



Satellite tracking swan and goose migration in relation to wind farm sites: Phase 3 tagging of Bewick's swans – Project Inception

A project to be undertaken by the Wildfowl and Wetlands Trust (WWT), funded by the Department of Energy and Climate Change (DECC) Offshore Energy Strategic Environmental Assessment (OESEA) programme. For further information, contact the Project Coordinator at sml@hartleyanderson.com

Context

Initial satellite-tracking of migratory swans and geese, undertaken by WWT under contract to COWRIE (Griffin *et al.* 2010) and DECC ([Griffin *et al.* 2011](#)), highlighted key areas where the construction of offshore wind farms may pose a risk to these birds, particularly for whooper swans and barnacle geese (Phase 1 of project). An extension of these successful satellite-tracking studies was proposed to provide further detailed information on the migration routes for other important flyways of migratory swans and geese wintering in Britain, notably for the Bewick's swan and Greenland white-fronted goose, whose populations are currently in decline.

A pilot study (funded by DECC) assessed the practicality of using GPS-GSM devices mounted on plastic neck collars to track swans and geese, these allowing data to be downloaded opportunistically over mobile phone networks. Whooper swans were tracked initially because they are relatively large, have been tracked successfully in the past (using solar-powered Platform Transmitter Terminals (PTTs)), and can be readily observed throughout their range (Britain, Ireland and Iceland).

Project Objectives & Scope

Phase 3 of the project will use the new GPS-GSM loggers to track the movements of Bewick's swans between southeast England and mainland Europe in relation to current and proposed wind farms.

The main objectives of this phase will be to:

- Fit up to 20 GPS/GSM loggers on Bewick's swans wintering on the Ouse Washes in winter 2012/13. Download preliminary data on Bewick's swan movements to determine whether the tags are functioning properly whilst the swans are in the UK in spring 2013, and during their migration through northwest Europe (completed and will be reported with data from 2013/14).
- Fit a further 20 GPS/GSM loggers to Bewick's swans in winter 2013/14, to track their movements between southeast England and mainland Europe. Download preliminary data on their movements to determine whether the newly-fitted tags are functioning properly in spring 2014.
- Download and analyse the GPS data recorded for Bewick's swans, in relation to current and proposed wind farms along the swans' migration route.

A final report is due in Q4 2014.

Satellite tracking of Bewick's swans

DECC Offshore Energy SEA

The SEA process aims to help inform licensing and leasing decisions by considering the environmental implications of a plan/programme and the activities which could result from its implementation. Since 1999, DECC has conducted a series of offshore energy SEAs, the latest covering wind, tidal stream and range, CO₂ and hydrocarbon gas storage, and oil & gas – see right.

Since the first SEA, the associated research programme has targeted key information gaps on the marine environment and potential industrial impacts, to inform the SEA process, developers, consenting bodies and others. Research priorities are discussed with the SEA Steering Group and a range of other stakeholders.

For more information on the OESEA programme, visit the offshore SEA web pages on <https://www.gov.uk/> or email oepe@decc.gsi.gov.uk

A data portal for previous SEA reports and data is at <http://www.bgs.ac.uk/data/sea>

	Area	Sector
SEA 1	The deep water area along the UK and Faroese boundary	Oil & Gas (19 th Licensing Round, 2001)
SEA 2	The central spine of the North Sea which contains the majority of existing UK oil and gas fields	Oil & Gas (20 th Licensing Round, 2002)
SEA 2 Extension	Outer Moray Firth	Oil & Gas (20 th Licensing Round, 2002)
SEA 3	The remaining parts of the southern North Sea	Oil & Gas (21 st Licensing Round, 2003)
R2	Three strategic regions off the coasts of England and Wales in relation to a second round of offshore wind leasing	Offshore wind (R2 of Leasing, 2003)
SEA 4	The offshore areas to the north and west of Shetland and Orkney	Oil & Gas (22 nd Licensing Round, 2004)
SEA 5	Parts of the northern and central North Sea to the east of the Scottish mainland, Orkney and Shetland	Oil & Gas (23 rd Licensing Round, 2005)
SEA 6	Parts of the Irish Sea	Oil & Gas (24 th Licensing Round, 2006)
SEA 7	The offshore areas to the west of Scotland	Oil & Gas (25 th Licensing Round, 2008)
OESEA	UK offshore waters*	Oil & Gas (26 th Licensing Round, 2009) Gas storage Offshore wind (R3 of Leasing, 2009)
OESEA2	UK offshore waters*	Oil & Gas (27 th Licensing Round, 2012) Gas storage Carbon dioxide transport and storage Offshore wind, wave and tidal energy

*For renewable energy included potential leasing in the UK Renewable Energy Zone (REZ) and the territorial waters of England and Wales but not the Scottish Renewable Energy Zone and Northern Irish waters within the 12 nautical mile territorial sea limit