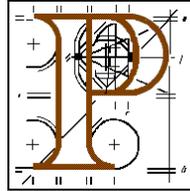


## An Bord Pleanála



### Inspector's Report

**Development:** Integrated constructed wetland system to treat dirty yard and run off waters from farm complex at Rathfeigh, Tara, Co. Meath

#### Planning Application

Planning Authority: Meath County Council  
Planning Authority Reg. Ref.: NA/50189  
Applicant: Michael Fox  
Type of Application: Permission  
Planning Authority Decision: Grant permission conditionally

#### Planning Appeal

Appellants: 1) Eastern Regional Fisheries Board  
2) Anne Gallacher  
3) Leo Curran  
4) Basil Curran  
Type of Appeal: Third parties v Grant of permission  
Observers: None  
Date of Site Inspection: 22 May 2006

**Inspector: Roger Dean**

## **SITE LOCATION AND DESCRIPTION**

The appeal site is located in the eastern central part of Meath County, about 1.5 km to the west of the N2 highway and about 10 km to the north-west of Ashbourne. It is part of an agricultural holding which has its cattle units and yard located in its south-eastern corner accessed directly from the CR398.

The site has a stated area of 1.4625 hectare and comprises part of an open and gently sloping pasture field approximately 0.5 km to the north-west of the farm yard. The intervening land is also gently sloping. Immediately beyond a post and wire fence to the west of the site, however, the land falls steeply where it forms the valley of the River Hurley, a tributary of the River Nanny. Other boundaries of the site are unmarked.

There are no residential properties in close proximity to the site, the nearest being the applicant's house about 350 metres to the north-east and another about 380 metres to the east of the site.

## **THE PROPOSED DEVELOPMENT**

The proposed wetland will comprise five ponds of varying size with a total area of 11,700 square metres. Effluent will be discharged into one of the ponds from the farmyard by gravity via a 150 mm pipe. This would then flow successively through each of the ponds, the last being specifically for monitoring purposes. Discharge to the River Hurley stream watercourse would be via a sampling chamber.

A report accompanying the application explains that the basic requirement of an Integrated Constructed Wetland (ICW) is that it should intercept and retain polluted water in a bunded planted area, retaining it long enough to be cleansed and discharged in a way that does not negatively impact on the receiving ground or surface water. It states also that the relatively large land area used in ICWs compared with that of other treated wetlands facilitates a greater range of the physical, chemical and biological processes that occur in the wetland environment, including that required for the removal of the more difficult contaminants of phosphorus and nitrates.

The report explains also that trial holes at the site had revealed that the water table was further than 2 metres below ground level and that the clay subsoils would be suitable for the construction and sealing of the proposed wetland. Effluent water would be retained in the ponds at an average depth of 30 cm and the ponds would be contained and separated by banks 2 metres wide and one metre higher than water level. The ICW is stated to be designed to treat an average volume of 13.5 cubic metres of effluent a day, with the volume of the ponds facilitating a nominal residence time of 265 days. The life expectancy of the ponds is considered to be 50 years.

## **THE DECISION OF PLANNING AUTHORITY**

By Order dated 14 November 2005, Meath County Council granted permission subject to four conditions. These relate to compliance with submitted plans and particulars, no direct discharge of effluent to surface waters, removal of construction waste off-site to a licenced site and the avoidance of nuisances in the construction and operation of the proposed development.

## **REPORTS**

### *Environment Section*

The Senior Engineer of the County Council's Environment Section noted that the area of the proposed ICW had been calculated using Duchas/National Parks and Wildlife Service Guidelines, had been calculated to ensure sufficient residence time in the wetland and had been designed to provide a generous margin of flexibility. The report observed that wetlands have an ability to clean dirty water through physical, chemical and biological processes but that it was important to establish that the receiving waters in this case have sufficient waste assimilative capacity (WAC) to accept discharges of treated effluent. Further information was requested on this basis.

### *Health Service Executive*

A letter from the Environmental Health office notes that the proposed ICW requires a Discharge Licence from the County Council and that environmental controls will be dealt with by way of conditions on the licence.

## **FURTHER INFORMATION**

A hydrological report addressing the requested further information was sent by the applicant's agent with a covering letter dated 11 November 2005. It assesses the river catchment area upstream of the proposed point of discharge to be approximately 44.15 square kilometres. An estimate was then made of the mean flow and the 95-percentile flow of this watercourse at the point of discharge using a particular software package. This is one used to define the hydrological potential for ungauged watercourse sites in Europe but modified for Irish conditions.

The long-term annual rainfall and potential evaporation for the catchment area was then estimated and predictions of mean flow, 95-percentile flow and dry weather flow in the watercourse were made by computer modelling.

The waste assimilative capacities of the receiving watercourse in terms of Biochemical oxygen demand (BOD<sub>5</sub>), phosphorus (P) and ammonia (N)

were then predicted with formulae that in each instance identifies the maximum permissible level of each constituent, existing background levels, predicted discharges from the proposed ICW and levels of flow in the watercourse.

The predictions were that there would be adequate BOD<sub>5</sub> assimilative capacity in the River Hurley, even in dry weather flow conditions. The report states that for the purposes of phosphorus and ammonia assimilative capacity, mean flow estimates in the watercourse are utilised. Under such conditions it is predicted that there would be no measurable increase in ortho-phosphate or ammonia levels in the watercourse due to the discharge from the proposed ICW.

The Senior Engineer of the Environment Section then issued a further report on the basis of the further information provided. He considered that, based on EPA monitoring and estimates of another river in the area, the submitted 95-percentile flow estimates in this case were inaccurate and should be of the order of half that predicted. However, another error in the calculation was identified which cancelled out the inaccuracy to the 95-percentile flow estimate. The Engineer then made a detailed analysis of the waste assimilative capacities predicted in the applicant's agent's report and made some refinements to the prediction methodology. He concluded that the discharge of treated effluent at the standard proposed would have no appreciable impact on the water quality in the river in terms of BOD<sub>5</sub>. With regard to phosphorus, he considered that the concentration of this element in the receiving waters would not increase above background levels such is the available dilution.

No further analysis was made with regard to the dilution of nitrates. However, the overall conclusion of the Senior Engineer was that the flows in the receiving waters are sufficient to ensure that there would be no significant impact on water quality from the discharge of treated effluent at the discharge standards proposed.

## **HISTORY**

The Planner's report records the following site history:

- 88/247** Permission granted for a slated shed, silage pit and wall.
- 89/270** Permission granted for a 2 storey house, garage and septic tank.
- 90/918** Decision to permit the erection of effluent treatment tanks and the erection of a lean-to for general agricultural purposes. Permission then refused by An Bord Pleanála.
- 91/1263** Permission refused for the retention of soil water tank.

- 93/510** Permission granted for slatted slurry tank and lean-to. Decision upheld by An Bord Pleanála on appeal.
- 96/549** Permission granted to retain existing entrances to retain roof to slatted shed, to enlarge and reconstruct soiled water tank, to retain new feeds and machinery sheds and to provide concrete yard.
- 97/585** Permission granted to retain tank for the storage of molasses.

## **GROUND OF APPEAL**

*The appeal submitted by the Eastern Regional Fisheries Board*

This is set out in a letter dated 1 December 2005 from Noel McGloin, Senior Fisheries Environmental Officer and may be summarised as follows:

*The use of ICWs in treating waste waters*

- The proposed final effluent quality is based on performance from similar systems in Ireland but these have been relatively recently introduced and there is concern about attributed performance. There are a number of references regarding ICWs which cast doubt upon this form of waste water treatment.
- These references include the EPA publication *Waste Water Treatment Manual of Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (1999)* which states that *constructed wetlands remain unproven for other than BOD & suspended solids removal and that there is some removal of total N and total Ps but this is low.* Hence the appellant is concerned that the proposed system is unproven for the removal of phosphorus and nitrogen.
- Another reference is the EPA publication *River Water Quality in South East Ireland (2003)* which states:

*In recent times constructed wetlands (also called Reed Beds or Artificial Wetlands) are being promoted in the region as a low cost system for the disposal of soiled water from farmyards. This departure (where farm waste is discharged to surface water via an artificial pond that contains various plants) is of serious concern for a number of reasons as follows:*

- 1. Previously, the disposal of farm waste to surface waters was generally prohibited.*
- 2. Constructed wetlands, unless well managed, have the potential to cause serious water pollution.*
- 3. Section 4 of the Water Pollution Act, 1977, prohibits the discharge of trade effluents to any waters without a licence from*

*the Local Authority – most constructed wetlands on farms do not have such a licence.*

- 4. Farm waters should be recycled by proper land spreading – not disposed of to surface waters*
  - 5. Constructed wetlands are being installed on farms without planning permission.*
  - 6. There is no monitoring or regulation of constructed wetlands on farms – in some cases constructed wetlands will be used for the disposal of slurry.*
- A further reference is a paper entitled: *A farm-scale Integrated Constructed Wetland to treat farmyard dirty water*, published by Teagasc in 2005. This was carried out by the competent national authority for agricultural research over a period of two and a half years. The findings cast doubt upon the anticipated removal rates of phosphorus that have been projected by the applicant, particularly so in respect of the winter months, when most run-off occurs, and with regard to particulate form.
  - National Parks and Wildlife Service Guidelines have been quoted by the applicant but the appellant understands that no such official document exists. The appellant has been reliably informed that there is an interagency group formulating a protocol with regard to ICWs but this has not been completed.
  - The water course to which the effluent is proposed to be discharged is the main channel of the Hurley River which is a significant salmonid watercourse and is already subject to a high pollution risk. From the foregoing, the projected low figures submitted in the planning application are disputed and it is considered that there would be a deleterious effect on the receiving waters of the River Hurley.
  - The Fisheries Board is concerned about the high polluting effects of raw farmyard effluent at this farm and it is suggested that the applicant should employ more stringent anti-pollution controls. By proper nutrient management practice and land-spreading of effluent, there is no need for an ICW on this site. Roof water does not need to be treated and can be directed to local watercourses.
  - The Fisheries Board is also concerned about the proximity of the stored deleterious matter to the River Hurley (70 metres) and the steep slope down to the river. There is also concern about the considerable distance from the farmyard. Any leakages from the pipe would contaminate local ground and surface water supplies.
  - The ICW would require constant observation and monitoring. The site is quite remote from the farmyard and maintenance costs would probably be prohibitive.

- There is concern that there is potential for other effluent to be discharged to the ICW through the manhole system. Whilst there is no implication that such activity would occur, policing would be impossible whilst the potential exists.

*The appeal submitted by Anne Gallacher*

As contained in her letter dated 30 November 2005. Although expressed as observations, the representations were accompanied by the correct fee for these to be treated as an appeal. The grounds may be summarised as follows:

- The EPA document *Waste Water Treatment Manual of Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (1999)* is also referred to. The disadvantages of ICWs concluded in that document include the low level of nitrogen & phosphorus removal and the unreliability of faecal and total coliforms.
- The site is in the heart of a scenic river valley and the proposal would impact on the landscape.
- There is potential for polluting the river. The County Council does not have the resources to inspect and ensure compliance.
- The farm complex is not a dairy farm. It already generates unpleasant odours because of the spreading of waste from the appellant's abattoir nearby.
- The doubts raised by the Council's engineer on some of the figures raised in the applicant's submission raises concerns about other measurements in the report accompanying the application.

*The appeal submitted by Leo Curran*

As in a submission dated 28 November 2005 and summarised as follows:

- Planning permission 96/549 granted to the applicant for the operation of his enclosed livestock unit contains 21 conditions. The appellant is not convinced that these have been implemented and adequately supervised by the planning authority.
- Material from the applicant's slaughterhouse is transported to the Rathfeigh area for disposal. Samples of blood and guts spread on the land have been taken and submitted to the County Council but no action has been taken.

- The Council has not taken into account the potential for such disposal through the wetlands system. Human and livestock health would be compromised, increased by the presence of birds on or in the wetland vegetation.
- The Hurley River provides an exploration ground for children during the summer when water levels are low. Their health should not be placed at risk.

*The appeal submitted by Basil Curran*

The grounds of appeal are set out in a letter dated 29 November 2005 and may be summarised as follows:

- The Hurley River valley is to be protected under a local ‘Pride of Place’ initiative, this being a Council sponsored initiative to enable rural community groups to upgrade a walk in their area.
- The schedule of conditions as recommended by the Council in this case refers to a system appropriate to farmyard water but the project is a factory farm with two beef producing feed lots.
- The owner is known to spread waste from an abattoir on to nearby land. He is also spreading slurry from the feedlots which causes annoyance in the locality.

## **RESPONSES**

### **By the planning authority**

The response simply identifies the reports of the Council’s Senior Engineer particularly that following the submission of further information. The conditions as attached to the decision to grant permission are considered to satisfactorily address any environmental concerns that may arise.

### **By the applicant**

As set out in a letter from the applicant’s agents dated 5 January 2005 which may be summarised as follows:

*With regard to the appeal by the Eastern Regional Fisheries Board*

- The EPA publications cited by the appellants does not refer to ICWs which have been an initiative of the National Parks and Wildlife Service for a number of years. It is stated that reed bed systems and constructed wetlands are referred to in the manual but that ICWs have a much larger land requirement and have demonstrated a greater level of treatment.

- The Teagasc paper cited by the appellants focuses on an ICW that is undersized and is receiving inflows from external sources. The proposal in this case is larger than that recommended by the National Parks and Wildlife Service.
- Discharges to the River Hurley will be confined to periods of heavy or prolonged wet weather when the capacity in the receiving watercourse is higher. There will be no discharge when flows in the river are low.
- Calculations carried out in relation to the assimilative capacity of the river show that there will be no negative impact on the receiving watercourse.
- A discharge licence will require a number of monitoring procedures to be undertaken to ensure that the system is functioning effectively and that no untreated effluent is discharged to the River Hurley.

*With regard to the appeals made by local residents*

- There will be no significant odours due to the treatment of agricultural waters in the wetland. In fact the occurrence of odours will reduce since the landspreading of effluent will cease.
- The ICW will have the appearance of a natural wetland system and will not negatively affect scenic value.
- ICWs are operational in a number of locations throughout the country. There are 12 in a valley in Co. Waterford that are being monitored by that County Council and DoEHLG as part of an ongoing research programme on the performance of ICWs. Present results are positive showing that river quality has improved significantly.
- The applicant has written to appellants stating that there has never been any spreading of abattoir waste on these lands. That which is done is approximately a mile from the subject holding. The proposed ICW is for the treatment of soiled water from this holding only, to avoid landspreading during the winter months.

## **THE DEVELOPMENT PLAN**

In the County Development Plan 2001 there are no specific features shown on the site by the relevant rural amenity map. A SRUNA (Sustainable Recreational Use of Natural Assets) site is shown at Rathfeigh Church and Motte about 400 metres to the north of the site and there are monuments shown in the vicinity.

Section 3.6.4 in the Written Statement of the Plan covers agricultural development. It states that the provision of well located structures and facilities necessary to good and environmentally sound agricultural practice will be supported by the Planning Authority. The suitability of a given proposal will be determined *inter alia* by the following factors:

- The comprehensiveness of information in relation to waste management with particular emphasis on developments within existing farm complexes.
- The availability of an effective means of farm waste management to ensure nutrient balancing between application of farm wastes to land and the balanced uptake by agricultural use of land.
- The availability of measures to ensure good supervision in relation to the management of farm wastes including ownership of spreadlands or control of same through agreements capable of effective enforcement.
- Consideration of the "Measures Report" prepared by Meath County Council pursuant to the Local Government (Water Pollution) Act 1977 and the Water Quality Standards for Phosphorus Regulations 1998 (S.I. 258 of 1998) in the assessment of all agricultural or agri-business proposals including the modification and or rejection of proposals as necessary.

## ASSESSMENT

The principal issues that arise in this case are firstly, the effects of the proposed development on water quality in the receiving waters of the River Hurley and secondly, the impact of the proposal on the landscape of the area. I shall consider these issues in turn.

### *Water quality*

The source of the proposed disposal system is clearly the faecal waste arising from the farmyard wherein the cattle sheds are located and also rain water runoff from the yard surfaces and buildings. One of the appellants has claimed that the occupancy of cattle in this yard is greater than that which is allowed under a previous planning permission. However, this in my opinion is a matter for the planning authority to consider separately under its enforcement powers if indeed any breach of planning control has occurred.

With regard to the concern of the Fisheries Board about what it considers to be the unnecessary inclusion of surface water in the system, it is my opinion that a dilution of the cattle waste would be necessary in view of the shallow fall of the lengths of drainage pipe to the proposed ICW.

A principal concern of appellants is that other elements of waste may be introduced into the system. This is categorically denied by the applicant who acknowledges that he has spread abattoir waste on other lands in the area.

However, he states that he has not done so on the subject lands nor does he ever intend to do so. He explained in a letter to the appellants, as attached to his agent's response to the appeals, that his abattoir at Duleek is an export licenced establishment with a full time veterinary inspector on the premises. Verification is given by a veterinary inspector from the Department of Agriculture and Food that all waste from the abattoir is sent for rendering except wash water and rumen content. The former is spread onto land as is the latter after being stored in a sealed pit and dried. The applicant explained also that he is in the process of applying for permission to build a treatment plant at the abattoir which would eliminate any wash water being transported to lands at Rathfeigh and the adjoining townland.

It is my opinion that there is little foundation for the expressed concerns that sources of waste other than that arising from the subject site would be directed to the proposed ICW. However, I consider that if permission were to be granted in this case, a condition preventing the import of waste to the site would be appropriate.

My assessment of this issue now turns to the pathway of the proposed waste disposal. Initially, the route to the ICW is via underground pipework with manholes where changes in falls occur. In my opinion, the submitted drawings show appropriate construction details and there is no rational basis for concerns about system failure if the scheme is constructed as proposed.

The principal pathway for the disposal of waste is of course the construction and operation of the ICW itself. Documentation supporting the application explained that the area of the four treatment ponds would be double that of the farmyard and its roof area. It is stated that the National Parks and Wildlife Service Guidelines recommend a minimum wetland area of 1.5 times the interception area at source. The application documentation states also that the proposed ICW system has been designed to deal with farmyard water run-off with the following characteristics: BOD 2000mg/l, suspended solids 1500mg/l, total nitrogen 90mg/l, total phosphorus 90mg/l and ammonia 60mg/l.

I am satisfied with the applicant's agent's projections to the effect that the construction of the ponds with a water depth as proposed would allow for the storage of volumes of waste water for a nominal period of 265 days. Precipitation falling on the ICW would be layered, maintained on the top of the waste waters and flowing preferentially into the clean zone. The ecosystem of the proposed ICW would be of plant types that are stated to be capable of coping with prolonged periods of drought after establishment.

The predicted performance of the proposed ICW through the five pond system is the output of treated effluent with concentrations of each of the constituents as follows: BOD<sub>5</sub> 3.6 mg/l, suspended solids 6.0 mg/l, total nitrogen less than 1.5 mg/l, total phosphorus less than 0.02 mg/l and ammonia at 0.01 mg/l.

These performances are stated by the applicant's agent to be based on that of similar systems in Ireland. The principal basis of the Fisheries Board appeal is its doubt that this can be achieved especially with regard to phosphorus and nitrogen removal. Of the various sources cited in support of this appeal, the EPA publication *Waste Water Treatment Manual of Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (1999)* clearly does not apply to the proposed development in this case. Significant points about the quoted EPA document *River Water Quality in South East Ireland (2003)* are its concern about constructed wetlands that are not authorised and the need for good management to avoid water pollution. Clearly the former does not apply in this case and the latter is capable of being addressed by environmental controls as well as by planning condition.

The Teagasc paper referred to by the Fisheries Board is a detailed scientific analysis in the form of an end of project report of one particular constructed wetland. A further reference is a short paper from a representative of the Department of Agriculture and Food. This states that constructed wetlands are to be welcomed for their ecological value and that when correctly constructed and performing as designed, they are a useful addition in treating waste waters. However, the paper expresses doubts, saying that misuse has occurred in the past at farms and that intermittent checks by local authorities may not pick up consequent damage to watercourses.

My overall findings on this review of published material are that there is some uncertainty in the scientific community about the performance of ICWs but that there is widespread agreement about the need for effective management, monitoring and control. It is relevant to note also the applicant's point that there is ongoing research on the performance of ICWs in County Waterford involving DoEHLG.

I find also that the report of the Council's Senior Engineer following the submission of further information is a cogent analysis of the effects of the proposed system on the principal receptor i.e. the receiving watercourse. The analysis is that conditions would be favourable if the ICW performs as is projected by the applicant.

The nub of the issue is therefore whether the proposed ICW would perform as projected. I am concerned that there is conflicting evidence about this but it is my opinion that this matter cannot be resolved without detailed scientific research that, in my submission, would be beyond the remit of the Board in regard to its planning responsibilities. It may well be that uncertainties would remain until further national research was carried out and, even then, the true performance of the proposed ICW could only be evaluated when it is operational and its actual impacts analysed.

Undoubtedly, the prevention of pollution in watercourses is a material planning consideration but the key factor in this case is that the discharge of waters to the receiving waters would require a licence from the local authority under the Local Government (Water Pollution) Acts 1977 and 1990. Such a licence would be geared to specific criteria to prevent

pollution and this would require proper monitoring and evaluation. The concern that has been expressed by some appellants about the local authority's capacity in this regard has not been indicated by the authority itself.

I am satisfied that, with the specific provision of the fifth ponds for monitoring purposes and the incorporation of a sampling chamber on the discharge route to the watercourse, the design of the proposed system provides for effective monitoring and inspection. The applicant's agent has stated that an aftercare and maintenance system will be designed to include guidance to the applicant on daily upkeep. Whilst such maintenance requirements may be required in connection with the licensing regime operated by the County Council, I consider that an appropriate planning condition would also be necessary in this case.

Additionally, whereas a condition requiring the project to be the subject of a licence from the local authority under the relevant legislation may not be strictly necessary, I note that an informative would have been attached to the decision had it been issued by the planning authority. I note also that such a condition was attached by the Board when granting retention permission to an ICW in Co. Waterford in 2002 (appeal reference PL24.129738).

Subject to such requirements, I conclude that there are sufficient safeguards to ensure that water quality in the receiving waters of the River Hurley would be satisfactorily protected.

#### *Landscape impact*

The location of the proposed ponds is at some distance from public viewpoints, the nearest being that from a county road approximately 0.7 km to the west. The limited height of the proposed banks surrounding the ponds is such that there would be no appreciable alteration of the landform of the area. The present grass of the pasture field would be replaced by low lying plants within the ponds but this change would hardly be incongruous. Bearing in mind also the absence of any special landscape protection in the County Development Plan, my finding is that the effect on landscape character would not detract significantly from the amenity of the area.

The concerns raised by one of the appellants with regard to the local Pride of Place initiative are not easily understood since this is stated to be a project directed towards enhancing the attractiveness of walks along tertiary roads. The valley of the River Hurley is mentioned with regard to this project but there is neither a clear walkway along the valley nor is it evident that a right of way exists. Nonetheless, it is my opinion that the banks and the planting of the ponds would only have a very limited impact on the outlook of persons walking alongside the river at lower level.

My conclusion, therefore, on this issue is that the scheme would cause no material harm to the character and appearance of the surrounding landscape.

With regard to other matters raised, concerns were raised about potential odours but I have noted that there are no dwellings in close proximity to the proposed ICW and it is therefore most unlikely that any harm to residential amenity would occur in this respect. In any event, a condition as was attached to the planning authority's decision would act as a further safeguard. With regard to archaeology, there is no evidence that any monuments in the area would be affected. On the question of biodiversity, it is my opinion that this would be enhanced by the habitats created in the proposed wetland.

## **RECOMMENDATION**

In the light of the foregoing and having taken account of all other matters raised, I recommend that permission be granted as set out below. My recommended conditions incorporate those in the planning authority's decision but augmented by those highlighted in my foregoing assessment.

## **REASONS AND CONSIDERATIONS**

Having regard to the existence of pollution controls under other legislation, the landscape of this rural area and the pattern of development in the vicinity, it is considered that subject to compliance with the following conditions, the proposed development would not be prejudicial to public health or be visually obtrusive and would not seriously injure the amenities of the area. The proposed development would therefore be in accordance with the proper planning and sustainable development of the area.

## **CONDITIONS**

- 1) The development hereby permitted shall be constructed in accordance with plans and particulars received by the planning authority on 26 July 2005 and 12 October 2005 except where conditions hereunder specify otherwise.

**Reason:** In the interests of proper planning and development.

- 2) All surface water run-off from dirty yards and from clean roofs and yards shall be directed to the constructed wetland system comprising five ponds or lagoons prior to final discharge by gravity to surface water. Under no circumstances shall any effluent be permitted to discharge directly to waters.

**Reason:** In the interests of environmental protection and the prevention of water pollution.

- 3) No waste shall be imported to the site and no waste other than that arising from the dirty yards and farm buildings as indicated in the application shall be directed to the proposed integrated constructed wetland system.

**Reason:** In the interests of environmental protection and the prevention of water pollution.

4. Before any development is commenced a scheme detailing the management, maintenance and monitoring processes to be undertaken in relation to the proposed integrated constructed wetland system shall be submitted to and approved in writing by the planning authority, and these shall be carried out as approved. The monitoring of the performance of the proposed integrated constructed wetland system shall be carried out by a suitably qualified person.

**Reason:** In the interests of environmental protection and the prevention of water pollution.

5. All waste generated during construction, including surplus excavation material to be taken off-site shall only be recovered or disposed of at a site which has a current Waste Licence or Waste Permit in accordance with the Waste Management Acts 1996 to 2003. This shall not apply to disposal of waste excavation material within the applicant's site boundary.

**Reason:** In the interests of public health.

6. The development hereby permitted shall be so constructed and operated so as to ensure that there will be no emission of malodours, fumes, gas, dust or other deleterious materials, no industrial effluent and no noise vibration or electrical interference generated on the site such as would give reasonable cause for annoyance to any person in any residence or public place in the vicinity.

**Reason:** In the interests the amenity of the surrounding area.

7. The developer shall make application to Meath County Council for a licence to discharge treated effluent from the proposed integrated constructed wetland system to surface waters in accordance with Section 4 of the Local Government (Water Pollution) Acts 1977 and 1990.

**Reason:** In the interests of environmental protection and the prevention of water pollution.

Roger Dean

Inspector

June 2006