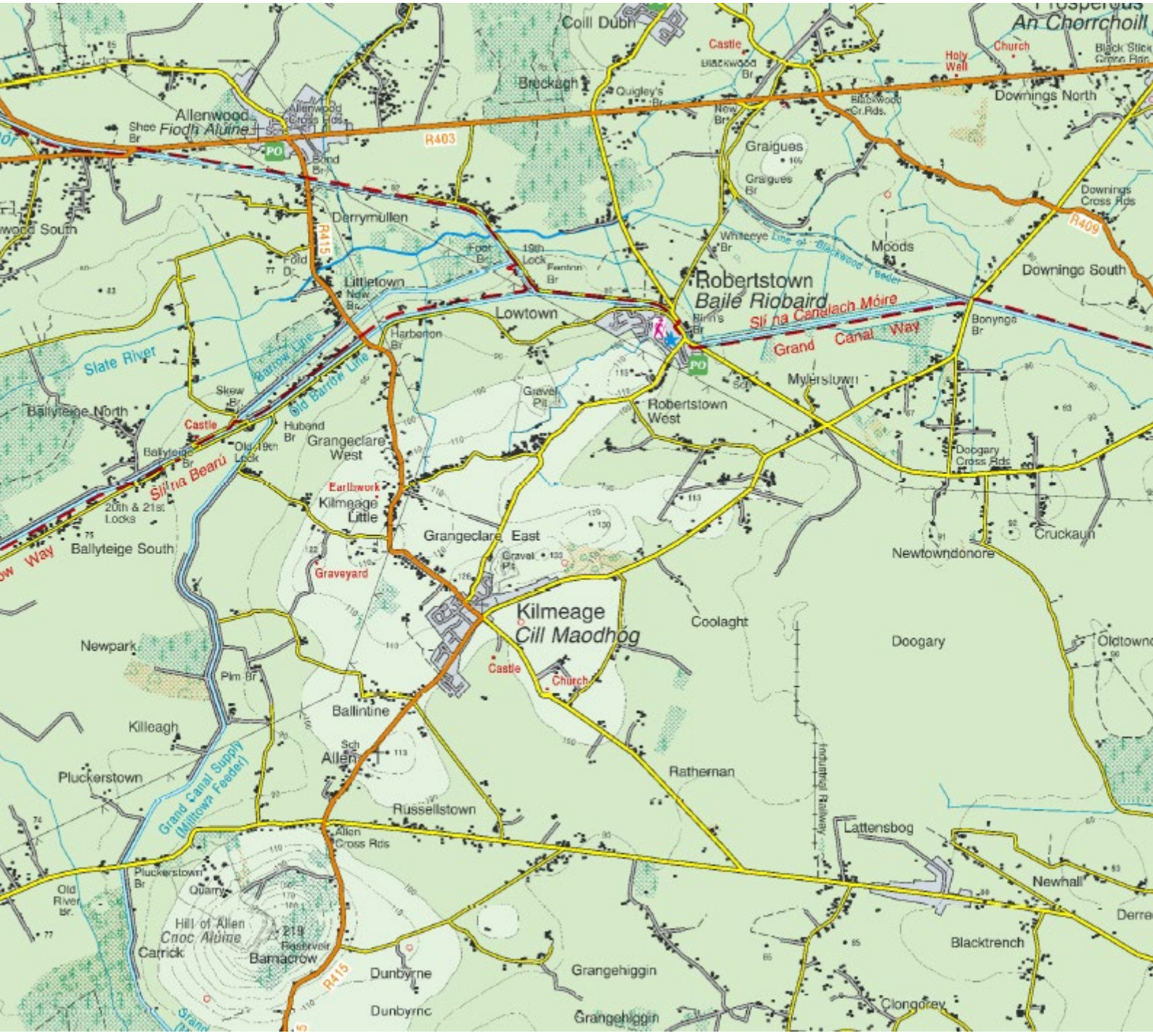
CHAPTER 17

MITIGATION AND MONTIORING



QUARRY CONSULTING

Table of Contents

INTRODUCTION

17.1 This chapter on 'Mitigation and Monitoring' is a critical component of the Environmental Impact Assessment Report (EIAR), designed to outline the specific actions and strategies that will be implemented to mitigate potential environmental impacts identified during the assessment phase of the proposed development. Following the Environmental Protection Agency's (EPA) guidelines, this chapter emphasizes the importance of clarity, specificity, and commitment in presenting all mitigation and monitoring measures.

17.2 Mitigation measures are actions taken to avoid, reduce, or compensate for environmental impacts. Monitoring measures, on the other hand, are implemented to track the effectiveness of mitigation actions and ensure ongoing environmental protection throughout the lifespan of the development. Together, these measures play a pivotal role in safeguarding environmental resources and ensuring the sustainability of the project.

17.3 For organizational clarity and ease of reference, the chapter is structured to include a comprehensive compendium of all mitigation and monitoring commitments. The detailed elaboration on each measure is addressed within the main body of the EIAR.

17.4 Proposed Mitigation Measures are provided in Table 17.1 Proposed Monitoring requirements are provided in Table 17.2.

Table 17-1: Mitigation Measures

Chapter	Topic	Mitigation Measures
6	Biodiversity	• Protection of hedgerows during screening berm construction. • Compliance with the Wildlife Act 1976 (as amended) for ground nesting birds. • Vegetation clearance outside the bird breeding season. • Inspection for nesting activity if clearance occurs during the breeding season. • Establishment of exclusion zones around identified nests.

7	Soil	• Construction Phase: Adopt landscape and restoration plan post-operation.
		  ○ Use stripped topsoil for berm formation and site restoration.
		  ○ Controlled refueling with drip trays
		  ○ Emergency procedures and spill kits for spillages.
		Erosion Control:
		• Use soil for boundary berm creation.
		• Design pit wall slopes to prevent failure.
		Operational Phase:
		• Adhere to EPA guidance on waste acceptance criteria.
		Restoration Phase:
		• Implement a restoration plan considering local topography.

8	Water	**Construction/Extraction Phase:** • Silt fencing and daily monitoring of earthworks.

Chapter	Topic	Mitigation Measures
		• Scheduling works during low rainfall. **Groundwater Protection:** • Best practices for oil usage and refueling. **Operational/Infilling Phase:** • Sourcing proven inert material. **Surface Water and Groundwater Contamination Prevention:** • Detailed measures for the control of fuels and oils.
9	Climate	• Use of energy-efficient machinery. • Avoid idling of plant machinery. • Replacement of old machinery with energy-efficient models. • Installation of solar panels. • Utilization of software for efficient routing. • Planting of native trees and grasses. • Recycling of waste materials. • Engagement with local communities and environmental bodies. • Investment in carbon offset projects.
10	Air Quality	• Minimise drop heights and distances of on-site haul routes. • Use of water sprays and road sweeper. • Paved access road.

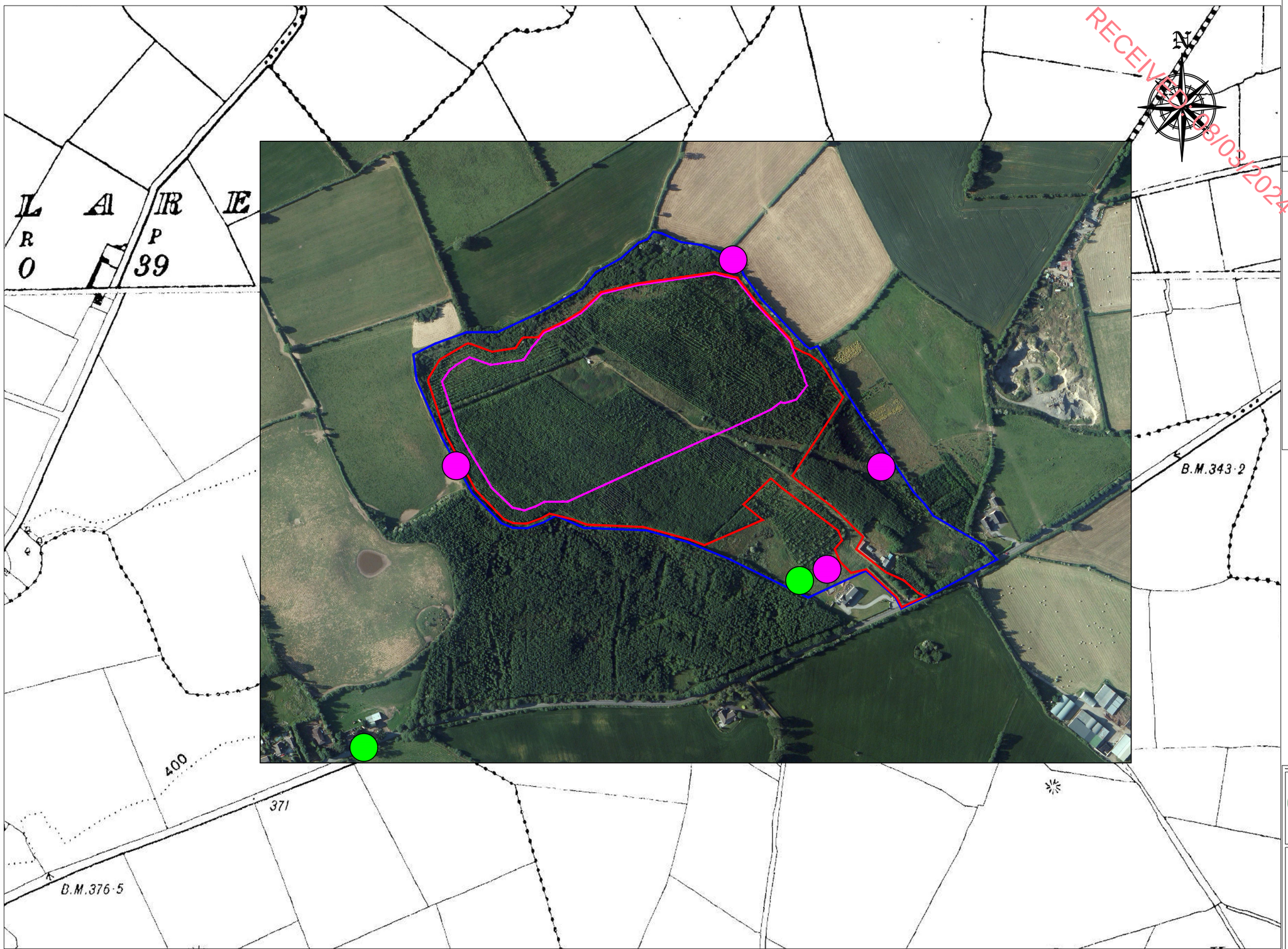
Chapter	Topic	Mitigation Measures
		• Seed surfaces of completed mounds. • Retention of a buffer strip of trees around the site perimeter. • Locate processing plant within the pit void.
11	Noise	• Construction of a screening berm for acoustic barriers. • Regular maintenance of plant and haul routes. • Avoid unnecessary revving of engines and keeping lorry tailgates closed. • Orientation of directional noise away from sensitive areas.
12	Landscape	• Retention of vegetation surrounding the site. • Construction of landscaped berms planted with native vegetation. • Phased working of the site. • Restoration of the site to woodland/natural habitat post-development.
14	Cultural Heritage	• Monitoring of topsoil-stripping by a qualified archaeologist.

Table 17-2: Proposed Monitoring: Refer to Figure 17.1 for locations

Proposed Environmental Monitoring	
General Monitoring	Environmental sampling, monitoring, and testing as required, with records maintained on-site.
Dust Monitoring	Undertaken at the site with locations reviewed and revised as necessary.
Groundwater Monitoring	Implementation of an Environmental Management System (EMS) for water sampling.
Meteorological Monitoring	Utilization of data from Lullymore weather station.
Noise Monitoring	Carried out at the site with locations reviewed as necessary.
Stability and Settlement Monitoring	Visual inspections of slopes and aftercare for infill lands.
Aftercare and Monitoring	5-year aftercare program for tree planting and monitoring of restoration success.

FIGURES

03.03.FIGURE 17.1 MONITORING.dwg



0 50 100 150 200m 300 400 500

Metres 1:5000

NOTES

1. Extract from Ordnance Survey 6 Inch Mapping - Map No. KE13 and KE 16;
2. Ordnance Survey Ireland Licence No. CYAL50187128 (c) Ordnance Survey Ireland / Government of Ireland.

LEGEND

- LAND OWNERSHIP AREA (c. 19.25 Ha.)
- APPLICATION AREA (c. 13.2 Ha.)
- PROPOSED EXTRACTION AREA (c. 8.65 Ha.)
- PROPOSED DUST MONITORING LOCATION
- PROPOSED NOISE MONITORING LOCATION

QUARRY CONSULTING

Peter Kinghan (MSCSI MRICS)
Chartered Geomatics Surveyor
Chartered Mineral Surveyor
Unit 3, Cedar Crescent
Westport
Co. Mayo
pkinghan@quarryconsulting.ie

JOSEPH LOGAN

PROPOSED SAND AND GRAVEL PIT
COOLAGHT TOWNLAND, KILMEAGUE
CO. KILDARE

MONITORING LOCATIONS

FIGURE 17.1

Scale	Date
1:5,000	MARCH 2024