

OBJ (2).



Iascach Intíre Éireann
Inland Fisheries Ireland



Our Ref: NMcG/Eurofarm/Hurley

**Office of Climate, Licensing & Resource Use
EPA Headquarters
PO Box 3000
Johnston Castle Estate
Co. Wexford**

24th February 2011

Re: Objection to proposed determination on the IPPC licence from Cooksgrove Limited trading as Eurofarm Foods, Cooksgrove, Duleek, County Meath in respect of an activity at Cooksgrove, Duleek, Co. Meath (Reg No.: P0822-01)

Dear Sir

Inland Fisheries Ireland (IFI) is a Statutory Body established on the 1st July 2010 replacing the Regional Fisheries Boards (inc. the Eastern Regional Fisheries Board). Under section 7(1) of the Inland Fisheries Act 2010 (No. 10 of 2010) *the principal function of IFI is the protection, management and conservation of the inland fisheries resource.*

Under section 7(3) of the IFI Act it is stated that *without prejudice to subsection (1), IFI shall in the performance of its functions have regard to:*
(g) *the requirements of the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997) and the need for the sustainable development of the inland fisheries resource (including the conservation of fish and other species of fauna and flora habitats and the biodiversity of inland water ecosystems),*
(h) *as far as possible, ensure that its activities are carried out so as to protect the national heritage (within the meaning of the Heritage Act 1995).*

Please bear in mind under the Water Framework Directive waters such as the Nanny, Hurley and Ballyboghil that may be impacted upon by this activity are designated as having a *poor* status and have to be restored to at least *good* status in due course. Also Article 5 of the 2009 Surface Water Regulations *requires that a public authority, in performance of its functions, shall not undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water i.e. in this case to from poor to bad*

We want to deal with this Propose Determination under the following headings:

The treatment of industrial effluent as soiled waters

We understand that further to an e-mail and telephone query to the Department of the Environment regarding the proposals contained in a planning retention application by operators of an abattoir to landsread effluent from their plant as 'soiled water' under the Nitrates Regulations it was advised that the Nitrates Regulations (European Communities Good Agricultural Practice for Protection of Waters) Regulations 2009.

(S.I. 101 of 2009)) relate only to waste waters arising in an on-farm context. Soiled waters in this context are landspread as a fertiliser to enhance growth, whereas the proposal in question would appear to constitute a waste disposal activity. Such effluents do not constitute 'soiled water' which is defined in the Nitrates Regulations.

Soiled waters and slurry – We note from the submitted Nutrient Management Plan (NMP) the abattoir effluent that is to be treated as soiled waters is to be stored in tanks (designed for slurry) on farms. At 120 m³/day effluent produced (maximum limit allowed) and 2000 m³ storage being put forward, this amounts to 16/17 days storage. It is stated in the *Explanatory Handbook for Good Agricultural Practice Regulations* (Section 1, page 6 – Appendix 1) that *If soiled water is stored together with slurry, or if it becomes mixed with slurry, then as far as the Regulations are concerned it is slurry and is subject to the same rules as slurry*. There appears to be no conditions regarding the separation of soiled water from slurry when stored in slurry tanks. Furthermore we would question the planning legality of storing a non-agricultural effluent in such tanks as there would be questions regarding change of use, intensification, etc.

Transporting of effluent - we note in Section 1.2 *Management of treated effluent* of the IPPC Licence IR Addendum dated 10th January 2011 that *the applicant has advised that the treated effluent generated at the installation is currently being brought to a farm in Rathfeigh, owned by Michael Fox (owner of the Cooksgrove Limited installation), for landspreading. In the event of adverse weather conditions the effluent is stored and then landspread when weather permits*. Is this the effluent that comes from the upgraded wastewater treatment plant at the abattoir? If so, an application was made to retain this treatment plant in 2008, but the same application was withdrawn in 2009. Therefore is this treatment plant illegal under the Planning Acts? This would also imply that the effluent should not be produced let alone not be stored and spread in such a manner. We are disappointed that the EPA apparently allowed spreading activity to continue without intervening and now appear to be trying to legalise it by means of this IR. Is this not *ultra vires*?

Storage Lagoon at Rathfeigh - We wish to use this opportunity to make the following points with regard to the specific issue of the 4393.56 m³ effluent storage lagoon on the premises of Mr. Michael Fox in Rathfeigh as detailed in the above application :

- This lagoon is described as being *constructed pre-planning-relined 2009* in Table 3.2 *Schedule of Available Storage* in the *August 2010 Rev 1 of NMP 2009* version of the Nutrient Management Plan in the submission dated 30.08.10 by Raphael McEvoy MSc – RME Environmental on behalf of Eurofarm Foods.
- In detail 4 in the submission dated 16.09.2010 by Raphael McEvoy it is stated that *The proposed storage lagoon facility at Rathfeigh was relined in 2000 by specialist contractor Geoline Ltd from Waterford. All relining works were carried out in conjunction with S126 Department of Agriculture and Food "Minimum specification for geomembrane – lined slurry/effluent stores and ancillary works". Attached please find a copy of the certification of conformance with the specification S126 to which the lagoon was relined and a copy of the specification of the material used in the re-lining of the lagoon.*
- The Eastern Regional Fisheries Board sought a Declaration from Meath County Council in 2009 under Section 5 of the Planning and Development Act 2000, as to the actual planning status of the then *hole in the ground* used for

slurry storage. This hole in the ground was later reconstituted, relined and renamed as *the proposed storage lagoon facility*. On 20/10/2009 Meath County Council stated in Declaration NA/S59042 that *the hole in the ground used for slurry storage all in the ownership of Michael Fox is NOT EXEMPT*. We have attached copy of this Declaration, which was not appealed to An Bord Pleanála (Appendix 2).

- It is stated in the second bullet point above that. All relining works were carried out in conjunction with S126 Department of Agriculture and Food "Minimum specification for geomembrane. Also included in the submission is the relevant certificate of conformance. We also attach a copy of S126. (Appendix 3) On page 3 it is stated - *3 Planning Permission In every case planning permission shall be obtained for this type of slurry/effluent store. It shall be clearly stated in the application for permission to the Local Authority, that the proposed structure is to be a geomembrane-lined store.*
4 Storage Capacity The storage capacity of the slurry/effluent store shall comply with the conditions attached to the granting of Planning Permission by the Local Authority. Where such conditions have not been imposed, the capacity shall be in accordance with the current requirements of the Department of Agriculture and Food, and the Department of Environment and Local Government. In calculating the capacity of the slurry/effluent store, the maximum top level of the effluent shall be taken at 300mm below the lowest slurry channel invert. As far as we are aware no planning application has not been lodged for this storage lagoon facility. We are currently pursuing this matter with Meath County Council Planning Enforcement Section.

We respectfully submit that the slurry storage lagoon facility on the lands of Mr. Fox at Rathfeigh does not have planning permission and has been declared as *not exempt* in 2009 by Meath County Council. Therefore it should not be included as part of the available storage as listed in Table 3.2 of the 30.08.10 Eurofarm Foods submission as it may be contrary to the Planning Acts and S126. This alleged lack of planning may expose the nearby waters to an unacceptable risk in the event of polluting matter discharging from this facility.

This storage facility is being put forward as 4323.56 m³ of a 8975.62 m³ storage bank (48%) and it's exclusion would put the whole application in doubt.

Inspectors Report (7th December 2010) – Section 8

In Section 8 of the above mentioned report our correspondence of 20th November 2009 is noted. In our appendix to this we include a letter to Meath County Council dated 19th November, 2009. One of the points we made was :

We want to put it on record that recently a large storage lagoon has been constructed on the lands of Mr. Fox that has allegedly been constructed without proper planning. We would ask Meath Co. Co. to deal with this matter and ensure that this structure as it stands will never be used to store effluent from the applicant. There is a direct connection between the proposed storage tanks on Mr. Fox's lands in his farmyard at Rathfeigh and the storage lagoon.

We regret that the EPA did not note this particular point and comment on same.

Inspectors Report (7th December 2010) – Section 7

In the top paragraph, page 11 of the main inspector's report it states that **Condition 6.20 of the RD requires the applicant to carry out an evaluation of the repeated application of treated effluent to land during the winter period, to be submitted to the agency as part of the AER.** Condition 6.20 does not contain this proviso nor does it appear to exist in any other form within the RD. Also this statement does not appear to have been removed/amended in the IR Addendum of the 11th January. In fact Condition 8.14.2 appears to make it easier for the applicant to have more a more lenient spreading regime for the all year spreading of effluent *where it demonstrated to the satisfaction of the Agency that the increased application frequency will not have an impact on the receiving environment.*

Inspectors Report (7th December 2010) – Section 11, Submission 4 (iii & inspector's comment)

The HSE raises a point regarding the storage of solid waste in Submission 4. In the inspectors report (page 13) it is stated that **Condition 3.11 of the RD requires the applicant to achieve the storage capacity at appropriately authorised storage facilities within 6 months.** In reading Condition 3.11 the phrase *appropriately authorised* is not used but the phrase *as agreed by the Agency is.* We would presume that the phrase *appropriately authorised* would mean being fully compliant with the Planning Acts. As you know we believe that the storage lagoon at Rathfeigh (4323.56 m3) may not be compliant with the Planning Acts and may not be within six months of the date of the granting of the license and that it should be made clear that all storage facilities must be planning compliant.

Inspectors Report (7th December 2010) – Section 11, Submission 6 & inspector's comment)

In page 14 of the inspector's report it is stated that *the RD requires the applicant to within six months of the date of the licence demonstrate that the storage facilities are appropriately authorised.* Section 3.12 of the RD appears to cover this. In reading Condition 3.12 the phrase *appropriately authorised* is not used but the phrase *as agreed by the Agency is.* As stated in the paragraph above we would presume that the phrase *appropriately authorised* would mean being fully compliant with the Planning Acts. As you know we believe that the storage tanks may not be compliant with the Planning Acts and may not be within six months of the date of the granting of the license and that it should be made clear that all storage facilities must be planning compliant.

Directing effluent to Duleek WWTP

We note Condition 11.14 regarding the possibility of tankering the treated effluent o Duleek WWTP. However, we advise that this is the best solution from the environmental point of view given that Duleek WWTP is only 2 km distance from the abattoir and that sufficient capacity exists within the treatment plant.

Under Section 8 of the Inland Fisheries Ireland Act 2010 the functions of the Central and Regional Fisheries Boards have been transferred to IFI. Also Under Schedule 3, Part 5 of this Act Item 1 displays an Amendment of Environmental Protection Agency (Licensing Fees) Regulations 1994 where in Article 8(3) "Inland Fisheries Ireland" has been substituted for "the Central Fisheries Board". Therefore the reduced fee of €63 applies for this objection. A postal order for the said amount is enclosed.

Yours faithfully



Noel McGloin
Senior Fisheries Environmental Officer
Tel: 01 2787230 (direct)
E – mail: noel.mcglain@fisheriesireland.ie

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

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

EXPLANATORY HANDBOOK FOR GOOD AGRICULTURAL PRACTICE REGULATIONS



For inspection purposes only.
Consent or copyright cannot be used for any other use.



THE DEPARTMENT OF
AGRICULTURE & FOOD
AN RÓINN TAIMHARACHTA AGUS BIA



30-01-0108: 10,000 Brunswick Press Ltd. (20309)

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

SECTION 1: Managing the Farmyard

The **Regulations** deal with three main aspects of farmyard management:

- Keeping soiled water to a minimum
- Collecting effluents, organic fertilisers etc
- Storing effluents, organic fertilisers etc properly

Keeping soiled water to a minimum

You must:

- Divert all clean water to a clean water outfall
- Prevent clean water from becoming soiled
- Keep the amount of soiled water that is produced on your holding to a minimum
- If soiled water is stored together with slurry, or if it becomes mixed with slurry, then as far as the **Regulations** are concerned it is slurry and is subject to the same rules as slurry

Collecting organic fertilisers

Organic fertiliser means slurry, farmyard manure, sewage sludge, industrial sludges etc. Until you are ready to apply them to land, you must collect all organic fertilisers, effluents and soiled waters in a way that will prevent runoff or seepage, directly or indirectly, into groundwaters or surface water.

Storing organic fertilisers properly

You must have enough storage capacity to make certain that you will not be spreading organic fertilisers on the land during the **prohibited spreading periods** when spreading is forbidden. But spreading is also forbidden, even at other times of the year, if weather or ground conditions are unsuitable and there is a risk that the nutrients in the fertilisers might run off into surface water or groundwater. Therefore you must also make sure that you have enough spare capacity to allow for bad weather.

All storage facilities for organic fertiliser, effluents and soiled water must be kept leak-proof and structurally sound. All new storage facilities must meet the construction specifications of the Department of Agriculture and Food. (You can get more information about these specifications from your adviser/consultant, from your local Department office or on the Department's website www.agriculture.gov.ie).

If you have not got enough storage capacity, one way of dealing with the problem is by having straw bedding or other absorbent bedding material. (For example you could have straw bedded housing for cattle, or wood shavings or chopped straw for broilers).

If your holding is in more than one zone, you must follow the rules that apply to the zone where greater storage capacity is required.

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

Cy 16/11/09

MEATH COUNTY COUNCIL

Planning Section

Abbey Mall

Abbey Road

Navan

046 - 9097000

Planning & Development Act 2000, as amended

DECLARATION

To: Noel McGloin (Senior Fisheries Environmental
Eastern Regional Fisheries Board
15A Main Street
Blackrock
Co Dublin

**PLANNING REFERENCE
NUMBER:**

NA/S59042

**APPLICATION RECEIPT
DATE:**

23/09/2009

**FURTHER INFORMATION
DATE:**

n/a



In pursuance of the powers conferred upon them by the Planning and Development Act 2000, Meath County Council has by order dated 20/10/09 decided to Declare the proposed development is

EXEMPT, in accordance with the documents submitted namely: **three ICW extra ponds (as modified) at Rathfeigh, Co. Meath.**

NOT EXEMPT, in accordance with the documents submitted namely: **the hole in the ground used for slurry storage all in the ownership of Mr Michael Fox. Relevant Planning Files are NA/50189 (PL17.215281) & NA70432. (Enforcement Notice US07/122) at Rathfeigh Co Meath.**

Signed on behalf of Meath County Council

Date: 20/10/09

Deirdre Murphy
Area Administrator

MEATH COUNTY COUNCIL

Planning Section

Abbey Mall

Abbey Road

Navan

046 - 9097000

By 16/11/09

Planning & Development Act 2000, as amended

DECLARATION

**To: Noel McGloin (Senior Fisheries Environmental
Eastern Regional Fisheries Board
15A Main Street
Blackrock
Co Dublin**

**PLANNING REFERENCE
NUMBER:**

NA/S59042

**APPLICATION RECEIPT
DATE:**

23/09/2009

**FURTHER INFORMATION
DATE:**

n/a



In pursuance of the powers conferred upon them by the Planning and Development Act 2000, Meath County Council has by order dated 20/10/09 decided to Declare the proposed development is

EXEMPT, in accordance with the documents submitted namely: **three ICW extra ponds (as modified) at Rathfeigh, Co. Meath.**

NOT EXEMPT, in accordance with the documents submitted namely: **the hole in the ground used for slurry storage all in the ownership of Mr Michael Fox. Relevant Planning Files are NA/50189 (PL17.215281) & NA70432. (Enforcement Notice US07/122) at Rathfeigh Co Meath.**

Signed on behalf of Meath County Council

Date: 20/10/09

Danica Murphy
Area Administrator

DEPARTMENT OF AGRICULTURE, AND FOOD

Farm Development ServiceNovember 2002

S126

MINIMUM SPECIFICATION FOR GEOMEMBRANE-LINED
SLURRY/EFFLUENT STORES, AND ANCILLARY WORKS

This is a minimum specification. Where the word "SHALL" is used, then that standard (at least) **must** be followed in a grant-aided slurry/effluent store. Where a procedure is "RECOMMENDED", this is advice only on good practice.

Note that all references to other department Specifications are to the current edition of that specification [available on the Department of Agriculture and Food Website (www.irlgov.ie/daff) under Farm buildings]. Similarly, references to Standards are to the current edition of the Irish, British or European Standard, as appropriate.

Note: Slurry/effluent stores need careful and constant management to ensure correct operation.

1. Safety.

Farmers Responsibility: Please note that neither the Minister nor any official of the Department shall be in any way liable for material damage or injury to persons, animals or property in the event of any occurrence related to the development.

Dangers: Where the applicant/farmer is undertaking any part of the above work, it shall be done in strict compliance with the instructions of the lining contractor, who shall alert the applicant to relevant safety procedures.

Power lines: A slurry/effluent store shall not be constructed under or near an overhead power supply. If advice is required, or if power lines need to be diverted, written notice should be given to the local ESB supervisor before construction commences.

Danger to children: Children shall be prevented from playing or spending time in the vicinity of any construction work.

Insurance cover: The applicant/farmer shall ensure that the lining contractor has full Employers/Public and Product Liability Insurance, and also that his/her insurance policy gives indemnity to you as an employer.

If the applicant is carrying out any of the work, he/she should check that their current insurance policy covers the relevant work, and if not, that such insurance is arranged.

2. The Lining Contractor

All work specified in this document shall be the responsibility of the Lining Contractor, who shall be a specialist in this form of construction, and accepted as such by the Department of Agriculture, and Food. The full installation of the lining shall be carried out directly by the Lining Contractor. All other works shall be completed either by the Lining Contractor, or in accordance with the Lining Contractor's instructions. In all cases the installation shall at least meet all of the requirements of this specification. Certificates shall be required from the Lining Contractor to cover all aspects of the work. [Clause 20]

It is recommended that the Lining Contractor has an ISO 9002 Quality Accreditation, and uses only materials from an ISO 9001 Quality Approved Manufacturer. As a minimum, the work shall be performed to a level accepted by a recognised European accreditation body.

3. Planning Permission

In every case planning permission shall be obtained for this type of slurry/effluent store. It shall be clearly stated in the application for permission to the Local Authority, that the proposed structure is to be a geomembrane-lined store.

4. Storage Capacity

The storage capacity of the slurry/effluent store shall comply with the conditions attached to the granting of Planning Permission by the Local Authority. Where such conditions have not been imposed, the capacity shall be in accordance with the current requirements of the Department of Agriculture and Food, and the Department of Environment and Local Government.

In calculating the capacity of the slurry/effluent store, the maximum top level of the effluent shall be taken at 300mm below the lowest slurry channel invert.

5. Location

The location of any lined slurry/effluent store shall be in compliance with all requirements of planning permission and other statutory regulations. Additionally the location should be at a suitable remove from busy work areas, or from circulation areas in the farmyard, or from trees. No part of the structure shall be directly under any power line, and the fence line must not run under any nearby trees [Clauses 1 and 18]. Site investigations shall take place to determine ground water level, bedrock depth and subsoil type. Trial pits need only to be sunk to one metre below the expected lowest level of the store.

A storage facility shall be located not less than 50m from any waterbody in the case of new farmyards, and not less than 10m in the case of extensions/modifications to an existing facility. The minimum distance between a storage facility and a public or domestic water supply source, either surface or ground, shall be 60m. In vulnerable situations this distance should be increased up to 300m.

6. Ground Conditions

The proposed site shall be free of bedrock [clause 11]. The water table at its estimated highest point, or at its cut-off point where ground water table drainage is to be provided, shall be at or below the leak detection layer [clause 10].

7. Construction

On all sites, the topsoil within the slurry/effluent store perimeter and for a minimum distance of 1.5m outside it shall be removed.

The banks of the store shall be not less than 600mm high above ground level and be well-compacted. The banks may be constructed of suitable excavated material as assessed by the lining contractor.

8. Bank Stability

The banks shall be excavated to a slope, which will maintain stability in the prevailing ground conditions and with regard to the soil type. The slope angle shall normally be 45°, but in certain soils the angle may be steeper. In no circumstance shall the bank slope be steeper than 55°. The banks shall be wide enough to allow permanent stability of the bank and for safe access to the chosen agitation point(s).

9. Air and Gas Escape

Suitable provision shall be made to ensure the escape of any trapped gas or air from beneath the liner, particularly during construction.

10. Leak detection system.

A leak detection system shall be installed underneath the geomembrane-lining. This shall consist of one of the following:

- 1) 50mm land drainage pipes, spaced at 2.5m intervals under the layer of pea gravel [clause 11].
- 2) Flat geocomposite drainage tubing (for example Colbondrain) laid in a fan-like fashion and brought to one 160 mm diameter pipe that exits the lagoon sidewall. These drainage pipes may be laid over or under the pea gravel.

The pipes, in both cases, shall be brought to a 1000 litre inspection chamber so that monitoring of the discharge can be undertaken.

11. Surface Preparation

The excavated and/or made-up ground must be finished uniform and smooth and free of any sharp protuberances. In particular, the surfaces to be lined must be free of water, jagged rock, debris, roots or any matter that could damage the lining material. A minimum 75mm layer of pea gravel (10mm max particle size) shall be used on all slurry/effluent store floors. In stony ground a quarry dust layer (5mm to fines), 50mm thick, shall be applied on all side slopes.

Before lining commences the formation shall be examined by the Lining Contractor to ensure suitability. An acceptance certificate will then be issued to record that the ground preparation has been carried out in full accordance with the Contractor's recommendations [Clause 20]. The first portion of the contractors certificate shall be completed at this stage.

12. Anchoring Trench

The anchor trench shall be carefully formed and compacted, and any undisturbed top soil beneath it shall be removed. The anchoring trench shall be at least 500mm back from the slurry/effluent store edge and it shall be excavated at least 300mm wide and 500mm deep. When the liner has been installed in the prepared store, at least 500mm of liner all round should be available for burial in the anchor trench, which shall then be backfilled and compacted.

13. Liner

The Material Specification of the proprietary geomembrane-Lining Material shall be provided to the Department and the material recorded as accepted by them before the Lining Contractor is approved. The Lining Contractor shall also forward details of their Quality Control System and their acceptance as a Quality Approved Company by an independent Quality Regulatory Body. Any change to the specification of that material shall also require approval by the Department.

The liner shall be laid and jointed by the Lining Contractor strictly in accordance with the manufacturer's instructions. When laid, the liner shall be free of creasing, and bulges shall not exceed 150mm height. Liner installation shall not take place in temperatures below 5°C or above 30°C.

The lining contractor certificate shall state that the material used is of the same standard as that which has been previously accepted, and that all the welds have been examined and have passed all relevant tests. The Certificate shall also incorporate a guarantee that the Lining shall remain watertight for a minimum of 30 years.

14. Agitation and Emptying Points

The proposed method of agitation should be carefully selected prior to construction, and the number of agitation points shall be agreed between the Lining Contractor, the applicant and his Planner before any excavation works proceeds. The number of agitation points required will vary depending on the depth, size and shape of the slurry/effluent store in question. The number of chosen points should be kept to the minimum necessary for complete agitation.

During construction, all requirements of the selected system shall be incorporated in the structure. Agitation point(s) shall consist of a) a tractor access point; b) a concrete footing (reinforced with steel reinforcing mesh, minimum A142) of sufficient size so that at its edges, turbulence will be dissipated to a level which will not endanger the liner, but in all cases at least 2 metres square; and c) a concrete apron at least 1m wide and 100mm thick, steel mesh reinforced (min A142), extending from the tractor stand, down the slope to the near edge of the agitator footing.

Alternatively, the Agitation point(s) shall consist of a tractor access point; a 10mm HDPE Plate footing (welded to the store liner) of sufficient size so that at its edges, turbulence will be dissipated to a level which will not endanger the liner, but in all cases at least 2 metres square; and a 10mm HDPE Plate apron at least 1m wide (welded to the side slope liner), extending from the tractor stand, down the slope to the near edge of the agitation footing.

Suitable arrangements may be provided by way of sump(s) so that the total contents can be more easily removed. Any sump shall be constructed in concrete, or alternatively constructed with a 10mm thick stock sheet of approved leak-proof material. Any joints between the sump and the liner shall be tested and be guaranteed as leak-proof by the Contractor.

Note: All agitation equipment shall be provided with protective steel grills so as to prevent contact between the rotor and the liner.

15. Pipe Connections/Concrete Inlet Channels

Any pipe connections to the facility must be carried out by trained staff and all joints must be totally leak proof. Pipes shall be installed so that no weight is transferred to the liner. Where concrete inlet channels are being used and where such channels are below the anticipated top water level within the tank, an impervious anchor profile or collar of approved design will be cast into the concrete at the interface of the concrete channel/liner. The liner shall then be welded directly to the anchor profile to achieve a guaranteed watertight seal between the liner and the concrete inlet channel.

16. Tractor Access

Tractor access for agitating shall be through a gated opening in the surrounding fence, at least 1.8m high and normally 3.6m wide. The access route shall be concreted from the fence line to store edge. The access point and tractor stand shall either be level or shall slope moderately away from the pit edge. Close to the pit edge there shall be a

raised kerb (wheel stop), at least 300mm high and 600mm wide, across the whole access point [A gap, maximum 1m wide, may be positioned in the centre of the wheel stop to facilitate the use of agitation equipment.]. The wheel stop shall also be cast into the excavated anchor trench, at least 500mm deep. A tubular steel safety barrier, at least 1.2m high, shall be provided around the access point.

17. Emergency Ramps/Ladders

At each corner of the slurry/effluent store there shall be a facility provided which will permit emergency access or escape. This shall consist of a tyre ladder, suitably constructed and anchored, or any other suitable means. Further such facilities shall be provided at intervals not exceeding 8m around the perimeter of the slurry/effluent store.

18. Protective Fencing

A stock proof and childproof fence, 1.8m high, shall be provided around all slurry/effluent stores.

Posts shall be a minimum 2.3m long of either:-

- a) Reinforced concrete 125mm x 125mm at butt end (to IS 177: 1980)
- b) Galvanised angle iron 60mm x 60mm x 6mm thick
- c) Galvanised tubular steel, 75mm outside diameter, and 3.2mm thick

Uprights and strainers shall be embedded at least 400mm into 0.5m square concrete bases, not more than 3.0m apart. Four strands of 3.2 mm plain wire shall be strained, and stapled or tied to the uprights with tying wire. Chain link fencing, 2.5mm, (to IS 130:180), 1.8m high, shall be secured to the outside of the line wires over entire fence. One strand of 2.5mm barbed wire shall be placed along the top of the fence.

The entrance gate shall be of tubular steel construction and be galvanised. The only horizontal bars shall be at the top and bottom of the gate. The gate shall be covered with chain link fencing to the outside so as to prevent climbing of gate. The gate shall be designed such that it can be closed securely, and that either people or stock cannot get through or under when closed. The top of the gate shall be a minimum of 1.8m off the ground.

Other proprietary fence systems will be acceptable if the above criteria are met.

19. Warning Signs

Warning signs shall be erected at the entrance to the store, stating "**SLURRY STORE: DANGER OF DROWNING**".

20. Certification

The following Certificates shall be provided to the applicant for submission to the Department before grant-aid can be certified for payment.

- 1. 'Concrete' Certificate [clause 21]
- 2. Contractors Certificate of Ground Preparation and Leak Tightness for Geomembrane-lined Slurry/Effluent Stores [Appendix A].

21. CONCRETE

21.1 Concrete for all works shall be purchased on the basis of a characteristic 28 day crushing strength of 40N/mm^2 [EN206 Class C32/40]. Minimum cement content shall be 350kg/m^3 . The slump of unplasticised concrete shall not exceed 75mm [EN206 Class S2]. Maximum aggregate size shall be 20mm.

21.2 Cement used in concrete and concrete products shall be certified to I.S.I. 1991, or shall be certified by N.S.A.I. to be equivalent to I.S.I. 1991. All aggregate shall be I.S. 5, 1990. Plasticisers and other admixtures shall be used in strict accordance with manufacturer's instructions, and shall be added only by the concrete-mix manufacturer.

21.3 A numbered certificate, signed and stamped, shall be required for all concrete delivered to site or for concrete made on site by contractors. This certificate, the 'Concrete Manufacturers Specification Certificate', is produced in triplicate. The top certificate printed on light blue paper shall be retained by applicant and given to the Department for inspection upon completion of works.

21.4 Polypropylene fibres can be incorporated into the concrete mix to improve the properties of fresh concrete. The use of fibres helps in the reduction of plastic cracking and crazing, and may also improve surface durability. However, they are not a substitute for structural reinforcement. Where fibres are used in concrete they shall be used in strict compliance with manufacturers' instructions and shall only be added at the Concrete Manufacturers Mixing Plant. The concrete Certificate (see 3 above) shall clearly show the amount and type of fibre added.

21.5 It is recommended that concrete samples be taken and tested in accordance with B.S. 1881.

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

Appendix A. –

Contractors Certificate of Ground Preparation and Leak Tightness for Geomembrane-lined Slurry/Effluent Stores.

To be reproduced on contractors headed paper as per sample given overleaf.

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

**[Certificate to be typed on Lining Contractors
Headed Paper]**

**Contractors Certificate of Ground Preparation and Leak Tightness
for Geomembrane-lined Slurry/Effluent Stores**

(To be completed by lining contractor)

Name of Client: _____

Address of client: _____

I hereby certify that the excavation and preparation work performed is of the required standard to at least meet the requirements of the Department of Agriculture and Food specification S126, 'Minimum Specification For Geomembrane-Lined Slurry/Effluent Stores, and Ancillary Works'.

Name of contractor preparing site: _____

Address of contractor preparing site: _____

Date site certified ready for lining: _____

Name and position of person certifying preparation work: _____

Signature of person certifying preparation work: _____

It is further certified that the geomembrane-lining has been installed to, at least, the standard of specification S126, and is hereby certified as leak tight. It is also certified that all safety features have been installed.

Date of certification: _____

Name and position of person certifying lining: _____

Signature of person certifying lining: _____

Company Stamp of Lining contractor:

