Remedial Natura Impact Statement

For

Development works undertaken at Steel Fabrication Workshop

at

Knockauntouk, Gort, Co. Galway

Prepared by Mary Burke[1] (Burke Environmental Services)

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1. Introduction

1.1 Introduction

Coleman Rock is applying to An Bord Pleanála for Substitute Consent under Section 177E (Application for Substitute Consent) of the Planning and Development Act 2000 (PDA 2000), as amended (by Section 27 of the Planning and Development, Maritime and Valuation (Amendment) Act 2022) and under Part 19 of the Planning and Development Regulations, 2001 (as amended).

Paragraph 177G of the 2000 Act sets out that the remedial Natura Impact Statement (rNIS) shall be prepared by experts with the competence to ensure its completeness and quality and contain:

- a statement of the significant effects, if any, on the relevant European site which have occurred or which are occurring or which can reasonably be expected to occur because the development was carried out;
- details of any appropriate remedial or mitigation measures undertaken or proposed to be undertaken by the applicant to remedy or mitigate any significant effects on the environment or on the European site;
- the period of time within which any such proposed remedial or mitigation measures shall be carried out by or on behalf of the applicant.

This report presents the rNIS, which has been prepared to accompany the substitute consent application for the extension to the R & K Engineering works (referred to hereafter as "the subject site"). The report has been prepared in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) and the European Communities (Birds and Natural Habitats) Regulations 2011. The assessment relates to the construction and operation (including decommissioning) of the subject site which comprises the buildings associated with the R & K Engineering steel works at Knockauntouk, Gort and all associated works. The purpose of this report is to determine if the subject site, either alone or in combination with other plans and projects, has had or is likely to have had, is having or is likely to have significant effects on any European site(s)[2] in view of the site's conservation objectives. This Remedial Natura Impact Statement (rNIS) has been prepared to accompany the application to An Bord Pleanála (ABP) for Substitute Consent, as prescribed under Part XA 177F of the PDA 2000

1.2 Historical Context of Coleman Rock Steel Work Activity.

The site layout on the subject site is shown in Fig 4, Section 4 of this report, reproduced from the drawings which accompany the application. Coleman Rock operates a steel fabrication works (R & K Engineering Steelworks) within the site of the applicant's dwelling house, at Knockauntouk, Gort, Co Galway. The original activity was permitted at this location under

[2] Natura 2000 is a network of protected areas in Europe, stretching over 28 countries, designated to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the Birds Directive (79/409/EEC, as amended) and the Habitats Directive (92/43/EEC). Natura 2000 sites include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). Referred to in Ireland as European sites

P01/393 (Galway County Council). In 2015 an extension to Shed 1was constructed to provide roof cover for the operators in the activity. A second shed (Shed 2) was constructed to house shot blasting and steel painting equipment, and, a third shed (Shed 3) was constructed to store steel beams, after cutting/treatment, prior to movement off site. A yard area was provided on the eastern/open side of Shed 3 to enable collection vehicles to access the yard and facilitate the safe loading of steel beams to the delivery vehicles. The works undertaken to extend Shed 1, the entirety of Sheds 2 and 3 and the works to provide the yard area on the eastern side of Shed 3 are unauthorised, and are the subject of this application for Substitute Consent.

1.3 Remedial NIS Competency

This Remedial NIS (hereafter referred to as rNIS) has been undertaken by Mary Burke, Burke Environmental Services, based on professional qualification and experience in environmental monitoring as set out hereunder ;

Mary Burke, (B.Sc Hon Chem, M.I.C.I, Employed 1994-2014, 2014-2024) in area of environmental protection, (Clare County Council Senior Executive Chemist (up to 2014) and thereafter (to date) in private consultancy) including ongoing monitoring and assessment of development impacts (direct and indirect impacts) on environment and amenity; preparation of EIAR and NIS Screening reports and long term monitoring of projects thereafter. Continuing professional development (CPD) training in various areas (NUI Galway Certificate in Biodiversity 2012); Operational Competence Certificates from British Examining Board in Occupational Hygiene in Toxic Metals, General Principles of Workplace Controls, Harmful Dusts/Vapours/Liquids/Gases/Mists, Asbestos, Noise & Vibration, Thermal Environment; 2007- 2009; FAS Certified in Site Suitability Assessment and Inspection of Domestic Waste Water Treatment System and FAS Certified in Waste Management Modules (Policy & Legislation, Regulation, Waste Management Planning, Communication & Consultation, Minimisation & Recycling, Recovery & Disposal, Biological & Thermal Treatment, Environmental Management Systems

In addition, published data and literature review is referenced to support aspects of the rNIS where reference is made to the status of surface water and groundwater catchments, local geology, status of habitats and species associated with the application site.

1.4 Limitations and Difficulties Encountered

Coleman Rock has operated the steel fabrication work shop at Knockauntouk since 2001 as R & K Engineering. No complaints were recorded with Galway County in relation to the activity until 2015, when the building works on site were undertaken. No increase in the number of employees or the output from the facility has been noted from the business records, which were made accessible and scrutinised for completion of the Substitute Consent application. The retrospective impact assessment on the receiving environment (including habitats and species) has been carried out based on the reasonable availability of information relating to the structural works undertaken, the status of the yard area prior to these works and the available reports on the status of habitats in the catchment of the site.

Overall, monitoring of the impact of the activity is undertaken by consideration of published reports on groundwater and surface water quality, normal local monitoring of noise/dust

(referenced against statutory limits), and, published reports (including Article 17 reports[3]) on the status of the Natura sites in the catchment, before and after the works on site were undertaken. Incidental, unannounced site visits (including assessment of night lighting on the units) also support the monitoring of the activity. This enables the assessment of positive and negative impacts on the environment to be measured. The environmental indicators of relevance to the activity and the surrounding receiving environment are identified in this rNIS, and key trends are assessed for the period 2010-2024 to assess any changes that would be attributable to the activities undertaken at R & K Engineering.

The assessment has been limited by the following:

- Accurate baseline information of the habitat status in the (current) yard area to the east of Shed 3, based on surveys, mapping and the boundary (as set) for the Coole Garryland SAC. This includes the availability, completeness and accuracy of survey data on the extent of limestone pavement habitat in the area, and the reason for setting the boundary of the SAC to the east of the extended yard area. It should be noted that the application site is outside the SAC area, and Mr Rock owns the land to the east of the application site, which is within the Coole Garryland SAC
- Extensive monitoring data on the turloughs and lakes within the Coole Garryland SAC area, before and after 2015, when the extension works took place. No change in the employee number at the facility was associated with the extensions. No trade discharges to water were/are associated with the activity. The wastewater treatment unit serving the dwelling house, permitted under P01/393, is used as the toilet facility for the steel fabrication workshop, both prior to 2015 (when the buildings were extended) and after 2015. The number of employees is 4 (including Mr Rock and his son)- so that the additional loading to the septic tank arising from 2 employees is not a significant discharge in the overall context of the surface water and groundwater catchments in the area, and does not arise in the context of the extensions on site- as the employee number is unchanged over the duration of operation of the activity.

2. Appropriate Assessment

2.1 Regulatory Context

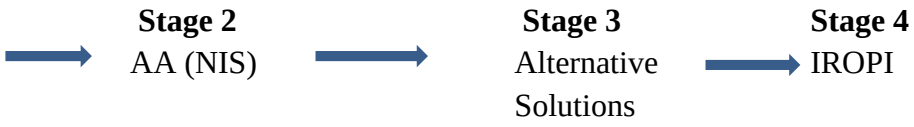
The EU Habitats Directive 92/43/EEC provides legal protection for habitats and species of European importance through the establishment of a network of designated conservation areas known as the Natura 2000 Network, referred to in Ireland as European sites. The Appropriate (AA) process arises out of the Article 6 of the EU Habitats Directive and Birds Directive, which was transposed into Irish legislation by the Planning and Development Act, 2000 as amended, and the European Communities (Natural Habitats) Regulations, 1997, 1998 and 2005 and the European Communities (Birds and Natural Habitats) Regulations 2011. This requires an

[3] Article 17 of the Habitats Directive requires a report to be sent to the European Commission every 6 years following an agreed format. The core of the 'Article 17' report is assessment of conservation status of the habitats and species targeted by the directive. The assessment is made based on information on status and trends of species populations or habitats and on information on main pressures and threats.

'Appropriate Assessment' (AA) to be carried out where a plan or project is likely to have a significant impact on a Natura 2000 site.

2.2. Appropriate Assessment Process

The European Commission's methodological guidance (EC, 2002) sets out a four-stage process to complete the AA, and outlines the issues and tests at each stage. The process requires that the outcome at each successive stage determines whether a further stage in the process is required. The four stages are summarised sequentially as



Stage 1 (Screening) is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):
o Whether a plan/project is directly connected to or necessary for the management of the site,
o Whether a plan /project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.
If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, or includes mitigation measures, then the process requires a **Stage 2** Appropriate Assessment (AA), with preparation of a Natura Impact Statement (NIS), or a Remedial Natura Impact Statement (where development works have been undertaken). Screening is undertaken on the potential impact of the project, including the construction works. The greatest level of evidence and justification is needed in circumstances where the process ends at the screening stage on grounds of no potential impact on elements of conservation interest in the Natura 2000 site/s

Stage 2. Appropriate Assessment considers whether the plan or project, alone or in combination with other projects or plans, could have an adverse effect on the integrity of a Natura 2000 site, including mitigation works associated with the development. Stage 2 requires preparation a Natura Impact Statement. This is a scientific examination of the project and the relevant Natura 2000 sites, to identify any possible implications for the designated site in view of the site's conservation objectives, taking account of the works proposed, (or undertaken in a Remedial NIS) mitigation measures and cumulative effects arising from other projects undertaken in the catchment area, and should provide information to enable the competent authority to carry out a full assessment of the project impact on the Natura sites.

If Stage 2 demonstrates that the project would have adverse effects on the integrity of a Natura 2000 site, **Stage 3** must examine alternative solutions that could enable the plan or project to proceed without adverse effects on the integrity of the Natura 2000 site. Where no alternative solution is found, the project can only be considered where there are imperative reasons of overriding public interest (IROPI).

This requires **Stage 4** derogation application, including compensatory measures for habitat protection, and is assessed by the European Commission.

3. Methodology

3.1 Overview

For the purposes of this rNIS the baseline date is circa 2014, prior to any construction works at the Project site. Baseline data to inform the construction phase impacts was collected from a desktop review of existing datasets, (described in Section 3.2). Aerial photography from the OSI Mapviewer[4] was used to assist in determining the type and distribution of habitats within the Project site prior to the commencement of the construction phase. Ecological monitoring of the adjacent Coole Garryland SAC area has been ongoing since the designation of the site and spans the construction phase (i.e. 2015 onwards) to present. The monitoring has included bird, bat, terrestrial habitat and aquatic ecology. Monitoring undertaken in accordance with the Water Framework Directive[5] has also been accessed. The results of these surveys have informed the impact assessment of the construction and operational phase of the subject activity and have also informed the mitigation measures required in the activity to protect and maintain the good status of the receiving environment conditions

3.2 Assessment criteria

This assessment has been undertaken in accordance with all relevant legislation and with regard to the following best practice guidelines:

- Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission;
- Directive 2009/147/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission;
- European Communities (Birds and Natural Habitats) Regulations 2011, as amended;
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (Department of the Environment Heritage and Local Government, 2009 (Revision 1, 2010));
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2001); and

[4] Now Taillte Eireann

[5] The EU Water Framework Directive (WFD) (2000/60/EC) is recognised as a critical regulatory legislative provision. The WFD entered into force in December 2000 and requires the protection of the ecological status of surface and ground waters – this encompasses (among other elements) water quality and requires the conservation of habitats for ecological communities. The WFD was transposed into Irish Law through the European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003), as amended. It applies to rivers, lakes, groundwaters, transitional and coastal waters. River Basin Management Plans cover the period 2010-2015. Subsequently, the Government established a new structure for the management, governance and responsibilities for the implementation of the WFD. The new structure was given legal effect by the European Union (Water Policy) Regulations 2014 S.I. 350 of 2014

- Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive Directive 92/43/EEC[6] (European Commission, 2018).
- Appropriate Assessment Screening for Development Management (Practice Note PN01)[7]

3.3 Desk review

A desktop study was conducted to examine the potential 'Zone of Influence' (refer to Section 3.4) of the Project and to identify any European sites within this area which may have been affected or have the potential to be affected as a result of the Project. The National Parks and Wildlife Service (NPWS) website database was examined in relation to designated nature conservation areas and relevant reports. GIS data was accessed using the NPWS mapviewer (accessed February 2024).

The desktop study included a review of historic and current mapping including aerial photographs, historic and current reports and data relating (particularly) to the surveys of limestone pavement priority[8] habitat and water quality status (both groundwater and surface water) within the zone of influent of the Project. The following databases, websites and reports have been consulted:

- National Parks and Wildlife Service data bases including aerial photography, maps of designated areas, habitat and species reports within and around the designated Natura sites in the area (including Site Synopsis, Data Forms and Conservation Objectives) (www.npws.ie), Turloughs Ecology, Hydrology and conservation (edited by S Waldren)
- The National Biodiversity Data Centre (NDBC) (www.biodiversityireland.ie);
- EPA catchment data (surface water and groundwater, documented groundwater traces)
- National Roads Authority data /surveys associated with M18 and follow up surveys on effectiveness of mitigation measures implemented in the area for species of conservation interest (particularly Lesser Horseshoe Bat surveys associated with Coole -Garryland SAC)
- Bat Conservation Ireland (www.batconservationireland.org);
- Aerial photography (past and present) and photographs taken at the site;
- Ordnance survey data (past and present) www.osi.ie;
- Information on water quality (including groundwater) in the area available from www.epa.ie and www.catchments.ie;
- Information on soils, geology and hydrogeology in the area available from www.gsi.ie;
- Information on the status of EU protected habitats and species in Ireland (NPWS, 2019a, 2019b and 2019c);

[6] Definitions of conservation status of natural habitats or species, integrity and significance used in this assessment are defined in accordance with 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (European Commission, 2018).

[7] March 2021, Office of the Planning Regulatorhttps://www.opr.ie/wp-content/uploads/2021/03/9729-Office-of-the-Planning-Regulator-Appropriate-Assessment-Screening-booklet-15.pdf (OPR 2021)

[8] A priority habitat is one in danger of disappearance and for which there is a particular responsibility to conserve

- A search of the Galway Co Council websites for planning applications with trial hole data, bat survey data, water quality data, water tracing data within 10 km of the project in the last 10 years, and search developments in the Project catchment to assess potential in combination effects
- NPWS publication; The development of methodologies to assess the conservation status of limestone pavement and associated habitats in Ireland (Sue Murphy & Fernando Fernandez Valverde (2009))
- Northern Ireland Habitat Guide Limestone Pavement (Dept of Agriculture, Environment and Rural Affairs)
- Google street view, Ordnance Survey and Bing Maps
- Ordnance Survey Historical aerial maps
- Engineering drawings for the activity
- NPWS (2022) Irish Wildlife Manuals 134; Bat Mitigation Guidelines for Ireland -V2 (Ferdia Marnell, Conor Kelleher & Enda Mullen)
- Article 17 reports on the Natura sites in the catchment of the activity (www.npws.ie)
- Groundwater catchment data from EPA file D0195-01, prepared by the EPA in their consideration of the Gort wastewater discharge licence application, including the Stage 1 Screening (Appropriate Assessment) provided with the application, referring to the catchment status of surface water and ground water in the coincident receiving catchment of the subject application.
- National and European Court judgements on interpretation and implementation of the Habitats Directive.

3.4 Zone of Influence

The 'zone of influence' (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the project and associated activities. The zone extends beyond the project site area, particularly where there are hydrological links via surface water or ground water. The area of the zone varies for different ecological features, depending on their sensitivity to changes in the local environment and their mobility (ex situ[9] species associated with Natura sites in the vicinity). A distance of 15km is recommended for consideration in guidance documents, but this needs to be evaluated on a case by case basis, using the source-pathway-receptor conceptual risk model.

Defining the ZoI of a project needs a stringent analysis of the scope and characteristics of a project- both during construction and operation of the activity. Impacts associated with the Project, both known and potential have been used to establish the potential zone(s) of influence. This has been undertaken by

- Consideration of the nature and scope of the activities undertaken during construction and operation

[9] Ex situ species refers to species listed as conservation interests for an SAC/SPA whose mobility and foraging habitat extends outside the defined Natura site boundary

- Assessment of the sensitivity of the ecological receptors in the catchment of the Project (including conservation status, sensitivity to disturbance, species core sustenance (CSZ) and foraging zones – particularly relevant to Lesser Horseshoe Bat and Whooper Swan (Species of Conservation interest associated with Coole- Garryland SAC)
- Assessment of potential pathways between the Project and potential receptors, as mapped and traced (groundwater) in published reports for the area

The ZoI for terrestrial habitats is generally considered to be within the red line boundary of the Project and immediately adjoining the site boundary. A direct impact to a terrestrial habitat is confined to the footprint of the development within the site boundary and any ancillary works. The terrestrial habitats adjoining the site boundary must be assessed for potential indirect impacts arising from the activity. Taking a conservative approach, the potential ZoI for European sites designated for terrestrial habitats and species is considered to be 15km, but this is established on a case by case basis using the Source-Pathway-Receptor (SPR) framework. Source refers to the development site and activity on site, including construction and operation of the activity; pathway refers to the connectivity between the site and the conservation interests of designated area (SAC/SPA), which are the receptors.

There are no surface waters within or adjacent to the Project site, so direct surface water hydraulic connectivity is not considered as a potential pathway for impact assessment, or definition of zone of influence.

The site is located close to the defined boundary of the Kinvara- Gort groundwater body, with the eastern boundary of the site defined in the Caherglassaun Turlough Groundwater Body (which is also classified as a groundwater dependent terrestrial ecosystem GWDTE) (See Fig 2). This connectivity is addressed in Sections 3 and 4 of this report. However, the potential ZoI for European sites designated for water-dependent habitats and species has been defined as those sites hydrologically connected to the river systems draining the Project. Thus, potential impacts on downstream European sites in the groundwater catchment is included in zone of influence for the purpose of this assessment. The extensive network of European sites in the geographic catchment of the Project are shown in Figs 1 and 2. It is important to note that the steel works activity is a "dry" activity, with no trade[10] emissions to air or water.

The overall net hydraulic discharge from the subject site (steelworks and dwelling house) is less than that permitted under P01/393 (original permission) when the dwelling house occupancy was considered with population equivalent of 8 full time residents (now 3 residents).

[10] A trade effluent is any effluent which is produced from a commercial or industrial process, and does not include domestic sewage (toilet flushing , hand washing)

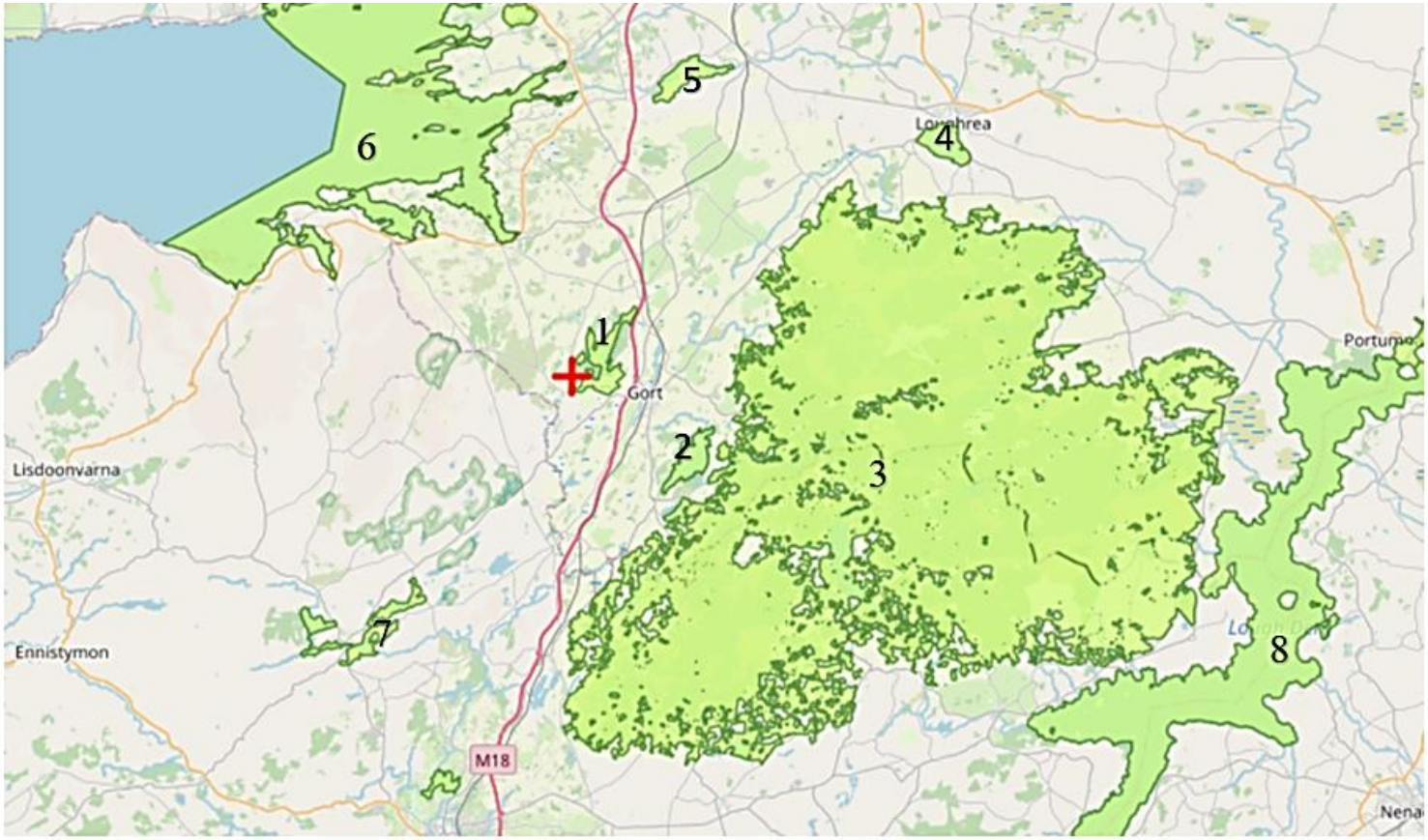


Fig 1; SPA areas in zone of influence of Project with + marking Project Site Location and SPAs as numbered

1.Coole Garryland SPA 2. Lough Cutra SPA 3. Slieve Aughty Mountains SPA 4. Lough Rea SPA 5. Rahasane Turlough SPA 6. Inner Galway Bay SPA 7. Corofin Wetlands SPA 8. Lough Derg Shannon SPA

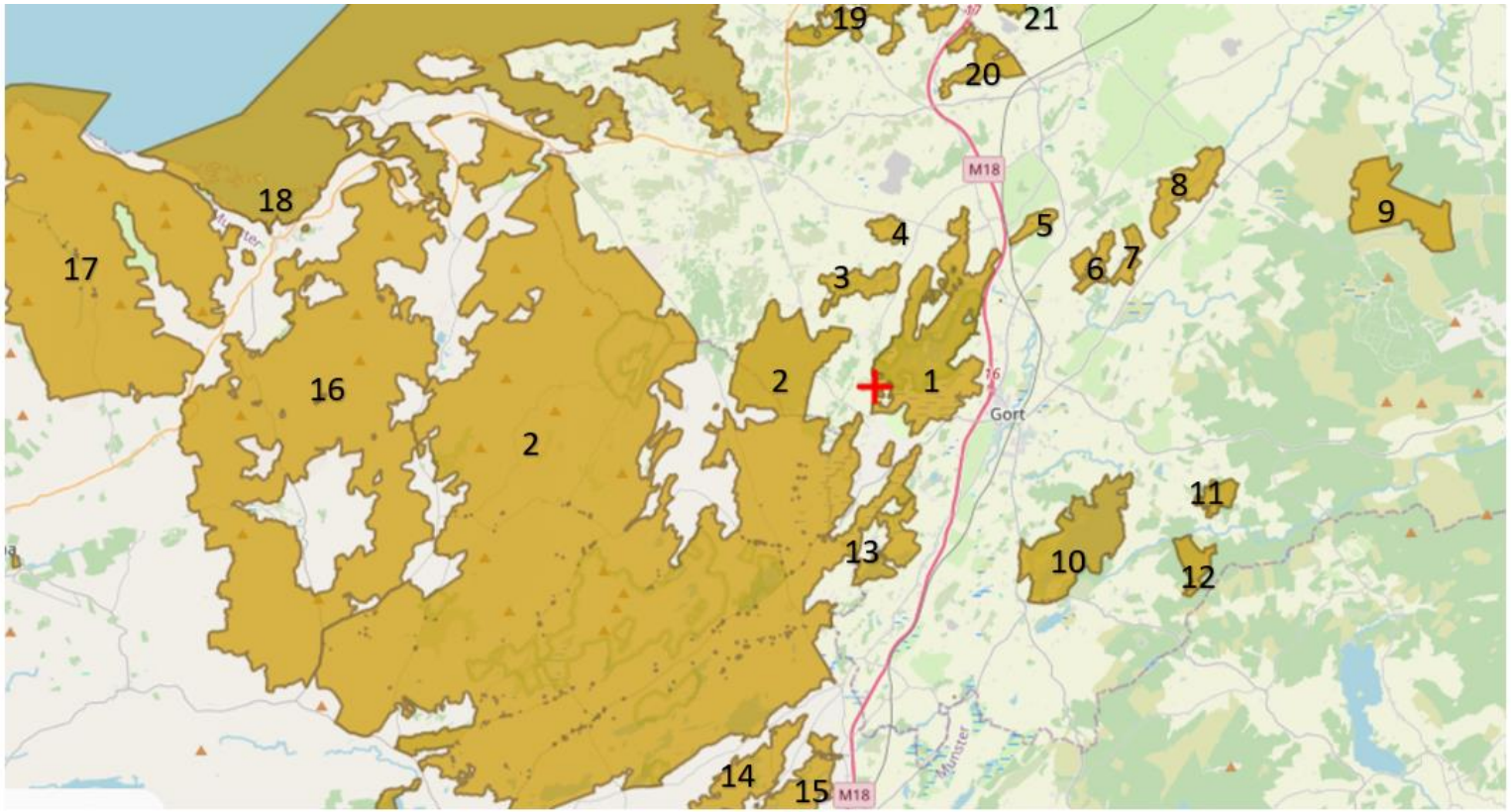


Fig 2. SAC areas in zone of influence of Project with + marking Project Site Location and SACs as numbered

1.Coole-Garryland Complex SAC 2. East Burren Complex SAC 3. Caherglassaun SAC 4. Cahermore Turlough SAC 5.Ballinduff Turlough SAC 6. Carrowbaun, Newhall, Ballylee Turloughs SAC 7. Lough Coy SAC 8. Peterswell Turlough SAC 9. Sonnagh Bog SAC 10. Lough Cutra SAC 11. Drummin Wood SAC 12. Gortacarnaun Wood SAC 13. Tarmon Lough SAC 14. Ballyogan Lough SAC 15. Moyree River System SAC 16. Moneen Mountain SAC 17. Black Head- Poulsallagh Complex SAC 18. Galway Bay Complex SAC 19. Lough Fingall Complex SAC 20.Ardrahan Grassland SAC 21 Castletaylor Complex SAC

3.5 Site Description and works undertaken

3.5.1 Site Description and works undertaken

The site is located c. 4 km west of Gort in the townland of Knockauntouk, which is situated to the south west of the wooded Coole Garryland Demesne. This site lies in an area of open countryside that is punctuated by one-off dwelling houses and farmsteads. Field and roadside boundaries are denoted by either hedgerows or dry stone walls. It is accessed by means of a gated entrance off the L-45160, which runs on a north south axis to the west of the site and which forms part of the local road network to the west of the M18/N18 and to the north of the R460.

The site forms part of the landholding of Mr Coleman Rock (with 20 acres in ownership around the family home). The yard area associated with the steelwork business is in place since 2001. The surrounding landscape is characterised by limestone pavements and dry stones walls. The main body of the site to which this application refers is roughly rectangular in shape, and accessed directly from the established site entrance, off the L45160. This site is slightly elevated above the local road to the west. Otherwise, it is level and it extends over an area of 0.544 hectares. The site accommodates the originally permitted light engineering workshop in its south eastern quadrant (See Fig 4, Chapter 4 and site layout drawing accompanying the application). This shed, denoted as No. 1, has been extended to the front and rear. It also accommodates a wholly new shed, denoted as No. 2, which is sited within the south western quadrant of the site and a storage structure (denoted as No.3) which is sited within the current north western quadrant. A yard area, with portions of sealed surface, lies between these buildings and it extends into the remaining north eastern quadrant. The northern section of the site is an extension of the overall site area, as permitted under P01/393.

To the west of the southern portion of the site lies the applicant's dwelling house and garage. The site boundaries are generally dry stone walls, which have not been disturbed.

The sheds, as constructed, were selected in the belief that the agricultural buildings were associated with the landholding and were exempted development. The intended use of the sheds as part of the steel fabrication business is clear, but the applicant operated on the basis that the agricultural style sheds were exempted development.

3.5.2 Current Application

The applicant seeks leave to apply for substitute consent, under Section 177 C of the Planning and Development Act 2000 (as amended) for retention of the following items:

- The extension to the originally permitted light engineering workshop (Shed No. 1). Part of this extension is a workshop and part is a storage area. The former has a floorspace of 86 sqm and the latter has a floorspace of 120 sqm,
- The new engineering workshop (Shed No. 2), which has a floorspace of 455 sqm, which is used only as storage area for equipment, pending the removal of this dis-used equipment off site.
- The additional storage structure (Shed No. 3), which has a floorspace of 340 sqm, This Shed No 3 is in use as an operational storage unit for fabricated steel, and

- Associated site works, including a turning yard area to the east of Shed 3.

The extension to Shed 1 provides a covered work area for employees in the facility. The extended space is required to cater for the longer steel beams processed at the facility.

Shed No. 2 is elongated in form and it has eaves and ridge heights of 3.331m and 4.310m, respectively. A higher portion of this shed, towards its centre, has eaves and ridge heights of 6.250m and 7.400m, respectfully. The northern end and the northern half of the eastern elevation are open. This shed was constructed to house a sand blasting and coating element for the steel fabrication workshop. This process has been discontinued, as a mitigation measure to ensure no adverse impacts on the surrounding environment. Steel is galvanised off site, to meet the stringent requirements of EN1090. Shed No. 2 currently functions to store the shot blasting and coating equipment, pending its removal from the site. A suitable purchaser, or disposal outlet is currently being sought for the equipment

Shed No 3 The storage structure has a mono-pitched roof that rises from 3.9m to 6.3m. Its eastern elevation is open. This unit is an essential functioning element of the workshop, as loading and unloading of steel beams, and timber (for roofing) requires this building height for the safe working of the loading and offloading of goods.

The extended yard area on the site serves for turning of trucks and facilitates the safe loading and offloading of steel and trusses on arrival and for movement off the site. Appropriate space around the delivery vehicles is required for the safe operation of a fork lift truck in this activity All the buildings are clad throughout in bottle green coloured, corrugated steel sheeting, resembling farm buildings

There is no change in the number of employees on the site, and no significant change in the volume of orders processed in the steel fabrication workshop. There is no significant intensification of steel fabrication work on site and the facility continues as a steel fabrication workshop, permitted on site under P01/393.

Construction works on site required provision of concrete slab bases for the sheds (829m^2) and steel works to provide the structures, resembling agricultural buildings.

3.6 Surveys undertaken

A noise monitoring survey was undertaken at the activity on 30/05/2018 during the operation of the sandblasting and coating activity, which corresponds to the highest level of noise emissions arising from the activity (Appendix A). The daytime LA90 measurement in the field approximately 90m northwest of the sandblasting shed was 41.9 dB (with extraneous noise sources removed , such as traffic on the adjacent L4510 road) which is less than the EPA guideline limit for areas with low background noise (i.e., 45 dB LAr,T). This is the location of the nearest neighbour to the facility.

Dust deposition observations were made during all site visits. Observations were made on all surfaces around the site, for evidence of dust deposition on steel, roof surfaces, vehicles parked, and disused equipment around the site. No evidence of dust deposition was noted on any such visit. A summary of site visits is provided in the Stage 1 Appropriate Assessment Screening report (Section 4.3.8). This includes a night survey visit (not pre-advised, (18/03/2023) to assess night lighting of the facility.

The data generated from these surveys has provided essential information on the operation of the activity at the site, including an assessment of potential emissions arising from the activity and the potential for the activity to impact on the receiving environment. Several site visits were unannounced to ensure no pre-visit clean-up was undertaken, or works scaled down to minimise emissions (including noise emissions). The survey data is useful in the assessment of the actual ongoing impact of the activity and is adjudicated in the context of the writer's experience in reviewing such activities over a thirty year period.

4. Screening for Appropriate Assessment (AA)

4.1 Introduction

Stage 1 Screening (see Section 2.2 above) determines whether a Stage 2 appropriate assessment (Natura impact Statement) is necessary by examining:
1. Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and
2. The potential effects of a project or plan, either alone or in-combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant (DoEHLG, 2009 (Rev 1 2010).

The proposed development is not directly connected with or necessary to the management of any European site so screening for appropriate assessment is required.
Screening for AA involves the following:

- Description of the Project, including works undertaken at the site of the development
- Identification of Natura 2000 sites within the zone of influence of the project
- Description of individual/cumulative impacts associated with the development
- Assessment of significance of any impact identified above on site conservation objectives
- Exclusion of sites where it can be concluded that there are no significant effects

4.2 Description of project

4.2.1 *Site location and physical setting*

The site is located (marked with red X in Fig 3) at Knockauntouk, Gort, accessed via a local road L45160, and details of the site physical setting are outlined in Table 1.

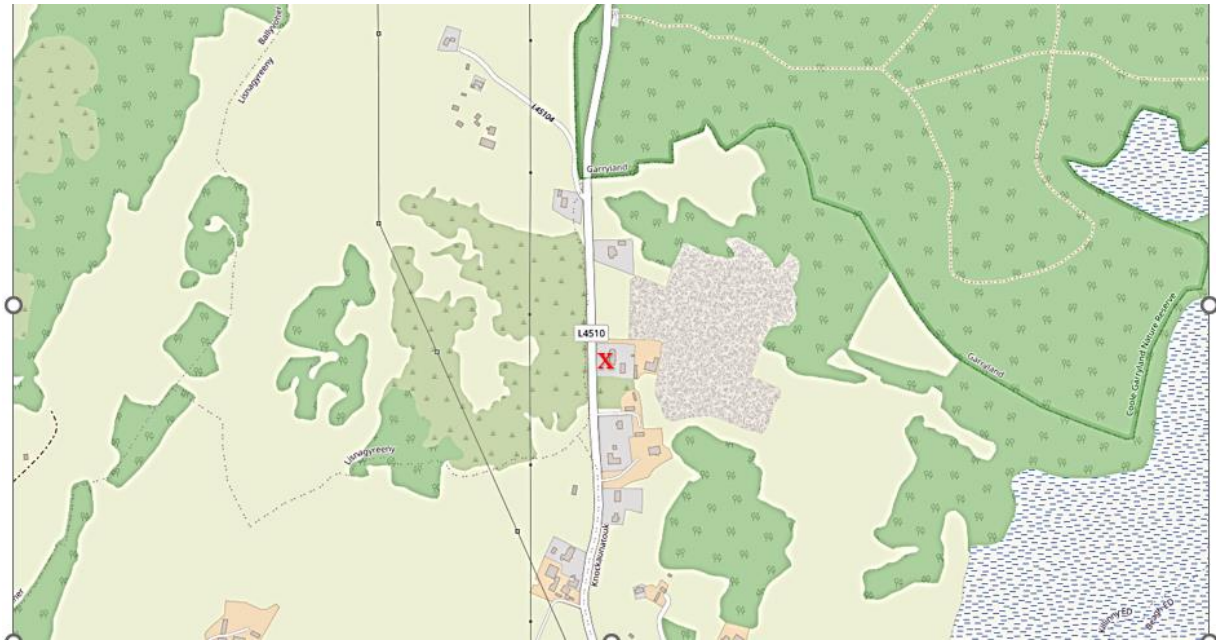


Fig 3; Site location map (www.catchments.ie) (with subject site marked (red) X)

The site is slightly elevated above the local road to the west. Otherwise, it is level and it extends over an area of 0.544 hectares. The site layout is provided in Fig 4.

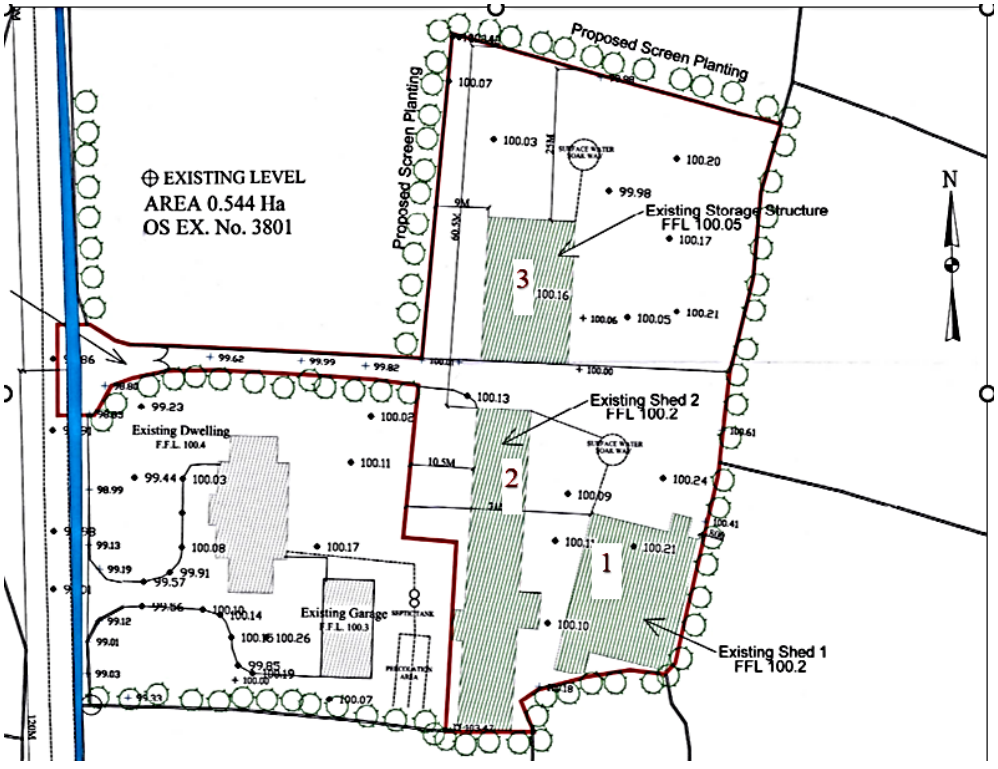


Fig 4 Existing site layout with sheds numbered 1, 2 and 3, from planning drawings

The site accommodates the originally permitted light engineering workshop in its south eastern quadrant. This shed, denoted as No. 1, has been extended to the front and rear. It also accommodates a wholly new shed, denoted as No. 2, which is sited within the south western quadrant of the site and a storage structure (denoted as No.3) which is sited within the north

western quadrant. A yard area, with portions of sealed surface, lies between these buildings and it extends into the remaining north eastern quadrant. The site access from the local road (L45160) was established under the earlier permission (P01/393) with minor improvements undertaken for road safety in 2018. This access enables entry and exit of delivery vehicles to the workshop site, with no queueing on the public road and with no additional improvement works required.

The developments on site (house and workshop) are served by a septic tank, installed under P01/393. Surface water drainage is to soakaways on site. No other discharges to groundwater are identified from the facility and no washing/ process water (i.e. trade effluent) is generated.

Information regarding site location, hydrology, geology, hydrogeology and site designations as collated are accessible at https://gis.epa.ie/EPAMaps/Water providing details of overall connectivity with the surface water, groundwater and marine catchments in the area of the site. Numerous site visits have been undertaken between 2017 and 2024

Feature	**Details and Comments**
Topography	The site (total area 0.544 ha, within which the dwelling house and garage occupy 0.36ha) slopes gently in an easterly direction from the local road. The dominant habitat on site is wet grassland (BL3[11]). The site boundaries are defined by dry stone walls. Lands due east of the site are dominated by exposed rock (ER2), classified as shattered limestone pavement[12]
Geology	Soils on the site occur in pockets, as documented[13] and ground truthed
Hydrogeology	Site is underlaid by a karst aquifer (Rkc). Groundwater catchment IE_WEH_G-002, Kinvara Gort, rated as good status. Located in the hydrometric area of Galway Bay South East (Area 1268 km^2). Dye trace proven flow direction is established, indicating flows from the site move in the Kinvara Gort groundwater body, rather than Vulnerability rated extreme with rock at or near the surface. The boundary for the GWDTE-Caherglassaun Turlough (SAC000238) (IE_WE_G-0091) groundwater body is due east of the subject site (Fig 5).
Hydrology/Ecology	WFD[14] listed surface water body data indicates the marine catchment is the Galway Bay South East catchment. No surface waters located around the site. Eastern boundary of the site is shared with the Coole Garryland SAC.

Table 1; Site physical setting (information from https://gis.epa.ie/EPAMaps/Water).

[11] A Guide to Habitats in Ireland by Julie A. Fossitt, BL3 Buildings and Artificial Surfaces
[12] EU Annex I Habitat Limestone Pavement (8240), Priority Habitat
[13] Geological Survey of Ireland (GSI)
[14] WFD Water framework directive as implement in Ireland through River Basin Management Plans in six year cycles. This approach allows for the assessment, planning, implementation and review at regular intervals. Irelands current approach to water quality management has developed over the first and second cycles of river basin management plans (RBMP) and will continue to evolve under the third cycle of implementation of RBMP 2022-2027 with the ongoing objective of protecting and improving water quality locally and nationally

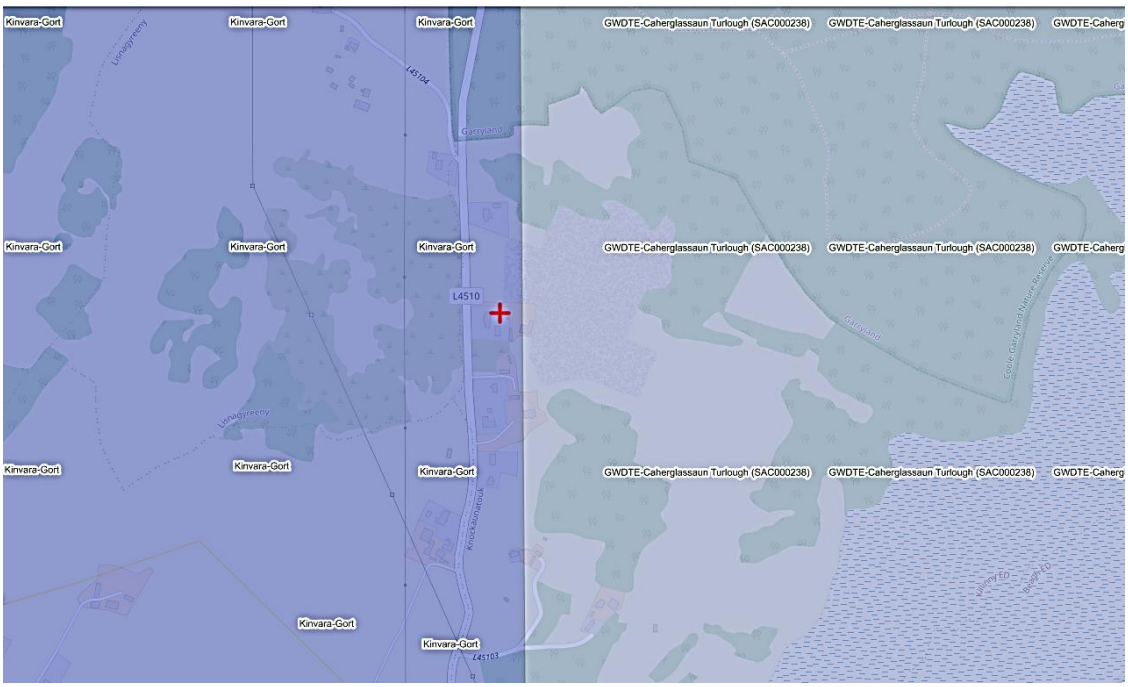


Fig 5; Site location marked with red +. Groundwater body IE_WE_G_002, Kinvara Gort to the west and Caherglassaun Turlough to the east

4.2.2 Developments on site to which the retention application refers

The on site development works (see Fig 4) on the subject site comprise

- The extension to the originally permitted (P01/393) light engineering workshop (Shed No. 1). Part of this extension is a workshop and part is a storage area. The former has a floorspace of 86 sqm and the latter has a floorspace of 120 sqm,
- The new engineering workshop (Shed No. 2), which has a floorspace of 455 sqm, which is used only as storage area for equipment, pending removal of equipment off site
- The additional storage structure (Shed No. 3), which has a floorspace of 340 sqm, This Shed No 3 is in use as an operational storage unit for fabricated steel, pending completion of a full order, prior to its movement off site, and
- Associated site works.

No change in site entrance is associated with the works undertaken at the site. No change in the scope of light engineering works at the site is proposed. There is no signage associated with the site. Permission was granted for the steel fabrication workshop on site and the dwelling house, with associated septic tank serving both elements of the development under P01/393. No change in the use of the facility or the population equivalent is associated with the current application. The material character and building finishes are designed to integrate into the rural landscape as farm buildings and correspond with other such existing farm buildings in the area. The facility operates a standard working day, with no night time emissions of light or noise.

The only activity undertaken at the facility is the cutting and preparation of steel. The equipment provided for shot blasting and spraying of steel has not been used since 2020. This sand blasting and coating equipment was purchased and housed on site in 2016. However, the

use of this equipment was discontinued in 2020, and the applicant is currently engaged in removal of the equipment from the site. The steel fabrication workshop is not open to the general public, there is no signage associated and all work on site is via contractor order. Steel is purchased and cut to size in the workshop on site, moved off site for galvanising and then returned to the site and stored on site pending completion of the load, and moved from the site to the customer site, as completed. No significant parking requirements arise. Steel delivery and collection vehicles are enabled to move from the local road, on arrival and park on site during loading. Site layout is shown in Fig 4.

The traffic volume associated with the proposed facility is very low and does not give rise to any significant change in local road traffic volumes (see TTRSA Road Safety report, October 2016 Appendix B). No change in output or employee number has taken place since the completion of this report.

Potable water at the site is provided by a bored well on site, serving the dwelling house, with no drawdown required for steel fabrication work. No trade effluent is generated from the activity. Domestic effluent discharges to a septic tank permitted under the original site permission P01/393 (Galway County Council)

In 2016, the yard area of the business (north eastern site quadrant Fig 4) was extended to facilitate movement of delivery vehicles, sand blasting and spraying of steel beams (discontinued), and storage of steel beams in an open sided shed (Shed No 3). This (new) yard area abounds the original business yard area, as defined under P01/393, and is within the land holding of R & K Engineering.

During the site preparation works, rocks on this area of the site were cleared. The habitat status of the rock cleared was considered by Galway Co Council as potentially limestone pavement (Annex I priority habitat[15]). However, anecdotal evidence from the site owner (supported by aerial views of the site) indicates the rock in this area of the site was deposited during the construction works for the dwelling house/yard/workshop associated with the permitted works, under P01/393. This is corroborated by the nature of the material moved in 2016- being loosely aggregated on site and not requiring invasive mechanical rock breaking activity. The overall effect of the works to the original Shed No 1, and provision of Shed No 2 is an increased density of sheds within the existing site footprint. The Shed No 3 is in the lands adjacent to the existing business, and accessed from the same access road to the L45160 local road. From the roadside, the building complex resembles farm buildings, and is visible (only) from a 100 metre section of the adjacent local road, when travelling in a north to south direction.

As the subject site works are now completed, the site physical surveys focussed on potential damage to the habitats and species at the site and associated with the Coole Garryland SAC, the boundary of which is located on the eastern side of the R & K Engineering development site. This includes consideration of various site inspections undertaken in 2015 by Galway Co Council and NPWS warden[16]

[15] A priority habitat is one in danger of disappearance and for which there is a particular responsibility to conserve

[16] Environmental Technician (David O Connell, Galway Co Council) called to the site in April 2015, on foot of a third party complaint from Mr Rocks neighbours (on the northern side of the land holding). Mr O Connell made no observations regarding the limestone pavement habitat, or works being undertaken at the site. Mr Rock also

Descriptor	Development works undertaken
Demolition/Vegetation removal	No requirement for demolition. Further assessment required in the event of demolition works being required. Existing site entrance continues in use irrespective of the buildings on the site. No tree removal required for the subject site works undertaken. Rock clearance on the extended yard area. Anecdotal evidence indicates this rock was excavated from the construction works associated with P01/393 (house, garage and workshop construction)
Size and scale	Site area is total area 0.544 ha, within which the dwelling house and garage occupy 0.36ha. 829m^2 concrete slab laid with agricultural style buildings provided as Shed 1 extension, Shed 2 and Shed 3, and associated yard area to east of Shed 3.
Distance from Natura site/s, or key features of the site	See Section 4 for full details and descriptions. Nearest site is the Coole Garryland Complex SAC and SPA, located on the eastern boundary of the site.
Resource requirements	No groundwater or surface water abstraction. No ongoing resource requirements during operation. Concrete imported for construction of the shed bases.
Emissions	No deleterious emissions of environmental significance during operation of the activity. Domestic toilet facilities (served by septic tank on site as granted under permission P01/393) used by 2 day time employees at the steel fabrication activity. No other loading to the unit is associated with the development. No change in site lighting associated with the development works undertaken. No night lighting observed.
Excavation requirements	Site clearance works were undertaken in construction of Shed No 3, and yard on the open eastern side of Shed 3, assessed in the context of potential interference with habitats of the adjacent Coole Garryland SAC.
Duration	Steel fabrication workshop is an ongoing activity

Table 2; Descriptors of potential pollution sources associated with the development

4.3 Identification of the European Sites within the likely Zone of impact

4.3.1 Definition of zone of influence

Current guidance informing the approach to screening for Appropriate Assessment defines the zone of influence of a proposed development as the geographical area over which it could affect

consulted with the NPWS warden (Mr R Stephens) on 9th March 2015 for the area prior to the clearing of the yard area. The NPWS warden visited the site and no concern was raised regarding limestone pavement habitat

the receiving environment in a way that could have significant effects on the Elements of Conservation Interest (SAC) and Qualifying Interests (SPA) of a designated Natura site.

It is recommended that this is established on a case by case basis using the Source-Pathway-Receptor (SPR) framework. Source refers to the development site and activity on site, including construction and operation of the activity; pathway refers to the connectivity between the site and the conservation interests of designated area (SAC/SPA), which are the receptors. The European sites that could be connected to the project via SPR linkages are first identified. Following on from this approach, the methodology used to identify which European Sites are within the likely Zone of Impact of the subject site employed;

- Using up to date GIS spatial datasets for the European sites and water catchments (available from www.npws.ie[17] and www.epa.ie (and www.catchments.ie). This spatial data and catchment definition is used to define hydrological connectivity between the subject site and European sites, particularly those whose qualifying interests are linked to surface water or groundwater.
- Cross checking all European sites within a 15 km radius of the subject site, looking at connectivity of the designated sites with the subject site, and taking account of the nature and scale of the development on site including lighting
- Consideration of existing EPA reports specifically referencing the catchment of Caherglassaun turlough and Coole turloughs
- In relation to Special Protection Areas, no specific Irish/European guidance is provided. Scottish National Heritage Guidance (*Assessing Connectivity with Special Protection Areas)(2016)* was consulted. This guidance takes account of the distance species may travel outside the SPA boundary, including their foraging areas.
- Article 17 of the Habitats Directive requires a report to be sent to the European Commission every 6 years following an agreed format. The Article 17 report provides updated information on status and trends of species populations or habitats and on information on main pressures and threats, informing the conservation status of species and habitats. The reports for the period 2007-2012 and 2012-2019 were consulted in relation to the network of European sites in the vicinity of the subject site.

As can be seen in Fig 6, the subject site is located adjacent to the Coole Garryland Complex SAC (Site Code 000252) and 680 metres south west of the boundary of the Coole Garryland SPA (Site Code 004107).

[17] Using Site Synopses and Conservation Objectives for the sites

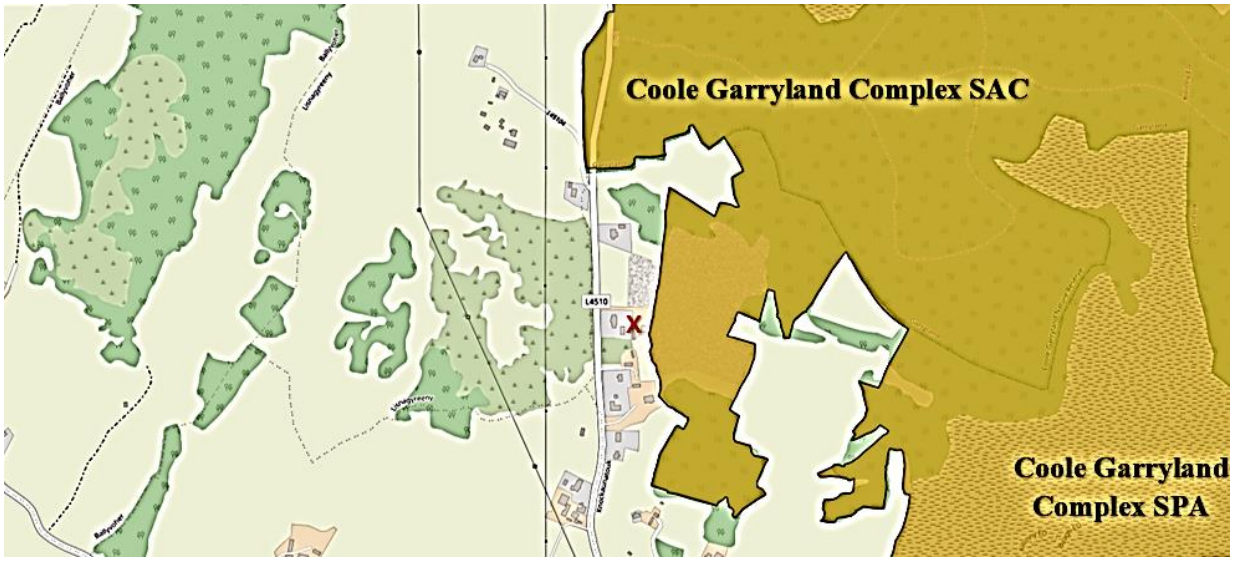


Fig 6; Subject site location marked with red cross, and nearest Natura sites

4.3.2 Hydrological Connectivity between the subject site and European sites

The groundwater catchment associated with the subject site is shown in Fig 5, indicating the site is located in the Kinvara Gort groundwater body, IE_WE_G-002, rated as good status, and in the hydrometric area of Galway Bay South East (Area 1268 km^2). There are no surface water channels in or around the subject site. Dye traced proven flow direction is established, indicating flows from the site move in a north westerly direction in the Kinvara Gort groundwater body (Kilchreest sub-catchment). There are also a number of traced underground water connections east and west of the application site. The closest of these include underground connections approximately 222m west and 621m east of the application site (GSI Groundwater Data). The proven flow movements are shown in Fig 7, with the Project site being some 2km south west of the nearest point in this flow regime.

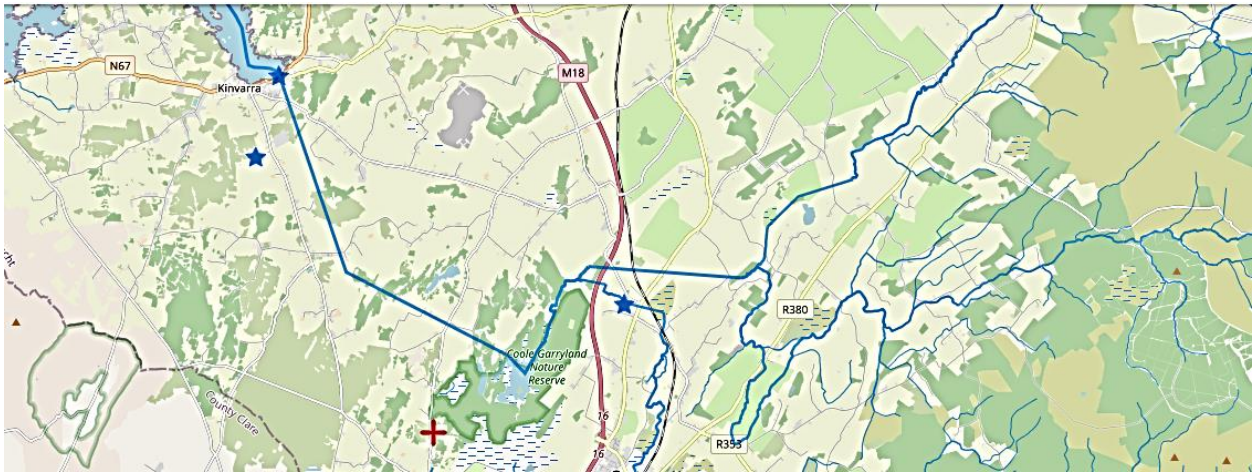


Fig 7; Indicative flow network for Kilchreest sub-catchment (29K02) (www.epa.ie). Red cross marks location of the subject site

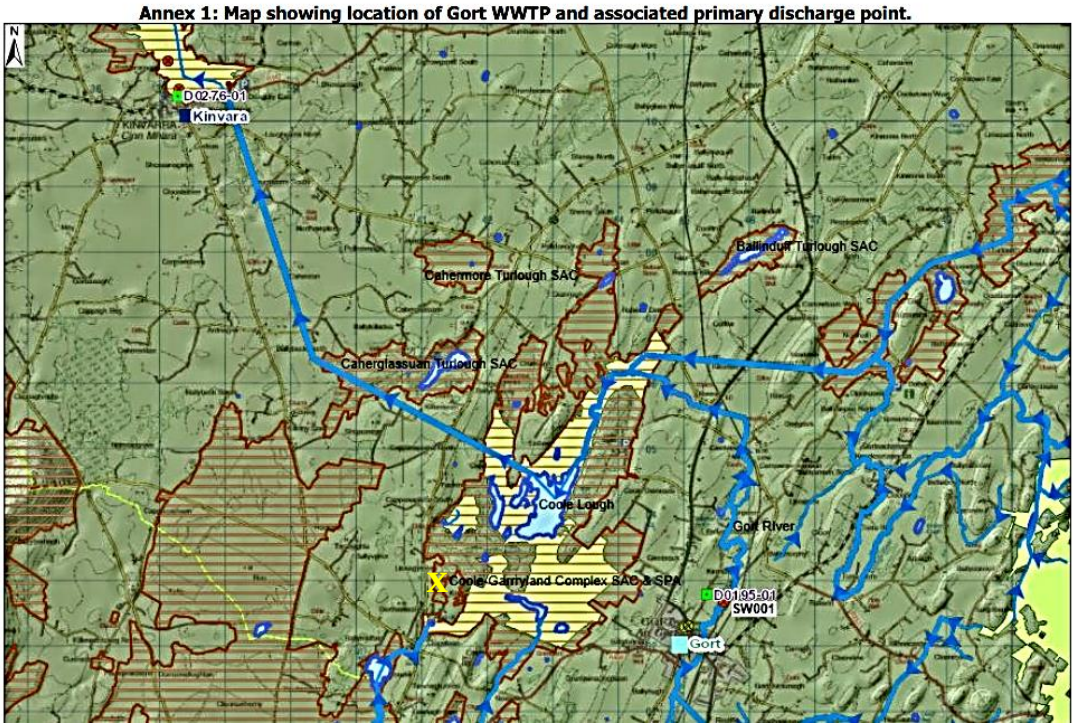


Fig 8; Extract from EPA report on D0195-01, showing flows in the catchment due north of subject site (marked with yellow X in the above map)

The groundwater and surface water flow in the Kinvara- Gort groundwater body is indicated clearly in the 2014 report prepared by the EPA in their consideration of the Gort wastewater discharge licence application (D0195-01) (Fig 8), which concluded no potential impact associated with the Gort discharge to the catchments of Caherglassaun turlough and Coole Lough. The Project site is located some 2km south of the defined flow network for Kilchreest sub-catchment (as shown in Fig 7), flowing to Kinvara Springs. The Kinvara Gort Groundwater body area is 256km^2 occupies the area between Kinvara Gort lowlands, with extensive karstification throughout. Significant agricultural development is associated with the land use throughout the catchment.

In this context, and applying the source-pathway-receptor model of risk assessment, it is reasonable to conclude that the use of septic tank on subject site has not resulted and is not *likely* to result in *significant* impact on habitats in downgradient European sites. In this context "likely" means a risk or possibility of effects occurring that cannot be ruled out based on objective scientific information and "significant" means an effect that would undermine the conservation objectives of a Natura site, either alone or in combination with other plans and projects (OPR 2021). This conclusion is reached taking account of two non-resident employees at the steel fabrication workshop and two employees (Mr Rock and son) are residents of the dwelling house on site, using the house toilet during the working day.

The construction works on site are typical of agricultural building construction and would not give rise to any significant discharge to groundwater, or long term noise emissions.

The emphasis on "likely" and "significant" echoes the requirements of the Article 6 (3) of the Habitats Directive and underpins the Appropriate Assessment process. Taking account of the

opinion associated with C258/11, including the nature and purpose of the screening process as set out by Advocate General Sharpston (in the opinion published), and in particular to the paragraphs 47-49, we refer to paragraph 48 in particular, and quote

The requirement that the effect in question be significant exists in order to set down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3) activities on or near the site would risk being impossible by reason of legislative overkill.

Paragraph 46 of the opinion (258/11) refers to the word "likely" and indicates "the question is simply whether the plan or project concerned is capable of having an effect". The conclusion can reasonably be reached that the septic tank discharge from the premises (permitted in 2001) is not likely to have a significant impact on the downstream catchments. The ongoing management of the unit is a feature of all such installations, and is undertaken not with the aim of reducing the negative effects of a project on the designated site/s concerned, but as standard features required for all projects of the same type. This is not considered a mitigation measure (European Court ruling C-721/21, dated 15th June 2023 (referring specifically to "the fourth question", Paragraphs 44-52 of this judgement).

The sand blasting and spraying activity is discontinued at the site. The discontinuation of this activity was recommended to the applicant as a precautionary mitigation measure, to ensure no ongoing tonal noise emissions and ensure no process water arises or is discharged from the site. It can reasonably be concluded that no significant downstream impact on surface water or groundwater arises from the subject site.

Storm water from the sheds is discharged to ground soakaways, separated from the septic tank and unlikely to impact its associated percolation area. This water is not contaminated and is not likely to give rise to any impact on the downstream European sites.

4.3.3 Impact on Terrestrial habitats in the adjacent SAC

The subject site is outside the Coole Garryland Complex SAC/SPA site areas so that direct effects on the qualifying habitats of the SAC/SPA are not considered likely in this screening report. There has been no incursion into the SAC/SPA areas. Exposed rock was cleared on the site of the extended yard area in March 2015, adjacent to Shed 3 and outside the SAC area. This yard area has been examined in detail for evidence of interference with or removal of Limestone Pavement priority habitat.[18]

The NPWS GIS data for the area was also consulted to provide habitat information on the subject site *prior* to development works (See Fig 9). The GIS data indicates limestone pavement habitat (8240*) with Dry Heath (4030), which is frequently found associated with limestone pavement. It is important to note that site specific survey data is not available for the

[18] By reference to *EU Habitats Directive Interpretation Manual (Anon. 2007) description of Limestone pavements (8240),* the NPWS publication; *The development of methodologies to assess the conservation status of limestone pavement and associated habitats in Ireland* (Sue Murphy & Fernando Fernandez Valverde (2009)), and, *Northern Ireland Habitat Guide Limestone Pavement* (Dept of Agriculture, Environment and Rural Affairs)

area, but that the map viewer data indicates areas which are likely to support the habitat. However, no reliable photographic information or ecological survey data on the physical status or vegetative cover of the habitat is available. The broadly mapped areas do not automatically infer the complete coverage of the area with the habitat. Several such mapped areas have been recorded, but the extent of limestone habitat therein varies from none to extensive habitat area

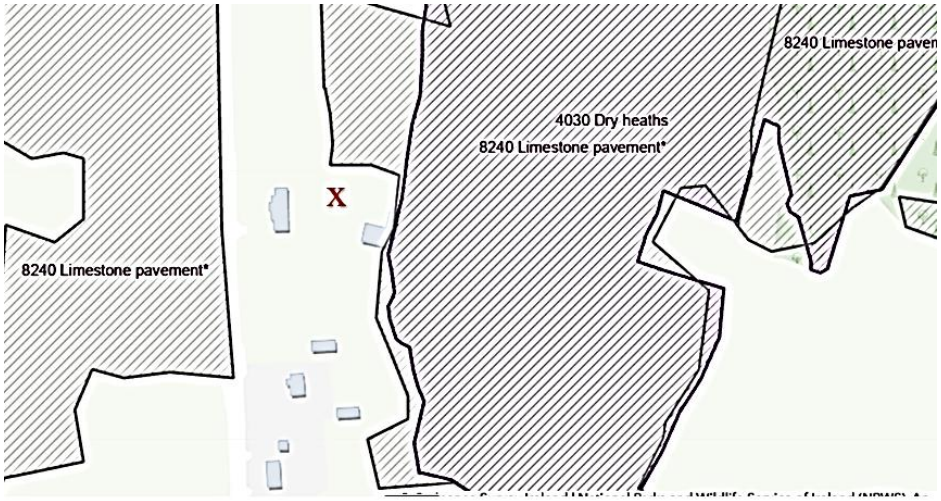


Fig 9; NPWS GIS mapping of habitats in the area. Project site marked with red X

The blue arrows drawn on Fig 10 in the lands due north of the subject site (aerial view of the site) show lines along which potential karstified limestone bedrock outcrops can be discerned. The area circled with a red circle on Fig 10 shows exposed bedrock. The embankment on the eastern boundary of the "new" yard area (see Fig 11) shows the nature of the bedrock prior to any development works. This area was examined in detail on April 26th 2018, to assess evidence of limestone pavement habitat likely to be associated with this yard area. The examination of the embankment area on the eastern boundary of the unauthorised yard area of the subject site (Fig 11), shows exposed fractured limestone bedrock, but not in the typical clint/gryke pavement formation or shattered limestone formation, classified as limestone pavement. No incursion into the SAC area is noted. The aerial view also indicates that house sites adjacent to the local road are cleared of exposed rock. This supports the view that the rock material removed from the unauthorised yard area is highly likely to have been generated from the house and shed construction under P01/393. The area is not readily identifiable as priority limestone pavement habitat. This is further evidenced by site visits from Galway Co Council staff and NPWS warden in the area (see below Section 4.3.4 below). Additional site photographs are provided in Appendix C.

Fig 10; Aerial view of Project site prior to Shed 3 and yard construction works

Fig 11; Bedrock outcrop in area adjacent to red ringed area in Fig 10

4.3.4 Site visits in 2015 and Derogation application

- On 9th March 2015 Mr Rock consulted with the NPWS warden (Mr R Stephens) for the area prior to the clearing of the yard area. The NPWS warden visited the site and no concern was raised regarding limestone pavement habitat. Text messages to this effect have been examined. Clearly there was no intention on the part of the applicant to cause disturbance to the limestone pavement habitat.
- Mr Rock advises that a site inspection was undertaken (April 2015) by an Environmental Technician (David O Connell, Galway Co Council), on foot of a third party complaint. Mr O Connell made no observations regarding limestone pavement habitat on the site or works being undertaken at the site. The yard area was being cleared at that stage. No enforcement notice was issued on the activity until April 2016.

- Mr Rock's observation of the importance of the Limestone pavement habitat and the proximity to the SAC is evidenced from an application in 2011 (File Reference NA0156, see Appendix D to this report) requesting a derogation to instal a wind turbine adjacent to the site.

In view of the scale of works involved, the current evidence on the site (as shown in Figs 10 and 11), the evidence from the previous derogation application, and no further action taken on foot of separate site visits by Galway Co Council and NPWS warden – there is very limited evidence of the disturbance of limestone pavement habitat on the subject site, other than the NPWS GIS mapping, which was not ground truthed to support the mapping.

The Version 2 Conservation Objectives publication[19] provides mapped areas of limestone pavement habitat in the Coole Garryland SAC (Map 6, citation reference 18 below). This revised map indicates the area of lands adjacent to the subject site on the eastern boundary as "potential limestone pavement". This 2024 conservation objectives document (limestone pavement) refers to the findings of the Turloughs: Hydrology, Ecology and Conservation (Edited by S. Waldren)[20] indicating loss of limestone pavement habitat only to the north of Garryland turlough (see Page 689 of 884).

Clearly, there is no direct effect on the limestone pavement habitat of the adjacent SAC, and loss of this priority habitat in the area of the subject site outside the SAC is very unlikely. There is no evidence of any incursion into the SAC habitat area, or destabilisation of the adjacent habitat, or any impact on the flora of the habitat on the site. Overall, it can reasonably be concluded that the R & K Engineering site works did not impact directly on the limestone pavement habitat of the SAC area, and is very unlikely to have interfered with this priority habitat outside the SAC area.

4.3.5 Potential Impact on Lesser Horseshoe Bat (roost and foraging habitat)

Rhinolophus hipposideros (Lesser Horseshoe bat) is a qualifying interest for the Coole Garryland Complex SAC (and East Burren Complex SAC), which houses a nursery roost of international importance for this species. A building (Garryland Lodge, Fig 12) has been renovated specifically as a bat roost and Lesser Horseshoe bat numbers have exceeded 150 in summer time since 2017 and reached 219 in 2021[21]. The building is also used as a hibernation roost with numbers varying depending on the weather, but averaging 40 bats over the last 5

[19] Citation: ISSN 2009-4086 Series Editors: Maria Long and Colin Heaslip NPWS (2024) Conservation Objectives: Coole-Garryland Complex SAC 000252. Version 2. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

[20] This report details the findings and recommendations of a multidisciplinary project to investigate the hydrology, ecology and conservation status of Irish turloughs, temporary lakes in karst limestone. The project was funded by National Parks & Wildlife Service, with additional funding for Nova Sharkey's PhD project provided by the Environmental Protection Agency. The project was carried out by Principal Investigators and Researchers from the Departments of Botany, Zoology, Geology, Civil Structural and Environmental Engineering, and the Centre for the Environment at Trinity College Dublin.

[21] Extract from NPWS Site Synopsis, Coole Garryland Complex SAC *Garryland Lodge- which has been renovated specifically to make it suitable for use by bats. Lesser Horseshoe numbers have exceeded 150 in summer time since 2017 and reached 219 in 2021. The building is also used as a hibernation roost with numbers varying depending on the weather, but averaging 40 bats over the last 5 winters (2017–2021)*

winters (2017–2021). The restoration works on the lodge to provide the optimal conditions for the maternity roost have been extremely successful and the roost is now considered a long term stable roost, both as a maternity roost and a summer roost for the Lesser Horseshoe Bat species. The lodge is very important in the North Gort area, particularly during flood events, as caves used by the species for roosting may flood. The entire population of the species in the area North of Gort is estimated at 400, so that this roost caters for over half the population of this area.

The subject site is located some 550m south of the Garryland lodge roost (Fig 12), so that any potential direct or indirect impact on this qualifying interest of the Coole Garryland SAC must be considered. The letter X marks the approximate location of the Garryland lodge in Fig 12, and the letter Y marks the subject site location

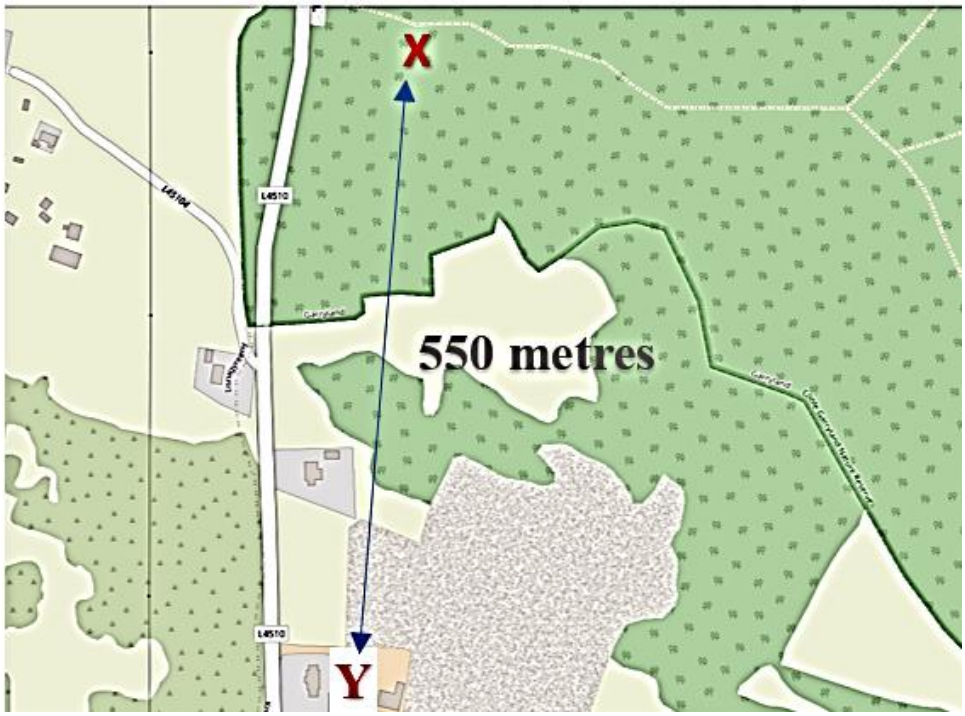


Fig 12; Subject site (Y) relative to the Garryland lodge roost (X) (550m)

The favourable conservation status of a species (for which an SAC is designated) is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long -term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis

The increase in the Lesser Horseshoe Bat population associated with the Garryland lodge roost since the restoration works on the roost in 2007 clearly evidences the ongoing favourable conservation status of the Lesser Horseshoe bat in the area, and, the reasonable conclusion that

the works at the R & K Engineering site, and ongoing operation of the activity, have not impacted the conservation status of the Lesser Horseshoe Bat. No site works are undertaken at night time and no night lighting of the activity is required. Arising from the proximity of the subject site to the Garryland Lodge, it was decided on a precautionary basis to discontinue all sandblasting and spraying of steel at the facility. This is considered as a mitigation measure to ensure no deleterious emissions of noise (including tonal emissions or high frequency emissions) from the activity.

4.3.6 Potential impact on avifauna in the SPA

Indirect effects of emissions (dust, light, noise) likely to impact avifauna habitats (including foraging habitat) or species for which European sites are designated in the catchment of the subject site are considered. The subject site is located at the western boundary of the Coole Garryland Complex SAC and within 680m of the boundary of the Coole Garryland SPA area (See Fig 6). No evidence of dust emissions from the activity, or dust deposition on receptor surfaces has ever been observed around the activity (2016-2024 site visits by Burke Environmental Services), and noise monitoring undertaken during processing on site indicates noise levels do not exceed normal thresholds observed in agricultural activity (See Appendix A, Noise monitoring, May 2018). Thus, there is no likely emissions such as could give rise to disturbance of nesting or foraging areas for Whooper Swans (Qualifying Interest of the Coole Garryland SPA).

No process waters arise and the consideration of impact of the associated septic tank on downstream water bodies (which could provide nesting, feeding or foraging areas for avifauna) has been included in Section 4.3.2 above. No impact on the receiving aquatic environment is likely, and hence no impact on nesting, feeding or foraging grounds for avifauna is likely.

Fig 13; Birds nest observed in the roof of Shed No. 2 April 2018

An observation made during the site survey on April 26th 2018 was that a bird nest had been constructed in the roof of Shed No. 2, over the sand blasting equipment. This is a reasonable illustration of the level of containment of sound within the activity and the low level of noise arising from the activity (Fig 13).

Arising from this screening exercise a summary of European sites was prepared considering whether the developments at the subject site had potential to have a direct or indirect effect on the designated sites in the zone of influence, or impact on mobile species associated with these sites. Using the source-pathway-receptor framework, the zone of influence of the project where hydrological or aerial pathways could connect the proposed development site to the designated areas have been considered. Table 3 provides a summary of SAC/SPA areas within the zone of influence of the site, using the above methodology to define this zone of impact. The list of designated Natura sites within a 15 km radius of the subject site is provided in Table 3.

Table 3; SAC /SPA areas within zone of influence of the Project site

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Coole Garryland Complex SAC (Site Code 000252) Located on the eastern boundary of the site.	Natural eutrophic lakes; Turloughs*; Chenopodion rubric p.p. and Bidention p.p. vegetation; Juniperus scrub; Orchid rich Calcareous Grassland*; Limestone pavement*, Yew Woodlands*, and Rhinolophus hipposideros (Lesser Horseshoe Bat)	*Detailed conservation objectives for this site were reviewed as part of this assessment and are available on www.npws.ie*	No direct impact on the SAC as the development site footprint is outside the SAC Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded. Similarly, short term use of ready-mix concrete on level site in construction of sheds will not give rise to deleterious discharge to groundwater. No potential pathway for effects on terrestrial habitats for which the site is designated is identified. No interference with the limestone habitat associated with the SAC. The development is located within 500m of the Garryland lodge bat roost (Section 4.3.5). **Potential for impact on the QI species requires further consideration**
Coole Garryland Complex SPA (Site Code 004107) 680m south and east	Whooper Swan (Cygnus cygnus)	*As above*	No direct impact on the SPA as the development site is outside the SPA.The site of the development does not provide suitable habitat for roosting or foraging birds. Based on the consideration of emissions from the activity and hydrological connectivity (Section 4.3.2 above), and that there is no process water discharge from the activity, the potential for indirect impact on the qualifying interests of the SPA can be excluded. This SPA is not in the likely zone of impact, no further assessment required
Termon Lough SAC (Site Code 001321) 3.6 km South Turloughs	Turloughs	As above	No direct impact on the SAC as the development site is outside the SAC. Based on the consideration of hydrological connectivity in Section 6.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded. This SAC is not in the likely zone of impact, no further assessment required

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Caherglassaun Turlough SAC (Site Code 000238) 2.7km North	Turloughs, Rhinolophus hipposideros (Lesser Horseshoe Bat)	As above	No direct impact on the SAC as the development site is outside the SAC Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded. Short term use of ready-mix concrete in construction of shed base would not give rise to adverse impact on waterbody. The development is located just outside the 2.5km foraging limit for the SAC population of Lesser Horseshoe Bat. **Potential for impact on the QI species requires further consideration**
East Burren Complex SAC (Site Code 001926) 2km due north	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp; Turloughs; Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation; Alpine and Boreal heaths; Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco- Brometalia) (* important orchid sites); Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis); Calcareous fens with Cladium mariscus and species of the Caricion davallianae; Petrifying springs with tufa formation (Cratoneurion) Alkaline fens; Limestone pavements; Caves not open to the public; Alluvial forests with Alnus glutinosa and Fraxinus excelsior ; Euphydryas aurinia (Marsh Fritillary); Rhinolophus hipposideros (Lesser Horseshoe Bat); Lutra lutra (Otter)	As above	There will be no direct impact on the SAC as the development site is outside the SAC Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded. No potential pathway for effects on terrestrial habitats for which the site is designated The development is located within the 2.5km foraging limit for the SAC population of Lesser Horseshoe Bat. **Potential for impact on the QI species requires further consideration**

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Inner Galway Bay SPA (Site Code 004031) 8 km North West	Great northern diver, Cormorant, Grey Heron, Light bellied Brent Goose, Wigeon, Teal , Shoveler, Red breasted Merganser, Ringed Plover, Golden Plover, Lapwing, Dunlin, Bar-tailed Godwit, Curelw, Redshank, Turnstone, Black-headed Gull, Common Gull, Sandwich Tern, Common Tern, Wetlands and Waterbirds	As above	No direct impact on the SPA as the development site is outside the SPA. Based on the consideration of emissions from the activity (Section 4.3.5) and hydrological connectivity (Section 4.3.2), and that there is no process water discharge from the activity, the potential for indirect impact on the qualifying interests of the SPA can be excluded. This SPA is not in the likely zone of impact, no further assessment required
Cahermore Turlough SAC (Site Code 002294) 4.4 km North	Turloughs	As above	No direct impact on the SAC as the development site is outside the SAC. Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded This SAC is not in the likely zone of impact, no further assessment required.
Kiltartan Cave SAC 000286 4.5 km North East	Caves not open to the public ; Rhinolophus hipposideros (Lesser Horseshoe Bat)	As above	No direct impact on the SAC as the development site is outside the SAC The development is located outside the 2.5km foraging limit for the SAC population of Lesser Horseshoe Bat. This SAC is not in the likely zone of impact, no further assessment required
Galway Bay Complex SAC (Site Code 000268) 11.4 km North West	Mudflats and sandflats not covered by seawater at low tide; Coastal lagoons, Large shallow inlets and bays; Reefs; Perennial vegetation of stony banks Salicornia and other annuals colonizing mud and sand; Atlantic salt meadows Otter; Common seal; Mediterranean salt meadows; Turloughs ; Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates (*important orchid sites); Calcareous fens with (Cladium mariscus) and species of the Caricion davallianae; Alkaline fens	As above	No direct impact on the SAC as the development site is outside the SAC Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats and species in the SAC can be excluded. Short term use of ready-mix concrete during construction works would not give rise to deleterious impact on groundwater. This SAC is not in the likely zone of impact, no further assessment required

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Ballinduff Turlough SAC 002295 5.9 km North East	Turloughs	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Lough Cutra SAC 000299 6.5 km South East	Rhinolophus hipposideros (Lesser Horseshoe Bat)	As above	No direct impact on the SAC as the development site is outside the SAC The development is located outside the 2.5km foraging limit for the SAC population of Lesser Horseshoe Bat. This SAC is not in the likely zone of impact, no further assessment required
Lough Cutra SPA 004056 7.3 km South East	Cormorant (Phalacrocorax carbo	As above	No direct impact on the SPA as the development site is outside the SPA. There is no hydrological connectivity with the development site. This SPA is not in the likely zone of impact, no further assessment required
Carrowbaun, Newhall and Ballylee Turlough SAC 6.9 km North East	Turloughs	4.5km north east	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Lough Coy SAC 002117 7.7 Km north east	Turloughs	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Slieve Aughty Mountains SPA 004168 8.9 km East	Hen Harrier, Merlin	As above	No direct impact on the SPA as the development site is outside the SPA. The site of the development and the surrounding lands does not provide suitable nesting or foraging habitat for qualifying interests of this SPA. Based on the consideration of emissions from the activity (Section 4.3.5 above) and hydrological connectivity (Section 4.3.2 above), and that there is no process water discharge from the activity, the potential for indirect impact on the qualifying interests of the SPA can be excluded This SPA is not in the likely zone of impact, no further assessment required

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Ardrahan Grassland SAC 002244 9 km North	Alpine and Boreal heaths ; Juniperus communis formations on heaths or calcareous grasslands ; Limestone pavements	As above	No direct impact on the SAC as the development site is outside the SAC Based on the scope of works and nature of the development site, potential for indirect impact on the European Site can be excluded. This SAC is not in the likely zone of impact, no further assessment required
Peterswell Turlough SAC 000318 9.6 km North East	Turloughs	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Drummin Wood SAC 002181 11 km south east	Old sessile oak woods with Ilex and Blechnum in the British Isles	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Gortacarnaun Wood SAC 002180 10.1 South south east	Old sessile oak woods with Ilex and Blechnum in the British Isles	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Lough Fingall Complex SAC 000606 10.2 km North	Turloughs; Alpine and Boreal heaths; Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates; Calcareous fens with Cladium mariscus and species of the Caricion davallianae; Limestone pavements; Rhinolophus hipposideros (Lesser Horseshoe Bat)	As above	No direct impact on the SAC as the development site is outside the SAC Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats and species in the SAC can be excluded This SAC is not in the likely zone of impact, no further assessment required

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Dromore Woods and Lough SAC 000032 14.4 km south west	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; Limestone pavements; Rhinolophus hipposideros; Lutra lutra (Otter)	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Ballyogan Lough SAC 000019 10.4 km south	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	As above	No direct impact on the SAC as the development site is outside the SAC. There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Kiltiernan Turlough SAC 001285 11 km North	Turloughs		No direct impact on the SAC as the development site is outside the SAC. There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Moyree River System SAC 000057 11 km South	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation; Alkaline fens; Limestone pavements; Caves not open to the public; Rhinolophus hipposideros (Lesser Horseshoe Bat); Lutra lutra	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required
Castletaylor Complex SAC 000242 12.2 north east	Turloughs; Alpine and Boreal heaths; Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates; Limestone pavements	As above	No direct impact on the SAC as the development site is outside the SAC There is no hydrological connectivity with the development site. This SAC is not in the likely zone of impact, no further assessment required

European Sites and distance from development site	Qualifying Interests/ Conservation interests for which the site is designated	Conservation objectives	Likely zone of impact determination/further consideration
Corofin Wetlands SPA 004220 14 km south west	Little Grebe; Whooper Swan; Wigeon; Teal; Black-tailed Godwit		No direct impact on the SPA as the development site is outside the SPA The site of the development and the surrounding lands does not provide suitable nesting or foraging habitat for qualifying interests of this SPA. Based on the consideration of emissions from the activity (Section 4.3.5 above) and hydrological connectivity (Section 4.3.2 above), and that there is no process water discharge from the activity, the potential for indirect impact on the qualifying interests of the SPA can be excluded This SPA is not in the likely zone of impact, no further assessment required
Moneen Mountain SAC 000054 14 km west	Turloughs; Alpine and Boreal heaths; Juniperus communis formations on heaths or calcareous grasslands; Calaminarian grasslands of the Violetalia calaminariae; Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (* important orchid sites); Petrifying springs with tufa formation (Cratoneurion); Limestone pavements; Euphydryas aurinia (Marsh Fritillary); Rhinolophus hipposideros (Lesser Horseshoe Bat)	As above	No direct impact on the SAC as the development site is outside the SAC.+ Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, the potential for indirect impact on the habitats in the SAC can be excluded. No potential pathway for effects on terrestrial habitats for which the site is designated This SAC is not in the likely zone of impact, no further assessment required

4.3.7 Likely cumulative impact of the development works on European Sites, in combination with other plans and projects

Where potential pathways for effect have been identified in Table 3 the potential for cumulative effects resulting from the development works when considered in combination with other plans and projects, cannot be discounted at this stage and further assessment is required. Cumulative effects will be further considered in this remedial NIS report.

4.3.8 Article 6.3 Appropriate Assessment Screening Statement and Conclusions

The findings of this Screening Assessment are presented following the guidance as set out in Section 3.2 of this report. The findings are supported by site survey work and desk studies as indicated in Section 3.3 of this report.

Numerous site visits were undertaken in March, April, May June 2018. Additional site visits were undertaken 24/11/2022, 13/02/2023 (both day time visits), 8/03/2023 (night visit to observe lighting), 10/05/2024, 20/06/2024. The compilation of this screening report includes examination of records of throughput and storage of material on site, together with analysis and evaluation of risk to environmental media in the vicinity of the site. Site visits are mixed announced and unannounced. Site visit on 13/02/2023 (pre-announced) included observation of loading and off-loading of steel to get a clear understanding of the use of Shed 3 and the associated yard area The night visit (08/03/2023) was unannounced to observe site lighting and site activity.

4.3.9 Concluding Statement

The conclusion of the Stage 1 Screening Assessment is presented below:

The development at R & K Engineering, Knockauntouk, Gort (subject site) has been assessed taking into account:

- the nature, size and location of the works and possible impacts arising from the operation of the activity and associated site preparation works
- the qualifying interests and conservation objectives of the European Sites in the zone +of influence of the site
- the potential for in-combination effects arising from other plans and projects.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the author of this report that, on the basis of objective information; the possibility may be excluded that the subject site will have a significant effect on any of the European Sites listed below:

Coole Garryland Complex SPA (Site Code 004107)
Termon Lough SAC (Site Code 001321)
Caherglassaun Turlough SAC (Site Code 000238)
Inner Galway Bay SPA (Site Code 004031)
Cahermore Turlough SAC (Site Code 002294)
Kiltartan Cave SAC 000286
Galway Bay Complex SAC (Site Code 000268)
Ballinduff Turlough SAC 002295

Lough Cutra SAC 000299
Lough Cutra SPA 004056
Carrowbaun, Newhall and Ballylee Turlough SAC
Lough Coy SAC 002117
Slieve Aughty Mountains SPA 004168
Ardrahan Grassland SAC 002244
Peterswell Turlough SAC 000318
Drummin Wood SAC 002181
Gortacarnaun Wood SAC 002180
Lough Fingall Complex SAC 000606
Dromore Woods and Lough SAC 000032
Ballyogan Lough SAC 000019
Kiltiernan Turlough SAC 001285
Moyree River System SAC 000057
Castletaylor Complex SAC 000242
Corofin Wetlands SPA 004220
Moneen Mountain SAC 000054

However, upon examination of the relevant information, including in particular the nature of the works undertaken and the proximity of the site to the European sites listed hereunder, and taking account of the conservation interests (namely Rhinolophus hipposideros (lesser horseshoe bat)) of a number of European sites in the catchment of the development, the possibility may not be excluded that the activity at the subject site would have a likely significant effect on the European Sites listed below:

Coole Garryland Complex SAC
Caherglassaun Turlough SAC
East Burren Complex SAC

These European sites are assessed further as part of this rNIS. Mitigation measures taken at the site, incorporated in the ongoing operation of the activity are assessed to examine the potential for significant effects arising from the subject site (either alone or in combination with other projects or plans) on the integrity of the Coole Garryland Complex SAC, Caherglassaun Turlough SAC, and East Burren Complex SAC

Appendices to the Stage 1 Appropriate Assessment Screening (and remedial NIS)
Appendix A; Noise Survey
Appendix B; TTRSA Traffic report
Appendix C; Site photographs
Appendix D; Derogation NA 0156 (2011)

5. Stage 2 Appropriate Assessment (remedial Natura Impact Statement)

5.1 Introduction

For Stage 2 AA, a Natura Impact Statement (NIS)is prepared, which in this case is presented as a remedial NIS, as the development works have been undertaken and mitigation measures incorporated in the works.

Potential impacts are based on information regarding the qualifying interests and conservation objectives of the European Sites identified in Section 4 (Stage 1 AA Screening for the subject site) and have been informed by a desk study. Impact assessment is based on the Source-Pathway-Receptor model. Where no pathway exists, there is no possibility for significant effects on any qualifying interest of the European Site in question. The Stage 2 assessment is concentrated solely on the features and potential impacts highlighted in the screening assessment, i.e. potential impacts relating to Lesser Horseshoe Bat.

In accordance with Section 177G under Part XA of the Planning and Development Act 2000, as amended ("the 2000 Act"):

"177G. — (1) A remedial Natura impact statement shall contain the following:
(a) a statement of the significant effects, if any, on the relevant European site which have occurred or which are occurring or which can reasonably be expected to occur because the development the subject of the application for substitute consent was carried out;

(b) details of *(i) any appropriate remedial or mitigation measures undertaken or proposed to be undertaken by the applicant for substitute consent to remedy or mitigate any significant effects on the environment or on the European site;*

(ii) the period of time within which any such proposed remedial or mitigation measures shall be carried out by or on behalf of the applicant;"

As such, it is necessary to assess the impact of the subject site on European site/s in the zone of influence of the activity, taking into consideration the extent of the works carried out, any mitigation measures carried out, and any works proposed, but not yet undertaken.

The rNIS must provide a clear conclusion regarding the absence of adverse effects on the integrity of European site/s. In order to grant permission, the competent authority must conclude, having conducted their Stage 2 AA that the development works do not have an adverse effect on the integrity of any identified European sites. This is the prescribed scope of a Stage 2 Appropriate Assessment.

The potential for significant effects arising from the subject site on the conservation interests of Coole Garryland Complex SAC, Caherglassaun Turlough SAC and East Burren Complex SAC is examined in Section 6 below.

5.2 Summary of Relevant European Sites

5.2.1 Coole Garryland Complex SAC (extract from Standard Natura 2000 data form)[22]

The Coole-Garryland Complex is situated in a low-lying karstic limestone area west of Gort, in Co. Galway. It contains a series of seasonal lakes (turloughs), which are fed by springs and a partly submerged river, surrounded by woodland, pasture and limestone heath. The more well-known turloughs present in the site include Lydacan, Crannagh North, Raheen, Crannagh South, Coole, Garryland, Newtown and Hawkhill. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Natural Eutrophic Lakes, Turloughs*, Chenopodion rubri p.p. and Bidention p.p. Vegetation, Juniper Scrub, Orchid-rich Calcareous Grassland*, Limestone Pavement*, Yew Woodlands* , Lesser Horseshoe Bat (Rhinolophus hipposideros).

5.2.2 East Burren Complex SAC (extract from Standard Natura 2000 data form)

Caherglassaun is a large lake located 6 km north-west of Gort and 5 km south-east of Kinvarra in the low-lying farmland of east Co. Galway. Situated in a natural depression just to the north-west of Coole Nature Reserve, this site comprises a permanent lake at its core, while the rest of the basin functions as a turlough. At times of high water, the site can flood to a depth of 10-15 m. A series of collapse features act as swallow-holes. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Turloughs*, Chenopodion rubri p.p. and Bidention p.p. vegetation, Lesser Horseshoe Bat (Rhinolophus hipposideros).

5.2.3 Caherglassaun Turlough SAC (extract from Standard Natura 2000 data form)

This site incorporates all of the high ground in the east Burren in Counties Clare and Galway, and extends south-eastwards to include a complex of calcareous wetlands. The area encompasses a range of limestone habitats that include limestone pavement and associated calcareous grasslands and heath, scrub and woodland together with a network of calcareous lakes and turloughs. The site exhibits some of the best and most extensive areas of oligotrophic limestone wetlands to be found in the Burren and in Europe. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Hard Water Lakes, Turloughs*, Floating River Vegetation, Alpine and Subalpine Heaths, Juniper Scrub, Calaminarian Grassland, Orchid-rich Calcareous Grassland*, Lowland Hay Meadows, Cladium Fens*, Petrifying Springs*, Alkaline Fens, Limestone Pavement*, Caves, Alluvial Forests*, Marsh Fritillary (Euphydryas aurinia), Lesser Horseshoe Bat (Rhinolophus hipposideros), Otter (Lutra lutra) The limestone pavement at this site includes smooth blocky and shattered types. The bare pavement is interspersed with species-rich calcareous vegetation communities.

[22] * = priority habitat

5.3 Conservation Objectives

The focus of the Stage 2 AA (rNIS) is on the integrity of European sites in light of their conservation objectives, and, in particular the conservation objectives for Lesser Horseshoe Bat (Rhinolophus hipposideros) for the Coole Garryland Complex SAC, East Burren Complex SAC and Caherglassaun Turlough SAC. The generic conservation objectives for all designated sites are based on maintaining/restoring the favourable conservation condition of the habitats and species for which sites are selected. The "favourable conservation status" of a habitat or species is defined by Articles 1(e) and 1(i) of the Habitats Directive as follows:

"*The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when*: -

-its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

-population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

6. Impact Assessment; Linkages to Annex I Habitats/Species

Impact assessment is based on the Source-Pathway-Receptor model. Where no pathway exists, there is no possibility for significant effects on any qualifying interest of the European Site/s in question. The assessment focus is on potential impacts highlighted in the screening assessment, which included consideration of the construction and operational emissions from the activity. The consideration of noise and odour emissions which could impact habitats or species in the designated sites within the zone of influence of the activity, are screened in for consideration in the Stage 1 AA Screening report (Section 4).

6.1 Coole Garryland Complex SAC

The habitats and species listed as conservation interests for the Coole Garryland Complex SAC are listed in Table 4, and potential pathways for transfer of impact between the subject site and the conservation interests considered.

Table 4; Potential pathways between the conservation interests of the Coole Garryland Complex SAC and the subject site

Coole Garryland Complex SAC (Site Code 000252), located on the eastern boundary of subject site	
Feature of Interest	**Potential pathway**
Natural eutrophic lakes; Turloughs*	Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, there is no pathway for direct or indirect impact on this habitat in the SAC. During construction works, the ready-mix concrete used in the concrete slabs under the agricultural shed buildings would not give rise to run off or discharge such as would impact the local groundwater. There are no surface waters on site
Chenopodion rubric p.p. and Bidention p.p. vegetation	Based on the footprint of the activity, and absence of emissions, there is no potential pathway for effects on terrestrial habitats for which the site is designated. No emissions arise from the subject site, during construction or operation, likely to impact these habitats
Juniperus scrub	
Yew Woodlands*	
Orchid rich Calcareous Grassland*	
Limestone pavement*	Based on the footprint of the activity, and absence of interference in the SAC, it can reasonably be concluded that there was no interference with limestone pavement habitat in the SAC during construction, and no interference with this priority habitat during the operation of the activity on the subject site.
Rhinolophus hipposideros (Lesser Horseshoe Bat)	The potential for noise or odour emissions from the subject site was considered. Sandblasting and spraying activity was discontinued at the site, as a mitigation measure. As noted in Section 4.3.5, consideration of the proximity of the subject site to the Garryland Lodge roost merited review of any potential emissions likely to give rise to disturbance of the population of Lesser Horseshoe Bat (including any potential negative impact on the foraging area or population viability. Bats use echo-location when foraging and route finding, and prefer quieter areas[23]. While the subject activity is a day time only activity, and noise levels were not found to be excessive- it was considered that any potential disturbance to the roost arising from noise or odour emissions be taken into account[24] Monitoring data has shown a considerable increase in the Lesser Horseshoe Bat population in the Garryland Lodge (*NPWS Site Synopsis*)

[23] (Mackey and Barclay 1989; Bunkley et al. 2015), (Schaub et al. 2008), show reduced foraging activity and efficiency (Siemers and Schaub 2011; Bunkley and Barber 2015)

[24] NPWS Article 17 Report 2019, Volume 3, lists Residential or recreational activities and structures generating noise, light, heat or other forms of pollution as a potential pressure or threat (F24) to the species

6.2 East Burren Complex SAC

The habitats and species listed as conservation interests for the East Burren Complex SAC are listed in Table 5 and potential pathways for transfer of impact between the subject site and the conservation interests considered.

Table 5; Potential pathways between the conservation interests of the East Burren Complex SAC and the subject site

East Burren Complex SAC (Site Code 001926), located 2km due north of the subject site	
Feature of Interest	**Potential pathway**
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp Turloughs Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation; Calcareous fens with Cladium mariscus and species of the Caricion davallianae; Petrifying springs with tufa formation (Cratoneurion) Alkaline fens	Considering hydrological connectivity (via groundwater) in Section 4.3.2 above, and that there is no process water discharge from the operating activity at the subject site, there is no pathway for direct/indirect impact on these habitats in the SAC. During construction works, the ready-mix concrete used in the concrete slabs under the agricultural shed buildings would not give rise to run off or discharge such as would impact the local groundwater. There are no surface waters on site
Alpine and Boreal heaths Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco- Brometalia) (* important orchid sites) Lowland hay meadows Caves not open to the public Alluvial forests with Alnus glutinosa and Fraxinus excelsior	Based on the footprint of the activity on the subject site, and absence of emissions, there is no potential pathway for effects on terrestrial habitats for which the site is designated. No emissions arise from the subject site likely to impact these habitats The works on site were confined within the site area during construction, and no damage to these habitats was likely during construction works.
Limestone pavement*	Based on the footprint of the activity, separation distance from the SAC, and absence of interference in the SAC, it can reasonably be concluded that there is no interference with limestone pavement habitat in the SAC associated with the ongoing activity at the subject site or during the construction works.
Marsh Fritillary Otter	Based on the footprint of the activity, and the separation distance from the SAC, it can reasonably be concluded that there is no interference with this species or associated foraging habitat in the SAC during the ongoing operation of the activity or during its construction.
Rhinolophus hipposideros (Lesser Horseshoe Bat) Subject site is located within the 2.5 km foraging radius of this SAC.	The potential for noise or odour emissions from the subject site was considered. Sandblasting and spraying activity was discontinued at the site, as a mitigation measure. See note above Table 4, Lesser Horseshoe Bat. No potential impact likely to be associated with construction works at the subject site.

6.3 Caherglassaun Turlough SAC

The habitats and species listed as conservation interests for the Caherglassaun Turlough SAC are listed in Table 6 and potential pathways for transfer of impact between the subject site and the conservation interests considered.

Table 6; Potential pathways between the conservation interests of the Caherglassaun Turlough SAC and the subject site

Caherglassaun Turlough SAC (Site Code 000238) 2.7km North of subject site	
Feature of Interest	**Potential pathway**
Turloughs	Based on the consideration of hydrological connectivity in Section 4.3.2 above, and that there is no process water discharge from the activity, there is no pathway for direct or indirect impact on this habitat in the SAC. During construction works, the ready-mix concrete used in the concrete slab under the agricultural shed buildings would not give rise to run off or discharge such as would impact the local groundwater. There are no surface waters on site
Rhinolophus hipposideros (Lesser Horseshoe Bat) Subject site is located just outside the 2.5 km foraging radius of this SAC.	The potential for noise or odour emissions from the subject site was considered. Sandblasting and spraying activity was discontinued at the site, as a mitigation measure. No potential impact likely to be associated with construction works at the subject site See note above Table 4, Lesser Horseshoe Bat

The NPWS Article 17 (2019) report[25] refers to the Lesser Horseshoe Bat population throughout the national territory and assessed the overall population to be inadequate and declining. This conclusion is reached on the basis of decline in the range and habitat in Limerick and North Kerry. The report (re Lesser Horseshoe Bat) concludes

"The population overall is doing well; monitoring has demonstrated significant increases in numbers in the core areas. Over much of its distribution, both range and the area of suitable habitat have remained stable. In Limerick and North Kerry, however, worrying declines in habitat, and consequently in range, have been observed. These are considered likely to continue without significant intervention. For these reasons, Habitat, Range and their associated Future prospects, which were all considered to be Favourable in the last report, are now considered Inadequate, and the Overall Status of this species is assessed as Inadequate and declining"

6.4 Conclusion

In accordance with Section 177G under Part XA of the Planning and Development Act 2000, as amended ("the 2000 Act"):

"177G. — (1) A remedial Natura impact statement shall contain the following:

[25] The Status of EU Protected Habitats and Species in Ireland 2019 (NPWS)

(a) a statement of the significant effects, if any, on the relevant European site which have occurred or which are occurring or which can reasonably be expected to occur because the development the subject of the application for substitute consent was carried out;

(b) details of *(i) any appropriate remedial or mitigation measures undertaken or proposed to be undertaken by the applicant for substitute consent to remedy or mitigate any significant effects on the environment or on the European site;*

(ii) the period of time within which any such proposed remedial or mitigation measures shall be carried out by or on behalf of the applicant;"

6.4.1 Sources examined

Construction works on the site undertaken between 2015 and 2016 used ready mix concrete for shed slab bases, and steel works typically associated with agricultural buildings. Based on the scope of the works, the nature of the materials used and the absence of surface water connectivity with designated sites, no pollution sources were likely to give rise to significant impact in the receiving environment, including in the designated sites in the zone of influence of the subject site as identified.

Operation of the activity between 2016 and 2020 involved the use of occasional sand blasting and spraying of steel at the subject site. No evidence of spillages, interference with habitat in the surrounding environment, or interference with population of Lesser Horseshoe bat in the nearby Garryland Lodge has been associated with this activity on site. Noise monitoring during sand blasting on site (May 2018) did not record excessive noise levels.

Table 7 below sets out the attributes and targets associated with the relevant conservation interest for the Coole Garryland Complex SAC, East Burren Complex SAC and Caherglassaun Turlough SAC (a copy of the conservation objectives for Lesser Horseshoe Bat species for these three SAC areas is provided in Appendix E). The potential significant effects of the subject site on these attributes and targets are also assessed.

Table 7; Assessment of the potential impact of the development on site specific conservation objectives of relevant species in the Coole-Garryland Complex SAC, East Burren Complex SAC and Caherglassaun Turlough SAC

Attribute	Target	Assessment of likely significant effects (Construction)	Assessment of likely significant effects (Operation)
Coole Garryland Complex SAC; Rhinolophus hipposideros (Lesser Horseshoe Bat)			
Population per roost	Min bat number 218 for NPWS roost id 226	Population exceeds target- and is growing- conclude no effect arose during construction works	Population exceeds target- and is growing-conclude no effect arises with the operation of the activity on the subject site.
Summer roosts	No decline	Population increase-conclude no decline	Population increase-conclude no decline
Auxiliary roosts	No decline	Population increase	Population increase
Extent of potential foraging habitat	No decline within 2.5km of qualifying roosts	No activity likely to interfere with foraging habitat extent- short duration activity	With discontinuation of sand blasting and spraying, there is no activity undertaken likely to interfere with the species during foraging or foraging habitat.
Linear features	No significant loss within 2.5km of qualifying roosts	No interference with habitat or removal of vegetation	No interference with habitat or removal of vegetation
Light pollution	No significant increase in artificial light intensity adjacent to named roosts or along commuting routes within 2.5km of those roosts	No night work, no night lighting	No night work, no night lighting

Attribute	Target	Assessment of likely significant effects (Construction)	Assessment of likely significant effects (Operation)
East Burren Complex SAC; Rhinolophus hipposideros (Lesser Horseshoe Bat)			
Population per roost	Min bat number of 103, 103, 150, 100, 50, 108 for summer roosts (NPWS id 132, 825, 216, 130, 126, 144 respectively),	The population increase noted at Garryland can be taken as an indicator of no significant effect on bat population of area, and no likelihood of significant effects on the species population in this SAC	The population increase noted at Garryland can be taken as an indicator of no significant effect on bat population of area, and no likelihood of significant effects on the species population in this SAC
Winter roosts	No decline	As above- increased population at Garryland roost indicates no impact	As above- increased population at Garryland roost indicates no impact
Summer roosts	No decline		
Auxiliary roosts	No decline		
Extent of potential foraging habitat	No decline within 2.5km of qualifying roosts	No activity likely to interfere with foraging habitat extent- short duration activity	No activity undertaken likely to interfere with the species during foraging or foraging habitat
Linear features	No significant loss within 2.5km of qualifying roosts	No interference with habitat or removal of vegetation	No interference with habitat or removal of vegetation
Light pollution	No significant increase in artificial light intensity adjacent to named roosts or along commuting routes within 2.5km of those roosts	No night work, no night lighting	No night work, no night lighting
Caherglassaun Turlough SAC; Rhinolophus hipposideros (Lesser Horseshoe Bat)			
Population per roost	Min 20 bats for winter roost NPWS id 246	See note for East Burren complex- also referring to Coole Garryland roost- conclude no effect.	See note for East Burren complex- also referring to Coole Garryland roost- conclude no effect
Winter roosts	No decline	No likely significant effect	No likely significant effect
Auxiliary roosts	No decline		
Extent of potential foraging habitat	No decline within 2.5km of qualifying roosts	No activity likely to interfere with foraging habitat extent- short duration activity	No activity undertaken likely to interfere with the species during foraging or foraging habitat
Linear features	No significant loss within 2.5km of qualifying roosts	No interference with habitat or removal of vegetation	No interference with habitat or removal of vegetation
Light pollution	No significant increase in artificial light intensity adjacent to named roosts or along commuting routes within 2.5km of those roosts	No night work, no night lighting	No night work, no night lighting

6.5 In combination impacts.

A search of existing planning permissions on record in the Knockauntouk area between 2016 and the present was carried out. The listed developments were typically small in scale (once-off dwellings). Based on the available information, it is considered that there were no means for the subject site to act in-combination with any plans or projects which were permitted at the time of lodgement that would cause any likely significant effects on any European Sites.

7. Mitigation measures

7.1 Construction phase

The importation of ready-mix concrete for construction of slabs (829m^2 concrete slab laid) to provide a base for agricultural style buildings indicated as Shed 1 extension, Shed 2 and Shed 3 and clearing of rock deposit in the associated yard area to east of Shed 3 are the works considered. No mitigation measures were incorporated in the works program. It is considered that no emissions likely to give rise to a significant effect on the designated sites in the catchment were associated with this activity.

7.2 Operational phase

The activity of sand blasting and spraying of steel beams was undertaken on site between 2016-2020 on an intermittent basis. No dust or significant noise or odour emissions were noted from the activity. However, taking account of the proximity of the subject site to the Garryland roost (approx. 500m north) and the sensitivity of the Lesser Horseshoe bat to noise or odour emissions, and potential impact on their foraging area, it was considered that this activity should be discontinued at the site as a precautionary mitigation measure.

No additional works are proposed at the site, and the consideration in this rNIS includes the construction works undertaken at the site, and the ongoing operation of the activity.

8. Conclusion.

This remedial Natura Impact Statement details the findings of the Stage 2 Appropriate Assessment conducted to further examine the potential direct and indirect impacts of the development works undertaken at the R& K Engineering works at Knockauntouk, Gort on the following European Sites sites:

Coole Garryland Complex SAC
East Burren Complex SAC
Caherglassaun Turlough SAC

The remedial Stage 1 Appropriate Assessment investigated the potential direct and indirect impacts of the works undertaken at the subject site, both during its construction and operation on the qualifying interests and special conservation interests of the above European Sites alone and in combination with other plans and projects, taking into account the site's structure,

function and conservation objectives. The particular conservation interests of these designated sites likely to be impacted by the operation of the activity were further assessed taking account of the emissions arising from the activity and the attributes and targets set out in the conservation objectives reports for the designated sites.
A precautionary mitigation measure was implemented on site to ensure the works undertaken on the subject site had no potential to impact on the designated sites in its zone of influence, and in particular the conservation interests of these designated sites.
It is considered that mitigation measures were not necessary to avoid impacts to designated sites during the construction works carried out. No other works are proposed on the site.

As a result of this remedial Appropriate Assessment, it has been concluded that, ensuring the avoidance and mitigation measures are implemented as outlined, the subject site did not and will not have a significant adverse effect on the qualifying interests, special conservation interests and on the integrity and extent of

Coole Garryland Complex SAC
East Burren Complex SAC
Caherglassaun Turlough SAC

Accordingly, the subject site has not or will not adversely affect the integrity of any relevant European site

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