08 January 2021

An Bord Pleanala
64 Marlborough Street,
Dublin 1

**Re: Further Development Application for Ummera Gravel Pit**
**Ummera County Cork**
**For Drimoleague Concrete Works Limited**
**ABP Case Number: ABP-308194-20**

Dear Sirs

On behalf of Drimoleague Concrete Works Ltd (DCWL), please find attached its response to Cork County Council's submission on the Further Development application for Ummera Gravel Pit. This response addresses the further information sought by the Council and the Council's suggested planning conditions. It is noted that the 10-page Council submission provided to me does not have any assessment reports and appears to rely on the reports relating to the Substitute Consent application. It is noted that there is some cross over in the internal Council's reports between the Substitute Consent and Section 37L Further Development applications. We have provided a response to the Council's submission on the Substitute Consent application under separate cover.

As noted in the Council's submission, '*the board principle of this quarry at this location is generally acceptable*'. We trust that the clarification provided below will enable the Board to grant Further Development under Section 37L.

**FURTHER INFORMATION REQUEST**

**1. Map of Dust Sensitive Receptors**

House locations within 500m of the DCWL landownership boundary are shown on Figure 2-1 of the EIAR. The dust monitoring locations are shown on Figure 6-1. The nearest houses to the gravel pit are H1, H2, H3 and H10. Houses H1 and H2 are considered the dust sensitive locations. These houses along with the dust monitoring locations D1, D2 and D3 are shown on Drawing No. 008 - 1:1,250 scale Monitoring Point Location Plan (6 copies attached).

**2. Dust Monitoring**

The dust monitoring programme for the gravel pit was submitted to Cork County Council during the registration on the gravel pit in 2005. Three locations were submitted for agreement with the Council – these monitoring points (D1, D2 and D3) are shown on Figure 6-1 of the EIAR and Drawing No. 008 (attached). It is proposed to monitor dust levels for two 30-day periods each year between May and September. The results will be compared to the emission limit value of 350mg/m$^2$/day (the limit set by the Council during the S261 registration. Daily rainfall data from the nearest gauging station can also be submitted. It is unclear how the Council wants the assimilative capacity of the receiving environment to be determined. It is not practical for a small-scale gravel pit, with one operator, to manage an on-site meteorological station. The dust monitoring results for the site, submitted in the EIAR, are well within the emission limit value of 350mg/m$^2$/day, demonstrating that the measures taken have been and are effective.



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## 3. Speed Limit Enforcement

The access road is approximately 230m long (from the public road to the yard). The speed limit for the site is stated in the Environmental Management System (EMS). DCWL drivers, and other regular 3rd party customers, have been advised of the speed limit and the rational for it. To enforce the limit, signage will be erected along the access road remaindering users of the speed limit. Drivers observed to be breaking the speed limit will be warned by the pit manager. Lastly, habitual offenders will be barred from using the site.

## 4. Sprinkler System

The sprinkler system was installed in the 1990s to address a dust complaint from the neighbours located to the east of the gravel pit (H1). During the preparation of the EIAR, we spoke with the neighbours who has indicated that they are no longer affected by dust from the gravel pit and it is no longer a nuisance. The maturing of the trees planted along the western perimeter of the site and along the access road shelters the pit from the prevailing wind direction, which has greatly reduced the potential for dust generation. DCWL considers that the proposals detailed in the EIAR are sufficient to manage dust, primarily the paving of the access road. The inclusion of the sprinkler system is not necessary and would unnecessarily use the water resource.

## 5. Surface Water Abstraction Assessment

The washing of the gravel is operated within a closed system where wash water is pumped from the last pond and used water is directed into the first pond. Rainfall is used preferentially to top up the system and the Clashavoon Stream is used as a secondary source. The abstraction from the stream is not metered. Estimates are given in Section 7.1.3 of the S37L Further Development application as follows:

'*As discussed in Chapter 2, the settlement ponds have a capacity of approximately 14,970m3 following cleaning (removal of silt). This capacity decreases over time as the ponds fill with silt. In dry periods, water will be lost through wetting of aggregate, infiltration and evaporation. Over the course of a working day, approximately 800m³ of water is used. Assuming a 5% loss, 40m³ of top-up water would need to be abstracted from the Clashavoon Stream. This would equate to 2.7% of the dry weather flow over a 24-hour period.*

*It is noted that topping up would only be required when the level in the last pond was too low to pump. Assuming losses of 40m³/day, the capacity in that pond would allow for over approximately 100 days without top-up. In this time, rainfall would naturally top up the ponds and / or abstraction could be timed during high flows in the stream.*'

The catchment area of the ponds (including the ponds) is approximately 3ha. Based on the mean annual rainfall for the Ummera area (1,200mm), the incident rainfall on the 3ha is approximately 36,000m³ per annum or 98.6m³/day on average. Assuming a runoff co-efficient for the site of 0.37, on average, 36.5m³/day would top up the ponds. However, the rainfall will not always coincide when top-up is needed, so small volumes of abstraction are required. With low volumes of occasional abstraction from the stream, the impact on hydrological processes, habitats and species would be localised (between the abstraction and point and River Laney confluence) imperceptible (an effect capable of measure but without consequences) brief (lasting less than a day) neutral impact. Furthermore, water seeping from the ponds will contribute to groundwater baseflow to the Clashavoon Stream, so the abstraction is offset. With use, the ponds will self-seal, reducing water losses and reducing abstraction requirements.

## 6. Weir on Clashavoon Stream

It is not stated in the documentation submitted for either the Substitute Consent or Further Development applications that the weir has been partially removed. It is stated in the EIAR (Section 10.5.3) for the S37L Further Development application that '*the partial removal of the weir will improve access upstream for salmon and lamprey species*'. This work has not been undertaken, so the requested assessment can't be provided. DCWL will liaise with Inland Fisheries Ireland (IFI) regards the weir.



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## 7. Environmental Management System

Six copies of DCWL's EMS for the Ummera Gravel Pit are attached.

## 8. Habitats & Species Management Plan

The Council is requesting a Habitats and Species Management Plan, which we consider could be dealt with by condition under the Section 37L Further Development application.

***Habitats***

The habitat map for the site is provided on the site plan – Drawing 009 – 1:1,250 Habitat Map (attached). The dashed purple line shows the extent of the extraction area. This consists mostly of Active Quarries and Mines (ED4), grassland and scrub.

The habitats mapped as being of local importance (higher value) or of County importance within the Section 37L application boundary are:

- Depositing River (FW2): The Clashavoon Stream is considered of County importance due to its potential to host otter. Apart from the weir, there will be no disturbance to this habitat. Works at the gravel pit do not interfere with the use of the stream by otter.
- Scrub (WS1): Most of the areas of scrub on site are classified as being of local ecological importance (lower value). An area of scrub at the southwest corner of the site is considered to be local ecological importance (higher value) as it provides an ecological corridor. Part of this scrub habitat is within the excavation boundary. The use of this area as an ecological corridor will be offset by the provision of a planted berm around the perimeter of this area. The existing screening berms on the eastern side of the site are identified as ecological corridors for wildlife using and passing through the site and the proposed berm will act in a similar manner.
- Willow Dominated Dry Woodland (WN): It is found on the western side of the site, in two areas between public road and site access road / settlement ponds. A third area is located between the public road and the Clashavoon Stream – i.e. the location of the original settlement pond. It is considered to be of local importance (higher value). These areas will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Wet Willow-Alder-Ash Woodland (WN6): This habitat is located at the northwest corner of the site between the settlement ponds and the public road. It is considered to be of local importance (higher value). This area will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Hedgerow (WL1): This consists of a length of hedgerow recorded along the southern Section 37L application boundary. It is considered to be of local importance (higher value). This hedgerow will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Treeline (WL2): This consists of two sections of treeline recorded within the Section 37L application boundary; one at the southern/southwestern boundary and one at the northeast corner of the site. It is considered to be of local importance (higher value). Of the 300m of Treeline within the Section 37L boundary, approximately 70m will be removed. The remaining Treeline will be enhanced with additional tree planting as shown on Drawing 004 (already submitted). There is a further 600m of Treeline within the landholding but outside the Section 37L application boundary that will not be interfered with.
- Dry Meadows and Grassy Verges (GS2): These habitats are found along the eastern margin of the site and southern area of the landholding. It is of local importance (higher value). Most of this habitat along the eastern site boundary corresponds with the perimeter screening berm and is outside the extraction area. The area at the southern boundary is used for silage and forms part of the extraction area. The remaining area of Dry Meadows habitat is outside the Section 37L application boundary and will be retained. The long-term restoration plan for the site is to return most of the site back to Dry Meadow.



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- Wet grassland (GS4): A small area of wet grassland was recorded within the dry meadow habitat, south of the active gravel pit, close to house H2. It serves as a foraging area for local invertebrates and birds and so is considered of local importance (higher value). This area has developed on revegetated low profile topsoil stockpiles due to berms impeding runoff water. It will be removed during the Further Development of the gravel pit.

The loss of habitat of local ecological value (noted above) will be replaced over time with a more diverse mix of semi-natural habitats that currently characterise the site (i.e. a positive impact on biodiversity).

Additional habitats mapped as being of local importance (higher value) are found within the landholding but outside the Section 37L boundary. These include Mixed Broadleaved Woodland (WD1), Hedgerow (WL2) and Treeline (WL2). These habitats were avoided in the design of the Further Development application and will add to the biodiversity mix within the landholding.

***Mammals***

The site is considered to be of local importance (lower value) for terrestrial mammals. Only rabbit and fox were confirmed to be using the site. Otter was not found to be using the site. While they may use the Clashavoon Stream to forage, no otter holts were recorded along the Clashavoon Stream between the sampling points. Otters have been recorded on the Laney River. The settlement ponds do not provide suitable habitat for otter. No badger setts were recorded during the site surveys.

**Bats**

Relatively low levels of overnight bat activity were recorded on the Songmeter placed at the settlement pond and very low levels of bat activity at the central location of the gravel pit. Ummera gravel pit is not an important foraging site for bats. The study found there are excellent foraging sites for bats along the route of the River Laney and the Clashavoon Stream very close to the western and northern boundary of the site. These will not be affected by the works.

**Amphibians**

Froglets were recorded in wet grassland habitat near the abandoned farmyard and wet grassland habitat near spoil heaps. The latter is within the further development area and can be stripped outside the season when young frogs would be present. Given the low numbers found within the site, this site is of local importance (lower value) for amphibians. The ponds within the gravel pit provide sub-optimal habitat for Smooth Newt. Given the high sediment content it is unlikely frogs will use this habitat to breed.

***Birds***

A wide range of birds were recorded on or passing over the site. The majority of birds noted are not of conservation concern (Green listed); while Goldcrest, Sand martin, Lesser-black backed gull, Sparrowhawk, Swallow and Robin are amber listed. The site is considered to be of local importance (higher value) for birds. Gravel / sand cliffs / banks supporting Sand martin nests are not interfered with during the breeding season.

***Invasive Species***

No invasive plant species listed on the 2011 Regulations were recorded on site. Four invasive / non-native species were recorded at the site. These were Buddleia (single plant), Russian Comfrey (single plant), Montbretia (on bank adjacent to site access road), and Cherry Laurel (at ruined farmhouse). These plants are outside the extraction area. However, DCWL will arrange for their eradication. The quarry manager will be trained in the identification of these plants and how to control their spread.



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***Outline of Measures***
Measures outlined in the Substitute Consent and/or Section 37L application documents to management habitats and species includes:

1. Partial removal of the weir on the Clashavoon Stream to permit the free passage of fish.
2. Maintaining the habitat that has developed at the original settlement pond between the road and the Clashavoon Stream.
3. Maintaining the mature trees that have developed around the perimeter of the site. These woodlands and hedgerow provide suitable foraging and corridors for a range of species found on site. The proposed landscaping of the site to incorporate additional planting of native species will provide suitable new habitat for birds displaced by the loss of scrub and treeline habitat (both habitats are widespread in the wider environment).
4. Enhancing the screen planting on the berms along the eastern site boundary. These provide corridors for mammals moving through the area and nest and foraging for birds.
5. Clearance of vegetation such as scrub will be carried out outside the breeding bird season from 01 March to 31 August inclusive.
6. As part of the site restoration a face of the gravel pit will be left in-situ for nesting Sand martins. Extraction does not take place on faces where Sand martins are actively nesting. As with the removal of vegetation, works to sand martin nesting burrows will be conducted outside the bird nesting season (March 1st – 31st August).

## 9. Restoration Plan

The submission of a Restoration Plan can be conditioned if the Further Development is granted. Once the Further Development commences, the conditions of the Substitute Consent would lapse and the conditions controlling quarrying under Section 37L becomes the only permission requiring ongoing compliance.

## 10. Future Extraction Areas

The areas where extraction will occur for the further development are outlined by the green dashed line on Drawing No. 008 - 1:1,250 scale Monitoring Point Location Plan. A buffer of 40m is provided to the road near H1. A 3m buffer is provided to the perimeter screen berm, which provides a minimum 15m buffer to the edge of the public roads.

## 11. Stability of Settlement Pond Banks

The ponds are installed into undisturbed in-situ gravel deposits. The ponds have been at their current location for the last 25 years without incident. The banks to the east of the ponds have been seeded with grass to reduce scouring during heavy rainfall. The ponds are excavated into the ground, so the perimeter banks are composed of in-situ gravels.

Using Barnes (1992) for effective stress analysis, the critical factor of safety (F) for long term effective stress is of the form:

$$F = a + b \tan \varphi$$

Where:

a and b = stability coefficients related to slope angle, the cohesion of soil parameter $c'/\gamma H$ and the water table parameter $h_w/H$.
c' = cohesion (in effective stress terms) (a conservative value of 5kPa is used to represent poorly graded silty sands)
$\gamma$ = unit weigh ($22kN/m^3$)
H = height of slope (3m)
$h_w$ = depth to water table (>3m – no groundwater was observed in excavations)
$\varphi$ = friction angle ($34^o$)

Only conservative textbook values can be used as the ground investigation was not possible in the time allowed.



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Using tables from Barnes (1992) for a 1:1 slope, a = 0.6; b = 1.39 and tan φ = 0.67

F = 1.5 – the banks are stable in the dry condition.

When the ponds are filled with water, a = 0.44; b = 1.32 and tan φ = 0.67.

F = 1.3 – the banks are stable when filled.

The natural cementation of the gravel deposit will increase the stability and factor of safety but is not considered.

The risk of a bank failure is therefore very low and as noted, no bank failures have occurred at the ponds since constructed – approximately 25 years ago. The Council raise the issue of the consequences of a pond bank failure being the discharge of silt laden water onto the public road and into the stream. In the unlikely event of a bank failure, it would displace the water in that pond. Taking a worse-case scenario of a bank on the largest pond failing and displacing half its contents (i.e. 2,625m$^3$; ½ x area (1,750m$^2$) x 3m) of water, the freeboard in the other ponds and safety berms around the pond enclosure would have the capacity to contain that water. Any water reaching the yard area would be intercepted by drains directing it to the overflow pond where additional capacity is available. The infrastructure in place is robust and no remedial measures are deemed necessary.

## 12. Stability of Silt Stores

Silt excavated from the ponds is stored in stockpiles of approximately 5 to 6m height and with side slope angles of 20° typically. The silt is stable at these angles. Any rainfall runoff from the silt stockpiles is intercepted and directed to the settlement ponds. The stockpiles vegetate naturally providing further stability.

## 13. Q-values on Laney River

The corrected Table 10-7 is provided below.

**Table** Error! No text of specified style in document.**-1: Q-Value recorded on the R. Laney River – 1973- 2019**

| Year | Q-Value | Status | Q-Value | Status |
|---|---|---|---|---|
| | RS19L010400 R. Laney; upstream of Clashavoon confluence | | RS19L010500 R. Laney; downstream of site | |
| 1976 | --- | --- | 5 | High |
| 1981 | 5 | High | 5 | High |
| 1986 | 5 | High | 5 | High |
| 1990 | 5 | High | 4 | Good |
| 1994 | 4-5 | High | 4-5 | High |
| 1997 | 4-5 | High | 4-5 | High |
| 1999 | 4-5 | High | 4-5 | High |
| 2002 | 4-5 | High | 4-5 | High |
| 2005 | 4-5 | High | 4-5 | High |
| 2008 | 4-5 | High | 4-5 | High |
| 2011 | 4-5 | High | 4-5 | High |
| 2014 | 4-5 | High | 4-5 | High |
| 2017 | 5 | High | 5 | High |
| 2018 | 4-5 | High | 4-5 | High |
| 2019 | 4-5 | High | 4-5 | High |

The discussion of water quality based on the EPA Q-values in Section 10.4.4 is modified as follows:



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*'EPA water quality data (Q-values) is presented from stations on the River Laney upstream and downstream of the confluence with the Clashavoon Stream. These data suggest that water quality downstream of the gravel pit broadly mirror those of the upstream station on the River Laney. On only one occasion (1990) was there a lower q-value recorded in the downstream station. While negative impacts on the Clashavoon Stream have been noted, in for example correspondence, from the SWRFB, the EPA data doesn't indicate an impact on water quality from the gravel pit'.*

**14. Discharges to Clashavoon Stream**

The surface water features at the gravel pit are shown on Figure 7-2 of the rEIAR and EIAR. The discharge referred to on page 131 of the EIAR is the end of the original settlement pond located on the western side of the public road. As noted, this pond is no longer used by the gravel pit; the pipe is closed off. The recirculated water was previously returned to the washing plant from this point. This is no longer the arrangement. The only water now entering this pond is runoff from the public road – the Council has directed runoff from the road into this pond.

**15. Discharge from Settlement Ponds**

There is no direct discharge from the settlement ponds to the Clashavoon Stream. Overflow from the settlement pond is directed to a pond adjacent to the access road. No discharges from this pond have been observed during site visits or reported by the quarry manager. The pond is dry, or water level is below the invert of the discharge pipe.

**16. Surface Water Discharges**

Surface water features at the gravel pit are shown on Figure 7-2. They have been added to Drawing No. 008 - 1:1,250 scale Monitoring Point Location Plan. It is noted that the locations where they cross local road L-3423-20 are Council-maintained culverts.

**17. IFI & Removal of Weir**

Noted.

**18. Original Settlement Pond**

It is not proposed to use this pond for the further development of the gravel pit. The area has been allowed to vegetate naturally and this biodiversity is maintained for the restoration of the site.

**19. Hydrocarbon Interceptor**

A relatively small volume of fuel will be stored and used at the site; less than a typical farmyard. The proposals to manage fuel is detailed in the EIAR and consists of the construction of a bunded fuel storage shed and concrete refuelling pad. This pad will drain to an oil trap as shown on Drawing 006. The oil trap and bund of the storage shed will be cleaned as needed, minimum annually, by a licensed contractor such as Enva.

**20. Silt Traps on Drainage Channel**

Surface water runoff is diverted to the overflow settlement pond where levels allow. However, the section of access road nearest the site entrance is below the pond, so flow can't be diverted to it. Check dams will be installed along the roadside drainage channel to slow flows and filter the water. These will be constructed using geotextile supported by metal pegs, sandwiched by clean washed filter gravel, as illustrated. The check dams will be spaced so that the toe of one is at the same level as the crest of the subsequent downgradient one.



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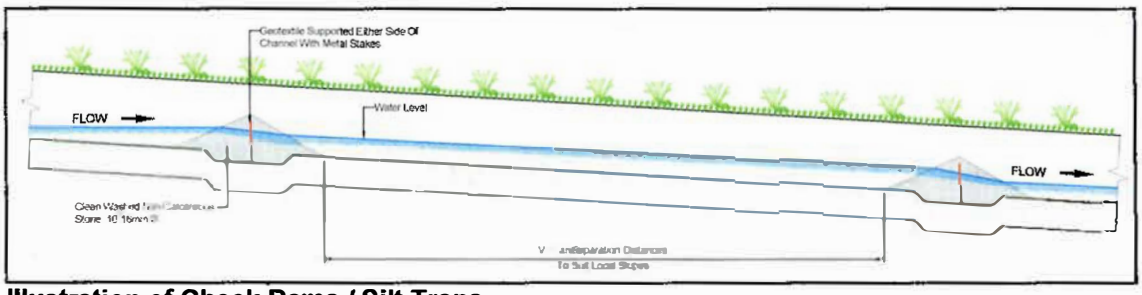


**Illustration of Check Dams / Silt Traps**

## 21. Archaeological Monitoring

The report of the County Archaeologist (provided with the Substitute Consent submission (page 42) (none was provided to me with the Council's Further Development submission) concludes that '*no further archaeological input required*'. This is at odds with what is being sought in the further information request. There are no works proposed near the Fulacht Fia (CO071-058) and the 30m buffer is provided from the Gallan Stone (CO071-57) as required per the original assessment and S261 quarry registration condition. Stripping in areas 3 and 4 will be monitored by a qualified archaeologist.

## SUGGESTED PLANNING CONDITIONS

The Council have suggested 34 No. planning conditions should the Board grant permission for Further Development. While DCWL is agreeable to most of these conditions, it requests a number of them be removed or modified. It is noted that the Council has not proposed a condition on the lifespan of the Further Development. As detailed in Section 2.5 of the EIAR, a 15-year lifespan is sought.

### Condition 3 – Hours of Operation

The Council proposes operational hours of 09:00 to 18:00 Monday to Friday and 07:00 to 16:00 on Saturday. The current operational hours (per quarry registration) are:

- Weekdays – 07:00 to 19:00
- Saturdays – 07:00 to 14:00
- No operations on Sunday or Public Holidays

These are normal working hours for this industry and DCWL need to keep these hours of operation available to it.

### Condition 6 – Sprinkler System

As noted in FI Item 4, DCWL considers that the sprinkler system is not necessary, particularly in consideration of the proposed improvements. DCWL suggests that this would only be required if dust emissions create a nuisance to neighbouring properties. Suggested rewording of Condition 6 is '*The Operator will carry out an assessment if dust emissions exceed emission limit values at the site boundary. Suitable and appropriate mitigation measures will be implemented within 3 months of receipt of the sample results to address elevated dust emissions, which may include, but not limited to, the installation of a fixed water spray system*'.

### Condition 8 – Noise Surveys

Noise surveys have been carried out as part of the EIA for the gravel pit while all equipment was operational (washing plant, pumps, front-end loader etc.). The results are discussed in Section 5.7 of the EIAR. The findings are:

1. Measured data indicate that $L_{Aeq\ 1\ h}$ levels attributable to DCWL operations are markedly lower than the 55dB criterion at present.
2. $L_{Aeq\ 30\ min}$ levels attributable to DCWL levels are currently less than the 55dB limit set out in Condition 36 of quarry registration QR01 which applies to the site.



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There have been no complaints from neighbours with respect to noise nuisance from the operations at the gravel pit, and this is stated in the Council's internal report (for the Substitute Consent application). The operations at the gravel pit will remain unchanged from those assessed in the EIAR. Considering the small-scale operation, noise levels well within limits, absence of complaints, and unchanged nature of operations, DCWL considers that ongoing noise surveys are not warranted. Rather it suggests that noise monitoring surveys be repeated every 5 years, during investigation of received noise complaint or following significant change in operations.

**Condition 10 – Wheel Wash**
DCWL considers that a wheel wash is not necessary. As noted in the EIAR, it is proposed to pave the access road from the public road to the site office – a distance of approximately 230m. HGVs using the site remain on areas that are covered with hardcore or washed gravel. HGVs do not deposit mud on the public road. With the paving of the access road, there is virtually no chance for vehicles carrying mud onto the public road.

**Condition 11 – Surfacing of Access Road**
It should be clarified that approximately 230m of the road will be paved, not 75m as stated in the condition.

**Condition 12 – Contributions**
Payment of the special contribution of €29,250 should be permitted on a phased basis. DCWL suggests €1,000 per month over a 29-month period.

**Condition 21 – Geological Survey**
DCWL can submit the available site investigation reports. However, this is not a rock quarry so there are no bedrock cuttings.

**Condition 29 – Marking Posts**
It is unclear where the Council want the marking posts – is it at the culvert inlets along the public road or at the discharge points of drains / streams to the Clashavoon Stream and Laney River? The culverts are under the public road and in the charge of the Council. DCWL sees no gain or environmental protection in erecting marking posts along the banks of the river.

**Condition 34 – Archaeology**
Considering the conclusion of the County Archaeologist that '*no further archaeological input required*', it is suggested that this condition be changed to '*The Developer shall facilitate the preservation, recording and protection of the archaeological material or features that may exist within the site. In this regard, the developer shall (a) employ a suitably-qualified archaeologist who shall monitor all topsoil stripping and (b) provide arrangement for the recording and removal of any archaeological material uncovered*'.

If you have any queries, please contact the undersigned.

Yours sincerely,

Dan Keohane

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Encl.



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**ATTACHMENTS**

6 No. copies of Drawing No. 008 - 1:1,250 scale Monitoring Point Location Plan
6 No. copies of Drawing 009 – 1:1,250 Habitat Map
6 No. copies of Ummera Gravel Pit EMS



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