any decision is made. In this way everyone can decide for themselves whether the effects are outweighed by the advantages of the project.

The EIS is usually prepared during the design stage of a project. This allows environmental experts to advise the designers about how to improve the project by avoiding problems before they happen. Experience has shown that it is much better to try to avoid environmental problems at the design stage than to try to fix them after the project has been built.

The EIS is prepared on behalf of the developer and must follow the Regulations that set out all of the information to be contained in the EIS. The Regulations set out how the information is to be presented – so that all aspects of the environment are covered and so that the full effects of the project can be clearly understood. The box below shows what must be provided.

Information that must be provided for an EIS
Project Description
Description of Existing Environment
Description of Likely Impacts
Description of Mitigation Measures
Non-Technical Summary

Topics that must be addressed in an EIS are:

Human Beings
Fauna
Flora
Soils
Water
Air
Climate
Landscape
Material Assets
Cultural Heritage
Interaction of Factors

It has been recognised that an EIS can become quite large and complex in order to satisfy the legal requirements. This can make people feel unable to easily understand what the effects of the project will be. To try to avoid this problem, the Regulations also require the preparation of a Summary, in non-technical language, of the main content and findings of the EIS.

THE NON-TECHNICAL SUMMARY

The following pages provide a summary of the main information that is contained in the EIS. It is laid out in the same order and using the same headings as the EIS. If you feel that you need to know more about any topic that is summarised here – look it up under the same heading in the main EIS.

SOME JARGON

Here are explanations of some words and phrases that are used and may need some clarification:

• EIA	Environmental Impact Assessment The process of preparing and assessing the EIS
• EIS	Environmental Impact Statement The document that describes the effects
• Scope	The coverage of the EIS
• Likely Impacts	The effects that are expected to take place
• Mitigation Measures	Steps taken to avoid, reduce or repair unwanted effects
• Applicant	Whoever is applying for permission to proceed with the proposed development

Submissions and observations in relation to the Environmental Impact Statement or the proposed development should be sent to:

An Bord Pleanála,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

THE PROPOSED DEVELOPMENT

Introduction and Background

At present County Kildare is heavily dependent on the River Liffey system for its water supply. The two major water sources, Ballymore Eustace Water Treatment Works and Leixlip Water Treatment Works account for approximately 80% of the water supply in the county. Most of the remainder of the water supply is currently obtained from groundwater sources in the county. As demand continues to grow in the Greater Dublin Area, competition for the Liffey Water Resource will be even more pronounced than it is now, and there is an urgent need to develop new sources.

As part of the water supply strategy, adopted by Kildare County Council in 1999, the Council, under the 1942 Water Supplies Act, intends to abstract 40,000 cubic metres per day from the River Barrow approximately 3.5km north of Athy. This quantity represents 2.2% of the average flow in the river at this location.

Alternatives Considered

The "Water Strategy for County Kildare" Report (1999) contained a detailed assessment of the potential water sources available to meet the projected water demand in County Kildare in the year 2020. Following a detailed technical assessment the Strategy Report recommended that four sources including the River Barrow be used to satisfy this requirement.

Six potential abstraction sites north of Athy along the River Barrow were assessed based on desk studies and site visits, together with an outline of the proposed works (See Figure 1). A comparative matrix showing the relative environmental issues at each site was drawn up to assess each site's attributes.

After a comprehensive examination the site in Srowland was selected (See Figure 2). The decision for selecting the site was based on a preliminary assessment of the various EIS topics resulting in the most environmentally advantageous site being selected.

Project Description

While the proposed development will not involve weirs or other works within the river, it is envisaged that the following works will be undertaken:

- The construction of a Riverside Intake Chamber and Pumping Station
- The construction of a Raw Water Storage Reservoir
- The construction of a Water Treatment Works and Pumping Station
- The construction of site roads, hardstandings, parking and other ancillary facilities
- The construction of an administration facility

All the water abstracted from the river will pass through the treatment units. A raw water bunded reservoir will provide a minimum of 3 days water storage to safeguard against pollution incidents upstream of the abstraction point.

It is anticipated that the Intake and Treatment Works will be constructed under a single phase of construction over approximately 30 months and that the plant will be in a position to produce water by 2008.

THE EXISTING ENVIRONMENT

The following topics are required to be examined under the EIA Regulations. The current condition and important features of each topic are highlighted. This provides a means of measuring the scale and significance of any effects that may be identified.

Human Beings

County Kildare is the fastest expanding county in the State as a result of the significant rate of population increase. A large portion of the population increases have occurred in towns in the north-east of the county such as Leixlip, Maynooth, Celbridge and Kilcock, whilst towns in the south (e.g. Athy, Castledermot) have experienced slow to moderate growth. Eighty per cent of the total current water demand is supplied from the River Liffey and obtained from treatment works developed and operated by other local authorities. As demand continues to increase in the Greater Dublin Area, competition for the Liffey Water Resource will be even more pronounced than it is now. Therefore there is an urgent requirement to develop new water sources in the Greater Dublin Region to satisfy this requirement.

Terrestrial Flora and Fauna

The area of the proposed site which is located adjacent to the River Barrow is a uniform stand of grass species, which is mown for silage. Arable crops (i.e. wheat) cover a section of the field and a wider variety of wild plant species can be found in the river lowland. The hedge forming the north-western boundary of the site is well grown and has a rich woody flora in keeping with its origin as a townland boundary.

The area has a small selection of mammals (rabbit, otter and fox), although considering the suitability of the habitat other mammal species such as badgers, hares, minks and hedgehogs, are likely to occur. A large number of bird species visit and nest on the surrounding areas of the River Barrow.

Aquatic Flora and Fauna

The River Barrow is an important habitat for a wide variety of freshwater invertebrates and is particularly important for many standing water species in a part of the country where natural standing waters such as lakes are scarce. A significant number of invertebrate species were recorded at the site.

Fisheries

The River Barrow has a well-established coarse and game fishery. At the site of the proposed abstraction point the river is a relatively slowflowing channel. The reach supports a wide variety of coarse fish species and migratory salmonids would be expected to pass upstream and downstream past the proposed abstraction site.

Soils

The soils of the site are deep and well drained suitable for the widest range of uses including tillage, pasture, meadow and forestry. Bedrock beneath the site consists of the clean coarse limestones of the Milford formation.

Hydrology and Navigation

The River Barrow rises in the Slieve Bloom Mountains and flows eastwards initially and then southwards towards the sea. The total catchment area of the River Barrow is estimated at 3,068 km^2. The proposed location for the abstraction point is immediately north of Athy and south of the confluence with its tributary, the Stradbally River. The catchment area at the proposed abstraction point is approximately 1,527km^2. The River Barrow has been an important navigation waterway for more than 200 years. It is possible to navigate from the tidal limits at St. Mullins to Athy where it is linked to the Grand Canal navigation system.

Water Quality

Over the last 30 years there has been a considerable variation in river water quality in the Barrow catchment. Upstream of the proposed abstraction point there was a gradual deterioration in water quality throughout the 1970s. This was followed by periods of improvement in the 1980s and in the late 1990s.

Noise

Existing noise levels were surveyed at the development site emphasising the critical period, i.e. night-time, in which the noise would have the greatest potential impact. The proposed location is quiet rural, with traffic noise audible from the Monasterevin road (R417) and local roads.

Landscape

The site is located in the fertile flat lowlands beside the River Barrow. The landscape character of the area is generally rural, with large grassland fields, well-trimmed hedgerows and housing is dispersed. The landscape resources in the vicinity are centred on the Grand Canal.

Material Assets I

The are no known buried or overhead services nor direct road frontages within the site. The site is not known to underlay any significant mineral assets. Agriculture is the principle activity in the area.

Material Assets II (Cultural Heritage)

The site contains no upstanding buildings or structures. There are a number of known archaeological sites in the vicinity of the proposed development site, the most important being a ruined church and graveyard of an Early Christian and Medieval period to the west of the site. The River Barrow itself is an area of considerable archaeological interest. Archaeological objects found in the river nearby suggest that the area has been occupied since the Neolithic period of prehistory.

THE IMPACTS

Human Beings

Although the proposed development will involve the removal of approximately 14 hectares of productive agricultural land, when considered in the context of the County the impact will not be significant. The proposed development will provide additional volumes of water supply that will facilitate the demands from the anticipated population growth, therefore the predicted socio-economic impacts are positive both locally and throughout the county.

Terrestrial Flora and Fauna

The treatment works, access roads etc. will be located away from hedges and access along the riverbank will be maintained to accommodate wildlife movement. During construction it is important to prevent the exposure of concrete to the river water. Once operational any discharges into the water will be controlled and subject to licensing and strict regulation.

Aquatic Flora and Fauna

No long-term disturbance of the freshwater invertebrate fauna is anticipated, although there is expected to be some short-term disturbance during the construction phase. Overall the proposed water abstraction scheme at Srowland will have no significant impact on the invertebrate fauna of the River Barrow.

Fisheries

No significant adverse impacts are predicted from the proposed abstraction of water from the River Barrow.

Soils

There will be a substantial removal of high-fertility soil at the site, however the loss is not significant having regard to the overall extent of such soils in the county.

Hydrology and Navigation

There will be no significant impacts on navigation as a result of the proposed abstraction. The projected impact in terms of water depth is very small, as the river level is controlled by weirs downstream of the abstraction point. However, improvements to the navigation are proposed at two problem locations as a mitigation measure as set out in the next section.

Water Quality

Construction of the proposed development has the potential to generate considerable volumes of silt that has the potential to affect surface water quality during construction. The potential impact of reduced flow on the river water quality will be more than

compensated by the anticipated improvement in river water quality resulting from the implementation of the Urban Waste Water Directive and the Phosphorous Regulations.

Noise
Noise impacts at nearest houses from both the construction works and during operation of the plant are predicted to be within guideline limits for rural areas. There is no indication of potential vibration impact from the proposed development.

Landscape
The proposed development has the potential to impact on the character of the surrounding countryside. However these effects will be highly localised and will not, therefore be significant.

Material Assets I
The proposed abstraction plant is predicted to have an overall positive impact as additional water sources are essential to allow new developments to take place.

The proposed development will generate additional local traffic during the construction period however it will be well within the carrying capacity of the R 417.

Material Assets II (Cultural Heritage)
There will be no direct impacts on the known sites of archaeological importance from the proposed development. However a number of mitigation measures are recommended, as set out in the next section, given the potential for this stretch of the River Barrow to retain material of archaeological interest.

THE MITIGATION MEASURES
This section only includes those topics where mitigation measures are required.

Fisheries
During construction the principal mitigation measure necessary at Srowland is to ensure that activities associated with installing the intake works and pumping station are restricted to as small an area as possible to limit the amount of disturbance.

Soils
The final design shall include measures to intercept and collect any spillages from the proposed development into the River Barrow. The contractor's method statement is required to indicate how contamination of ground or surface waters, by mobilisation of soil particles, shall be prevented by management, monitoring, interception, removal and/or treatment.

Hydrology and Navigation
It is proposed to carry out improvements to the Navigation at Bagenalstown Lock and at the Cork-Dublin Gas Main crossing as mitigation for marginally lowering water surface levels downstream of the abstraction location.

Water Quality
Appropriate measures will be taken to minimise the mobilisation or river sediments and the generation of silt-laden runoff during construction of the intake works and the

bankside construction. Works in the river will be undertaken outside of the salmon-spawning season and discharges into the river will be prevented.

All local authorities within the Barrow catchment area are already obliged to comply with the requirements of the Urban Wastewater Directive, the Phosphorus Regulations and the Water Framework Directive to achieve improvement in water quality. Measures taken to comply with these Regulations will achieve the improvement in Water Quality required and no further mitigation measures will be required.

Noise

If the supplier specifications for the treatment plant indicate that sound power emissions are greater than assumed in the assessment carried out, mitigation measures such as lower noise sources, screening and orientation need to be considered.

Landscape

The following mitigation measures are proposed for the construction stage of the project:

- All perimeter hedges and trees should be retained and protected throughout the construction period
- The riverbanks should be protected and planted with locally appropriate riverbank and light woodland species
- The design of the proposed development will be carefully considered because of its affect on the Barrow and its potential visibility from both the road and the vicinity of the Grand Canal. Maximum building envelopes and acceptable surface finishes will be specified for the development to minimise visual impact

Material Assets II (Cultural Heritage)

An underwater assessment and/or investigation is recommended prior to construction operation if there is any direct impact with the existing riverbed. During the construction phase, an archaeological monitoring programme should be undertaken by an experienced archaeologist.

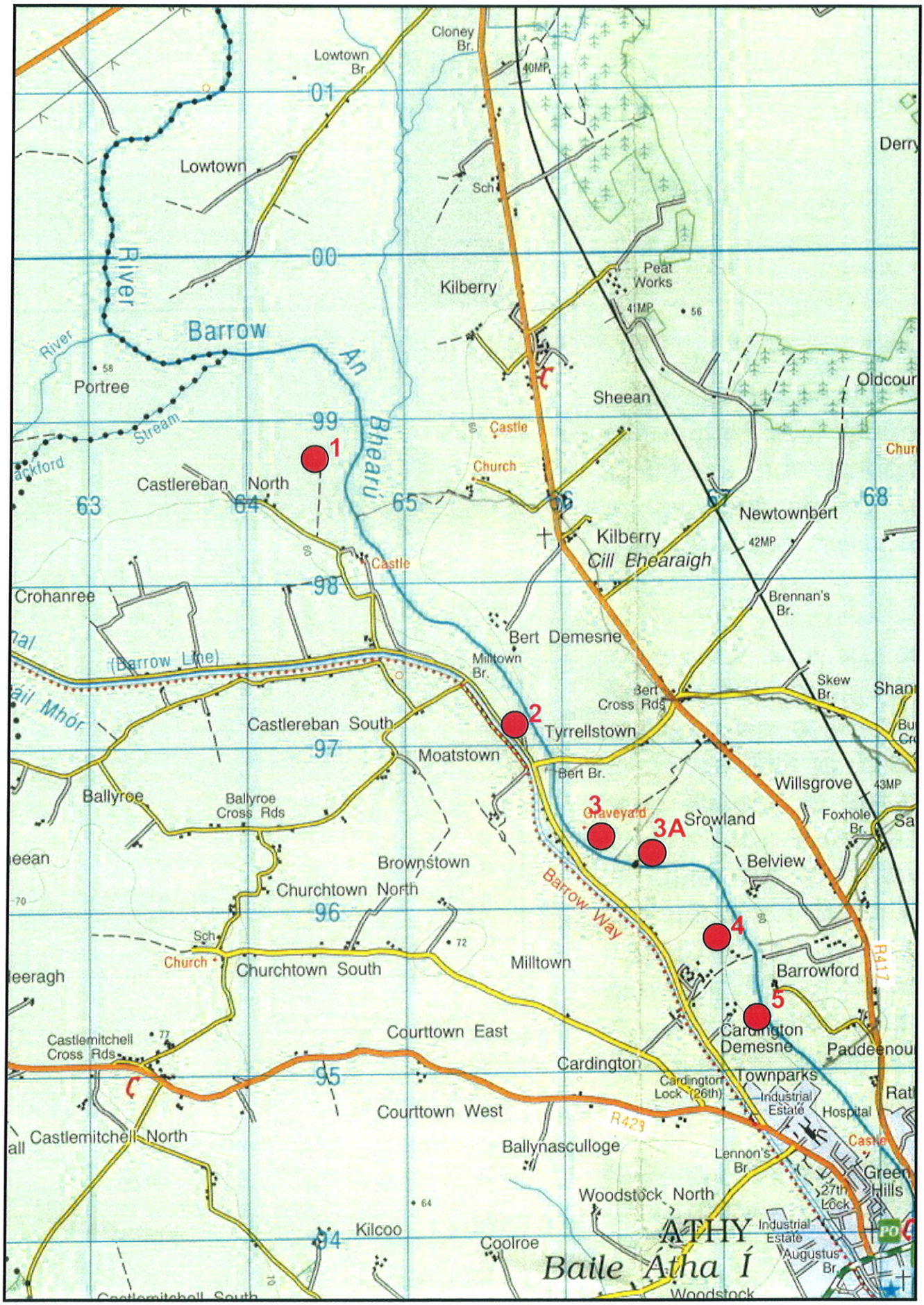

Figure 1 Assessment of Site Options

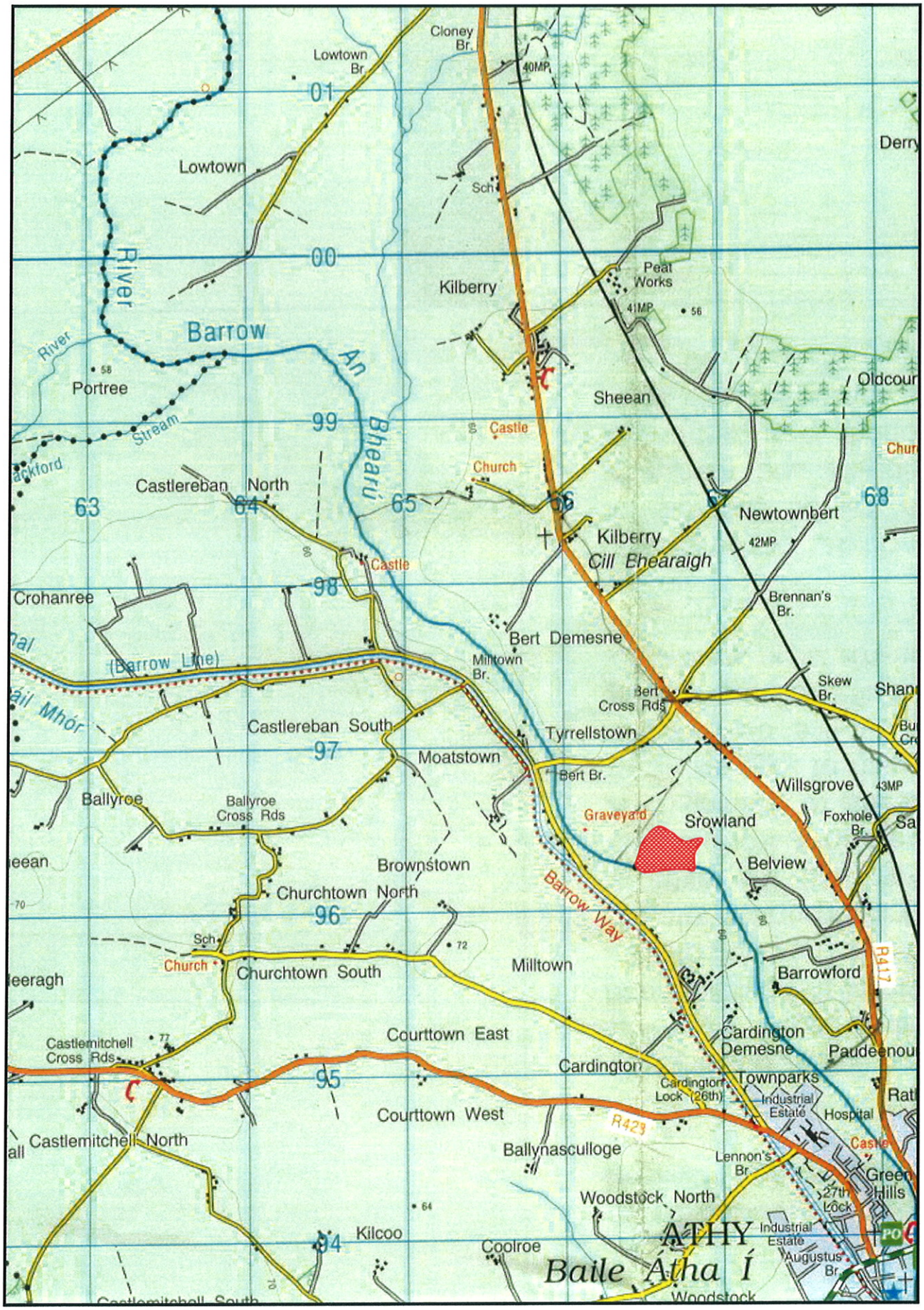

Figure 2 Site Location Map