

## **PART E — SUPPORTING INFORMATION (Complete Draft)**

*Prepared to accompany the derogation application under Regulation 54 & 54A of the European Communities (Birds and Natural Habitats) Regulations 2011*

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## 2. Introduction

### 2.1 Objective of the Proposed Works

The objective of this derogation application is to permit the **selective and temporary live-capture of coastal otters (*Lutra lutra*)** using **soft-catch leghold traps** for the purpose of:

- **Attaching a lightweight GPS/VHF dive-depth transmitter**, fixed externally with a proven safe, suede harness incorporating a **breakaway safety system**, and
- **Collecting high-quality ecological, behavioural and spatial data** essential for the study of:
  - coastal habitat use,
  - foraging behaviour,
  - movement ecology,
  - social structure,
  - effects of tides, season, prey availability and disturbance.

The research is undertaken strictly **for conservation and scientific purposes**, aligning with Regulation 54(2)(a) and (d).

The work directly informs **NPWS, Ireland's Otter Conservation Strategy, EU Habitats Directive obligations**, and international knowledge on coastal otter ecology.

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### 2.2 Scientific Staff – Qualifications and Experience

#### **Drs. ing. Adrianus (Addy) W.J.J. de Jongh**

- Applicant; Senior otter ecologist
- Founder of Dutch Otterstation Foundation; 40+ years' experience in otter conservation
- Carried out safe otter trapping for NL otter reintroduction programme (working in Netherlands, Latvia, Belarus)
- Safely trapped more than 90 otters in many different European countries for reintroduction and scientific research
- Certified in **Animal Experimentation for Wildlife Researchers** (NMBU, Norway; EU-compliant)

- Holder of **EU derogation** for soft-catch live trapping of otters (attached to application)
- Successfully conducted the **2010 Roaringwater Bay coastal otter pilot**, capturing/tagging otters with **zero injuries**.

Additional staff (veterinarians, assistants, trainees) will be added before the operational phase and submitted to NPWS for approval.

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### **3. Background to Proposed Activity**

The proposed research forms part of an ongoing **PhD at the University of Groningen** focusing on **coastal otters in Ireland, Norway or Shetland, Portugal and Greece**.

The central study area is **Roaringwater Bay, Co. Cork**, a complex archipelago with high ecological value and substantial pressures from:

- marine tourism,
- fisheries,
- nocturnal disturbance,
- climate-driven changes in prey distribution,
- coastal development.

Understanding otter habitat use at fine spatial and temporal scales is crucial for:

- future NPWS management decisions,
- designation or refinement of protected areas,
- informing local development and fisheries policies,
- protecting dens and resting sites,
- mitigating human–otter conflict risks.

No planning constraints apply, as the activity is scientific field research.

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### **4. Full Details of Proposed Activity**

- **Selective live-capture** of up to **10 otters** over the licence period.
- Use of **approved soft-catch leghold traps**, fitted with a **remote transmitter alarm** that immediately alerts the research team.
- Mandatory **maximum 30-minute response time** to captured otters.
- Animals are **sedated by a professional wildlife veterinarian**, fitted with the GPS/VHF/dive transmitter, monitored post-release.
- The lightweight harness includes a **fail-safe breakaway mechanism** (130–150 N threshold) preventing snagging.
- Harnesses with transmitters detach after **3–4 months**.

#### **Site Plan:**

The research area spans **the islands, peninsulas and shorelines near Baltimore in Roaringwater Bay**, including Heir Island, Sherkin, Ringarogy, Cunamore and the Ilen Estuary. Exact trapping locations will be submitted to NPWS in pre-operation briefings.

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## **5. Ecological Survey and Site Assessment**

### **5.1 Pre-existing Information**

- Otters are widespread in West Cork; densities in Roaringwater Bay resemble other high-quality coastal habitats.
- 2010 pilot study demonstrated active otter use of islands, tidal channels, kelp beds, and freshwater runoffs.
- Camera trap, spraint and track surveys showed consistent otter occupancy with stable reproduction with mainly nocturnal activity.

### **5.2 Conservation Status**

In Ireland, otters are **listed as “Favourable” nationally** but remain **strictly protected**.

Coastal otter ecology is **poorly understood**, and this project directly fills major knowledge gaps relevant to conservation.

### **5.3 Objectives of Survey**

- Determine fine-scale temporal patterns (diurnal/nocturnal/tidal).

- Identify key foraging zones and seasonal shifts.
- Assess interactions with human activities and fisheries.
- Map resting, grooming and movement corridors.
- Integrate data with **diet metabarcoding**, eDNA, and kinship genetics.

#### **5.4 Survey Area**

All trapping and tracking occur within **Roaringwater Bay, Special Area of Conservation (SAC) and surrounding waters**.

#### **5.5 Methodology**

- Deployment of soft-catch traps in areas identified via spraint surveys and tracks.
- Continuous electronic monitoring using trap-alarm system.
- Sedation following veterinary protocols used previously in Ireland, Portugal, Spain and Norway.
- GPS data collected at 15 – 120 min intervals on land and in water; dive depth and path at 1–2 Hz; VHF recovery pinger for harness retrieval.

This method is considered **international best practice** for coastal otter telemetry.

#### **5.6 Baseline Results**

The 2010 pilot showed:

- No injuries; negligible stress; normal post-release behaviour.
- Otters quickly showed normal behaviour and resumed foraging as usual, even in big storms carrying their light-weight GPS transmitter.
- Harnesses fell off safely within predicted times and most of them could be retrieved from the field.

#### **5.7 Population Size Class Assessment**

Roaringwater Bay with its total shore length of 307 km supports at least **175 - 219 adult otters** with overlapping home and foraging ranges according to a study done by Van Hall students and the Stichting Otterstation Nederland in 2014. So the proposed capture of **≤10** individuals across **two field seasons** remains well within safe thresholds.

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## 6. Evidence to Support Derogation Tests

### 6.1 Test 1 – Reason for Derogation

The derogation is required **for research and conservation**.

The project directly improves understanding of habitat use, threats, and conservation needs of an Annex IV species under pressure from climate change and human disturbance.

### 6.2 Test 2 – Absence of Alternatives

*Alternatives evaluated:*

- **Do nothing** → No ecological data; conservation blind spots remain.
- **Camera traps** → Cannot identify individuals; cannot record all kinds of relevant behaviour.
- **Genetic studies alone** → Valuable for identification, kinship, diet, food availability, but insufficient for fine-scale spatial and temporal ecology.

**Conclusion:** No alternative method can deliver the necessary behavioural, spatial and ecological data.

### 6.3 Test 3 – Conservation Status Impact

- The method has **EU approval** and follows strict conditions.
- The 2010 pilot and trapping done elsewhere proved **no moderate and serious injuries**.
- Harness and breakaway safety system eliminate snagging risks.
- Lactating females or unfit animals will **not** be tagged.
- Population impact is **negligible** and does not affect conservation status.

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## 7. Monitoring the Impacts of the Derogations

### 7.1 Monitoring Plan

- Continuous GPS/VHF, movement and diving depth data allow verification of post-release behaviour.
- Each capture/handling event is documented with time, sedation protocol, sex, age, health parameters.
- Trap function and capture logs are recorded.

### 7.2 Reporting to NPWS

- **Quarterly progress reports**, including:
  - number of otters captured,
  - number tagged,
  - health observations,
  - GPS tag and sensors performance,
  - any incidents or anomalies.
- Final **comprehensive scientific report** summarising results, impacts, and all mitigation outcomes in a final report for NPWS. Results from the study will be published in a scientific journal with at least one NPWS co-author.

### 7.3 Corrective Measures

If any issue arises (injury risk, stress responses, equipment failure):

- immediate suspension of trapping,
- consultation with NPWS,
- modification of methods before resumption.