

**ATTACHMENT 10**

**FLORA & FAUNA SURVEY**

*For inspection purposes only.  
Consent of copyright owner required for any other use.*

**Assessment of Impact  
on Flora and Fauna  
by Proposed  
Development  
at Carranstown, Co. Meath**

*For inspection purposes only.  
Consent of copyright owner required for any other use.*

*Prepared for*

**Project Management Ltd.**

*by*

**Biosphere Environmental Services  
29, La Touche Park, Greystones, Co. Wicklow.**

**June 2000**

## Contents

|   |    |
|---|----|
| <i>Summary</i>  | 2  |
| 1. Introduction   | 3  |
| 2. Survey methodology   | 3  |
| 2.1 Survey limitations  | 4  |
| 3. Baseline environment   | 4  |
| 3.1 Habitats, vegetation and flora                              | 4  |
| 3.1.1 Likelihood of rare plant species occurring at site        | 7  |
| 3.2 Fauna   | 7  |
| 3.2.1 Mammals, amphibians and reptiles                          | 7  |
| 3.2.2 Birds   | 7  |
| 3.3 Habitats and landuse around site                            | 8  |
| 3.4 Designated or proposed areas of scientific interest in area | 8  |
| 3.5 Overall assessment of scientific importance of site         | 8  |
| 4. Impacts of proposed development on flora and fauna           | 9  |
| 4.1 Characteristics of the proposal                             | 9  |
| 4.2 Predicted and potential impacts by the proposal             | 9  |
| 4.2.1 Loss of habitats  | 10 |
| 4.2.2 Possible damage to hedgerows by construction works        | 10 |
| 4.2.3 Potential for water pollution                             | 10 |
| 4.2.4 Impacts on rookery  | 11 |
| 5. Mitigation measures and recommendations                      | 11 |
| 5.1 Retention, protection and enhancement of hedgerows          | 11 |
| 5.2 Prevention of water pollution                               | 11 |
| 5.3 Retention of rookery  | 11 |
| 5.4 Landscaping   | 12 |
| 6. References   | 12 |

Figure 1. Habitat and landuse map of survey area

Plates 1-4. Views of site

## **Summary**

A baseline flora and fauna study was carried out at a site at Carranstown, Co. Meath in June 2000. The site comprises an area which has been intensively managed for agricultural purposes and all habitats present are man-modified types. Habitat diversity is low, with pasture grassland, meadow grassland, hedgerows and ditches being the only habitats present. The pasture and meadow grassland habitats are of negligible scientific interest and of practically no conservation value. The hedgerows are considered of limited ecological value due to low species diversity (predominantly hawthorn with some ash) and poor structure. Of some note, however, is the hedge which marks the eastern/northern townland boundary (accompanied by a substantial ditch), the hedgerow or treeline which forms part of the boundary with the road, and the hedgerow or treeline which forms the north-western boundary. All of the other hedgerows have very limited or even negligible value.

The survey area does not appear to support any rare or protected plant species. No animal species of high conservation importance occurs. Of some local interest is that rooks are nesting in an ash tree along one of the western boundary hedgerows.

The areas surrounding the site are also predominantly agricultural lands. There are no features of known ecological interest in the immediate area of the site. No part of the site or its immediate environs is governed by any scientific or conservation designation, with the nearest site of conservation importance being over 2 km away.

The principal impact to be considered by the proposed development is habitat loss. The development will result in the loss of pasture and meadow grassland and some hedgerows. The loss of pasture and meadow grassland is of negligible significance as these habitats have practically no scientific or conservation value. The loss of various sections of hedgerow would vary from negligible to low significance. During the construction phase, there is a possibility that damage could be caused to some of the other hedgerows on the site which are being left in situ. However, serious damage can be avoided with proper care. A further potential impact which requires consideration is possible water pollution which could be caused by contaminated water entering the ditch immediately west of the site (which leads to the nearby stream, a tributary of the River Nanny). The development could directly affect the rookery which exists in one of the ash trees. The significance of this could only be considered as low as the rook is a very common bird species.

Recommendations are made relating to the retention and protection of the hedgerows and to the possibility of enhancing those which will remain in situ. Also, there is an opportunity for the planting of new hedgerows. Suitable landscaping proposals for the development site could enhance the area for wildlife. Recommendations are also made relating to prevention of possible water pollution and to the retention of the rookery.

## 1. Introduction

The proposed development site is situated within the townland of Carranstown in County Meath (site grid reference O 064 708). It is approximately 4 km south-west of Drogheda and 2 km north-east of Duleek. The site is approximately 30 acres in area. The entrance to the site is from the R152 regional road, which skirts the eastern boundary of the site. Ribbon housing development occurs along this road. The Navan to Drogheda railway line runs just west and north of the site. A major cement factory occurs c.500 m to the north-east of the site.

The site comprises agricultural land and this is the main landuse in the surrounding areas. The agriculture in the area is generally intensive and of mixed character (mostly pasture and cereals). The soils are good quality agricultural soils and appear well drained. The general area is drained by the River Nanny, which flows through Duleek and enters the sea at Laytown. There are no streams within the site, the nearest watercourse being a small tributary stream of the Nanny c.100 m to the south of the site.

No part of the site is covered by a conservation designation or a proposed designation, such as an Natural Heritage Area, nor is adjacent to any area with such a designation.

The habitats and vegetation types occurring within the site and surrounding areas are described, as are the vertebrate fauna (i.e. mammals, amphibians, reptiles and birds). The likely impacts of the development on the local flora and fauna are discussed and, where necessary, mitigation measures are recommended.

The general format of this report is in accordance with guidelines recommended by the EPA (1995) *Draft Guidelines on the Information to be contained in Environmental Impact Statements*.

## 2. Survey methodology

The survey was carried out on 11th June 2000. The survey comprised a thorough examination of the entire site. The areas immediately surrounding the site were also examined (though in less detail than the site) in order to put the site in a local context and to determine whether the development would have any impact on these areas.

The survey methodology consisted of systematically walking the site area and recording plant species and vegetation types present. As most of the site comprises intensively managed land, emphasis was placed on the field hedgerow boundaries. Notes were made on bird species present within and around the site. For mammals, the main emphasis was

on search for signs of activity or dwellings. During the survey, particular attention was given to the possible presence of habitats and/or species which are legally protected under Irish or European legislation (e.g. the Flora Protection Order 1999; Wildlife Act 1976; EU Habitats Directive; EU Birds Directive).

The standard literature was checked for reference to the site and locality, as were the listings and maps of sites of conservation importance in Co. Meath held by Duchas the Heritage Service.

## **2.1 Survey limitations**

Seasonality is often a constraint in ecological surveying owing to the growing season of plants and the migratory or hibernating behaviour of some animals. The present study was carried out in summer, the optimum period for surveying plants. The timing of the survey is also considered good for surveying mammals and breeding birds. Birds which occur only in winter (winter migrants) would obviously not be present. While this is a survey limitation, it is considered unlikely that any rare or scarce bird species would occur in the survey area during winter owing to the low diversity and intense management of the habitats present. Overall, no significant difficulties were encountered in compiling information on the flora and fauna of the study area.

## **3. Baseline environment**

### **3.1 Habitats, vegetation and flora**

The site comprises three agricultural fields and about two-thirds of a further field (which backs onto the railway line). All of the fields are in grassland, mostly meadow grass which has not been grazed in recent times. Hedgerows and/or treelines form the field boundaries, though most of these have not been well maintained and are not stock proof. Ditches accompany some of the hedgerows. There are no natural or semi-natural habitats, such as woodlands, marshes, streams or rock outcrops, within the site. The main ecological interest at this site lies in the hedgerows.

The vegetation types or habitats which were identified are described below with reference to the accompanying map (Fig. 1). Both English and scientific names are given for plant species (after Scannell & Synnott 1987). For tree species, scientific names are given only after their first mention.



### ***Improved grassland - meadow and pasture***

Meadow grassland is the principal habitat type at the site (see plates 1 and 4), occurring in all of the fields apart from part of field 1 and most of field 2 where grazed pasture occurs (see map). The sward is approximately 50 cm to 70 cm high. It is dominated by common agricultural grass species, including rye grass (*Lolium perenne*), creeping bent (*Agrostis stolonifera*), cock's foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*). Common perennial herb species include meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), red clover (*Trifolium repens*), common mouse-ear (*Cerastium fontanum*), daisy (*Bellis perennis*), ribwort plantain (*Plantago lanceolata*) and speedwell (*Veronica serpyllifolia*). Thistles (*Cirsium vulgare* and *C. arvense*) and nettles (*Urtica dioica*) are frequent in parts, especially towards the field margins.

A corridor of pasture running east to west through fields 1 and 2 is fenced off by barbed-wire. This is a low sward of grazed pasture which has been reseeded in the past and is heavily poached by cattle in places. Pasture also occurs in these fields between the fenced off area and the road (see plate 2). The pasture in field 2 is particularly weedy and there is a large amount of manure stored alongside the south-western boundary of this field.

### ***Hedgerows or hedgerows / treelines***

Hedgerows of varying quality form the field boundaries within the site. Nine separate hedgerows are identified and these are shown on the accompanying map. They are almost entirely of hawthorn (*Crataegus monogyna*), with ash (*Fraxinus excelsior*) occurring as the main tall tree species. Apart from that along the road frontage, the hedgerows have not been maintained in recent times, and most are not stock proof. Indeed, some of the hedges have very significant gaps where cattle can pass freely through. Many of the hedgerows have poor structural development, with no noticeable understorey or ground layer. Where an understorey does occur it is usually dominated by brambles (*Rubus fruticosus*), along with species such as nettles (*Urtica dioica*), thistles (*Cirsium* sp.) and hogweed (*Heracleum sphondylium*). A feature of some of the hedgerows is that the hawthorn trees are very mature, with some up to 15m high. These older trees often have a heavy ivy cover. The hedgerow which marks the townland boundary is accompanied by a substantial ditch, as is one of the internal hedgerows (H4 as shown on the map). Two sections of hedge are dominated by tall ash and are more aptly termed treelines.

Overall, the hedgerows are considered of limited ecological value due to the low species diversity and the poor structure. They do, however, provide some value to local wildlife in this generally intensive agricultural landscape. There follows a brief description of each hedgerow (see corresponding numbers on map).

#### Hedgerow 1 (boundary with road)

This is a well maintained, low hedge (c.2 m) which forms the boundary between field 1 and the public road. It appears to be entirely of hawthorn (*Crataegus monogyna*). The hedge is fully stock proof. Of limited ecological value.

#### Hedgerow 2 (townland boundary)

This hedgerow marks the townland boundary along the northern and north-eastern part of site (see plate 1). The hedgerow is mostly intact though has not been managed in the last few years. It is on average about 5-6 m high and there are no tall trees. It is accompanied by a wide ditch (c.2 m width in places) and in parts the ditch has been planted on both sides. At the time of survey the ditch was damp in places. Some typical shade species such as lords and ladies (*Arum maculatum*) and hart's-tongue fern (*Phyllitis scolopendrium*) were noted within the ditch. Of some ecological value.

#### Hedgerow 3 (between fields 3 and 4)

This hedgerow is intact along its eastern end but rather gappy towards the west end where two tall ash occur. Otherwise the hedge is of hawthorn, some of the specimens being rather tall. Of limited ecological value.

#### Hedgerow 4 (central internal between fields 1/2 and 3)

This hedgerow is of poor quality, being variable in height and with regular areas having only a bramble covering. The most intact section is at the eastern end. A wide ditch, dry at time of survey, accompanies hedge. Of limited ecological value.

#### Hedgerow 5 (between fields 1 and 2)

This hedge is of very poor quality, comprising mainly a line of hawthorns with little or no understorey. The central section has been removed. Of negligible ecological value.

#### Hedgerow / treeline 6 (along road frontage)

This comprises a treeline of ash trees, with hawthorn as a secondary species (see plate 3). There are c.20 ash trees, most being between 15 and 20 m high. Of some ecological value.

#### Hedgerow 7 (west boundary of field 2)

This hedgerow is of very poor quality, comprising a line of hawthorns with little or no understorey (see plate 2). Cattle roam freely through it. Some of the hawthorns are quite old and have fallen or broken branches. Of negligible ecological value.

#### Hedgerow 8 (west boundary of field 3)

This hedgerow comprises a line of hawthorns, with a tall ash in the central section and one at the north end. It has little or no understorey and is not stock proof. Of very limited ecological value.



### Hedgerow / treeline 9 (west boundary of field 4)

This comprises a treeline of tall ash, with some hawthorn in between (see plate 4). It is not stock proof. There are c.10 ash trees, mostly well grown and of a height of c.15 to 20 m. Of some ecological value.

#### **3.1.1 Likelihood of rare plant species occurring at site**

No rare, threatened or legally protected plant species, as listed in the Irish Red Data Book (Curtis & McGough 1988), were found at the site nor have been known to occur in the general area in the past. Based on an appraisal of the habitats present, i.e. mostly intensively managed agricultural land, it is considered unlikely that any rare or scarce plant would occur within the site.

## **3.2 Fauna**

### **3.2.1 Mammals, amphibians and reptiles**

The low habitat diversity within the site results in the mammalian fauna being represented only by a few common species. Rabbits (*Oryctolagus cuniculus*) were observed within the site and signs of foxes (*Vulpes vulpes*) and brown rats (*Rattus norvegicus*) (i.e. droppings and burrows respectively) were noted at several locations within the hedgerows and ditches. Other ubiquitous Irish mammals which occur in agricultural habitats and are likely at the site would be hedgehog (*Erinaceus europaeus*), pygmy shrew (*Sorex minutus*) and long-tailed field mouse (*Apodemus sylvaticus*). Whilst bat species may hunt along the hedgerows, there are no potential bat roosts, i.e. buildings, caves or old mature trees, within the site.

Particular search was made for badgers (*Meles meles*) - while no signs were found the very dense vegetation within some of the hedgerows at the time of survey made full search impossible. It is considered that there is some chance that a badger sett could occur within the ditch system associated with hedgerows no. 2 and 4 (see map).

The habitats at the site are not considered suitable for the common frog (*Rana temporaria*) or the common lizard (*Lacerta vivipara*).

### **3.2.2 Birds**

A limited number of bird species occurs at the site owing to the low diversity of habitats. The species which are present are all typical species of agricultural areas with hedgerows. Woodpigeons (*Columba palumbus*) were common within the hedgerows, along with small birds such as blackbird (*Turdus merula*), chaffinch (*Fringilla coelebs*), robin (*Erithacus rubecula*), wren (*Troglodytes troglodytes*), blue tit (*Parus caeruleus*), coal tit (*Parus ater*) and chiffchaff (*Phylloscopus collybita*). Most of these species would probably nest.

There is a rookery (i.e. a colony of nesting rooks *Corvus frugilegus*), in an ash tree in hedgerow no. 8 (nine nests counted) and further nests (eight nests) in ash trees just west of the site. The location of these trees is shown on the accompanying map.

### **3.3 Habitats and landuse around site**

All of the fields around the site are in pasture or meadow grassland. East of the site, to the other side of the R152 road, there are cereal fields. A drainage ditch, with a substantial amount of water, occurs immediately west of the site and this links into a tributary of the River Nanny which occurs c.100 m west of the site. Hedgerows in surrounding fields appear of similar composition to those within the site, being dominated by hawthorn and ash.

A railway line runs north of the site and this typically has embankments and hedgerows along its margins. As already noted, a cement works occurs a little to the north of the site and is clearly visible from the site.

### **3.4 Designated or proposed areas of scientific interest in area**

No part of the site or its immediate surroundings is covered by a scientific or conservation designation or proposed designation as recognised by Duchas the Heritage Service.

The nearest site of conservation importance is the Duleek Commons proposed Natural Heritage Area (site no. 1578) located over 2 km to the south-west. This pNHA is a calcareous marsh and fen system. Two further sites of conservation importance are located on the River Boyne, c.5 km to the north-west of the site. These are the Boyne River Islands (site no. 1862) and Dowth Wetlands (site no. 1861). Both of these are proposed Natural Heritage Areas, while the Boyne River Islands is also a proposed Special Area of Conservation (pSAC).

### **3.5 Overall assessment of scientific importance of site**

This site represents an area which has for a long period been intensively managed for agricultural purposes. The only habitats present are grassland, both meadow and pasture, and hedgerows and ditches. All of these are wholly man-modified habitats.

The pasture and meadow grassland habitats are of negligible scientific interest and of practically no conservation value.

While the hedgerows are generally of relatively low interest due to low species diversity and poor structure, some have ecological value in a local context. These are hedgerow no. 2 (accompanied by a wide ditch) which forms the eastern/northern townland boundary, hedgerow or treeline no. 6 which forms part of the boundary with the road, and hedgerow or treeline no. 9 which forms the western boundary to field no. 4. All of the other hedgerows have very limited or even negligible value.

The survey area does not appear to support, nor has been known to in the past, any rare or protected plant species. No animal species of high conservation importance occurs. Of some local interest is that a rookery occurs in one of the ash trees within hedgerow no.8.

The areas surrounding the site are also predominantly agricultural lands. There are no features of known ecological interest in the immediate area of the site. No part of the site or its immediate environs is governed by a scientific or conservation designation, with the nearest site of conservation importance being over 2 km away.

In summary, this site represents fairly typical intensively managed agricultural land which has negligible to minor scientific interests. The main ecological interest lies in some of the better developed hedgerows or treelines.

## **4. Impacts of proposed development on flora and fauna**

### **4.1 Characteristics of the proposal**

The proposed development is an industrial development. This will be situated in the western half of the site. For the purpose of impact assessment it is assumed that all of the western part of site will be developed. Entrance to the site will be from the present public road.

While the proposed site is set in a mainly agricultural landscape, it is close to Drogheda town and is close to a major industrial complex (cement works). The ecological interests of the vicinity have already been greatly interfered with and altered, with no significant areas of natural or semi-natural habitats remaining in the immediate area. The character of this proposed development could not, therefore, be considered as being incompatible with the present landuse of the area.

### **4.2 Predicted and potential impacts by the proposal**

The principal impact to be considered by the proposed development is habitat loss. In addition, there may be damage or disturbance caused to hedgerows elsewhere on site during

construction works. A further potential impact which requires consideration is possible water pollution which could be caused by contaminated water entering the ditch immediately west of the site (which leads to the nearby stream). The development could directly affect the rookery which exists in one of the ash trees.

#### 4.2.1 Loss of habitats

The development will result in the loss of pasture and meadow grassland and some hedgerows.

The loss of pasture and meadow grassland is of negligible significance as these habitats have practically no scientific or conservation value.

The hedgerow along the road (H1, H6) will be removed to accommodate the site entrance and road widening but the remainder of the site boundary hedgerows (H2, H7, H8, H9) will be kept intact as much as possible.

Hedgerow no. 1 is of limited ecological value as it is a low, well maintained hedgerow. The loss of this will be of minor significance.

Hedgerow no. 2, which marks the townland boundary, is considered of some ecological value. The loss of part of this would be of some significance but only in a local context.

Hedgerow no. 6 is of some value as it comprises a well grown ash treeline. The loss of this hedgerow will be of minor significance, but only in a local context.

Hedgerow no 7 is of very low value and its loss would be of negligible significance.

Hedgerow no. 8 is generally of low value but has two fine ash trees (one which has a rookery). The loss of this hedge would be of only minor significance.

Hedgerow no. 9 is of some ecological value as it has a line of tall ash trees. The loss of some of these ash trees would be of some significance but again only in a local context..

All of the internal hedgerows (H3, H4, H5) will be removed. Hedgerows nos. 4 and 5 are of very low ecological value and their loss would be of negligible significance. Hedgerow no. 3 is of limited ecological value and its loss would be of only minor significance.

Overall, the loss of the various sections of hedgerow would vary from negligible to low significance.

#### **4.2.2 Possible damage to hedgerows by construction works**

During the construction phase, there is a possibility that damage could be caused to some of the hedgerows outside the main development area by construction traffic, machinery, storage of bulk materials etc. Any damage to the hedgerow (H2) along the townland boundary would be of some local significance as this is one of the better formed hedgerows in the area and is considered as of some ecological value. Damage to this hedgerow can be avoided with proper care (see recommendations section).

#### **4.2.3 Potential for water pollution**

As already noted, the possibility exists for contaminated water to enter the drainage ditch immediately west of the site and which leads to a tributary of the River Nanny. Potentially polluting substances could include suspended solids, wash down cement products, fuels, lubricants etc. If such substances were to enter the watercourses in significant amounts they could cause serious damage to the aquatic flora and fauna

#### **4.2.4 Impacts on rookery**

The rookery which exists in the ash tree in hedgerow no. 8 may be directly affected if this tree is removed. The significance of this could only be considered as low as the rook is a very common bird species. Nevertheless, efforts should be made to retain this tree.

### **5. Mitigation measures and recommendations**

The following measures relate to retention and protection of the hedgerows and to the possibility of enhancing those which will remain in situ. Also, there is an opportunity for the planting of new hedgerows. Suitable landscaping proposals for the development site could enhance the area for wildlife. Recommendations are also made relating to prevention of possible water pollution and to retention of the rookery.

#### **5.1 Retention, protection and enhancement of hedgerows**

Efforts should be taken to reduce the loss of hedgerows to a minimum. In particular the sections of hedgerow containing tall ash trees (H9) should be retained as far as is possible, along with the two single ash trees in hedgerow no. 8.

As discussed above, the loss of the hedgerow (H6) will be of minor significance in a local context. This will be mitigated by the extensive landscaping proposals, involving the planting of native species of trees along the boundary and on site.

During the construction phase, measures should be taken to avoid damage to the hedgerows elsewhere on site and especially that along the townland boundary (H2). Care should be taken while machinery is operating in the area, and building materials should not be stored within about 10 m of the hedgerows. Accidental damage which might be caused to the hedgerows should be repaired using the same tree and shrub species as already present (i.e. ash, hawthorn).

Note that an opportunity exists to lay a new hedgerow along the north-west boundary of the site (parallel to the railway line) and possibly along the eastern boundary of the development area. This would partly compensate for the loss of hedgerows elsewhere on site. Appropriate species would be ash and hawthorn. Also, if some of the hedgerows along the western boundary are to be retained, these could be improved by replanting the various gaps.

### **5.2 Prevention of water pollution**

Appropriate engineering practices will be required to prevent water polluting substances from entering the drain leading to the tributary stream of the River Nanny.

### **5.3 Retention of rookery**

If possible, the ash tree in hedgerow no. 8 which contains rook's nests should be retained. If this has to be removed, the tree should be felled during the period when the birds are not nesting (i.e. from late July to early March).

### **5.4 Landscaping**

An opportunity exists to enhance the wildlife value of the site by planting species which are useful to wildlife as part of the landscaping proposals. Preference should be given to the planting of native tree and shrub species (see list below), most of which would already be established in the general vicinity. If space is available, it is more useful to plant trees in small groups or copses rather than as scattered individuals.

Recommended species to plant include low to medium sized trees such as hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), alder (*Alnus glutinosa*), willow (*Salix* spp.), birch (*Betula* spp.), holly (*Ilex aquifolium*) and rowan (*Sorbus aucuparia*). Native oak (*Quercus petraea* or *Q. robur*) would also be a useful addition and would blend in well with the surrounding landscape. Useful shrubs include guelder rose (*Viburnum opulus*), wild current (*Ribes rubrum*), dogwood (*Cornus sanguinea*) and roses which produce hips (e.g. dog rose *Rosa canina*). The various cultivated species of cotoneasters and pyracanthas are all useful for providing berries for birds. Cultivated varieties of crab apple, such as yellow hornet, are both attractive and useful for wildlife.



## 6. References

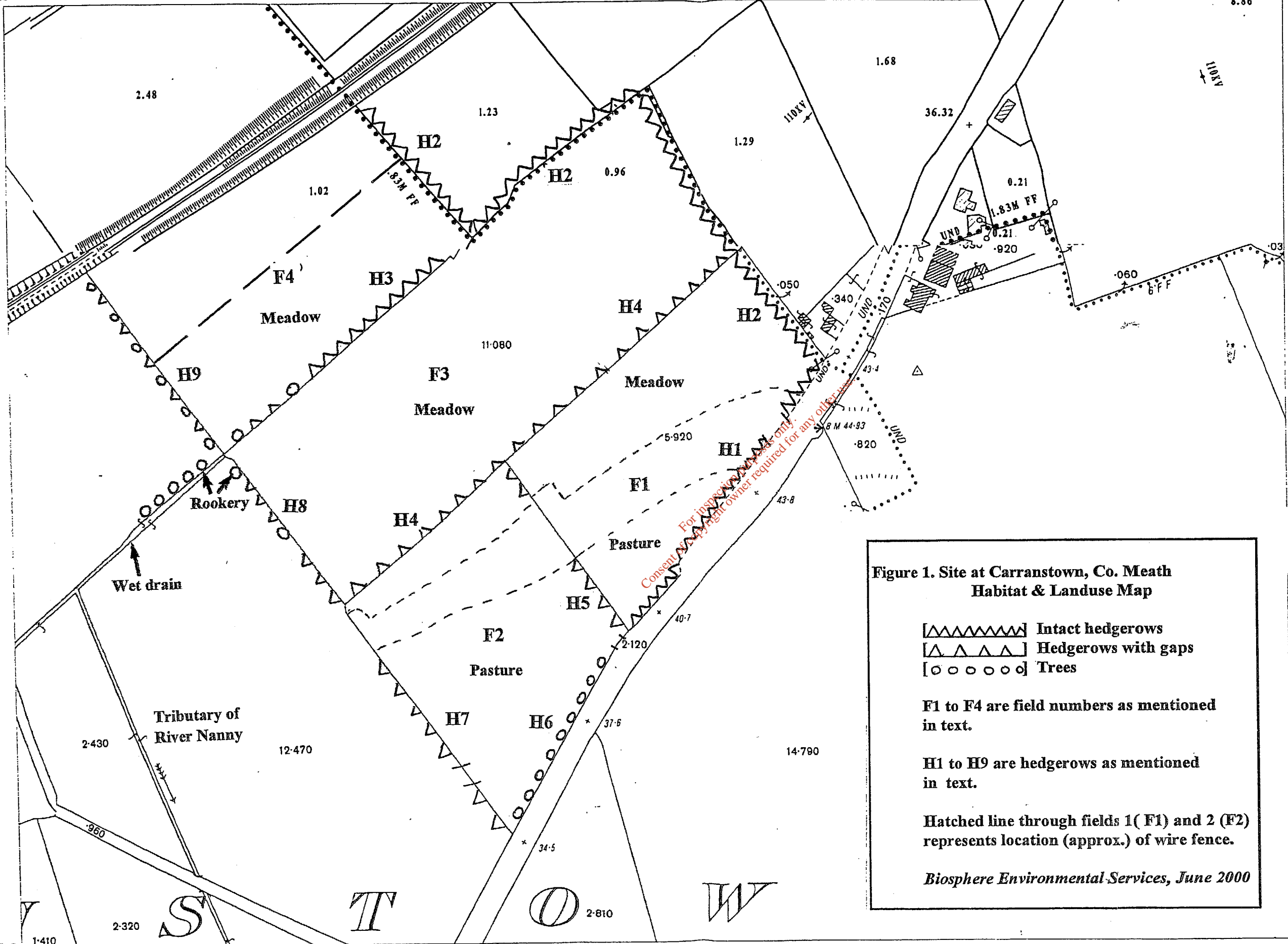
Anonymous (1999) *Proposed Natural Heritage Areas and Special Areas of Conservation in County Meath - listings and maps*. Duchas, the Heritage Service, Dublin.

Scannell, M.J. & Synnott, D.M. (1987) *Census Catalogue of the Flora of Ireland*. Stationery Office, Dublin.

For inspection purposes only.  
Consent of copyright owner required for any other use.

Surveyed 1909 - 1993  
 Revised 1974  
 Levelled 1910 - 1991

# Rural PLACE Map



**DESCRIPTION**



**MAP SCALES**

1:2500  
 2381-D  
 25inch  
 MH027-02

**Figure 1. Site at Carranstown, Co. Meath  
 Habitat & Landuse Map**

Intact hedgerows  
 Hedgerows with gaps  
 Trees

F1 to F4 are field numbers as mentioned in text.

H1 to H9 are hedgerows as mentioned in text.

Hatched line through fields 1 (F1) and 2 (F2) represents location (approx.) of wire fence.

*Biosphere Environmental Services, June 2000*



Suirbhéireacht Ordánais Éireann, Páirc an hIonnuisce, Baile Átha Cliath a thionsaig; a cháigh agus a d'fholligh.

Compiled, printed and published by Ordnance Survey Ireland, Phoenix Park, Dublin.

Ní hionann bóthar, béalach nó cosán a bheith ar léarscáil seo agus fianaise ar chuid sli.

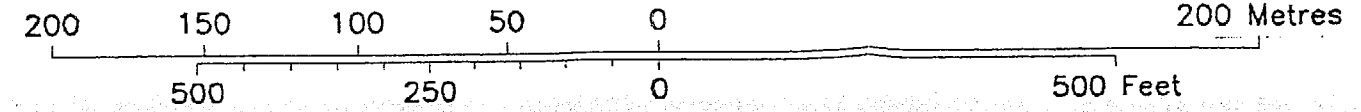
The representation on this map of a road, track or footpath is not evidence of the existence of a right of way.

Dianchosc ar mhacasamhlí an iomláin ná aon chuid de gan chead roimh ré ó Súlúthóir Shuirbhéire: Ordánais Éireann.

Reproduction in whole or in part is prohibited without the prior permission of the Director of Ordnance Survey Ireland.

© Rialtas na hÉireann, 1998  
 © Government of Ireland, 1998

Scale: - 1:2500  
 Scála: - 1:2500



Plot Ref. No. 140562\_1\_1  
 Plot Date 09-MAY-2000





**Plate 1.** View of field no. 1 looking northwards. Meadow grassland is the dominant habitat at the site. The hedgerow on the right hand side marks the townland boundary. The cement works is visible in the photograph.



**Plate 2.** View from field no. 2 looking westwards. Pasture quality is poor. Many of the hedgerows on site, including the one in the photograph (H7), are not stock-proof and generally of poor quality as regards species and structural diversity.





**Plate 3.** An ash treeline forms the boundary with the road in field no. 2. This is of some ecological value.

For inspection purposes only.  
Consent of copyright owner required for any other use.



**Plate 4.** View of western hedgerow (H9) in field no. 4. This includes a line of tall ash trees. As with other hedgerows on site, it is not stock-proof.