An Bord Pleanála

Inspector's Report PL17.249132

Development	Continued use of quarry. Permission for lateral extension, deepening of extension area and new waste water treatment system.
Location	Rathcore and Connellstown Townlands, Enfield, Co. Meath.
Planning Authority	Meath County Council.
Planning Authority Reg. Ref.	TA/161227.
Applicant(s)	Kilsaran Concrete.
Type of Application	Permission.
Planning Authority Decision	To grant with conditions.
Type of Appeal	First and third party.
Appellant(s)	Kilsaran Concrete. Colm Flynn. Niamh Souhan.
Observer(s)	L. Leech; E. Devine; J. & J. Keogh; S. Gorry; Foster Environmental; C. & P. Murphy; O. & D. O'Donoghue; A. & M. Gorry; D. O'Connell; K. Mahon; S.

	O'Tuathail & S. Boylan; C. Flynn; and N. Souhan.
Date of Site Inspection	14th February 2018.
Inspector	Deirdre MacGabhann

Contents

1.0 Site Location and Description

1.1. The appeal site is located c.3km to the north west of Enfield town and 1km to the south west of Rathcore, in townlands of Rathcore and Connellstown, Co. Meath. It is situated to the east of a county road, which joins the R148 c.2km to the south of the site and the R159 c.3.5km to the south east of the site. Access to the site is directly from this county road.

1.2. The appeal site comprises an active working limestone quarry, with stone extracted by periodic blasting and primary size reduction by mobile crushing and screening plant (within the quarry void). The quarry is worked in a southerly direction and the lowest bench has a ground level of c.75m AOD (this compares to the ground level near the weighbridge of c.86m AOD). Associated offices, weighbridge and car parking, lie to the west of the working area and crushing, screening/processing plant and stockpiled materials are to the north of the quarry void. Overburden storage areas and planted screening berms are generally around the perimeter of the site.

1.3. The quarry is worked dry, with a quarry sump on the western side of the quarry floor collecting surface water and inflows of groundwater. Excess water is pumped to a settlement pond and constructed reedbed lying to the west of the site. Water is subsequently discharged off-site via a buried pipe to a water course on the western side of the public road, c.150m to the west of the quarry.

1.4. The site is reasonably well screened from the public roads near the site by topography, screening mounds and mature vegetation. Residential properties lie on the public roads, principally to the west and south west of the site, with the nearest property opposite the entrance to the site (see Figure 1-3, EIS and photographs). St. Gorman's Well, an artesian thermal spring, lies c.1.7km to the west of the site (see Figure 6-1, EIS).

2.0 Proposed Development

2.1. The proposed development comprises the continued use of the existing quarry and the extension of it, both laterally and in depth, as follows:

- Permission for the continued use of the previously permitted developments under PA refs. 01/1018 (PL17.127391), 95/1416 (PL17.099325) and 91/970

(PL17.089787) including the existing quarry, stone extraction and processing and related ancillary buildings and facilities.

- Permission for the lateral extension of the existing quarry (c.9.7ha) by c.1.1ha, as permitted under reference no. 01/1018 (PL17.127391), to give an overall extraction footprint of c.10.8ha.
- Permission for the deepening of the overall extraction area (10.8ha) by 2 no. 15m benches to a final depth of c.45m AOD from the current quarry floor level of c.75m AOD (extraction to 75m AOD permitted under 01/1018 (PL17.127391).
- Replacement of the existing septic tank (currently sited to the north east of the settlement pond) with a new wastewater treatment system and constructed percolation area (to be sited the east of the quarry car park).
- Restoration of the site to an ecological afteruse.
- All associated site works within an overall application area of 30.3ha.

2.2. The applicant anticipates that the proposed quarry will extract an average of c.350,000 tonnes of limestone per annum (in line with the existing permitted development, PA ref. 01/1018; PL17.127391) over a period of c.21 years, and with a further 2 years for completion of restoration proposals. The applicant is therefore seeking permission for a period of 23 years.

2.3. Limestone rock will continue to be extracted by blasting. It is proposed that this will be carried out everyone to two months (Section 2.74, EIS) and all rock extracted from the application area will be processed on site (i.e. crushed and screened) to produce a range of aggregates, as per existing arrangements. No washing of aggregate will take place. Plans indicating the phased extraction of material from the site are shown in Figures 2-2 to 2-5 of the EIS and the proposed restoration plan is shown in Figure 2-6.

2.4. Accompanying the application for the development are an environmental impact assessment, an appropriate assessment screening report and a site characterisation assessment.

2.5. Following the submission of further information, the application was re-advertised in June 2017. The further information submitted includes details on the effect of the

development on groundwater and wells in the vicinity of the site, increases to surface water discharge, impact on St. Gorman's Well, proposals for restoration and impacts on properties due to blasting.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. On the 4th August 2017 the planning authority decided to grant permission for the development subject to 35 conditions, including the following:

- No. 2 – Limits permission to a period of 23 years and extraction to no deeper than 45m AOD.
- No. 3 – Requires compliance with the conditions set out under PA ref. 01/1018 (PL17.127391), except where conditions of the permission specify otherwise.
- No. 4 – Requires compliance with all mitigation measures set out in the EIS.
- No. 5 – Limits no. of HGV movements to 30 loads/day over 5.5-day week and precludes use of minor county road L6204 south of its junction with the L6209.
- No. 6 – Limits operating hours to 8am to 6pm Monday to Friday and 8am to 2pm on Saturdays.
- No. 7 & 8 – Require the monitoring of four on site wells and 4 domestic wells, off-site.
- No. 9 – Requires remedial works if a negative impact on any private well arises.
- No. 10 – Requires monitoring of levels and temperature in St. Gorman's well.
- No. 11 – Requires preparation and implementation of an Environmental Management System.
- No. 13 - 15 – Control noise.
- No. 16 - 18 – Control dust emissions.

- No. 19 & 20 – Control blasting.
- No. 22 & 23 – Set out standards for the construction and operation of the site wastewater treatment system.
- No. 24 – Governs discharge of surface water.
- No. 25 – Requires monitoring of groundwater, surface water, noise and dust and provision of an annual environmental audit (to include annual topographic survey; monthly groundwater levels; and a record of all complaints and the response to these).
- No. 26 – Governs restoration and planting along site boundaries.
- No. 27 – Controls boundary treatment (including fencing).
- No. 28 – Requires annual aerial photography of the site.
- No. 29 – Requires provision of contact details to residents, for incidents/complaints.
- Nos. 30 - 32 – Require payment of a development contribution in respect of social infrastructure; public roads and public transport infrastructure; and, surface water drainage.
- No. 33 – Requires payment of a special development contribution in respect of road improvement works over the life of the quarry.
- No. 34 – Requires payment of an annual contribution towards the cost of maintaining public roads in the area.
- No. 35 – Requires payment of a bond to secure the restoration of the site.

3.2. **Planning Authority Reports**

Planning Reports

3.2.1. There are two Planning Reports in respect of the proposed development. The first report, 11th January 2017, describes the appeal site, the proposed development, its planning history, development plan context and the submissions made on the proposed development. It considers the merits of the development under the

headings appropriate assessment, planning policy, environment, access and environmental impact assessment. It considers:

- In the context of relevant development plan policies, the principle of exploiting natural resources within the county is acceptable, subject to safeguards,
- The development would not give rise, by itself or in combination with other development, to impacts on any Natura 2000 site, and
- The increase in depth of the quarry, and requirement therefore for greater de-watering, raises concerns in relation to possible impacts on groundwater levels in the area.

3.2.2. It (a) recommends further information in respect of the possible impact of the development on groundwater levels in the area (including on residential properties, associated wells, watercourses and St. Gorman's Spring), and (b) requests that the applicant address the matters raised in third party submissions.

3.2.3. The second report (4th August 2017) refers to the further information submitted and the applicant's response to the issues raised in submissions. It considers that, having regard to the suitability of the site from a technical perspective, together with the nature and scale of development, the development would not seriously injure the amenities of the area or create traffic hazard/inconvenience. It therefore recommends granting permission for the development subject to 35 conditions.

<u>Other Technical Reports</u>

- Environment Section (9th January 2017 and 3rd August 2017) – The first report recommends further information regarding the potential impact of the additional dewatering on local groundwater sources and resources. The second report states that the Environment Section has no objections to the proposed development subject to conditions in respect of waste disposal; noise; discharge of surface water and site restoration.
- Engineering (5th January 2017) – Agrees with the proposed restoration plan (backfilling with groundwater). Recommends annual monitoring of the security of the restored site and further information on the effect of drawdown on water table.

- Road Design (11th January 2017) – Refers to the location of the quarry on county road L62261 and the main haul route south, to the L6226, both east and west. It states that the quarry has been in existence for many years and that roads are in a fair condition at present, but would be expected to deteriorate over time due to predicted HGV movements. It refers to the development charge levied in the previous permission and, updating this, recommends a roads contribution of €80,000 and an annual charge of €2,500 to maintain the condition of the road network.

3.3. Prescribed Bodies

3.3.1. The application for the proposed development, and the significant further information submitted, was circulated to Inland Fisheries Ireland; An Taisce; Development Applications Unit (DAHG) and the EPA. No observations were made by these bodies on the application.

3.4. Third Party Observations

3.4.1. Observations were made on the initial planning application[1] and, subsequently, on the further information submitted by the applicant[2]. The following issues were raised:

- **Development Plan.** Development should comply with policies and objectives of the County Development Plan (including CS OBJ 7, sustainable communities, and Section 11.14, Extraction Industry).
- **Duration of permission.** Unreasonable duration of permission sought for local community.
- **Depth and lateral extension.** Depth of permission sought is excessive. Extension sought amounts to quarry creep. Permission for such a substantial quarry unlikely to have been granted in 1991.

[1] By N. Souhan; Meath Environmental Protection Alliance; Enfield Environment Group.
[2] By E. Devine; C. Flynn; S. Gorry; Eco Advocacy (for Meath Environmental Protection Alliance); Enfield Environment Group; and Nick Wilkinson

- **Restoration.** Restoration to a beneficial ecological after use is inappropriate. The site should be restored to full agricultural use. Restoration to a large lake will pose a risk to public safety (drowning).
- **Structural damage.** Structural damage to properties from blasting (structural assessment attached to submission by N. Souhan).
- **Security and financial contributions.** Cash deposits/bonds previously levied are inadequate to reinstate the quarry.
- **Compliance with conditions of previous permissions.** The planning authority should establish that all previous conditions, monitoring requirements and financial obligations have been satisfied, including what reinstatement should have taken place and what has taken place to date. The quarry should be restored immediately as per conditions of earlier permissions.
- **Proliferation of quarries in South Meath.** Further planning consents should be considered overdevelopment in some of the best agricultural land in the country.
- **Scoping of EIA.** The local community had no opportunity to input to the scoping of the EIA, including the impact of the development on private boreholes.
- **Surface water.**
    - EIA refers to outdated rainfall figures. Higher rainfall data for more recent years should be considered.
    - On high rainfall days, there is continual flow of water from the quarry onto the main access route, draining into a ditch of a local farmer.
    - Capacity of the unnamed tributary where water from the quarry is discharged and risk of flooding.
    - Discharge volumes from the site already far exceeding maximum daily discharge volumes.
    - No proposal to increase the size of the settlement lagoon, hydrocarbon filter and reed bed system to manage the increase in surface water. As

the discharge drain ultimately discharges into the Blackwater, which is a tributary to the Boyne (a salmonid river) quality of surface water should not deteriorate.

- EIS deals inadequately with previous exceedances in water quality standards.
- Siltation traps within the quarry have previously burst. Impact of backfilling in quarry on water in yard of observer's property (C. Flynn).

- **Groundwater.**
  - Parish has no mains water supply or group water scheme. All houses rely on their own wells.
  - Development will substantially breach the water table and raises issues for contamination of groundwater aquifer; impact on boreholes/wells, particularly to the south west of the quarry; St. Gorman's Spring (pNHA and County Geological site) and area of geothermal activity surrounding the Spring, which has potential to provide a local source of renewable energy in the future.
  - Any plans for remediation of wells affected by the development should be provided in advance of dewatering taking place.
  - Response to request for further information (impact on St. Gorman's Well), is unsatisfactory, overly simplistic interpretation of conceptual model and inadequate consideration of hydrogeological complexity of the area. There is an absence of data on St. Gorman's well and its potential interaction with the proposed development e.g. effect of development on shallow and deep-water circulation patterns. There is a risk of unmapped faults in the subsurface which may provide a direct pathway between the proposed development and St. Gorman's Well. Geotechnical work carried out in respect of Ballinakill quarry[3], but not for the proposed development.
- **Dust**. Impact of dust on properties and along the road near the site and on health of residents.

[3] To the west of the Well, proposed under PA ref. 01/1234, but subsequently withdrawn.

- **Blasting and subsidence**. Recent increase in blasting. Impact of blasting on residential amenity. Ground movements because of quarrying. Monitoring should be carried out independently (e.g. garden has sunk, large depression to rear of observer's property, C. Flynn),
- **Karstic bedrock.** EIS states that latest episode of karstic activity is still active and refers to presence of karst voids on site. An operation in such an environment is extremely challenging.
- **Appropriate Assessment.** An appropriate assessment has not been provided.
- **Trees on site**. Poor condition of existing trees on site (at entrance).
- **Traffic**. Unacceptable levels on local roads.
- **Impact on residential amenity**. Long term impact of quarry on existing residential development (substantial number of houses in the area) and recently permitted development (TA/140157 and TA/140590 – to the south of the site).
- **Self-policing.** Ineffective (lack of compliance).

4.0 Planning History

4.1. The following history cases are most relevant to the proposed development (see also Figure 1-5, EIS):

- PA ref. 91/970 (PL17.089787) – Planning permission was granted by the Board in **1993** for the continuance of quarrying at the appeal site subject to 20 conditions. Condition no. 19 required the progressive and final reclamation of the quarry, as per the details submitted to the planning authority, with the work completed within 2 years of the quarry ceasing operations.
- PA ref. 95/1416 (PL17.099325[4]) – Planning permission was granted by the Board in **1996** for the extension of Rathcore quarry on 9.0ha of lands within Connellstown and Rathcore townlands and for a ground lime plant on 0.3ha of land within the existing quarry permission area (Rathcore townland).

[4] Copy of permission in history file PL17.127391.

Condition no. 1 requires conditions of the previous permission (above) to be complied with. Condition no. 4 required the progressive and final restoration of the quarry in accordance with the plans submitted.

- PA ref. 01/1018 (PL17.127391) – Permission was granted by the Board in **2002** for the extension of the existing quarry (PA ref. 91/970 and PA ref. 95/1416, above), by depth, on c.9.7ha; redesign of layout in northern section of permitted quarry area (c.3.8ha); retention of c.3.5ha for overburden storage; provision of additional overburden storage on c.8.4ha; and discharge pipe from quarry to surface drainage channel to west of quarry on c.0.2ha. The permission was subject to 27 conditions. Condition no. 3 required the developer to submit a revised phasing programme for quarrying operations, including a date for the cessation of quarrying activity, to preclude extraction below 75m AOD (extraction of bench nos. 2, to 60m, and 3, to 90m, was specifically not permitted). The reason for the condition included the protection of local water supplies and to reduce the risk of groundwater pollution. Condition no. 4 required provision of a revised restoration plan in accordance with the revised lifespan of the quarry.
- In **2005**, the applicant registered the quarry in accordance with section 261 of the Planning and Development Act 2000 (as amended). The planning authority subsequently decided to modify the conditions of the original permission, in accordance with the provisions of the Act. One of these conditions, dealing with hours of operation, was appealed to the Board (under QC.17.QC2167). The Board decided to modify the planning authority's proposed condition allowing operation of the quarry to between 7am and 6pm Monday to Friday; 7am to 2pm on Saturdays; no activities on Sundays or Bank Holidays; and no drilling or rock breaking before 8am each day. In August **2012** the planning authority determined that the site (S261A/QY53) did not come within the provisions of section 261A of the Act.
- PA ref. TA/120923 – Permission was granted in **2012** for a discharge water treatment facility, at the appeal site, comprising two lagoons, an oil interceptor, a reed bed and a concrete canal with a 'V' notch weir with subsequent discharge of treated waters via a buried pipe to an adjacent water course (un-named tributary of the River Blackwater). **Condition no.** 8

required the applicant to comply with the requirements of section 4 of the Water Pollution Act, 1977 for any discharge to surface water).

5.0 Policy Context

5.1. National Planning Policy

5.1.1. The Government's Guidelines for Planning Authorities on Quarries and Ancillary Activities, 2004, acknowledge the important contribution the extractive industries make to economic development in the country. However, they also accept that quarries can give rise to land use and environmental issues which require to be mitigated and controlled through the planning system. The guidelines identify these issues and set out best practice in dealing with them.

5.2. Development Plan

5.2.1. The appeal site falls within the policies of the Meath County Development Plan, 2013 to 2019. Having regard to the nature of the proposed development and the matters raised in the appeals and observations, the following policies are relevant to the proposed development:

- **Section 2.4 Sustainable Economy.** To promote rural economic development through the long term sustainable social and environmental development of rural areas and encouraging economic diversification and growth of rural enterprise (CS OJB 7).
- **Section 7.15 Flood Risk Management**. To ensure that a flood risk assessment is carried out for any development where flood risk may be an issue (WS POL 32).
- **Section 7.10 Water Supply.** To protect existing groundwater sources and aquifers (WS POL 2).
- **Section 7.14 Water Quality**. To promote compliance with standards and objectives for water quality established by the European Communities (Surface Water) Regulations, 2009 and the European Communities (Groundwater) Regulations, 2010 (WS SOBJ 9); to protect drinking water,

surface water and ground waters in the county (WS POL 19, WS POL 20); and to ensure that septic tanks and proprietary effluent treatment systems comply with the recommendations of the EPA (WS POL 27).

- **Section 7.18.1 and 7.18.2 Air and Noise**. To preserve and maintain air and noise quality in the county in accordance with good practice and relevant legislation (PC POL 1).
- **Section 9.7 Natural Heritage.** To protect, conserve and enhance the County's biodiversity (NH POL 1); to protect the integrity of Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas in decisions on development (NH POL 5); to ensure that development does not have a significant adverse effect on species protected by law (NH POL 8); and to have regard to the geological heritage of County Geological Sites listed in the Plan (Appendix 13) and to avoid inappropriate development through consultation with the Geological Survey of Ireland (NH POL 12).

  Three European sites lie within 15km of the appeal site (see attachments) and St. Gorman's Spring is listed in Appendix 13 as a County Geological Site.
- **Section 9.8 Landscape.** The appeal site lies within a 'Lowland Area' (Landscape Character Type 2) and within the eastern boundary of Landscape Character Area 6 'Central Lowlands', immediately west of Landscape Character Area 13 'Rathmoylan Lowlands' (see attachments). Both LCAs are described as 'High Landscape Value', areas which are of value by virtue of their positive characteristics, sense of place or local associations. LCA 6, is also described as of 'medium' landscape sensitivity i.e. a landscape that can accommodate a certain amount of change without affecting its overall character and LCA 13, is described as having 'high' landscape sensitivity i.e. a vulnerable landscape, likely to be susceptible to change. Polices of the plan seek to protect landscape character (LC SP 1; LC OBJ 1); and to assess proposals having regard to the recommendations of the Meath Landscape Character Assessment 2007 (LC OBJ 2).
- **Section 9.10 Views and Prospects.** To the north west of the appeal site, the view to the west and north west from the county road is a protected view (no.

57). Polices of the development plan seek to preserve views and prospects listed in Appendix 12 of the Plan (LC OBJ 5).

- **Section 10.1 Rural Development.** To support the continued vitality and viability of rural areas, environmentally, socially and commercially by promoting sustainable social and economic development (RUR DEV SO 1).
- **Section 10.12 Extractive Industry and Buildings Material Production.** To facilitate adequate supplies of aggregate resources to meet the future growth needs of the county and the wider region, while addressing key environmental, traffic and social impacts and details of rehabilitation (Goal; RD POL 21; RD POL 22; RD POL 23; RD POL 24; RD POL 25; and RD POL 26). To ensure that developments do not significantly impinge on Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas (and proposed NHAs), other areas of importance for the conservation of flora and fauna, archaeological heritage and sensitive landscapes (RD POL 27).

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. There are 4 appeals made in respect of the planning authority's decision to grant permission; 3 third party appeals (C. Flynn[5]; N. Souhan[6]; and N. Wilkinson[7]); and one appeal by the applicant. Matters raised are similar to those set out in submissions on the application. Additional points are summarised below.

Third Parties

- **Dust** - Impact of lime dust on family home (C. Flynn). Inadequate means to supress dust and no closure of quarry in the event that dust control equipment fails. Impact on quality of life and health risks posed by this (refer to incident at Poolbeg Incinerator where eleven staff were hospitalised following the release of lime dust).

[5] Receptor R13, Figure 9-1, EIS.
[6] Receptor R17, Figure 9-1, EIS.
[7] Owner of Hotwell House and St. Gorman's Spring.

- **Blasting and subsidence -** Impact of blasting on amenity of community and structure of properties (C. Flynn; N. Souhan).
- **Groundwater**
    - Impact on domestic well and family engineering business (N. Souhan). Well serving property dried up with de-watering of quarry, requiring a new deeper well at cost to themselves (C. Flynn). Need for independent assessment.
    - Impact on St. Gorman's Spring. Inadequate conditions imposed by the planning authority, should the quarry have a detrimental impact.
- **Surface water**
    - Impact of discharge water on water quality and downstream habitats.
    - Unacceptable water discharge regime at quarry. Discharge regularly exceeds volume set out in discharge licence. How will an even greater volume of water be managed.
- **Reinstatement.** There are many quarries in the area and to permit an ecological afteruse would set an unacceptable precedent.
- **Compliance**. No evidence of compliance with previous planning conditions.
- **Truck movements and condition no**. **5.** Truck movements commence in advance of 8am (in conflict with conditions of planning permission). Question ability of planning authority to enforce condition (restricting HGV movements), based on failure to previously enforce conditions.
- **Condition no. 6.** Operation of the quarry on a Saturday is unacceptable.

<u>First Party</u>

- **Condition no. 5.** The proposed condition is identical to condition no. 5 attached to a grant of planning permission for a Kilsaran sand and gravel pit at Ballynamona, Summerhill, Co. Meath, PA ref. TA/161396;PL17.248174. The junction referred to in condition no. 5 of both cases is located c.130m to the north east of the Ballynamona site entrance and does not refer to any road near the Rathcore quarry. The production levels being sought at Ballynamona equate to c.32 loads per day. In contrast, an output of 70 loads

per day is being sought at Rathcore. An imposed cap of 30 loads per day would make the quarry unviable.

- **Condition no. 6.** Loading trucks has been expressly permitted in each of the previous consents in respect of the appeal site since the first grant of permission in 1993 (PA refs. 91/970; 95/1416; and 01/1018). During the Section 261 registration process the planning authority removed the provision for loading between 7am and 8am. The applicant successfully appealed the condition to the Board who, having regard to the planning history of the site and in the interest of orderly development and consistency, provided for working hours of 0700 to 1800 hours Monday to Friday and 0700 to 1400 on Saturdays. There is no clear rational to now restrict an established working practice where loading has taken place from 7am over the past 24 years, and operations of the quarry (except drilling and rock breaking) from 7am over the past 9 years. Request the Board to amend the condition and restate it as stablished by the Board on foot of the Section 261 appeal.

6.2. **Applicant Response**

6.2.1. The applicant makes three separate responses to the appeals made.

6.2.2. **Appeal by Nick Wilkinson.** The applicant addresses the geological and hydrogeological context for the development and the likely impact of the development on St. Gorman's well. The response considers that no impacts will arise having regard to this and proposes additional monitoring of the levels and temperature of well water (bi-monthly) and ceasing quarrying operations, in the unlikely event that impacts do arise.

6.2.3. **Appeal by Colm Flynn.** Addresses the matters of dust, blasting, impact on well water, reinstatement, duration of permission, water discharge, subsidence, trees and restoration, compliance with conditions and planning condition no. 5 and 6.

6.2.4. **Appeal by N. Souhan**. Addresses the matters of blasting, water, truck movements, enforcement and compliance, restoration and duration of permission.

6.3. Planning Authority Response

6.3.1. The planning authority respond as follows:

- Condition no. 5 – Was added in error. The current planning application is located on county road L62261 with the main haul route the L6226 to the east and west. A new condition should be attached limiting the number of loads per day to 70 as per the application documentation.
- Condition no. 6 – Should remain, in order to protect residential amenities.
- Matters raised by third parties – The application was valid in the context of the Planning and Development Act, 2000 (as amended). The development was considered to be consistent with the policies and objectives of the County Development Plan. Refer the Board to the Planning Report (1st August 2017) in respect of the development.

6.4. Observations

6.4.1. There are 13 observations on file on the appeals made[8]. The submissions repeat matters already raised in observations on the planning application and appeals. The following additional matters are raised in respect of the proposed development:

- **Impact on residential amenity and property value.** Impacts on amenity over the lifetime of the quarry (blasts, dust, noise pollution, breaches of operating hours, increased HGV traffic). Condition no. 2 of the permission does not provide for any period of review. Property devaluation as a consequence of the impacts of the quarry.
- **Restoration.** Little information is provided on the proposed restoration of the site and no information on the extent of the bond required to ensure restoration of the site. Fencing around the site is inadequate. Post and wire fencing should be replaced with palisade fencing around the boundary.
- **Water.** Monitoring data for wells near the site is inadequate. What data is available shows substantial drops in water depth between Q1 2016 and Q1

[8] By L. Leech; E. Devine; J. and J. Keogh; S. Gorry; Foster Environmental; C. and P. Murphy; O. and D. O'Donoghue; A. and M. Gorry; D. O'Connell; K. Mahon; S. O'Tuathail and S. Boylan; C. Flynn; N. Souhan.

2017. Development will have an impact on the surrounding townlands and villages, including Longwood village. Condition no. 8 requires the monitoring of four wells, where as a previous permission (2006) required the monitoring of 21 wells. Risk of impact on Rathcore-Connellstown-Longwood water table/water supply and limited liability of applicant (if damaged). Lack of independent hydrogeological analysis of impact of development on water and wells. On-going risk of groundwater contamination with proposal to restore site to water filled void.

- **Operating hours.** Lorries continue to drive in and out of the quarry at any time from 5.30am (video provided). On-site activity starts at shortly after 6am. (C. Flynn property is 180m north of all major activities and is not mentioned in EIS).
- **Monitoring.** Risk of inadequate monitoring of conditions (including mitigation measures) in the future.
- **Noise.** Impact on amenity arising from constant hum of machinery; HGVs from 5.30am; and noise from blasting (video provided). Noise levels from the facility are in the region of 87 decibels on a daily basis as recorded from observer's home (C. Flynn, 180m north of major activities in the quarry).
- **Blasting.** No notification of intended blasts (J. and J. Keogh, Connellstown; S. Boylan and S. O'Tuathail).
- **HGV Traffic/haul routes.**
    - Volume of traffic proposed is inappropriate for rural area. Widths of roads insufficient to cater for the development (video provided). HGVs should be subject to very low speed limits and fully stop on meeting walkers, horse riders and cyclists on minor roads from the quarry. Impact on residential amenity of 30-ton quarry trucks passing within 30 feet of house for the last 20 years. Oppressive vibration and noise. Log of lorries should be kept. Risk of traffic incident arising from speed, size and bulk of trucks.
    - In the original planning permission HGV trucks were prohibited from using the L62262 linking the L6226 to the R159. This restriction is no

longer mentioned in new permission. The L62262 is very narrow, with residential development, and is inappropriate for truck traffic. Similar issues apply to the L6226 i.e. it is too narrow for two HGVs. Road markings and signage are not maintained and vehicles are a danger to other road users.

- **Condition no. 5.**
    - Refers to roads which are nowhere near the quarry.
    - If amended by the Board, as proposed by the applicant, the number of HGV trips from the quarry would double i.e. an average output of 70 loads per day, not 70 trips per day as stated in the EIS. Such an increase is unacceptable on the minor roads.
- **Dust.** Dust and dirt on roads and in vicinity of houses (video provided) and noise from road cleaning vehicles on the 2nd and 6th September 2016. Area for 100 yards around the quarry (until very recently) was always covered in lime dust. Dust should be tested for asbestos and other harmful substances. There has been a major issue with leaf drop from established evergreen hedgerows in the area.
- **Documents relating to planning application.** Unacceptable inaccuracies in applicant's submission and planning authority replies e.g. primary schools and post primary schools in Enfield; not all wells monitored as indicated; condition no. 5.
- **Nature conservation.** Impact of the development on ecology of St. Gorman's Well, which include 'tufa deposits' (a '*petrifying spring with tufa formation'* is recognised for international protection under the Habitats Directive, Annex I, Priority Habitat). Omission of reference to St. Gorman's Well, a proposed NHA, from Appropriate Assessment and Environmental Impact Assessment.
- **Consultation.** GSI were not consulted on the application for the proposed development.
- **Health and safety.** The EIS did not consider health and safety issues connected to the nearby fault line that had an earth tremor in the 1980s.

- **Litter.** Litter on public road thrown out of lorries.
- **Landscape.** The proposed development would spoil the area and change its landscape for the worst.

6.5. **Further Responses**

6.5.1. In October 2017 the Board sought observations on the proposed development from the Department of Communications, Energy and Natural Resources; Geological Survey of Ireland; and the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. No replies were received from any of the three bodies.

6.5.2. On the 6th February 2018 the Board sought observations again from GSI, having regard to the particular matters raised in the appeal. The response from GSI, dated 1st February 2018, refers to their audit of sites of geological importance in County Meath (2007), which stated that '*The spring* [St. Gorman's Well] *is a very important example of the warm spring province of the Kildare-Meath border area in northwest Leinster. As it is one of the highest temperature warm springs, well studied and least disturbed in the Leinster province, and probably the whole of Ireland, it is to be proposed as an NHA. It should also be listed as a County Geological Site in Meath'.*

6.5.3. Furthermore, the submission states:

- Due to various factors, there has been no designation by NPWS of geological NHAs to date. However, it is a County Geological Site.
- GSI has no record of any consultation request on the initial application.
- The Spring has been closely studied by Dr. Sarah Blake and is highly dependent on sensitive thermal circulation patterns beneath the well (created by one or more of three heat sources identified by Dr. Blake).
- The GSI strongly recommends that the valid observations and expert opinion of Dr. Blake, concerning the lack of cognisance taken of the extremely sensitive nature of the hydrogeological system in operation at the Well, be seriously considered.
- The potentially adverse impact on this delicate system by the proposed development could be irreversible and any abnormal behaviour recorded by the bi-annual monitoring of the levels and temperature of the well (condition

no. 10 of the permission) is unlikely to be mitigated by the required remedial measures.

7.0 Assessment

7.1. This assessment is carried out in three parts, planning assessment, environmental impact assessment and appropriate assessment.

7.2. Planning Assessment

7.2.1. I have read the appeal file and inspected the site and surrounding area and consider that the key issues arising in respect of the appeal comprise the following.

- Principle.
- Dust, noise and vibration.
- Traffic/condition no. 5.
- Hours of operation/condition no. 6.
- Trees on site.
- Restoration and public safety.
- Impact on surface water, groundwater and St. Gorman's spring.
- Impact on ecology of St. Gorman's Spring and need for Appropriate Assessment.
- Cumulative impact of quarrying in the area.
- Monitoring.
- Impact on residential amenity and property values.

7.2.2. Third parties also raise the following issues, which I comment on briefly:

- Application documentation – The application was validated, as required by statute, by the planning authority. Whilst I would accept that there are some errors in the application documentation, I do not consider that these are significant or materially alter the nature of the development before the Board. I specifically address issues raised in respect of condition no. 5 below.

- Compliance with conditions of previous permissions – This is a generally a matter for the planning authority, under their enforcement powers, and largely falls outside of the scope of this appeal. However, I do refer to matters of past performance, where relevant, in this assessment.
- Matters arising with the implantation of previous permissions (e.g. siltation traps, C. Flynn appeal) - Again, these are matters associated with the operation of the existing quarry, and lie outside the scope of this appeal.
- Adequacy of previous security for the reinstatement of the quarry – Earlier permissions granted for quarrying at the appeal site have required a specific deposit to secure the reinstatement of the site, or for the form and amount of security to be agreed with the planning authority. Again, the matter is therefore one which falls outside the scope of this appeal and it is in the interest of the planning authority to secure an adequate amount to provide for the restoration of the site.
- Scoping of EIA – This matter is dealt with below (Environmental Impact Assessment).
- Litter on the public road – This is not a matter which is directly related to the nature of the development before the Board, or, therefore, which falls within the scope of this appeal.
- Consultation with GSI – Parties to the appeal state that there was no consultation with GSI. However, as stated above, the Board sought and received observations on the appeal from GSI.
- Health and safety – Third parties refer to health and safety issues connected to the nearby fault line that had an earth tremor in the 1980s and to the risk of quarrying in a karstic environment. From the information on file, it is evident that a very small seismic event took place near Enfield in 1983. I do not consider this level of activity to represent a significant risk to quarrying at Rathcore. Health and safety issues arising as a result of quarrying in a karstic environment are dealt with under health and safety legislation and are outside the scope of this appeal. Issues arising from the complexity of quarrying in a karstic environment and potential impacts on groundwater and wells in the area are discussed below.

7.3. **Principle**

7.3.1. Reflecting national planning guidelines, policies of the Meath County Development Plan 2013 to 2019 acknowledge the economic importance of aggregates to the local and regional economy and the potential for adverse environmental and social effects. Consequently, policies of the Plan seek to facilitate adequate supplies of resources while addressing environmental, traffic and social impacts.

7.3.2. The appeal site is situated in a rural area, in a landscape of medium sensitivity (LCA 6) and is well screened by a combination of topography, screening berms and mature vegetation. The existing quarry is longstanding. The first planning application for quarrying was granted in May 1993 (PL17.089787) with conditions to control blasting, noise, vibration, dust, discharge of water and restoration. Subsequent permissions granted have extended these controls. The proposed development provides for the on-going operation of the existing quarry, its lateral extension and its deepening.

7.3.3. I note the concerns raised by third parties regarding the substantial extension of quarrying beyond the original timescale set out in earlier permissions, primarily due to the environmental and social effects of it in the local area. Whilst I acknowledge these concerns, I would also acknowledge that the quarry makes an important contribution to the supply of aggregates in the region and the applicant is entitled to bring forward the application for the continued operation/expansion of the quarry. Further, as minerals can only be worked where they occur and as the physical infrastructure for the quarry is already in place, the proposed development does provide, in principle, an efficient use of the existing resource and the wider resources of the countryside.

7.3.4. Within this context, I consider that the proposed development is, in principle in accordance with the policies of the County Development Plan, which facilitate the development of the industry and the sustainable development of rural areas. However, its overall merits are ultimately dependent on its likely social and environmental effects, which are discussed in detail below.

7.4. **Dust, Noise and Vibration**

<u>Dust</u>

7.4.1. Section 8 of the EIS deals with air quality. Nearby sensitive receptors are identified in Table 8-4 and Figure 8-2. In Table 8.3 the results of dust monitoring carried out at monthly intervals between December 2013 and May 2015 is presented for two dust monitoring locations (at the north and south of the site, see Figure 8-2, EIS). The table indicates that dust has been generally in compliance with the standard emission limit value of 350mg per square metre per day (averaged over a continuous period of 30 days), but there have been a small number of exceedances at both sampling points.

7.4.2. The applicant's response to the appeal by Colm Flynn (R13) provides further information on monthly dust monitoring for the period to July 2017. Again, it shows a generally high level of compliance.

7.4.3. The dust impact assessment, for the construction, operation and de-commissioning phases of the development, considers the effects of very small particulate matter ($PM_{10,}$ associated with health impacts) and larger particles 'deposited dust' on sensitive and ecological receptors. Modelling of likely dust emissions is based on proposed operations, wind direction/speed, proximity to source, sensitivity or receptor and natural dust suppression (rainfall patterns - not proposed mitigation measures).

7.4.4. The report concludes that during stripping, berm construction and restoration, the effects of dust during dry and windy conditions could lead to occasional increases in nuisance dust and 24-hour mean PM_{10} concentration immediately surrounding the application area. However, it considers that such effects are not significant due to the limited duration of such meteorological conditions and the limited scale of construction activities.

7.4.5. Given the location and relatively small scale of the proposed overburden storage area, to the north east of the proposed quarry void, and the short-term nature of these works (stripping, berm construction and restoration) and the proposed mitigation measures for these phases of the development, set out in Section 8.116 of the EIS, these findings seem reasonable.

7.4.6. For the extraction and processing of rock, the potential for deposited dust emissions at nearby sensitive receptors is set out in Table 8-12 (without mitigation measures). Risk of impact is highest at receptors R6, R7 and R13 (moderate adverse), sited to

the west and north west of the site. Again, this assessment would seem reasonable, given the proximity of the development to these receptors and prevailing wind direction.

7.4.7. For PM_{10} a highly conservative value of 5µg/m^3 is assumed from site activities and even with maximum annual mean background concentration levels of 9µg/m^3, PM_{10} levels are predicted to remain well below the annual objective of 40µg/m^3 (Air Quality Standards Regulations, 2011), with negligible impact. This conclusion seems reasonable given the conservative approach adopted (see Section 8.87 and 8.88, EIS).

7.4.8. Section 8.32 of the EIS refers to the levels of dust deposition likely to affect sensitive ecological receptors i.e. over 1000mg/m^2/day. Predicted (and historic) dust emissions are well below this threshold and unlikely to have any significant impact on nearby ecological receptors.

7.4.9. Section 8.113 of the EIS deals with cumulative impacts and states that no other local developments are likely to impact on air quality and therefore, cumulative effects will not arise. Given the absence of nearby developments likely to generate dust this conclusion also seems reasonable.

7.4.10. Mitigation measures are set out in Section 8.116 of the EIS for the different phases of the development. Typical measures used in the industry are set out, including minimising drop heights, progressive restoration of bunds, water spray to moisten handled material/haul routes etc. With the implementation of the mitigation measures the EIS considers that dust impacts at sensitive receptors will reduce, with at worst, a slight adverse impact on those likely to be most adversely affected. In response to the Colm Flynn appeal the applicant sets out additional mitigation measures which either are being or will be carried out in the next 6 months (see page 3 of submission).

7.4.11. At the time of site inspection, it was a damp day and the road, outside the quarry entrance, had been recently cleaned and there was little dust blow in the quarry. Whilst there appeared, therefore, to be no substantial issues with dust at the time, I would accept the legitimacy of concerns raised by residents, of the incidences of dust at properties and along the county road, and perhaps some of these concerns are reflected in the exceedances of emission limit values set out by the applicant in

the EIS. Notwithstanding this, since 2013 the applicant has operated the quarry substantially in compliance with standard dust emission limit values for the industry, which are designed to protect the amenity of sensitive receptors. Further, the assessment methodology and conclusions of the EIS seem reasonable given the nature of the development, topography and screening berms and location of receptors, relative to the site and prevailing wind direction. I am minded to conclude, therefore, that the applicant has demonstrated that the proposed development can be operated within the existing emission limit values and is not likely to give rise to significant dust impacts, to the detriment of property, public health, local roads and ecological receptors.

7.4.12. Notwithstanding this, given the longevity of the quarry in the area, the occasional breaches of emission limits and on-going concerns of the community, I would also recommend a condition requiring the developer to (a) establish a community liaison committee to liaise between the operator of the quarry, the planning authority and local community in regard to the monitoring of the operation of the quarry (b) the maintenance of a complaints register by the developer for the development, detailing the nature of complaints, investigations and remediation undertaken.

Noise and Vibration

7.4.13. Third parties refer to the impact of noise arising from the quarry on residential amenity (constant hum of machinery), to the impact of heavy and frequent blasting on residential amenity (one to two times/week in boom) and, in some cases, to the absence of notification. Parties argue that blasting has caused damage to property, with the following specific examples cited:

- Colm Flynn, appellant (property no. R13, north west of site) - House and sheds have cracks and large depression has appeared to rear of house.
- Niamh Souhan, appellant (property R17, south west of site) – Attached to the appellant's submission to the planning authority on the planning application is a structural assessment of the appellant's property. It refers to, and provides photographs of cracks, which appeared in the property after renovation and subsequent to blasting in October and December 2016.
- Eilish Devine, submission on RFI (property R5, south west of site) - Refers to disturbing nature of blasting (video attached to submission) and states that

the garden at the property has sunk and that gates no longer close as one pier is now lower than the other.

- Siobhan Gorry, submission on RFI (property R2, south of site) – States that there is evidence of structural damage to property in area and argues that an independent structural report is carried out.

7.4.14. Third parties also argue that there is a need for independent monitoring of impacts.

7.4.15. Noise and vibration are dealt with in section 9 of the EIS. Section 9.37 of the report sets out the controls which are already in place in respect of noise, vibration and blasting. Monitoring locations, B1 and B2, to the north and south of the quarry respectively, are shown in Figure 9-1, EIS and results of noise and vibration monitoring are presented in Appendix 9-B and 9-C. (page 9-23, EIS).

7.4.16. **Noise** monitoring results, between January 2014 and May 2016, indicate noise levels almost wholly below 55dB(A)$L_{Aeq,}$ when measured over 30minutes and at L90 (noise exceeded for 90% of the time) suggesting compliance with the emission limit value of 55dB(A)$L_{Aeq,}$ T (where T = 15 minutes). Vibration and air overpressure results from blasts between February 2014 and March 2016 (monitored by Irish Industrial Explosives) also indicate a very high level of compliance with standard emission limits.

7.4.17. Section 9.59 assesses the likely significance of noise arising from stripping of overburden, extraction of rock, movement by mechanical excavator, crushing and screening (equipment assessed is listed in Section 9.69 and 9.72). The assessment adopts a generally conservative approach, with all of the noise sources operating for 100% of the time with the noise source located in the closest distance to sensitive receptors. It also makes a -15dB(A) reduction for noise screening by proposed berms and the quarry face.

7.4.18. Table 9-9 presents predicted operational noise levels at nearest sensitive receptors and indicates that noise will be within criterion limits for overburden stripping (higher limit for temporary activities) and extraction (lower limit). Similarly, predicted cumulative impacts are shown in Table 9-10 and are typically minor to negligible for overburden stripping and moderate to minor for extraction impacts. Impacts are further reduced (by 5dB(A) with the application of standard industry mitigation measures, set out in Section 9.92 and 9.93. In section 9.102 sets out residual

impacts (i.e. predicted noise after mitigation) and the report concludes that the development is unlikely to exceed permitted noise levels at nearby sensitive receptors or result in any perceptible increase in noise level at nearby noise sensitive receptors.

7.4.19. The proposed development seeks to extend laterally and by depth an existing working quarry. No significant change is proposed to working methods or to extraction rates (350,000 tonnes per annum). The extraction area will extend to the east, generally away from sensitive receptors, and will extend down into the existing void. Within this context, and having regard to the generally high level of compliance with noise emission limits, the conclusions of the noise impact assessment seem reasonable and significant noise impacts on sensitive receptors are unlikely to arise.

7.4.20. Section 9.80 of the EIS deals with **vibration and air overpressure** from blasting. It states that the number of blasts carried out depends on market demand, with blasting typically carried out every one to two months and comprising a noise of short duration, similar to a clap of thunder, and blast-induced vibration, of short duration. Table 9-11 sets out vibration levels associated with every day activities. With regard to physical damage to properties, the report refers to research carried out by the United States Bureau of Mines (USBM) which concluded that vibration in excess of 50 mm/sec ppv are required to cause structural damage. It acknowledges that cosmetic damage can be associated with lower levels. The report also refers to BS7385: Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels for Groundborne Vibration and to vibration levels likely to cause cosmetic damage to buildings (set out in Table 9-6 of the EIS and Table 1 of the BS).

7.4.21. Section 7.4.1 of BS7385 (see attachments) states '*The vibration levels suggested are judged to give a minimal risk…….of vibration-induced damage. Some data … suggests that the probability of damage tends towards zero at 12.5 mm/s peak component particle velocity. This is not inconsistent with an extensive review of the case history information available in the UK'.*

7.4.22. The EIS states that the environmental monitoring programme implemented at the quarry confirms that it has operated within the recommended blasting emission limit values for the industry and thresholds set out in conditions of permission (12mm/sec peak particle velocity, at air overpressure of 125 dBL) and that future blasting

operations will not have a significant impact on sensitive receptors, as groundborne vibration will remain within these levels and will subject to standard mitigation measures (see Section 9.99, EIS) e.g. to be carried out between 9am and 6pm Monday to Friday, blast notifications to community, blast operations by certified 'shotfirer' etc.

7.4.23. In response to the request for further information the applicant attaches a survey of the Souhan property to the south of the appeal site. It concludes that the cracking appearing in the property is not likely to have been caused by quarry activity but are possibly formed for other reasons e.g. shrinkage of building materials, weathering, ageing of house or settlement of building (see Section 2.9 of report).

7.4.24. In response to the appeal the applicant provides information on the number of blasts carried out between 2009 and 2017 (Appendix A of response to Souhan appeal). It indicates a small number of blasts in 2009 and 2010; 7 blasts in 2014; 3 in 2015; 8 in 2016; and 7 in 2017, with usually no more than one blast per month. Monitoring at nearby sensitive receptors (initially property nos. R7 and R2 and more recently to also include property nos. R13, R17 and R5) indicates that all blasts have been within the peak particle and air overpressure standards set out in conditions of the permission for the quarry.

7.4.25. Having regard to the above, I do not consider that the frequency of blasting has been excessive. Further, the applicant has complied with emission limit values for vibration which are notably below levels set out in technical guidance documents, likely to cause damage to property. It seems unlikely therefore that damage to properties has occurred from the vibrational effects of quarrying.

7.4.26. However, I would again acknowledge that monitoring in the past has not extended to all nearby properties and recognising this, and the on-going concerns of the community with regard to blasting, I would recommend a condition requiring the developer to (a) provide on-going monitoring information in respect of all nearby sensitive receptors (b) establish a community liaison committee, and (c) to maintain register for the development, detailing the nature of complaints, investigations and remediation undertaken.

7.5. **Traffic/Condition No. 5**

Traffic

7.5.1. Traffic and transportation matters are dealt with in Section 13 of the EIS. It states that access to the site is directly from the L6226, with the principle haul route being to the south to the R148 and N4. The L6226 is a single lane road between the appeal site and the R148. There are many one-off houses along its length and the road itself varies in width and includes informal passing places.

7.5.2. The survey of existing traffic movements (Figure 8, EIS) indicates 48 vehicles (30 HGVs) leaving the quarry over the course of the day and 44 arriving (31 HGVs). These compare to 233 vehicles passing the entrance to the quarry. Based on an annual output of 350,000t per annum, over five and a half working days/week (278 working days/year) and an average load of 18t per vehicle, the EIS estimates a HGV trip generation rate of 70 HGV trips per day (or 140 HGV movements). This equates to approximately two times the volume of HGV traffic recorded in the traffic survey (section 13.48, EIS). However, as stated in the EIS, the proposed development does not seek to increase the overall extraction rate from the current permitted level of 350,000t per annum[9]. The impact of the development on the road network is considered, therefore, to be neutral (i.e. no perceptible change in day to day traffic generation of the site). (No capacity issues are identified with junctions in the vicinity of the site and given the low levels of traffic observed on the road network, conclusion seems reasonable).

7.5.3. Whilst I would accept, therefore, that the proposed development will not result in additional traffic movements over existing approved levels, it will extend the life of the quarry and the use of local roads by a relatively high volume of HGVs and the environmental, social and safety aspects associated with this. In the interest of residential amenity and traffic safety, I would recommend therefore, if the Board are minded to grant permission, conditions controlling operating hours (including when vehicles can access the site), maximum vehicle movements per day, identification and controlled use of haul routes and additional controls regarding driver behaviour. This matter could be addressed by condition.

[9] The EIS accompanying the planning application for PA ref. 01/1018; PL17.127391 referred to an output of 350,000 tonnes per annum. Further, the EIS, at the time, recorded c.136 quarry related HGV movements per day on the Rathcore to N4 road.

(I note that in one of the submissions it is stated that in the original permission HGVs were prohibited from using the L62262 linking the L6226 to the R159, however, I see no such restriction in the conditions attached to PA ref. 91/970 and PL17.089787).

Condition no. 5

7.5.4. Condition no. 5 of the permission limits HGV traffic associated with the development to 30 loads a day over 5.5 days/week and precludes use of the minor county road L6204 south of its junction with L6209.

7.5.5. The local roads referred to are substantially removed from the site and the planning authority acknowledge that the condition is erroneous and was wrongly attached to the permission. They propose a new condition limiting the number of loads to 70 as per the application documentation. Having regard to the existing level of production authorised at the site, I would concur with this approach.

7.6. **Hours of Operation/Condition No. 6**

7.6.1. Condition no. 6 of the planning authority's grant of permission limits operation of the quarry to between 8am and 6pm Monday to Friday and 8am to 2pm on Saturdays.

7.6.2. Third parties refer to HGVs arriving at the quarry in advance of permitted operating hours and argue that the truck movements on Saturdays are unacceptable. The first party argues that under previous permissions loading of trucks has been expressly permitted for the period 7am to 8am Monday to Friday and that there is no clear rational to now to restrict an established working practice where (a) truck loading from 7am has taken place over the past 24 years, and (b) operation of the quarry (excluding drilling and rock breaking) from 7am over the past 9 years.

7.6.3. In response to the appeal, the planning authority consider that the wording of the condition should remain (i.e. restricting operation of the site until 8am) in order to protect residential amenity.

7.6.4. I note that under previous permissions (PA ref. 91/970 and PL17.089787; PA ref. 95/1416 and PL17.099325; PA ref. 01/1018 and PL17.127391) the quarry has been allowed to operate 8am to 8pm Monday to Friday and 8am to 2pm on Saturdays, with truck loading only carried out 7am to 8am Monday to Saturday. Under section 261 of the Planning Act, the planning authority decided to modify conditions of the

permission granted under PL17.127391. These included, under proposed condition no. 5, to restrict hours of operation to 8am to 6pm Monday to Friday and 8am to 2pm on Saturdays. In their review of the condition, the Board decided to modify this condition, extending operating hours from 7am to 6pm Monday to Friday and 7am to 2pm on Saturdays, with no drilling or rock breaking before 8am each day, having regard to the planning history of the site and in the interest of orderly development (i.e. that uniform operational hours be applied to the whole site).

7.6.5. The Department's Guidelines on Quarries and Ancillary Activities (April 2004) recommend operating hours of between 7am and 6pm Monday to Friday, 7am to 2pm on Saturdays and no work on Sundays or Bank Holidays. In view of the established pattern of working at the quarry, and government guidelines on recommended operating hours, I recommend continuation of the existing operating arrangements. However, in view of the issues raised in submissions regarding possible breaches of these hours, I would also recommend enhanced arrangements for monitoring e.g. with lorries arrival and departure times logged and reported upon in regular monitoring reports to the planning authority.

7.7. Trees on Site

7.7.1. Third parties state that trees inside the entrance to the site appear to be dying and should be given better protection (e.g. 20-metre buffer zone).

7.7.2. The appeal site comprises a working quarry and perimeter planting contributes substantially to its integration into the local landscape. I note that there are no plans for the protection and/or maintenance of existing vegetation on site during the operational phase of the development. Figure 2-6, Proposed Restoration Plan sets out arrangements for planting at the cessation of extraction. However, a landscape management plan would be beneficial during the working life of the quarry, to ensure maintenance of key visual screens and progressive implementation of the proposed restoration plan (landscape elements). This matter could be addressed by condition.

7.8. Restoration and Public Safety

7.8.1. Figure 2-6 of the EIS indicates the proposed restoration plan for the site. This includes allowing the quarry void to flood to c.80m AOD, natural revegetation of the

processing area, seeding of overburden storage areas (once created) and hedge planting along the southern boundary. The void itself will be fenced with 'secure fencing' however, the nature of this is undefined. (I note that a restoration plan was submitted to the planning authority previously under PA ref. 01/1018, and that it also indicated restoration to an open body of water).

7.8.2. Whilst I would accept that there are a large number of quarries in south Meath, actual land take as a consequence of the proposed development, in conjunction with other quarries, is quite modest from the overall area of agricultural land. If the site was to be restored to agriculture, this would require the importation of a substantial volume of inert fill (given its interaction with groundwater) and substantial HGV movements to bring this volume of material to the site. In contrast, the afteruse proposed provides a more benign mechanism for the restoration of the site and the opportunity to create a rich and diverse habitat in an area which is otherwise generally intensively farmed. I consider the proposed approach is therefore reasonable. (It is also supported by policies of the Meath County Development Plan, NH POL 1 and RD POL 26).

7.8.3. With regard to fencing of the site. I would accept that the matter of public safety does arise but I consider that it could be addressed by condition, requiring the applicant to submit details of fencing to the planning authority for agreement.

7.9. Impact on Surface Water, Groundwater and St. Gorman's Spring

Surface Water

7.9.1. Chapter 6 of the EIS deals with surface water. Surface water arising within the existing site generally infiltrates to ground. However, during heavy periods of rain runoff is directed to the lowest point on the site, the quarry void, and from within the void collecting surface water and inflows of groundwater is pumped from the quarry sump for discharge offsite (to provide a dry working environment). Water is discharged from the site by pipe, after passing through a settlement lagoon, hydrocarbon filter and reedbed system, to a stream to the west of the public road, c.150m from the quarry (Blackwater(Longwood)_050). This stream discharges into the Blackwater River, just east of Longwood village, c.3km to the west of the site

(see Figure 6.1, EIS). The discharge from the site is subject to a Discharge Licence (Appendix 6-A, EIS).

7.9.2. The EIS states that the River Blackwater, at Longwood Bridge, has a Moderate status (Q3-4) in the period 2004-2014 and I note that the stream to the west of the site Blackwater(Longwood)_050, also has a Moderate status for the period 2010-2015 (catchments.ie).

7.9.3. Estimated flow data for the discharge stream is shown in Table 6-4. It ranges from 0.356m^3/s or 30,758.4m^3/s a day (5%ile flow) to 0.019m^3/s or 1,641.6m^3/s (95%ile flow). Capacity of the stream is shown in Table 6-5, Figure 6-1 and Appendix 6-C of the EIS. It ranges from a maximum of 1,262,778m^3/day at CS01 to a minimum of 99,466m^3/day at CS08. Unusually, capacity declines in the stream, with distance from the site, until point CS09, which is on the tributary of the Blackwater. However, the EIS states that this is as a result of previous works to the drainage channel carried out for arterial drainage purposes and this enlarged capacity is evident at the discharge point (see photographs).

7.9.4. The current discharge licence provides a maximum daily discharge rate of 724m^3/day (Appendix 6-A, EIS). Monitoring since March 2014 indicates frequent exceedances of this discharge rate (Table 6-6, EIS).

7.9.5. Limit values for a number of biological and chemical parameters are set out in Section 2.3 of the Discharge Licence (Appendix 6-A, EIS). Emission limits have also been exceeded for a number of parameters (summary results Table 6-7, EIS and Appendix G of response to Colm Flynn appeal, September 2014 to July 2016). Whilst exceedances are generally infrequent, at times they have been substantial e.g. Total Petroleum Hydrocarbons in August 2015. The applicant states, in the response to the Colm Flynn appeal, that with the exception of suspended solids, exceedances are most likely due to fluctuations in quality of background groundwater arising from external land uses.

7.9.6. The existing water management system for the site will continue for the proposed development, with rainfall allowed to infiltrate to ground and dewatering to allow an increase in depth of the quarry. Some water used for dust suppression, site welfare facilities and wheel washing – see Table 6-10 EIS.

7.9.7. Section 6.138 of the EIS indicates an estimated discharge of c.3,425m^3/day for the maximum depth of the quarry (years 14 to 21, Phase 3). In calculating this estimate, the applicant uses rainfall data for the period 1981 to 2010 in Table 6-3 of the EIS, with a AAR of 863mm. Met Eireann data for Dunsany, the closest monitored site to the appeal site, for the period 2015 to 2017, gives an AAR of 854.9mm. I do not consider the appellant's use of date for the earlier period, therefore, to be significant or erroneous.

7.9.8. Based on the channel capacity and estimated flows in the receiving waterbody, referred to above, it is evident that the proposed increase in discharge could be accommodated within the existing channel and would not give rise to out of bank flooding. I note the concerns raised by parties regarding flow of water on the quarry access route and across the public road. I saw no evidence of this at the time of site inspection and, if the Board are minded to grant permission for the development, this is a matter which could be expressly dealt with by condition.

7.9.9. In Section 6.139 the EIS states that water discharged from the quarry will be clean groundwater, with negligible impact on surface water quality. Mitigation measures are set out in Section 6.153 for the operational phase of the development. These include (a) standard measures for the industry, (b) the installation of an additional settlement pond (granted permission under PA ref. TA/120923), if sampling results for suspended solids indicates that additional treatment is required, (c) additional treatment capacity for hydrocarbons, as required within the increase in discharge from the site, and (d) review of the existing discharge licence at the site and compliance with any resultant conditions.

7.9.10. Monitoring arrangements for discharge waters are set out in Section 6.158 of the EIS, these include monthly monitoring of standard parameters for water quality and continuous monitoring of discharge volume (as per the requirements of the existing Discharge Licence). The EIS concludes that with the above measures in place there will be no residual impact on surface water. The Assimilative Capacity and Mass Balance Assessment (RFI) is based on the average effluent concentrations of treated discharge waters. It concludes that under 95%ile flow conditions in the receiving water there is no assimilative capacity for BOD, Total Phosphorus and Ammonia as levels in the Blackwater River exceed the Environmental Quality Standard; hence Mass Balance, with quarry discharge, also exceeds EQS. For the

remainder of the parameters measured, the report concludes that there is sufficient available Assimilative Capacity in the Blackwater River for discharge from the quarry.

7.9.11. On file there is no information regarding the capacity of the existing settlement pond/reed bed system and additional settlement pond (granted under TA/120923) to accommodate the substantially increased flows arising from the proposed development. Furthermore, the applicant has not provided explanations for the observed exceedances of all emission limit values or consequential actions that have been or will be taken to ensure such exceedances do not arise in respect of the proposed development. The applicant will have to comply with a revised Discharge Licence and it could be argued that these matters will be dealt with at the time, under a more appropriate code. However, the Board is being asked to adjudicate on the principle of the development, I consider therefore that this omission is significant and I do not consider that the applicant has adequately demonstrated how water quality standards will be attained. If the Board are minded to grant permission for the development, they may wish to seek further information in this regard.

Groundwater

7.9.12. Impact of the development on groundwater is also addressed in Section 6 of the EIS. It refers to the location of the quarry wholly in Waulsortian Limestone (and not partly within the adjoining Lucan Formation Limestone, as indicated on the GSI regional geology map, Figure 6-3, EIS), and in the Longwood Groundwater Body, a Locally Important Aquifer, of Good Status (WFD, 2010-2012) and extreme to high vulnerability (Figure 6-4, EIS). The EIS states that due to the poor porosity of the rock, primary groundwater flow and storage within the aquifer is via fractures, joins and cavities caused by karstic weathering and this is supported by GSI data on the Longwood Groundwater Body (see attachments). The GSI report states that '*most flow in this aquifer will occur near the surface. In general, the majority of groundwater flow will occur in the upper 10 m, comprising a weathered zone of a few metres and a connected fractured zone below this. However, deepwater strikes in more isolated faults/ fractures can be encountered at 50-70 mbgl. Flow path lengths are relatively short, and in general are between 30 and 300 m. The regional groundwater flow direction is to the northwest..'*

7.9.13. Reflecting this characteristic, paragraph 6.55 of the EIS states that a number of karst features have been identified in the quarry, indicating that the aquifer has in part developed solutionally enhanced conduits (with one relatively large cavity in the northern part of the site, c.50m from the proposed extraction area, where pumping tests have had little impact on water level, see Figure 6-2, EIS).

7.9.14. Section 6.59 refers to 15 no. private wells within 600m of the quarry which have been monitored on a monthly basis since November 2006, in conjunction with on-site monitoring locations (Figure 6-5, EIS). Table 6-8 presents minimum, mean and maximum data on weekly groundwater levels within the quarry between March 2008 and August 2016. Table 6-9 provides summary information on water level in 14 wells monitored to the west, south west and south of the site. Information is presented such that it is not possible to identify trends in levels over time or with quarrying activity. However, the applicant states that privately-owned boreholes situated towards the north and south of the quarry are elevated relative to those in the south west and a review of water level information indicates that the rest water table has been drawdown by c.5m by the current regime of dewatering.

7.9.15. Section 6.72 acknowledges that it is not possible to determine an overall groundwater flow direction from the water level data recorded, which would be typical of limestone aquifer systems where groundwater flow is within a network of fissures and fractures which may be poorly inter-connected from borehole to borehole. Further, the report states that primary groundwater flow within Waulsortian Limestones is within the uppermost 3m, where the rock is most weathered, with much less flow beneath this and confined to isolated fractures, joints and fissures (with no fissures typically below 50m bgl). However, the report also states that '*Two significant inflows (15m AOD and -35m AOD) and a minor inflow (53mAOD) were intercepted during drilling on site in 2000/2001'*. Results of rotary core borehole logs carried out in 2000-2001 are set out in Appendix 5-A of the EIS. However, the inflows referred to in the EIS are not recorded on the borehole logs and the depth at which they are stated to have occurred do not correlate to the depths presented in the logs (pages of the borehole logs are also missing). It is not possible to discern, therefore, where these inflows occur. However, the data would suggest that inflows at depth within the environs of the quarry do occur.

7.9.16. The reduction of the quarry floor from c.75m AOD (current level) to c.45m AOD (proposed) will require on-going pumping of water from the quarry, with a reduction in groundwater levels around the quarry. In paragraph 6.124 the applicant states that water levels will be lowered by 30m in addition to the estimated 5m drawdown which has already occurred.

7.9.17. Using the Theis analytical method, the applicant predicts a drawdown of between 6m and 8m, at 1,000m from the dewatering sump. The applicant states that the estimate is based on a number of assumptions, that may or may not be fully satisfied, with actual drawdown greater or less than predicted depending on the precise hydraulic properties of the aquifer and the connection between the wells and the quarry in the area. This point is important. The Theis model assumes a homogenous and isotropic aquifer, hence the stated limitations. Given the location of the quarry in karstified rock, the flow of groundwater in karst conduits typically resembles the flow of water through a network of pipes with storage chambers and overflow outlets. In this instance, the applicant has not demonstrated how the conceptual model used is appropriate for the site given its location in a karstic environment and the evidence of inflows into the quarry at depths of greater than 10m, as stated in the EIS. Furthermore and importantly, the implications or consequences of the limitations of the model, either on local wells or on the Longwood Groundwater Body, are not explored.

7.9.18. The applicant's response to the request for further information, provides further information on the expected drawdown at local wells in the vicinity of the site. It predicts no future impacts on shallow wells (as groundwater is separate feeding the wells is separate to deeper groundwater in bedrock, Table RFI 1-2) and some impact on deep wells (Table RFI 1-3), based on predicted drawdown (using the Theis method). Whilst I would not disagree with the findings of this exercise, based on the theoretical model, as stated, I do not consider that the applicant has adequately demonstrated that the model reasonably applies to the application site.

7.9.19. Chart RFI 1-2 in the RFI indicates water levels in local wells over the period January 2007 to January 2016. These show fluctuations in level over time (and by season), however, they are not shown against fluctuation in volume of discharge water and again do not provide an accurate picture of the relationship between dewatering and well water levels.

7.9.20. With regard to the impact of the proposed development of groundwater quality, Section 6.146 of the EIS identifies potential impacts arising from the continued operational activity at the site (e.g. impact on groundwater quality from fuel storage/refuelling and the existing wastewater treatment plant). Mitigation measures include standard practices (Section 6.153, EIS and the installation of a new foul waste aerobic digestion water treatment system, with sand filter) and these seem reasonable and would minimise the risk of contamination.

St. Gorman's Spring

7.9.21. St. Gorman's Spring is listed in Appendix 13 of Meath County Development Plan as a County Geological Site (see attachments). It is described as a warm spring found north west of Enfield, covering an area of c.40m^2 during periods of discharge (drying up towards the end of summer), with temperature varying between 12º and 25º depending on climate conditions and seasonal variations. The GSI, in their letter to the Board of the 1st February, 2018, refer their report on the site in 2007 which stated '.. *it is one of the highest temperature warm springs, well studied and the least disturbed in the Leinster province, and probably in the whole of Ireland..'*

7.9.22. The appellants argue that the spring is composed of a mix of shallow and deep groundwater and is strongly connected to and controlled by near-surface groundwater recharge processes. In particular, they argue that an overly simplistic interpretation of the conceptual model for the spring has been presented which does not give due consideration to the hydrogeological complexity of the area. Parties state that the Spring is supplied by groundwater flowing through Waulsortian limestone directly connected to those that would be extracted in the proposed development and that the impact of the development on the well has not been adequately considered. The arguments made by the appellants reflect the findings of Dr. Sarah Blake's PhD thesis, '*A multi-disciplinary investigation of the provenance, pathways and geothermal potential of Irish thermal springs'*, https://aran.library.nuigalway.ie/handle/10379/5926), which concludes that the source of waters for the Well is from karstic flow within the Waulsortian Limestone which is re-circulated to depth (facilitated by the local Fault lines in the underlying bedrock), at certain times of the year and under certain re-charge conditions.

7.9.23. In response to the appeals made, the applicant acknowledges that the Spring is fed by a mix of deep and shallow groundwaters, but argues that the development will (a)

not impact on the steep faults that Blake identifies as being the conduits for circulation of water to depth, as it is removed from the fault line (Figure, ABP-1, response to Wilkinson appeal), and (b) that the only credible significant source of shallow groundwater in the epikarst layer has already been removed at Rathcore quarry and it is difficult, therefore, to propose a mechanism for how the deepening of the quarry could further affect groundwater flow in this layer (see response to Wilkinson appeal).

7.9.24. From the information available on file it is evident that there is a lack of clarity and expert agreement on the source of water for St. Gorman's Spring and the effect of dewatering (if any) on the waters feeding the Spring. Dr. Blake has clearly established the source of Spring water to be that flowing in the Waulsortian limestone, but she has not established the source of these waters or the nature of any direct connections to the quarry site.

7.9.25. With regard to the applicant's submission, whilst I would accept that the quarry is removed from the Ballynakill Fault line (see ABP-1, response to Wilkinson appeal), and from the Spring itself, and has already extended beyond the epikarstic layer (except for the extension area), I also have concerns that the applicant's conceptual model of the underlying hydrology does not reflect the inherent characteristics of the underlying karstic bedrock or of the conditions observed on the ground or has demonstrated the absence of connectivity to the Spring.

7.9.26. Given the importance of the site in a whole of Ireland context, and the absence of clarity regarding the nature of the circulatory system that supplies the Spring and its relationship with groundwater with the quarry and the express views of GSI, I consider that it would be premature and inappropriate to recommend granting permission for the deepening of the quarry, which is dependent on substantial dewatering, and may impact on underground karstic flowpaths and potentially permanent damage to the Spring (and therefore its geothermal potential).

7.10. Impact on Ecology of St. Gorman's Well and the Need for Appropriate Assessment

7.10.1. The appellant's and third parties argue that the proposed development, by virtue of its impact on the hydrological system which feeds St. Gorman's Spring, will

adversely affect the unique natural habitat of the Spring. Third parties refer to its listing in the site is listed in the NPWS/Foss 2007 study of Spring, Fens and Flushes in Ireland (https://www.npws.ie/sites/default/files/publications/pdf/Foss_%26_Crushell_2007_Fen_report.pdf) and to the 2001 national study on Irish Thermal Springs (Irish Heritage Council) which highlighted the spring as having the highest plant species richness compared to all other hot springs and to tufa deposits. ('*Petrifying springs with tufa formation*' is an Annex I Priority Habitat under the Habitats Directive).

7.10.2. Chapter 4 of the EIS considers the effect of the quarry on ecology. It focuses on designated sites in the vicinity of the quarry, that may be affected by it, and the ecology of the appeal site itself. It does not identify St. Gorman's Spring as a site of ecological interest or the address the potential effect of dewatering on its ecology. The applicant's response to further information argues that the development will have a negligible impact on the flow, temperature and hydrochemistry of the Well.

7.10.3. St. Gorman's Spring is a County Geological Site. However, it is not currently listed by the NPWS's as a proposed Natural Heritage Areas. Further, the site is not designated as an SAC or SPA. Whilst appropriate assessment issues therefore do not arise, having regard to the information presented by the appellant's and third parties, I would accept that ecology of the site has features that would be of nature conservation interest, potentially at a regional, if not national/EU level.

7.10.4. As stated above, I do not consider that the applicant has presented a comprehensive understanding of groundwater flow in the vicinity of the quarry and interactions, if any, with St. Gorman's Spring. It follows, therefore, that the effect of the development on the habitats and species of the Spring have not been adequately assessed. Given the unusual nature of the habitat, and possible national value, I do not consider that a grant of permission can be recommended in the absence of greater certainty of groundwater flowpaths.

7.11. Cumulative Impact of Quarrying in the Area

7.11.1. Parties argue that south County Meath suffers from a proliferation of quarries. Whilst I would accept that there are numerous quarries in south County Meath, there are no

quarries in the immediate area of the site. I do not consider that cumulative impacts of quarrying occur, therefore, in the environs of the site.

7.12. **Monitoring**

7.12.1. Third parties argue that self-policing of the quarry has been ineffective and that the proposed monitoring arrangements (by way of condition) again rely on self-policing and are therefore unsatisfactory.

7.12.2. The quarry at Rathcore is longstanding and I would accept, based on the information on file, that there have been exceedances of emission limit values and breaches of other conditions of the permission. Whilst these matters are outside of the control and remit of the Board, going forward I would recommend enhanced arrangements for monitoring of compliance, greater liaison with the community and maintenance of a complaints register (as proposed above).

7.13. **Impact on Residential Amenity and Property Values**

7.13.1. Parties have argued, under the headings referred to above, that the proposed development will have an adverse impact on residential amenity and property values.

7.13.2. Whilst I have reservations regarding the impact of the proposed development on surface and groundwater, for the reasons stated above I consider that the quarry could otherwise operate, within the parameters of the recommended emission limits/conditions of permission, which would ensure that significant impacts on residential amenity and property values do not arise.

7.14. **Environmental Impact Assessment**

7.14.1. This section of the report comprises an environmental impact assessment of the proposed development. Many of the matters considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with relevant sections of the Planning Assessment.

7.14.2. The application for the proposed development was made to the Board before the16th May 2017 and the provisions of the EIA Directive as amended by Directive 2014/52/EU do not apply. The environmental impact assessment is therefore carried out in accordance with the 2011 EIA Directive.

Environmental Impact Statement

7.14.3. The application for the proposed development is accompanied by an environmental impact assessment statement. It:

- Describes the project including its site, design and size,
- Describes the measures envisaged to avoid, reduce, and if possible, remedy significant adverse effects,
- Generally, provides sufficient data to identify and assess the main effects which the project is likely to have on the environment (see detailed assessment of issues below),
- Provides a description of the main alternatives studied, an indication of the main reasons for the choice of alternative put forward, taking into account environmental effects, and
- Includes a non-technical summary of the above information.

7.14.4. Having regard to the above, and to my conclusions below in respect of the technical information presented, I am satisfied that the EIS generally complies with article 94 of the Planning and Development Regulations, 2001, as amended.

Environmental Impact Assessment

7.14.5. In accordance with the requirements under Article 3 of the EIA Directive and Section 171A of the Planning and Development Act, 2000 (as amended), the environmental impact assessment is carried out under the following headings:

- Human beings, flora and fauna,
- Soil, water, air, climate and landscape,
- Material assets and cultural heritage,
- The interaction of the above.

7.14.6. The EIA has had regard to the application documentation, including the EIS and NIS, the written submissions, the applicant's response and the Planning Assessment, above.

Scoping

7.14.7. Parties to the appeal argue that the concerned residents had no opportunity to input into the preparation of the EIS (i.e. that there was no public scoping of the EIA). However, under the 2011 Directive there is no requirement for the applicant to involve the public in the scoping of an environmental impact statement, and the EIS is not, therefore, deficient in this regard.

Human Beings, Flora and Fauna

7.14.8. I have considered all the submissions made in relation to **human beings**, in addition to those specifically identified in Chapter 3 of the EIS (and in other related Chapters).

7.14.9. Positive impacts on human beings potentially arise from continued employment associated with the quarry (direct and indirect) and the continued supply of aggregates in the region. Negative effects potentially arise as a consequence of emissions to noise, dust, vibration, traffic and the risk of impacts on water supplies.

7.14.10. Different chapters of the EIS deal with the above impacts and I have discussed each of these impacts above. Subject to the implementation of mitigation measures and adherence to standard emission limits for the extraction industry, I do not consider that significant environmental effects will arise as a consequence of noise, dust, vibration or traffic, from the proposed operation of the quarry, by itself or in conjunction with other developments (cumulative effects). However, as discussed, I do not consider that the applicant has demonstrated how excess surface and groundwater will be treated prior to discharge or an adequate understanding of groundwater flowpaths in the vicinity of the site. The proposed development, may therefore give rise to significant impacts on surface water bodies (water quality), well water, and public water supplies, in the vicinity of the site.

7.14.11. Impacts on **flora and fauna** are considered in Chapter 4 of the EIS. I have considered this information and that submitted by third parties to the appeal. The proposed development occurs within an existing quarry environment and, as set out in the EIS, there are no features or species of significant conservation interest that would be significantly adversely affected by the development. Designated sites of

nature conservation interest, in the wider environment, are substantially removed from the development and are also not likely to be affected by it, including Natura 2000 sites (see below). The EIS does not consider the likely effect of the development on St. Gorman's Spring, to the west of the appeal site. Given the information on file, presented by third parties, on the unusual ecology of the site and the absence of clarity regarding the relationship between the groundwater feeding the spring and that which will be displaced by de-watering, there is a risk that the proposed development will have a significant adverse (and possibly permanent) effect on the ecology of the Spring. The lack of information regarding arrangements for the treatment of discharge waters may also pose risks of adverse impacts on nearby water dependent downstream habitats.

Soil, water, air, climate and landscape,

7.14.12. I have considered all the written and oral submissions made in relation to soil, water, air, climate and landscape, in addition to those specifically identified in Chapters 5, 6, 7, 8 and 10 of the EIS.

7.14.13. The proposed development takes place within and adjoining an active working quarry. Land take is relatively small. Subject to implementation of mitigation measures, impacts on **soil** will be modest and short term. Impacts on geology will also be modest (limited loss of mineral resource), but permanent.

7.14.14. Impacts on **surface and groundwater** are discussed above and it is considered that the water to be discharged from the quarry can be accommodated in downstream water bodies without giving rise to issues of flooding but may result in adverse effects on water quality. In addition, as stated I have concerns regarding the applicant's conceptual model of groundwater flows in the vicinity of the site and impacts of drawdown on wells and public water supplies. I consider, therefore, that there is a risk of significant adverse impacts on these supplies as a consequence of the development.

7.14.15. As stated above, subject to compliance with proposed mitigation measures and standard emission limit values for the industry, I do not consider that significant adverse effects on **air quality (dust), noise or vibration** will arise as a consequence of the proposed development. Given the modest nature of the development, no significant impacts on climate will arise.

7.14.16. The appeal sites lies in LCA 6, a central lowlands area, close to its boundary with LCA 13, Rathmoylan Lowlands. Both are classified as being of High Landscape Value, with LCA 6 having medium sensitivity to change and LCA 13, high sensitivity to change. Within this context, the appeal site is well screened from public view by a combination of topography, screening berms and mature vegetation. The proposed development, which essentially comprises a deeper excavation and modest lateral extension, will not therefore be widely visible and will not detract from the landscape character. No significant **landscape or visual impacts** will therefore arise as a consequence of the development.

Material assets and cultural heritage,

7.14.17. Impacts on material assets and cultural heritage are dealt with in chapters 11, 12 and 13 of the EIS. I have considered all the written submissions made in relation to these matters in addition to those specifically identified in each Chapter of the EIS. A number of the matters discussed have also been addressed in the Planning Assessment above.

7.14.18. **Traffic.** As stated previously, the proposed development will extend the period of operation of the quarry, however extraction rates will not exceed existing levels and vehicle movements, including HGVs, will not increase above existing levels. The effect of the proposed development will therefore be to extend existing levels of quarry traffic over a long duration. However, as discussed above, subject to strict adherence to mitigation measures (including operating hours), I do not consider that impacts will be significant.

7.14.19. Impacts on **cultural heritage** are addressed in Chapter 11 of the EIS. Most of the proposed development will take place with already disturbed ground and there are no known items of cultural heritage interest in the lateral extension area. However, having regard to the possibility of the survival of sub-surface archaeological deposits the applicant proposes archaeological monitoring of the unquarried headland (lateral extension area). Subject to this mitigation measure, I do not consider that any adverse impacts on cultural heritage will arise.

The interaction of the above.

7.14.20. I have considered all the written and oral submissions made in relation to impacts on inter-relationship between factors, in addition to those specifically

identified in Chapter 14 of the EIS. As stated above, significant impacts arise by virtue of interactions between human beings and water; and between groundwater and flora and fauna (St. Gorman's Spring) and are discussed above.

Summary

7.14.21. In summary, having regard to the lack of (a) information on the arrangements for the treatment of discharge waters, and (b) detailed information on groundwater flowpaths in the karstic bedrock underlying and in the vicinity of the site, it is considered that the proposed development will give rise to significant adverse effects on water quality in nearby surface water bodies, on water supplies to properties in the vicinity of the site and on the unusual hydrogeology that supports Gorman's Well, a County Geological Site, and its associated habitats and species.

7.15. Appropriate Assessment

7.15.1. The application for the proposed development is accompanied with an Appropriate Assessment Screening Stage 1 Screening Report. It identifies three Natura 2000 sites within a 15km radius of the site (see Figure 1, Screening Report), the River Boyne and River Blackwater SAC (site code 002299); River Boyne and River Blackwater SPA (site code 004232) and Mount Hervey Bog SAC (site code 002342). Impacts on Mount Hevey Bog SAC are discounted due to no interaction with the SAC i.e. no pathway to connect potential pollutants from the quarry to the site. Given the location of this Natura 2000 site, removed from the proposed development, and to the absence of direct pathways for pollutants from the site to the Natura 2000 site, this conclusion seems reasonable.

Conservation Objectives/Conservation Interests

7.15.2. Conservation objectives for the remaining sites are as follows:

- River Boyne and River Blackwater SAC – To maintain and restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:- Alkaline fens; Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (a priority habitat); River Lamprey (*Lampetra fluviatilis)*; Salmon (*Salmo solar);* Otter (*(Lutra lutra).*

- River Boyne and River Blackwater SPA – To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interest for the SPA:- Kingfisher (*Alcedo atthis*).

Potential Effects

7.15.3. Incidental rainfall and groundwater will be pumped from the quarry, to facilitate extraction, and discharged into a watercourse which discharges to a tributary of the River Blackwater, a tributary of the River Boyne, (see Figure 6-1, EIS). The River Boyne is designated as a SPA and SAC c.9.4km downstream of the appeal site (see Figure 1, Screening Report and attachments). Quarrying could give rise to pollutants in discharge waters, for example from hydrocarbons, siltation, waste water. If uncontrolled, these could result in pollution of the protected sites.

Assessment of Likely Effects

7.15.4. The Screening Report states that at c.9.4km from the River Boyne and Blackwater SAC/SPA, the proposed development would have no measurable effects on water quality in the River Boyne, as a consequence of the dilution effect in the River Blackwater, its associated tributaries and in the River Boyne. Consequently, it predicts no significant effects on the River Boyne and River Blackwater SAC/SPA.

7.15.5. The Screening Report provides no scientific information to support the conclusions drawn. Notwithstanding this, the proposed development will be required to obtain a discharge licence from Meath County Council for the discharge of waters to the surface water body to the north west of the quarry (as per existing arrangements). The current licence specifies standard emission limit values for a range of physical and chemical parameters and I would consider that standard emission limit values expressed in any future licence would reflect best practice in environmental management and would be an intrinsic part of the development (hence they can be considered in a screening exercise). If these are adhered to, then I would accept the argument put forward by in the Screening Report, that at the point discharge waters reach the River Boyne and River Blackwater SAC/SPA, dilution would have been substantial and impacts on water quality are highly unlikely.

7.15.6. However, as stated above, the applicant has not provided objective, scientific information on which to draw this conclusion and I would consider therefore that the screening exercise is inadequate.

7.15.7. With regard to in-combination effects, no other quarries (or industrial activities) are evident in the area of the site, or along the path of the discharge water course, and no land is designated for industrial type development. Consequently, no in-combination impacts are likely to arise from the development in combination with other plans or projects.

7.15.8. On the basis of the information provided with the application and appeal, and in light of the assessment carried out above, I am not satisfied that the proposed development individually, or in combination with other plans or projects would not adversely affect the integrity of European site(s) Nos. 002299 and 004232 (River Boyne and Blackwater SAC and SPA respectively), in view of the site's Conservation Objectives. If the Board are minded to grant permission for the development, additional further information would be required.

8.0 **Recommendation**

8.1. Having regard to the matters raised above, I recommend that planning permission for the proposed development be refused for the reasons and considerations set out below.

9.0 **Reasons and Considerations**

Having regard to the limited information on file regarding the arrangements for the treatment of discharge waters, the location of the quarry in a karstic environment and the limited investigation and understanding of the complex hydrogeological conditions obtaining on site and in the wider area, the Board is not satisfied that the proposed development would not give rise to the pollution of surface water bodies, adversely impact on water supplies in the vicinity of the site or have a significant adverse effect on St. Gorman's Well, a County Geological Site, and its related ecology. The development would, therefore, be contrary to policies of the Meath County Development Plan 2013 to 2019 and to the proper planning and sustainable development' of the area.

Deirdre MacGabhann
Planning Inspector

10th May 2018