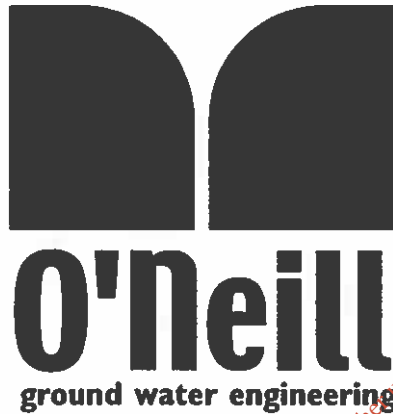


Goode Concrete Ltd.



REPORT

Request for Clarification of Further Information: RE: Planning Reference 02/1475 for the Extraction of Sand and Gravel over an area of 7.8 hectares, Associated Washing and Screening Plant, and all Associated Development and Works on an Overall Site of Approx. 13.9 hectares. The Further Information submitted provides for the Re-Alignment of the County Road bounding the north of the site (L5004) to form a new junction with the County Road bounding the east of the site (L1002), and a new site access to the re-aligned road at Ballinderry Carbury, Co. Kildare

July 2003

Project Number : 350301

7, South Main Street, Naas, Co. Kildare.

tel: 045 895668 fax: 045 881705 mobile: 087 2300933

email: info@groundwatereng.ie



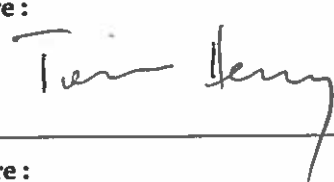

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**KILDARE COUNTY COUNCIL
PLANNING SECTION
RECEIVED**

27 AUG 2003

REPORT ISSUE FORM

Version No. :	C1
Document Title :	
<p align="center">REQUEST FOR CLARIFICATION OF FURTHER INFORMATION RE: PLANNING REFERENCE 02/1475 FOR THE EXTRACTION OF SAND & GRAVEL OVER AN AREA OF 7.8 HECTARES, ASSOCIATED WASHING & SCREENING PLANT, AND ALL ASSOCIATED DEVELOPMENT & WORK ON AN OVERALL SITE OF APPROX. 13.9 HECTARES AT BALLINDERRY, CARBURY, CO. KILDARE</p>	
Comments :	
<p>One Copy : Tom Goode, Six Copies:: Declan Brassil</p> <p>One Copy : OGE Ltd</p>	
List Of Authors :	Client : Goode Concrete Ltd.
Tiernan Henry	Client Contact Ref : Declan Brassil
Signature : 	Approved For Issue :
	EurGeol Shane O'Neill P.Geo Dip. CECLA
Signature : 	Verified/ Reviewed By :
	EurGeol Shane O'Neill P.Geo Dip. CECLA
	Issue Date : Wednesday, 30 July 2003

Version Codes:

A - Draft B - Final Draft (may be submitted to client) C - Final Report

The numbering starts at 1, and each version is raised by 1.

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REQUEST FOR CLARIFICATION OF FURTHER INFORMATION RE: PLANNING REFERENCE 02/1475 FOR THE EXTRACTION OF SAND AND GRAVEL OVER AND AREA OF 7.8 HECTARES, ASSOCIATED WASHING AND SCREEING PLANT, AND ALL ASSOCIATED DEVELOPMENT AND WORKS ON AN OVERALL SITE OF APPROX. 13.9 HECTARES. THE FI SUBMITTED PROVIDES FOR THE RE-ALIGNMENT OF THE ETC. AT BALLINDERRY CARBURY, CO. KILDARE.

1.0 Introduction

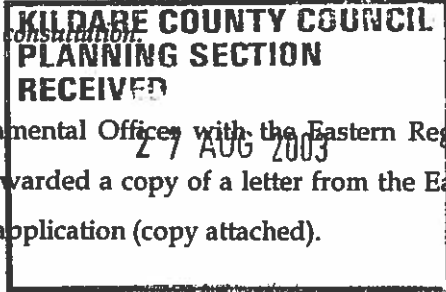
- 1.1 Declan Brassil & Associates Ltd. contracted O'Neill Ground Water Engineering Ltd. (OGE) to address an item raised by the Planning Section of Kildare County Council in relation to planning application 02/1475. Declan Brassil & Associates act as agents for Goode Concrete Ltd. The application states:

Planning Permission sought for the Extraction of Sand and Gravel over and area of 7.8 Hectares, Associated washing and screening plant, and all associated development and works on an overall site of approx. 13.9 hectares at Ballinderry, Carbury, Co. Kildare. The further information submitted provides for the re-alignment of the County Road bounding the north of the site (L5004) to form a new junction with the County Road bounding the east of the site (L1002), and a new site access to the re-aligned County Road – Goode Concrete Ltd. – 02/1475.

- 1.2 On June 30, 2003 the Planning Section of Kildare County Council wrote to Declan Brassil & Associates requesting clarification of the further information. Four items were set out by the planning office for clarification. OGE have been requested by Declan Brassil & Associates to address Item 3:

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Notwithstanding your further information submission you are advised that the Eastern Regional Fisheries Board is not satisfied that you have addressed their concerns in relation to the proposed development. You are requested to contact them directly and submit to the Planning Authority in writing the outcome of this consultation.



1.3 OGE contacted Mr. Noel McGloin (Senior Environmental Officer with the Eastern Regional Fisheries Board). On July 11, 2003 Mr. McGloin forwarded a copy of a letter from the Eastern Regional Fisheries Board in relation to the planning application (copy attached).

1.4 The letter was dated September 13, 2002 and was signed by Mr. McGloin for Alan McGurdy, Chief Executive Officer of the Eastern Regional Fisheries Board. In the letter the Board's reasons for objecting to the planning application are set out.

1.5 The reasons for the objection are quoted directly from the letter. They are:

- *This site is adjacent to the River Glash, which is a very important aquatic habitat and salmonoid (sic) nursery river. The applicant has not addressed in the EIS the likely impact of sub-groundwater level excavations on this habitat. It is clear that such excavations will have some impact on the flow patterns Glash River (sic) as groundwater that feeds into the watercourse at present will be diverted to the centre of the site as excavations move sub-groundwater level. After restoration this ground water will be flowing to the artificial plake (sic) that will be present on site. Such a change in flow patterns may have a detrimental effect on the Glash River.*
- *We are concerned about the likelihood of pollution from this site from suspended solids and hydrocarbons due to its proximity to the Glash River.*
- *We are concerned about the combination of this development, the proposed M4 motorway and a proposed IPC licenced discharge to the Glash River from a local meat factory will have on the river ecosystem.*

In summary the Board asks that this planning application should be refused for all the reasons set out above.

1.6 On May 8, 2003 Mr. McGurdy wrote to Kildare County Council in relation to the application. In this letter Mr. McGurdy states that the "applicant has addressed none of our concerns as



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expressed in our previous correspondence dated September 13, 2002". (Copy of letter attached.)

- 1.7 Declan Brassil & Associates contracted OGE to address these items. This is the focus of this report.
- 1.8 Mr. McGloin contacted Kildare County Council on July 25, 2003, attaching a copy of this report. A copy of Mr. McGloin's letter is attached.

2.0 Response to Eastern Regional Fisheries Board issues

- 2.1 OGE will address each item below.

2.2 Item 1

2.2.1 *This site is adjacent to the River Glash, which is a very important aquatic habitat and salmonoid nursery river. The applicant has not addressed in the EIS the likely impact of sub-groundwater level excavations on this habitat. It is clear that such excavations will have some impact on the flow patterns Glash River (sic) as groundwater that feeds into the watercourse at present will be diverted to the centre of the site as excavations move sub-groundwater level. After restoration this ground water will be flowing to the artificial plake (sic) that will be present on site. Such a change in flow patterns may have a detrimental effect on the Glash River.*

2.2.2 In the EIS completed for the proposal it is stated several times that the quarrying operation will go below the local water table. However, it is clearly stated that the methodology of extraction of materials from below the water table will be by dragline. A dragline operates by extracting the deposits in a large scoop bucket. The machine can extract materials from below the water table, but it does not remove water. There is no requirement for the area to be dewatered to allow draglining to proceed.

2.2.3 In Section 6.5.e (Conclusions) reference is made to "dewatering" of the site in connection to the quarrying activities.

2.2.4 *There will be no dewatering of the site to extract the deposits.*



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- 2.2.5 While the unconsolidated material will be removed there will be no removal of water from the excavation. The standing water in the excavation represents the elevation of the water table. While the removal of the unconsolidated sands and gravels will lead to an increase in the total volume of water stored there, there will be no removal of water; thus no drawdown. Therefore, this will not have long-term impact on the stream.
- 2.2.6 The aquifer and the lake will reach a new balance as there will be a change in storage of the water resources, from the aquifer to the lake, but the overall water balance for the catchment will remain unaffected by the removal of the unconsolidated materials.
- 2.2.7 When excavation work is completed the pit will have been partially backfilled with worked over materials and the remainder will form a lake. The surface elevation of this lake will represent the elevation of groundwater in the area. This will not cause water to flow to the area or significantly impact on the existing flow regime.
- 2.2.8 Groundwater will flow into the lake from the upgradient side (the west-northwest) and flow downgradient (to the southeast, in the direction of the stream) as it has always done. There will be no change in this flow direction.
- 2.2.9 Water is already in storage in the unconsolidated materials. Removal of the materials will result in this water remaining in storage (in the lake). More water can be stored in the lake than in the unconsolidated materials; however this will not lead to water being diverted from the stream. The groundwater gradient between the lake and river will not change, so the stream will continue to be recharged from the aquifer.
- 2.2.10 Water will continue to discharge to the stream from groundwater during drier months and will continue to recharge to groundwater during wetter months.
- 2.2.11 A number of monitoring boreholes have been put in place at the proposed site. OGE recommend that one of these boreholes be converted to a monitoring point and be used to record water levels and to record the change in water levels seasonally.



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2.2.12 This borehole should be levelled in. A simple staff gauge should be placed in the river and it too should be levelled in. Readings from the borehole and staff gauge can be used to determine the groundwater flow gradient from the pit to the river.

2.3 Item 2

2.3.1 *We are concerned about the likelihood of pollution for this site from suspended solids and hydrocarbons due to its proximity to the Glash River.*

2.3.2 In Section 3.3.1 of the EIS the following is stated:

It is proposed to minimise water discharge off site by utilising a closed system for mineral washing and utilisation of a silt press for removal of fines. Where possible surface water from the processing plant and access roads will be captured as part of the closed system. A small surface water settlement lagoon (20m by 10m) is proposed on the southern boundary to treat any excess water with a facility for a discharge to the ditch on the southern boundary during peak storm flows.

2.3.3 In Section 3.6 of the EIS the following is stated:

It is proposed to use a Finlay Siltmaster and CDE Silt Press as illustrated on Drawing Nos. 3121501 and MLE18-33, respectively. This plant facilitates the operation of a 'closed' stem (sic), whereby all water used in the Finlay plant is fed to the Silt Press separates (sic) the silt from the water and returns the clean water to the washing plant.

The clean water which leaves the Siltmaster is gravity fed to a storage tank for re-use in the washing plant. A ballcock is installed on the freshwater line to the storage tank to compensate for water removed from the site in the sand and stone products.

2.3.4 As can be seen from the above the issue of suspended solids being discharged from the site has been clearly addressed. Any silt or fine materials in the lake will not be able to migrate out of the lake towards the stream. They will be filtered out by the surrounding materials.

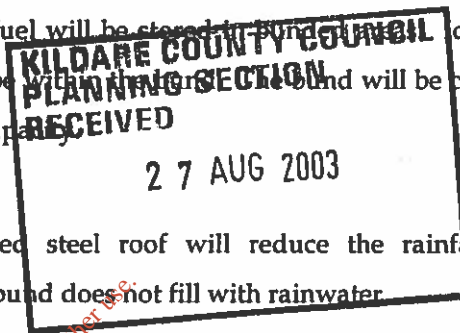
2.3.5 In Section 6.3.5 of the EIS the following is stated:



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It is planned to operate the proposed development with a closed system for mineral washing and a silt press for removal of fines. Moreover it is proposed to build a small surface water settlement lagoon on the southern side of the site. These measures together with bunding of fuel tanks and provision of concrete paved machinery parking areas, are believed to significantly reduce the risk of release of pollutants into the stream.

- 2.3.6 The major potential impact from a hydrocarbon leak arises at the storage and refuelling area rather than from the sudden, large-scale loss of fuel from a truck or vehicle.
- 2.3.7 Section 6.3.5 of the EIS states that all fuel will be stored in bunded tanks. Ideally the tanks and all refuelling points should be within the bund and will be capable of holding 110 percent of each fuel tank capacity.
- 2.3.8 Covering the tanks with a corrugated steel roof will reduce the rainfall input dramatically. This will ensure that the bund does not fill with rainwater.
- 2.3.9 It is also important that a bund management plan be put in place in the quarry to ensure that sediment or other materials do not collect in the bund. A drain valve will be put in place to ensure that rainwater can be drained from the bund. This water will not be discharged directly to ground (see below).
- 2.3.10 However, if it is not possible to place the refuelling point in the bund OGE recommended that clearly marked (brightly painted) concrete bollards will be used to protect the refuelling point from traffic.
- 2.3.11 A concrete pad will be put in place to ensure that *all* refuelling takes place on the pad. This pad should have a lip in place around the perimeter to ensure that only water that falls on the pad enters the drain. Ideally the pad should be covered with a roof structure to reduce the rainfall impact.
- 2.3.12 This pad will be cambered to a drain that will collect any spilled fuel. The bund drain valve should also discharge to this drain.
- 2.3.13 OGE recommended that this drain should be connected to the oil/water separator. OGE have used Klargest products before in similar situations, and would recommend that one of their products be used in this situation.



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2.3.14 Similarly, a paved and cambered parking area will be provided for site vehicles and visitor parking. Water from the parking area (and any fuel floating on the water) will be collected in a drain and allowed to pass through the oil/water separator to remove any fuels.

2.3.15 Vehicle maintenance will only be carried out in a designated paved area.

2.4 Item 3

2.4.1 *We are concerned about the combination of this development, the proposed M4 motorway and a proposed IPC licenced discharge to the Glash River from a local meat factory will have on the river ecosystem.*

2.4.2 While the applicant in this specific case has no control over the activities of the above, if the procedures and methodologies recommended by OGE are put in place then the impact on the River Glash caused by the extraction of sand and gravels at Ballinderry will be minimal.

2.4.3 Work on the Kilcock/Kinnegad section of the M4 is scheduled to begin this year. OGE assume that the conditions attached to the operation will include monitoring of local water courses, and that remediation strategies will have to be in place ahead of site clearing and construction. Likewise, the monitoring of the proposed IPC licence discharge will be conditional. The applicant will have to demonstrate that remediation strategies are in place to deal with a potential spill or accident.

2.4.4 OGE have addressed the items raised by the Eastern Regional Fisheries Board. When the monitoring and preventative recommendations are put in place the impact of the extraction at Ballinderry on the River Glash will be minimal.



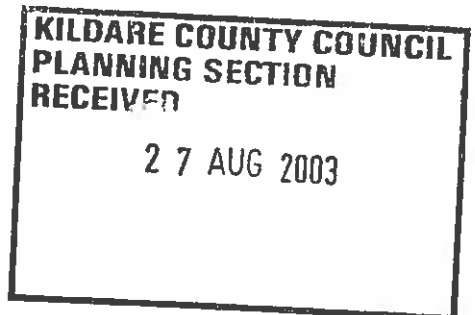
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3.0 Conclusions

- 3.1 The Eastern Regional Fisheries Board was concerned with the potential impact of the extraction activity on recharge to the river. The quarrying will not involve the dewatering of the site. Quarrying will be completed below the water table using dragline. There will be no dewatering involved.
- 3.2 This will have no impact on the regional water balance, and will have no impact on recharge to the stream. Following completion of the extraction the pit will be partially backfilled, and will be restored to a lake and wetland. This will not cause water to flow from the stream to the lake, nor will it cause negative impacts on the discharge of the river. The extraction will not affect the existing flow gradient.
- 3.3 The Eastern Regional Fisheries Board was concerned about the potential for suspended solids and hydrocarbons to enter the river from the proposed development. All suspended materials will be removed using a Finlay Siltmaster and CDE Silt Press. Silts will be stored for bunding or for backfilling of the worked out pit. A settlement lagoon will be constructed and all other waters will be passed through this before being discharged. There will be no movement of suspended solids from the pit to the river.
- 3.4 OGE have set out a methodology and procedure for the storage of hydrocarbons and for refuelling. All hydrocarbons are to be stored in a bunded area, and all refuelling and maintenance work is to take place on paved areas only. Drains will collect runoff from these areas and the runoff will be passed through an oil/water separator before being discharged.
- 3.5 The Eastern Regional Fisheries Board are concerned about the cumulative impact of the proposed development, the construction of a new section of the M4 and an application for a discharge licence from a meat factory. When the recommendations OGE have made are implemented then the impact on the river from the quarry will be minimal. Planning conditions and conditions set down by the local authorities will have been put in place in relation to the M4 development. The EPA (and the new enforcement agency) will police the IPC licence. If these are monitored and enforced then the impacts on the river will be minimised.

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The Planning Section
Kildare County Council
St. Mary's
NAAS
Co Kildare



25th July 2003

Our Ref: NMcG/Goode/Kil

Re: Application for planning permission by Goode Concrete Ltd. for the extraction of sand and gravel at Ballinderry, Carbury – (02/1475).

Dear Sir/Madam

We are in receipt of clarification of further information from O'Neill Ground water Engineering Ltd. (OGE) on behalf of Declan Brassil & Associates Ltd. regarding our submissions relating to the above planning application.

With regard to the response to our first concern (as outlined below):

This site is adjacent to the Glash River, which is a very important aquatic habitat and salmonoid nursery river. The applicant has not addressed in the EIS the likely impacts of the sub-groundwater level excavations on this habitat. It is clear that such excavations will have some impact on the flow patterns Glash River as groundwater that feeds into the watercourse at present will be diverted towards the centre of the site as excavations move sub-groundwater level. After restoration this ground water will be flowing to the artificial lake that will be present on site. Such a change in flow patterns may have a detrimental effect on the Glash River.

Some of our fears have been allayed however we want to be assured that the habitat of the Glash will not be altered by an impact due to any altered flow regime. We note that in Section 2.2.7 that it is said that there will be no significant impact due to the altered regime. If permission is granted we will want a condition to ensure that a monitoring borehole is in place as outlined in Section 2.2.11 and that this is monitored on a regular basis. We will also want a condition in place to ensure that full measures are in place to restore the baseline flow regime to the Glash should this become necessary.

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The Planning Section
Kildare County Council
St. Mary's
NAAS
Co Kildare

8th May 2003

Our Ref: NMcG/Goode/21

Re: Application for planning permission by Goode Concrete Ltd. for the extraction of sand and gravel at Ballinderry, Carbury - (02/1475).

Dear Sir/Madam

We are in receipt of cover letter with further information along with accompanying documentation regarding the above dated 29/04/ 2003 and received by us on 2nd May, 2003.

The applicant has addressed none of our concerns as expressed in our previous correspondence dated September 13, 2002.

Once again the Board asks that this planning application should be refused for all of the reasons as set out above.

We look forward to a copy of your decision in due course.

Yours faithfully

Alan McGurdy
Chief Executive Officer.

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Eastern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Oirthir



The Planning Section
Kildare County Council
St. Mary's
NAAS
Co Kildare

September 13, 2002

Our Ref: NMcG/Goode/K

Re: Application for planning permission by Goode Concrete Ltd. for the extraction of sand and gravel at Ballinderry, Carbury - (02/1477)

ack Report.

02/1475 due 30/9

Dear Sir/Madam

We are in receipt of your referral with accompanying documentation regarding the above dated 23rd August, 2002. This referral was originally sent to the Southern Regional Fisheries Board who passed it on to us as the site is within our Regional area.

The Eastern Regional Fisheries Board is a Statutory Body which has statutory obligations in regard to the management, conservation, protection, development and improvement of the fisheries within its Region.

Under section 8(a) (1) (i) of the Fisheries (Amendment) Act 1999 *A Regional Board shall in the performance of its duties, have regard to 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) and 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*

The Board wishes to object to this planning application on the following grounds:

- This site is adjacent to the Glash River, which is a very important aquatic habitat and salmonoid nursery river. The applicant has not addressed in the EIS the likely impacts of the sub-groundwater level excavations on this habitat. It is clear that such excavations will have some impact on the flow patterns Glash River as groundwater that feeds into the watercourse at present will be diverted towards the centre of the site as excavations move sub-groundwater level. After restoration this ground water will be flowing to the artificial plake that will be present on site. Such a change in flow patterns may have a detrimental effect on the Glash River.



16 SEP 2002
KILDARE COUNTY COUNCIL
ST. MARY'S
NAAS
CO. KILDARE

THE EASTERN REGIONAL FISHERIES BOARD
02 MAY 2003

The Eastern Regional Fisheries Board

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- We are concerned about the likelihood of pollution from this site from suspended solids and hydrocarbons due to its proximity to the Glash River.
- We are concerned about the combination of this development, the proposed M4 motorway and a proposed IPC licenced discharge to the Glash River from a local meat factory will have on the river ecosystem.

In summary the Board asks that this planning application should be refused for all of the reasons as set out above.

We look forward to a copy of your decision in due course.

Yours faithfully

Alan McGurdy FEO
 Alan McGurdy
 Chief Executive Officer.

Cc F. Carolan

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(Handwritten mark)

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