CARLOW COUNTY COUNCIL

COMHAIRLE CHONTAE CHEATHARLOCHA

County Buildings, Athy Road, Carlow.
Tel: 059 9170300
Fax: 059 9141503
Email: secretar@carlowcoco.ie
Web: www.carlow.ie

## NOTICE OF PROPOSED DEVELOPMENT

## PLANNING & DEVELOPMENT ACT, 2000 (PART XI)
## PLANNING & DEVELOPMENT REGULATIONS 2001 (PART VIII)

Notice is hereby given that **Carlow County Council** proposes to construct a new Waste Water Treatment Plant at Clonegal, to replace the existing Treatment Plant, which is at capacity.

The proposed new Treatment Plant will be located adjacent to the existing Treatment Works site and will involve the construction of a proprietary Biological Treatment Unit on the site.

Plans and particulars of the proposed development are available for inspection from **Friday 21st September 2007 to Friday 19th October 2007** inclusive at the following locations:



**Carlow County Council Offices, Reception Foyer, County Buildings, Athy Road, Carlow**
**Monday - Friday : 9.30am – 5.30pm**

**Area Offices in Tullow**
**Monday – Friday : 9.30am – 5.30pm**

**Area Offices in Bagenalstown**
**Monday-Friday : 9.30am – 1.00pm, 2.00pm – 5.30pm**

A copy of the relevant Plans and Particulars will also be available at the Post Office in Clonegal.

Submissions or observations with respect to the proposed development, dealing with the proper planning and development of the area in which the development would be situated, may be made in writing to the Senior Staff Officer, Water Services Section, Carlow County Council, Assembly Rooms, No 40 Dublin Street, Carlow to arrive no later than 4.**30 pm on Friday, 2nd November 2007** or by e-mail to enviro@carlowcoco.ie

**Eámonn Walsh**
**Director of Services**

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# Clonegal Sewage Treatment Works Improve Scheme

## Part VIII – Planning



**E. Walsh,**
**Director of Services,**
**Infrastructure, Water Services & Environment,**
**Carlow County Council,**
**County Buildings,**
**Athy Road,**
**Carlow.**

**August 2007**

# Clonegal Waste Water Treatment Works Improvement Scheme

## Part XI – Planning

### Introduction

Clonegal village is located a distance of approximately 30 kilometres south-east of Carlow Town. At present sewage is treated at a site to the south west of the village in the Huntington estate and effluent from the existing treatment works discharges to the Derry River, about a mile upstream where it joins the Slaney River. Clonegal Waste Water Treatment Works (WWTP) is a secondary treatment works constructed in the mid 1970s.

The plant was originally designed to take a population equivalent (pe) of about 200 pe and is currently receiving approximately over 400 pe. The existing works is currently overloaded and there is currently planning approval for three further developments in Clonegal. Beyond this it is expected that there will be future development pressure on Clonegal as villages in Carlow are now within the Dublin commuter belt region. It is proposed to upgrade the existing treatment works to provide an improved quality of effluent from the treatment works and to provide for future development in Clonegal.



### Existing Treatment Works

The existing treatment works is currently over 30 years old and using an extended aeration process. There is a storm water overflow in the inlet manhole and there is an influent pumping station which lifts the flow into the aeration tank. The aeration tank is aerated by a vertical shaft surface aerator which is far too small. Aeration has been supplemented by a venturi aerator, which provides adequate aeration for the current load. Venturi aerators are not very energy efficient and are generally used as a temporary solution when a WWTP is waiting upgrading. The secondary settlement tank is hydraulically over loaded particularly as the inflow is high and the inlet pumps are oversized. This creates pumping high flows through the works when running, which hydraulically shock loads the settlement tank every time. There are also sludge drying beds, with the sludge wasted to them on a regular basis.

Access to the works is via a right of way through the Huntington estate. There is a relatively high background flow indicating infiltration into the sewerage network. During rainfall there is a sharp increase in flow to the works which is causing hydraulic overloading of the works. While the works is providing adequate biological treatment at present it cannot accept any further biological loading and is suffering from serious hydraulic over-loading. Consequently Clonegal WWTP requires full upgrading and there are no pumping stations in the catchment at present.

The site of the existing works is the ideal location for the expansion of the works. The benefits of this site are that the sewerage network already drains to this site and it is isolated from housing. However there is not enough sufficient space on the existing fenced site for a new expanded WWTP. Therefore additional land is required and a site of up to one acre is recommended and this will allow for future development.

## Description of Proposed Works

It is proposed to provide a new treatment works on the site of the existing treatment works in Clonegal with an enlarged site footprint. The new works will cater for future development in Clonegal up to a population equivalent pe of 1000 people and will provide a high quality of treated effluent, which will comply with the highest standards. The plant has been designed so that additional capacity can be added at the site with relative ease in the future if the need arises.

The treatment works will consist of the following treatment processes:

- Fine screening
- Biological treatment
- Grit Removal
- Sludge removal
- Tertiary treatment

Tertiary treatment will be provided to ensure that the effluent meets the required high standard.



The existing inlet pipe will discharge into a new inlet works, which will consist of fine (6mm) screening. Screenings will be compacted and discharged into a sealed bin for disposal. The grit removal system consists of a grit chamber in which the grit is allowed to settle out of the flow. From this chamber, the settled grit is discharged to a sealed bin for disposal. The effluent will then discharge to an inlet pump sump which will have 2 inlet pumps (Duty/standby). The effluent will be pumped into an aeration tank which has contoured walls so as to give efficient movement of the tank contents and prevent solids accumulating and settlement. Fine bubble diffusers on both sides of the chamber inlet to give a controlled mixing pattern within the tank, which maintains the solids in suspension and prevents dead spots, shall introduce air.

The settlement chamber (Clarifier) shall be connected by inlet ports to the aeration zone. The clarifier walls have a slope of approximately 7.5 degrees to prevent solids accumulation and ensure that settled solids move by gravity to the bottom of the clarifier. The settled solids in the bottom of the clarifier are returned to the aeration tank by a return activated sludge (RAS) pump. The clarifier is equipped with a scum box to remove scum into a sludge chamber by gravity from where it is pumped to the sludge holding tank.

The return activated sludge (RAS) pump will return settled sludge to the aeration tank. Surplus sludge shall be pumped using the waste activated sludge (WAS) pumps to the sludge holding tank. The sludge will be stored in the holding tank and then removed off site. The supernatant from the sludge holding tank overflows by gravity to the adjacent waste return sump and shall be pumped to the inlet works for recycling through the process.

Clarified effluent from the settlement tank will flow into a sand filter. The dirty water is fed into an area below the entire sand bed. As the water rises to the surface, the particles of dirt remain between the grains of sand. Once the water is above the sand bed, it is clean for further treatment, depending on the process. The cleaning of the actual filter is performed by the sand washer, which continuously flushes the sand grains in the filter. An airlift pump sucks up sand from the bottom, where the grains are the dirtiest, and feeds them into the sand washer. In the washer the dirt is separated from the grains of sand, partly through flushing and partly through friction. The clean sand is then returned to the sand bed in an even layer at the surface.

Phosphorous removal will be obtained using Biological Treatment and a final polishing using chemical dosing of ferric sulphate.

The treatment works will fully treat flows up to 3 times the Dry Weather Flow of 690 $m^3$ /day. Flows in excess of this will pass through the fine screens and grit removal systems before flowing to a storm water holding tank which will provide storage for a further 3 times the Dry Weather flow. Any additional flow will then pass from the storm water holding tank to the stream. Following the storm event the contents of the storm water holding tank will be returned to the main treatment process



The effluent from the plant will be treated to the flowing standards:

| | |
|---|---|
| Biochemical Oxygen Demand (B.O.D) | - 10 mg/l |
| Suspended Solids (S.S) | - 10 mg/l |
| Ammonia Nitrogen | - 5 mg/l |
| Phosphorus | - 1 mg/l |

The works will also include necessary accommodation works for the new site including the construction of a new roadway to access the site.

## Impact of the Scheme

The treatment works is situated on the existing site, north of the village. An earth berm is to be constructed around the site to screen the works from view and to lessen the visual impact of the scheme. The berm will be planted to a landscaping plan to further screen the works and blend the site in with the local environment. The site will also be fenced with a welded mesh panel security fence, which will be coloured green, again to reduce the visual impact of the site.

The major impact of the scheme will be the high quality treated effluent, which will be discharged from the works to the Burren River which is a main tributary to the Barrow River. This will result in a lower impact on the water quality on the local water courses than the current plant.

## Archaeological Impact

An Archaeological Desktop Study, including a site investigation, of the scheme was carried out by Tobar Archaeological Services in August/September 2007. "The proposed development is not located within the constraint zone for any recorded monuments nor were any previously unrecorded monuments detected during field walking". "No known or newly discovered archaeological monuments are located on the proposed development site or within the site boundary." Additional recommendations made by Tobar Archaeology Services will be carried out at the works namely:



- No ground works or storage of machinery or spoil from the site should take place within the constraint zone for the Recorded Monument listed on Fig. 5

- A suitably qualified archaeologist shall monitor the removal of topsoil during the construction phase of the development in order to prevent the loss of or damage to any previously unrecorded or sub-surface archaeological remains which may exist on the site.

- Should any archaeological remains be uncovered during monitoring of groundworks provision shall be made for the appropriate resolution of such remains through preservation in situ or preservation by record

## Drawings

The drawings which accompany this report are:

Drawing no 1: Existing sewerage treatment works and proposed new works

Drawing no 2: Site Plan

Drawing no 3: Site Plan – Plant Layout

Drawing no 4: Site Plan – Sections

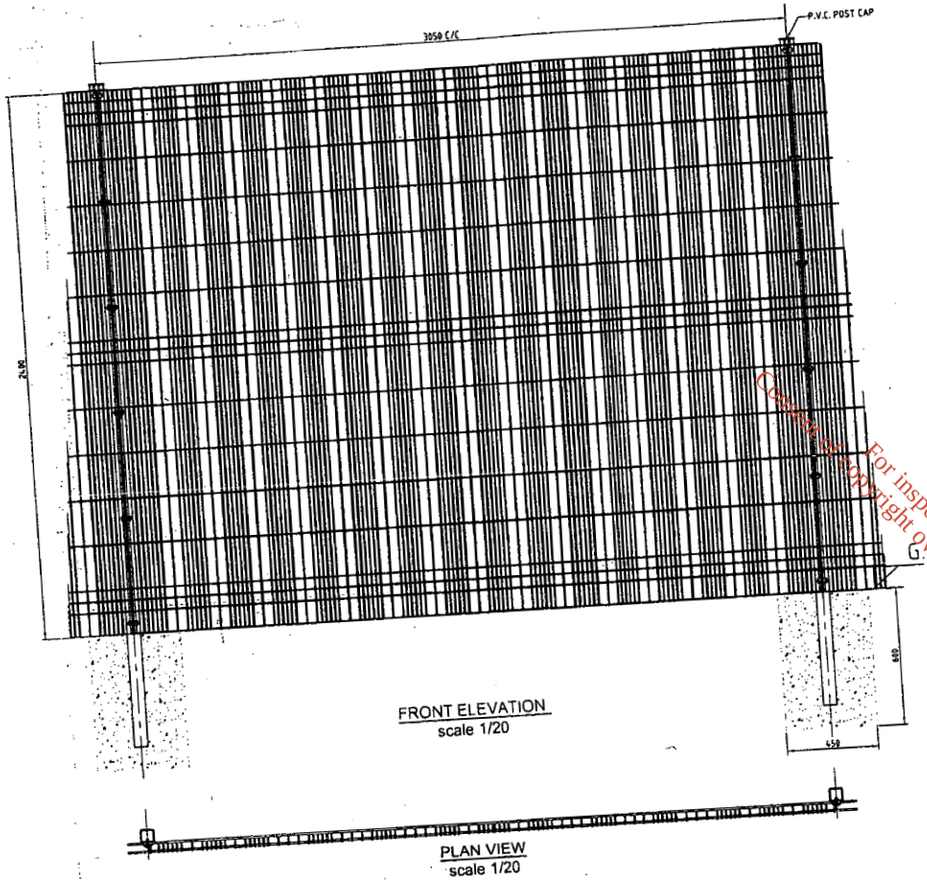
Fencing Standard Details

Appendix No. 1 – Details of Proposed treatment system

Appendix No 2 – Archaeological Report

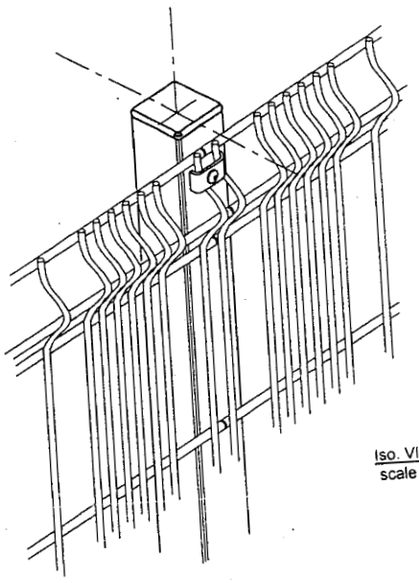
# Drawings and Appendices

Sheet Size -A3

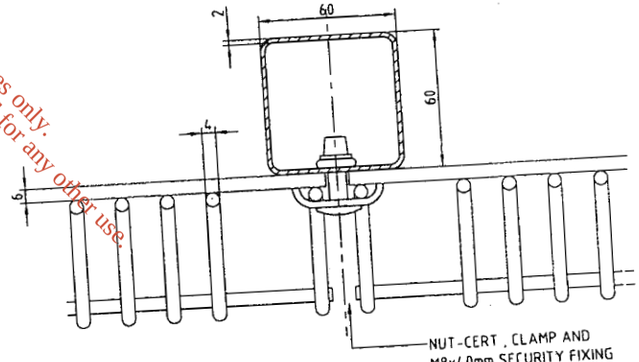



FRONT ELEVATION
scale 1/20

PLAN VIEW
scale 1/20



Iso. VIEW
scale 1/5

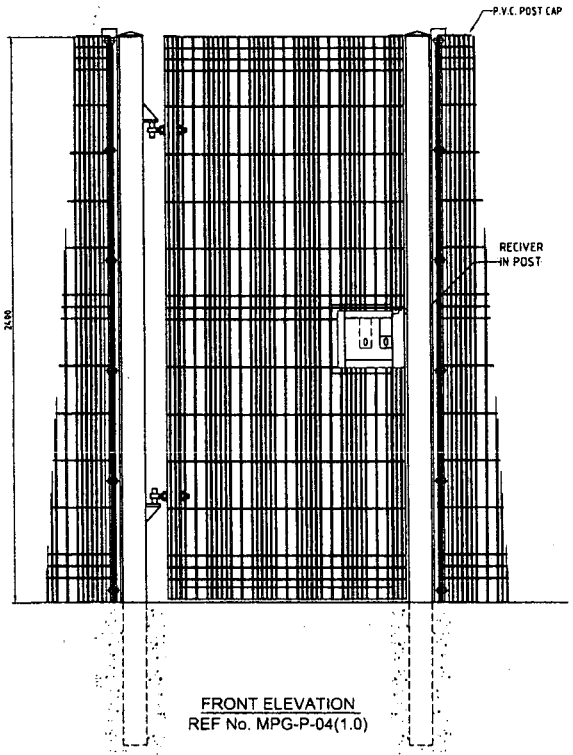



POST SECTION
scale 1/2

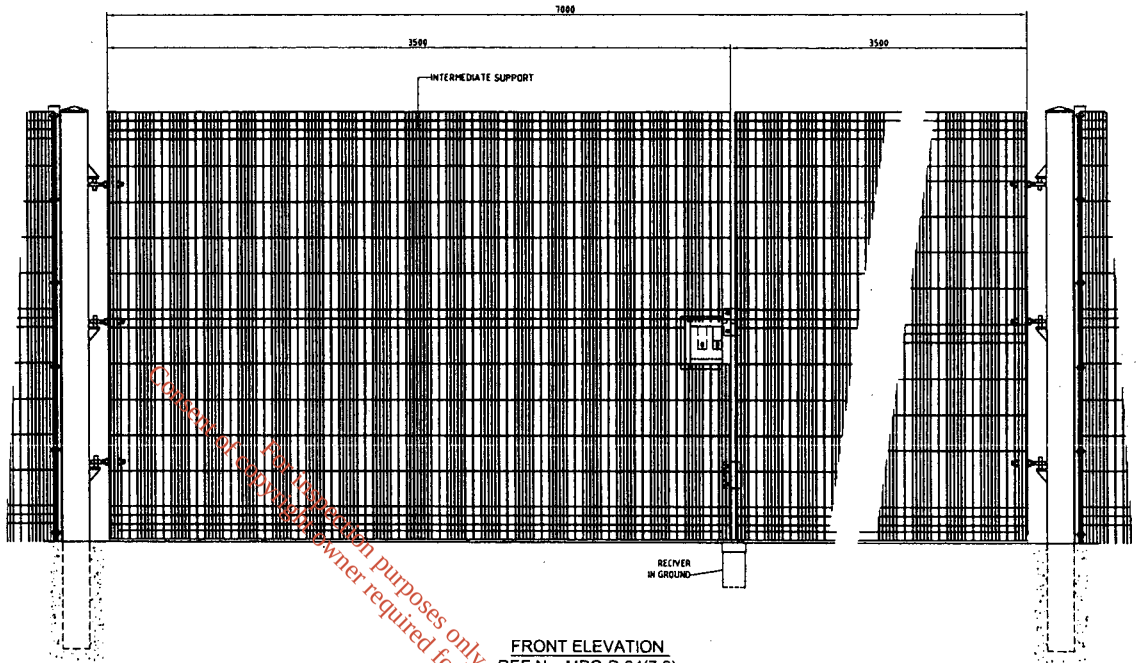
| Ref. No. | FENCE HEIGHT | MULTI-LIFT | PANEL WIDTH | POST DIM'S | POST O/A | WIRE (H) | WIRE(V) | MESH App. | V-BEAM'S | FIXING | CONC. BASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MP-P-01 | 1.20 M | N/A | 3044mm | 60x60x2mm | 1700mm | 6mm | 4mm | 200x40/20mm | 2 | M8+Bracket | 400x400x500mm |
| MP-P-02 | 1.80 M | N/A | 3044mm | 60x60x2mm | 2300mm | 6mm | 4mm | 200x40/20mm | 3 | M8+Bracket | 450x450x525mm |
| MP-P-03 | 2.00 M | N/A | 3044mm | 60x60x2mm | 2500mm | 6mm | 4mm | 200x40/20mm | 3 | M8+Bracket | 450x450x525mm |
| MP-P-04 | 2.40 M | N/A | 3044mm | 60x60x2mm | 3000mm | 6mm | 4mm | 200x40/20mm | 3 | M8+Bracket | 450x450x600mm |
| MP-P-05 | 3.00 M | 1.20+1.80M | 3044mm | 80x80x3mm | 3800mm | 6mm | 4mm | 200x40/20mm | 5 | M8+Bracket | 450x450x800mm |
| MP-P-06 | 3.60 M | 1.80+1.80M | 3044mm | 80x80x3mm | 4400mm | 6mm | 4mm | 200x40/20mm | 6 | M8+Bracket | 600x600x800mm |
| MP-P-07 | 4.20 M | 1.80+2.40M | 3044mm | 80x80x3mm | 5200mm | 6mm | 4mm | 200x40/20mm | 6 | M8+Bracket | 600x600x1000mm |

**NOTE.** 2.4 M High fence shown

Sheet Size -A3




FRONT ELEVATION
REF No. MPG-P-04(1.0)




FRONT ELEVATION
REF No. MPG-P-04(7.0)



| Ref. No. | GATE HEIGHT | MULTI-LIFT | CLEAR OPE | POST DIM'S (R.H.S.) | | POST O/A | FRAME | LEAF | No. LUGS | SLAPPER'S | CONC. BASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MPG-P-01/ (*) | 1.20 M | N/A | 1 TO 10M | CLEAR OPE | 100x100mm | 1700mm | 50X50mm | S.L / D.L | 2 | No | 400x400x500mm |
| MPG-P-02/ (*) | 1.80 M | N/A | 1 TO 10M | 1 TO 2M | | 2300mm | | | | Yes | 450x450x525mm |
| MPG-P-03/ (*) | 2.00 M | N/A | 1 TO 10M | 3 TO 4M | 120x120mm | 2500mm | 50X50mm | D.L | 2 | Yes | 450x450x525mm |
| MPG-P-04/ (*) | 2.40 M | N/A | 1 TO 10M | | | 3000mm | | | | Yes | 450x450x600mm |
| MPG-P-05/ (*) | 3.00 M | 1.20+1.80M | 1 TO 10M | 5 TO 6M | 150x150mm | 3800mm | 60X60mm | D.L | 3 | Yes | 450x450x800mm |
| MPG-P-06/ (*) | 3.60 M | 1.80+1.80M | 1 TO 10M | | | 4400mm | | | | Yes | 600x600x800mm |
| MPG-P-07/ (*) | 4.20 M | 1.80+2.40M | 1 TO 10M | 7 TO 8M | 180x180mm | 5200mm | 60X60mm 70X70mm | D.L | 3 | Yes | 600x600x1000mm |
| *EXAMPLE* MPG-P-01/ (*) (*) - DENOTES CLEAR OPE WIDTH 1 TO 10 METERS | | | | 9 TO 10M | 180x180mm | | 80X80mm | D.L | 3 H.D. | | |

**NOTE.** *2.4M High fence shown*

# Appendix No. 1

# Details of Proposed Treatment System

# Clonegal WWTW PROCESS DESCRIPTION

## 1 Introduction

E.P.S. intend to intend to provide a Waste Water Treatment Plant designed in accordance with BATNEEC and the Urban Waste Water Directive 1994.

The final effluent shall comply with the following discharge limit standards:

| Parameter | Concentration (mg/l) |
|---|---|
| $BOD_5$ (mg/l) | 10 |
| Suspended Solids (mg/l) | 10 |
| Ammonia ( as N) mg/l | 5 |
| Orthophosphate (as P) | .5 |
| Phosphorous (as P) mg/l | 1 |

**Table 1 – Effluent Limits discharge**



## 2 Plant Description

The Wastewater Treatment Works upgrade shall have a design flow of 690 $m^3/d$ (3 DWF) for a Population Equivalent of 1000.

The E.P.S. proposal is based on a Conventional Extended Activated Sludge Treatment Plant.

The following provisions are incorporated in the design:

- Provision for inlet sump complete with 2 No. Pumps (Duty/Standby)
- Automatic Inlet 6 mm Fine Screen including screenings disposal facility and a manual screen by-pass

- The Biological Treatment includes 1 No. Aeration tank and 1 No. Settlement Tank
- The Tertiary Treatment includes 1 No. Sand Filter
- Storm Tanks c/w washing facility
- Provision on site Sludge Holding Tank with a finished product at 3-4% DS
- Provision is made for Chemical Phosphorous removal

## 2.1 Inlet Works

The inlet works shall be designed to cater for a 1000 PE and shall consist of:

- An Automatic Inlet screen that will remove solids in excess of 6 mm.
- A manually raked emergency bypass 6 mm bar screen.
- Pump Sump completed with 2 No. Inlet Pumps (Duty/Standby)



## 2.2 Biological Treatment

E.P.S. propose the Conventional Extended Activated Sludge Process.

The aeration walls shall be contoured so as to give efficient movement of the tank contents and prevent solids accumulation and settlement. Fine Bubble Diffusers on both sides of the chamber inlet to give a controlled mixing pattern within the tank, which maintains the solids in suspension and prevents dead spots, shall introduce air.

The settlement chamber (Secondary Clarifier) shall be connected by inlet ports to the aeration zone. The clarifier walls have a slope of 7½ o

approximately to prevent solids accumulation and ensure that settled solids move by gravity to the bottom of the clarifier.

The settled solids in the bottom of the clarifier hopper return to the Aeration compartment, by RAS pump. The clarifier is also equipped with a

scum box to remove scum into sludge chamber by gravity from where at in pumped to the sludge storage tank and effluent weir trough.

The proposed Settling Tank shall be designed for the hydraulic load with 0.75 $m^3/m^2$ hr upward flow velocity, at a hydraulic loading of 3 DWF. Tanks are equipped with an inlet scum and sludge draw- off pipework, "V" notch weir plate and baffle-plate and scum collector.

The sludge return-pump shall then pump the sludge at a rate of 1 DWF and thus returns settled sludge to the start of the process (i.e. Aeration tank).



The proposed surplus sludge system consists of 2 No. surplus sludge pumps (duty/standby). Surplus sludge shall be pumped into the Sludge Holding Tank. The surplus sludge pumps shall be controlled via AC adjustable frequency drives using set points derived from the metered flows. The transmitter shall be located on the main control panel in the control building.

The Treatment Plant incorporates a Sludge Holding Tank for the storage and mixing of surplus sludge at 0.75% D.S from Settlement Tank.

The supernatant from the Sludge Holding Tank overflows by gravity to the adjacent waste return sump and shall be pumped to the inlet works for recycle through the process.

## 2.3 Tertiary Treatment

The dirty water is fed into an area below the entire sand bed. As the water rises to the surface, the particles of dirt remain between the grains of sand. Once the water is above the sand bed, it is clean for further treatment, depending on the process.

The cleaning of the actual filter is performed by the sand washer, which continuously flushes the sand grains in the filter. An airlift sucks up sand from the bottom, where the grains are dirtiest, and feeds them into the sand washer. In the washer the dirt is separated from the grains of sand, partly through flushing, partly through fiction. The clean sand is then returned to the sand bed in an even layer at the surface.



## 2.4 Chemical Treatment

Phosphorous exists in three main forms in wastewater; ortho-phosphate, polyphosphate and organic phosphate. During aerobic treatment, the later two forms are converted to ortho-phosphate, which is the easiest form to precipitate using chemical addition.

E.P.S. propose to remove phosphorous using Biological Treatment and a final polishing using chemical dosing of Ferric Sulphate. The Chemical Dosing location for the chemical precipitation of phosphorous shall be proposed at the aeration tank i.e. simultaneous precipitation, because polyphosphates and organic phosphorous are less easily removed than orthophosphorus. Adding Iron salts after secondary treatment (where organic phosphorus and poly-phosphorus are transformed into orthophosphorus) results in the best removal.

# Appendix No. 2

# Archaeological Report

# ARCHAEOLOGICAL IMPACT ASSESSMENT FOR PROPOSED WASTE WATER TREATMENT PLANT AT CLONEGAL, CO. CARLOW

**DATE:** SEPTEMBER 2007

**AUTHOR:** ANNETTE QUINN MA, MIAI

**PLANNING REF. NO:** N/A

**EXCAVATION LICENCE:** N/A

**CLIENT:** **WATER SERVICES**
**CARLOW COUNTY COUNCIL**
**COUNTY BUILDINGS**
**ATHY ROAD**
**CARLOW**



**TOBAR**
archaeological services

Saleen, Midleton, Co. Cork
**Tel:** 021-4652305
**Fax** 021-4651791
**Mob:** 087-4188993 or 087-4188994

# TABLE OF CONTENTS

## 1. INTRODUCTION

This report presents the results of an archaeological impact assessment of a proposed extension to a waste water treatment plant at Clonegal, County Carlow. The project involves the construction of an extension to the existing works. This report amalgamates desk-based research and the results of field walking to identify areas of archaeological significance or potential likely to be impacted by the proposed development. A number of mitigating measures will also be recommended in order to minimise any such impact.

## 2. METHODOLOGY

A desk-based study of the proposed development was undertaken in order to assess the archaeological potential of the area and to identify the impacts of the proposed development on this landscape.

*Cartographic Sources*

A primary cartographic source and base-line data for the assessment was the consultation of the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) for County Carlow. All known recorded archaeological monuments are indicated on 6 inch Ordnance Survey (OS) maps and are listed in this record. The 1st (1840) (Fig. 3) and 2nd edition (1906) (Fig. 4) OS maps for the area were also consulted.



*Documentary Sources*

The published *Archaeological Inventory of County Carlow* was consulted as were all local journals such as *Carloviana*. The database of archaeological excavations in Ireland, *excavations.ie*, was also searched in order to determine if recent unpublished excavations had been undertaken in the vicinity. Carlow County Development Plan (2003) was also checked in order to determine if any protected structures were located near to the proposed development area. The nearest protected structure (and also Recorded Monument) is Huntington Castle (see below).

*Field Inspection*

A programme of field walking of the proposed development area was undertaken. The site of the proposed extension was inspected to assess the likely impact, if any, on the recorded monuments in this area and also to determine if previously unrecorded archaeological monuments existed on or near to the location of the proposed site. A photographic and descriptive record was made of the proposed development site (Plates 1-5).

## 3. DEVELOPMENT PROPOSAL

The proposed development consists of the construction of an extension to an existing waste water treatment plant. The new works will occupy an area immediately west of the existing plant on a site measuring *c.* 63m in length north-south and 23m east-west (Fig. 2). The project will involve ground disturbance in the form of topsoil removal and the excavation of foundations for a number of proposed tanks on the site.



## 4. RECEIVING ENVIRONMENT

The proposed development site is located in the townland of Huntington just to the south of Clonegal village, Co. Carlow (Fig. 1). The village is located approximately 12km south-east of Tullow and 3 - 4km north of Bunclody, Co. Wexford. The proposed development area is located to the west north-west of Huntington Castle and can be accessed from the passageway leading to the castle. The site currently consists of newly planted coniferous forestry in places and was densely overgrown at the time of site inspection. The existing waste water treatment works are located immediately east of the proposed development area. The latter treatment plant is surrounded by fencing.

## 5. DESCRIPTION OF THE CULTURAL HERITAGE WITHIN THE PROPOSED DEVELOPMENT AREA

***Recorded Monuments within Proposed Development Area***

No recorded monuments are located within the proposed site boundary (Fig. 5) although a number of recorded monuments are located within close proximity (see below).

***Recorded Monuments in Vicinity of Proposed Development Area***

The nearest recorded monument to the proposed development site which is listed in the Record of Monuments and Places (RMP) and indicated on the accompanying maps is located c. 150m to the north-west of the proposed development area in the same field. It is located in the Record of Monuments and Places as a 'Bullaun Stone' (RMP CW018-019). The site is described in the *Archaeological Inventory of County Carlow* (Brindley and Kilfeather 1993, 60) as a 'large granite boulder, possibly still in original position in grounds of Huntington Castle. It has a single and rather shallow basin (diam. 0.33m; D. 0.21m). The latter site visit was carried out by the Archaeological Survey of Ireland in 1988. The first Edition (1840) and second Edition (1906) OS maps were consulted as part of the assessment and the bullaun stone is not marked on either edition. There was no visible surface trace of the monument at the time of this survey. The area was densely covered in overgrowth and some newly planted coniferous trees. It is possible that the bullaun stone was removed during forestry plantation or during ploughing of the same field sometime between 1988 and the present.



Huntington Castle (RMP CW018-018) is also a recorded archaeological monument and is located to the south-west of the development area. It is not visible, however, from the latter as the access road to the castle is lined with a boundary of mature trees. The castle is also described in the *Archaeological Inventory of County Carlow* (Kilfeather 1993, 94) although it is classified as a house. *'A castellated house of many periods, the earliest built in 1625, probably not tower house, but semi-fortified seventeenth century house, which would be appropriate to the proportions of the front façade of the present structure. Extended in 1680, with further additions in 1720 and 1860. Apparently described by Down Survey as house'(There is a bridge over the River Derrin neare the said house)' which further suggests a building which was not heavily fortified. Still occupied.*

## Record of Protected Structures

Huntington Castle is also listed in the Record of Protected Structures[1] (RPS) in the Carlow County Development Plan (2003) as registered number 10400710. It is described as the following '*Freestanding four-bay three-storey over basement tower house, c. 1625, with projecting porch and bow to rear. Extended, c. 1880, comprising seven-bay two-storey wing with conservatory, crenellated parapet and bartizans added. Interior retains timber panelling, ribbed ceilings, staircase, c. 1725, and Temple of Isis to basement. Stable complex to site with group of detached brick outbuildings. Formal gardens, c. 1675, to site with terraces, canals and yew walks*. It has been classified and rated as a structure of National Importance. The latter building is also listed in the *National Inventory of Architectural Heritage* under the same reference number (http://buildingsofireland.ie/niah).



Also associated with Huntington Castle is a two storey estate house, also listed in the RPS as registered number 10400714. It is described as the following '*Detached six-bay two-storey red brick former estate building, c. 1885, with projecting end bay to left, single-storey store to right and crow-stepped gable ends. Renovated, c. 1990, to accommodate private residential use*. The building is rated as of Regional Importance.

[1] **Record of Protected Structures**
*Protected Structures - Definition and Legislation*
A protected structure may be defined as a structure that a planning authority considers to be of special interest in a number of ways including architectural, historical and archaeological. The concept of protected structures was introduced through the Local Government (Planning and Development) Act 1999 and is now legislated by the Planning and Development Act 2000. While the 'protected structure' status of a building does not exclude it from development or alteration the owner/occupier is required to consult with the planning authority either through pre-application discussions or the planning application process to ensure that any elements of the structure which make it significant are not lost during development.

The owner and/or occupier of a protected structure is legally obliged to ensure that no danger is caused to the structure. This obligation applies from the time when an owner or occupier is notified of a proposal to include a structure in the Record of Protected Structures. At this time, the structure becomes a 'proposed protected structure'.

The Gate Lodge into Huntington Castle is also listed in the RPS in the Carlow County Development Plan (2003) as registered number 10400715. It is described as the following; *'Detached two-storey turret style gate lodge, c. 1880, incorporating fabric of earlier structure on site with castellated parapet. Renovated, c. 1990. Attached house to side'*. It is rated as being of Regional Importance.

*General Historical Background*



Clonegal and Huntington are situated in the parish of Moyacomb or Clonegal. There are a number of references to Clonegal and Huntington Castle in Lewis' Topographical Dictionary of Ireland. MOYACOMB, or CLONEGAL, a parish, partly in the barony of SHILLELAGH, county of WICKLOW, partly in that of SCARAWALSH, county of WEXFORD, but chiefly in that of ST. MULLINS, county of CARLOW, and province of LEINSTER, on the road from Tullow to Newtownbarry, and on the river Perry, containing with the post town of Clonegal and the village of Johnstown, (both separately described) 4877 inhabitants. It comprises 28,204 statute acres, as applotted under the tithe act, of which 9347½ are in Wicklow, 9287½ in Wexford, and 9569 in Carlow. The portion in the county of Wexford includes the estate of Abbeydown, containing 452 plantation acres, which has been tithe free from time immemorial, and is considered extraparochial. The soil is varied, and there are some patches of bog: the state of agriculture is gradually improving. A slate quarry has been lately opened on Gibbet hill, near Johnstown. Several fairs held at Clonegal are mentioned under that head; it is also a station of the constabulary police, and contains an old castellated mansion of the Esmonde family. The living is a rectory, in the diocese of Ferns, and in the patronage of the La Touche family: the tithes amount to £850. The church, in the town of Clonegal, is a good modern building, erected in 1819, for which the late Board of First Fruits granted a loan of £1300; and the Ecclesiastical Commissioners have recently granted £186 for its repair. In the R. C. divisions the parish is chiefly in the diocese of Kildare and Leighlin, and, together with the parish of Barragh, constitutes the union or district of Clonegal, containing the chapels of Clonegal and Kildavin; the remainder of the parish is in the diocese of Dublin, forming part of the union or district of Arklow, and containing the chapel of Ballyfad, near Johnstown. There is a meeting-house for Methodists at Clonegal. In the parochial school, supported by the rector, and in the national school at Clonegal, about 210 children are educated; and there are about 30 children in a private school. At Abbeydown are the remains of an ancient religious house, of which no account is extant'.

## 6. IMPACT OF THE DEVELOPMENT ON THE CULTURAL HERITAGE LANDSCAPE

*Visual Impact*

No recorded archaeological monuments are located within the proposed site boundary. One recorded monument (RMP CW018-019) Bullaun Stone is located approximately 150m to the west north-west of the proposed waste water treatment plant. Although there was no visible surface trace of the stone on the day of survey this may have been due to dense overgrowth. Alternatively, the stone may have been removed between 1988 and the present either through ploughing or the plantation of coniferous trees. It is proposed to plant Beech Hedging along the western boundary of the proposed extension and this would minimise any potential visual impact that the development may have on the surrounding archaeological landscape. Furthermore, the distance of the proposed plant from the recorded monument is considered to be sufficient so as to avoid any visual impact. Huntington Castle (RMP CW018-018) is located to the south-west of the proposed treatment plant extension and is not visible from the site or visa versa. It is unlikely that there will be any visual impact on the surrounding archaeological landscape, therefore.



*Archaeological Impact*

No known or newly discovered archaeological monuments are located on the proposed development site or within the site boundary. The location of the bullaun stone, however, should be taken into consideration during site works. A number of recommendations are made in order to minimise the potential impact of the development on the surrounding archaeological landscape. It is possible that ground disturbance associated with the construction of the extension to the waste water treatment plant may uncover the remains of buried archaeological features or deposits which are no longer visible above ground.

## 7. MITIGATION STRATEGIES

The proposed development is not located within the constraint zone for any recorded monuments nor were any previously unrecorded monuments detected during fieldwalking. It is possible, however, given the proximity of the development to the recorded monuments RMP CW018-018 and 019 that

previously unrecorded or sub-surface archaeological remains may exist within the development area. In order to minimise the impact of such works on the archaeological and cultural heritage landscape the following mitigating strategies are recommended:

- ❖ No ground works or storage of machinery or spoil from the site should take place within the constraint zone for the Recorded Monument (CW018-019 Bullaun Stone) (see Fig. 5).
- ❖ A suitably qualified archaeologist should monitor the removal of topsoil during the construction phase of the development in order to prevent the loss of or damage to any previously unrecorded or sub-surface archaeological remains which may exist on the site.
- ❖ Should archaeological remains be uncovered during monitoring of groundworks provision should be made for the appropriate resolution of such remains through preservation *in situ* or preservation by record.



## 8. REFERENCES

Brindley, A. and Kilfeather, A., 1993, *The Archaeological Inventory of County Carlow*. Government of Ireland.

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*Framework and Principles for the Protection of the Archaeological Heritage*, 1999, Department of the Arts, Heritage, Gaeltacht and the Islands.

Lewis, S, 1837 *'Topographical Dictionary of Ireland'* London

Record of Monuments and Places (RMP) for County Carlow.

Record of Protected Structures, Carlow County Development Plan 2003, Carlow County Council

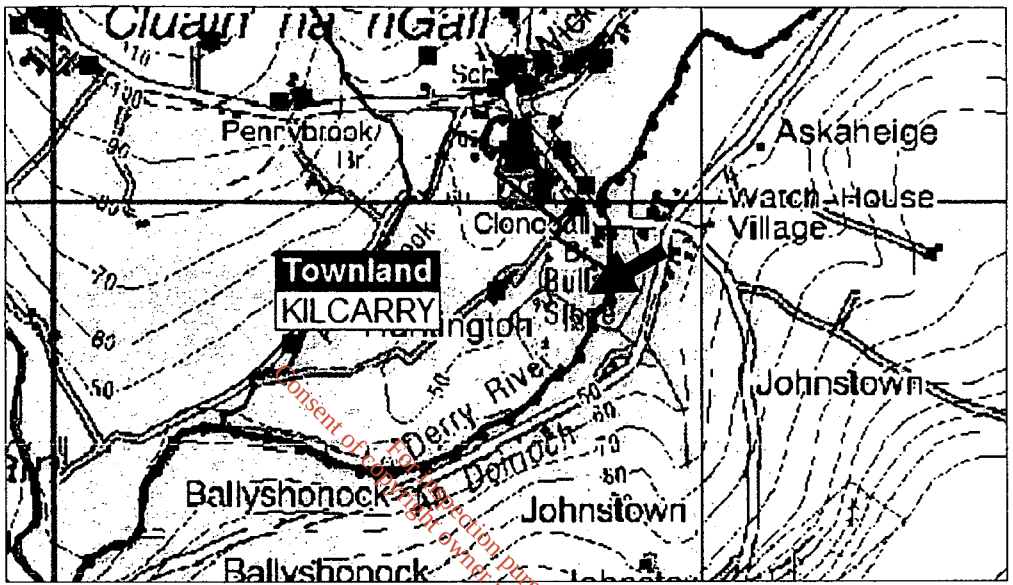
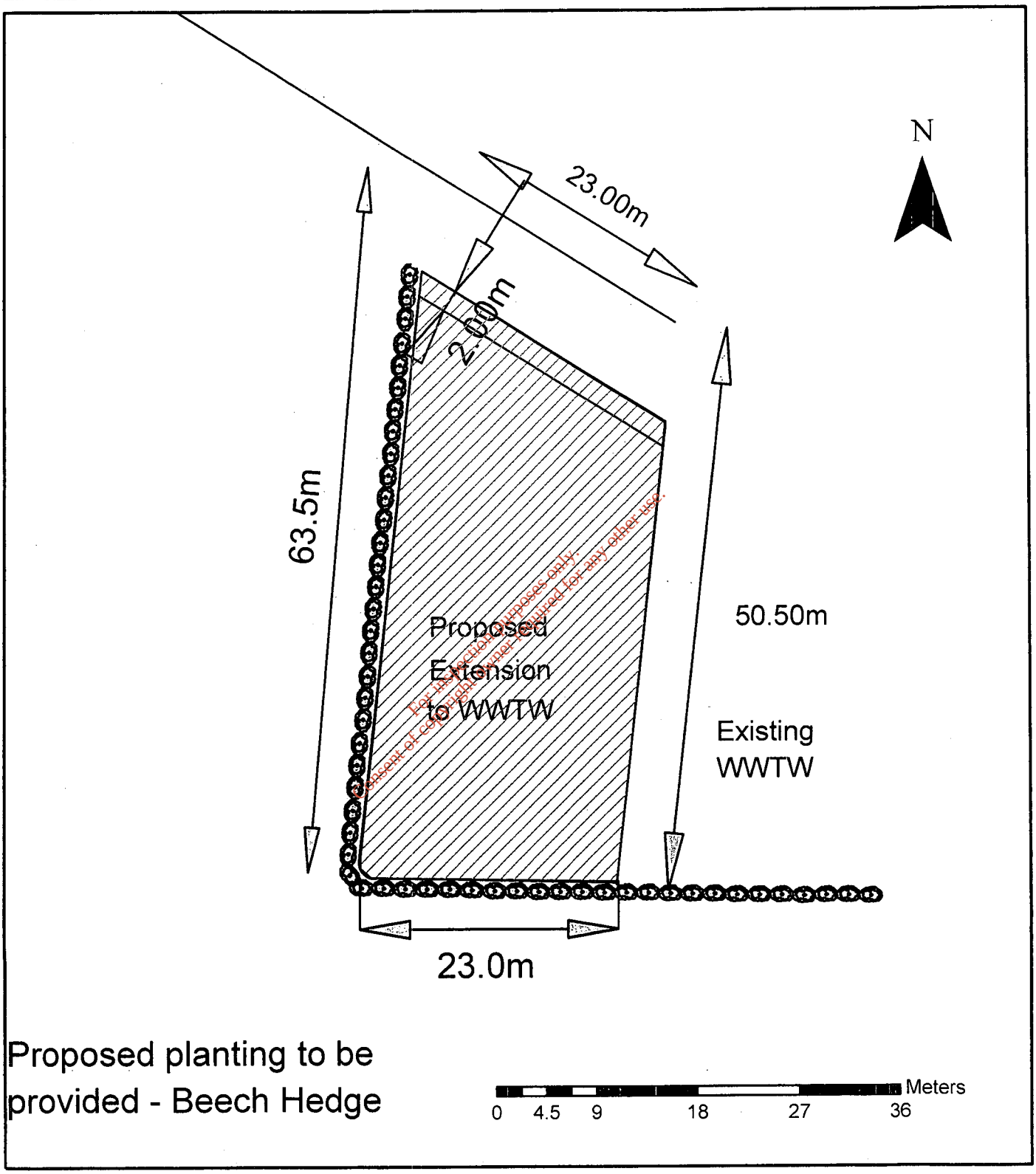



Figure 1: Site location indicated by arrow.

# Proposed WWTP at Clonegall






Base map provided by
Carlow County Council.
Additions using ArcView GIS.

Figure 2: Proposed WWTP
hachured in green.



Figure 3: Extract from 1st Edition (1840) OS map showing proposed development site indicated by arrow.

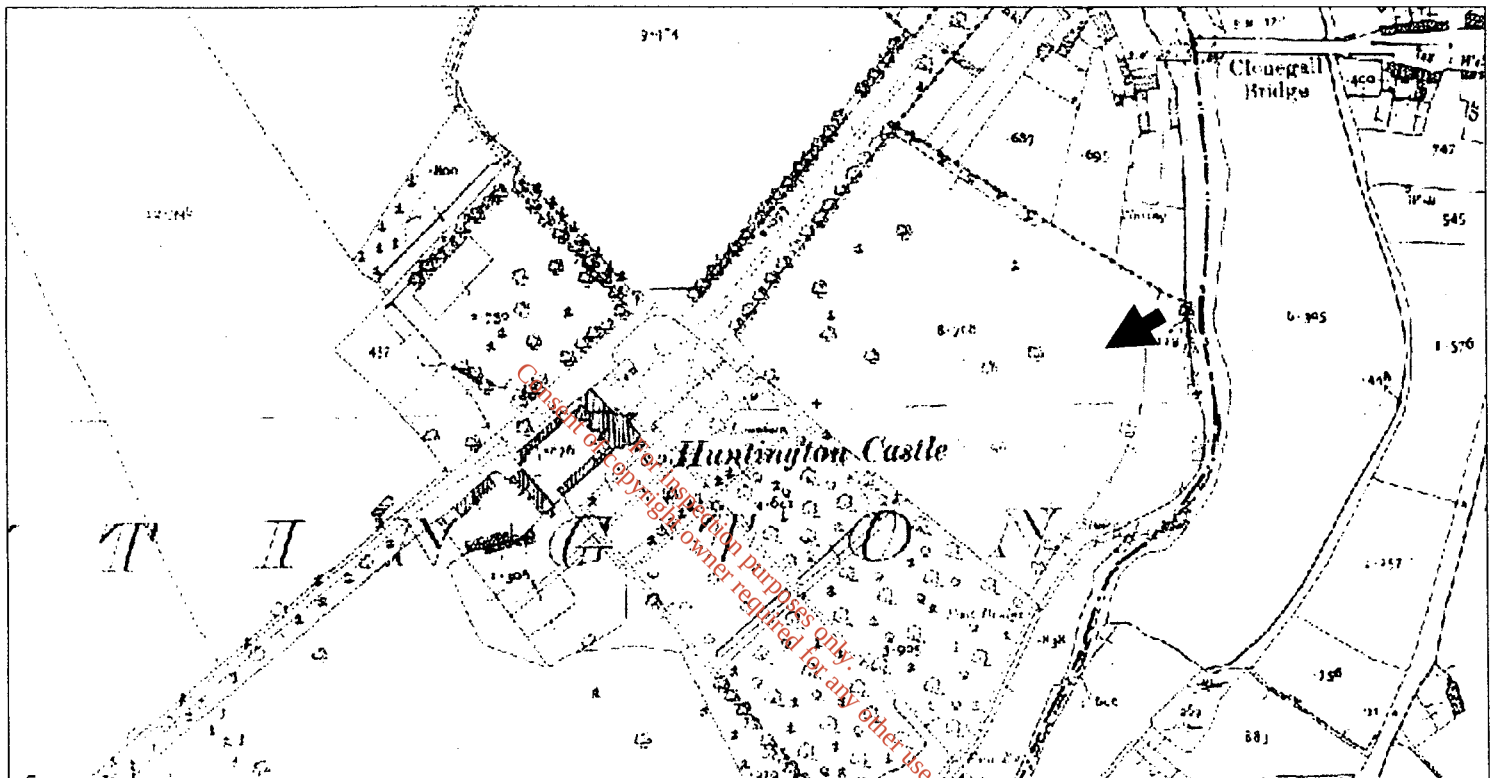




Figure 4: 2nd Edition (1906) showing area of proposed development indicated by arrow.

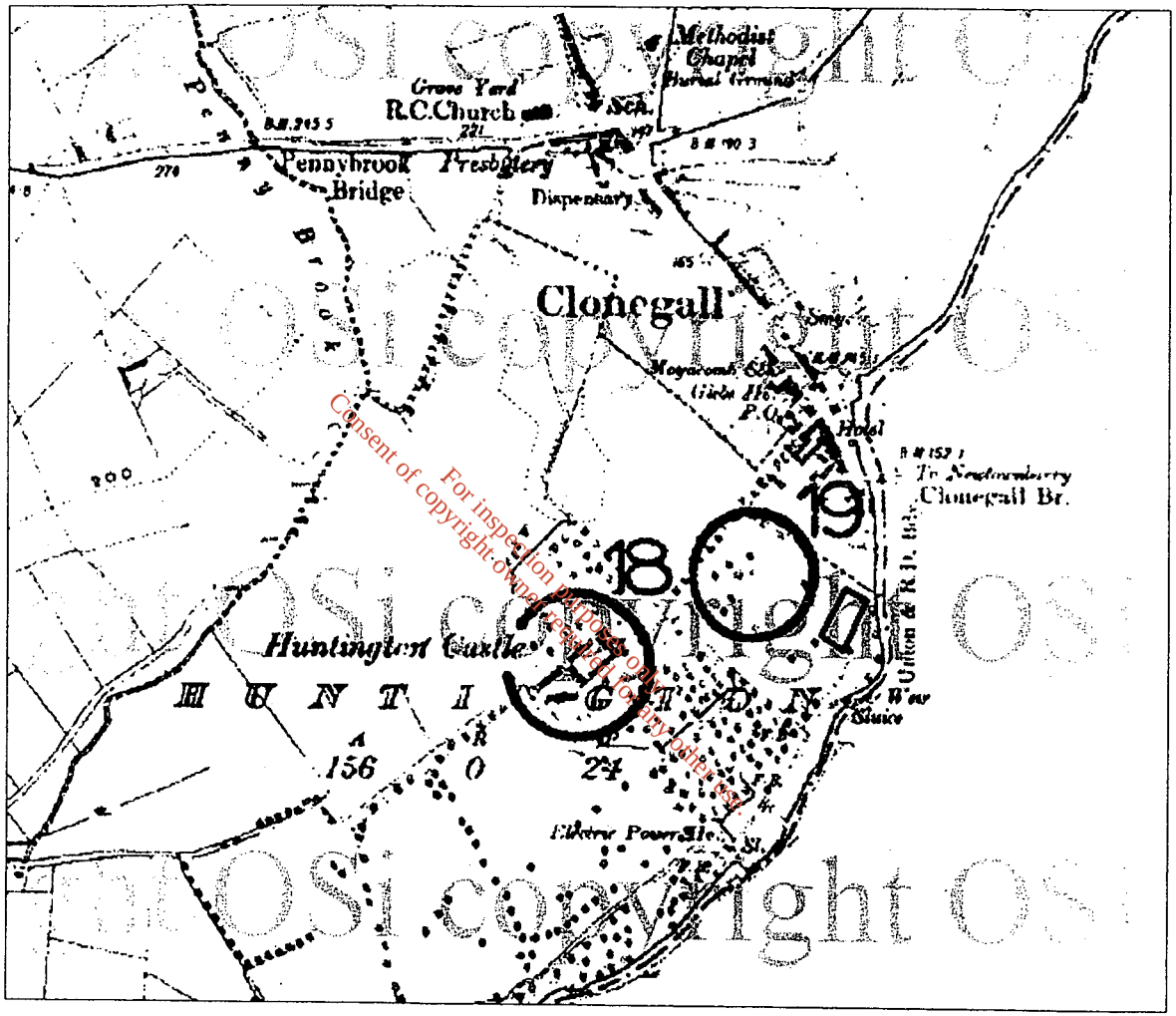



Figure 5: Extract from Record of Monuments and Places showing approximate location of WWTP in relation to recorded monuments 18 and 19.

Plate 1: Area of proposed extension to WWTP looking NW.

Plate 2: Existing WWTP looking S.

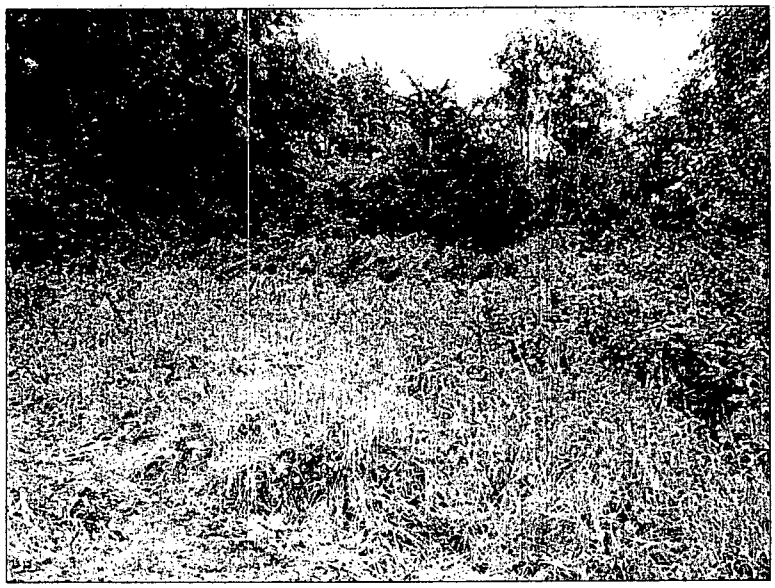


Plate 3: Area to the east of existing plant.

Plate 4: Area of Bullaun Stone (RMP CW018-019) looking west.

Plate 5: Huntington Castle (RMP CW018-018) looking southwest.