3 Results

Desktop Survey

There are no designated sites for breeding birds within 20km of the Uig Ferry Terminal. Uig Bay is within the candidate (submitted to EC) Special Area of Conservation Inner Hebrides and the Minches, which has harbour porpoise as its qualifying feature. The Trotternish Ridge SAC is also within 20km of the site.

Very little information on breeding birds of the Uig area was available. RSPB have records of breeding corncrake in the area, so the field survey included surveying following standard RSPB methodology.

No data on the seabirds of Uig bay was available from either the surveys carried out for the Shiant Isles Seabirds Recovery Project or the Inner Hebrides and the Minches candidate SAC. A single count was carried out for the Wetland Bird Survey in winter 2005/2006.

Field Survey

The existing pier is an open mental construction at the seaward end and a solid concrete wall and rock armour at the shore end. As detailed in the Phase 1 Habitats and Otter Survey Report[1], the intertidal area is brown algal beds with a small area of saltmarch at the upper llimits of the area below the rock armoured sea wall. The shingle area above high tide has sparse vegetation (Figure 1). There is a grass verge between the seawall and the roads and car park area. The adjacent crofts land is herb-rich semi-improved grassland.

Figure 1: Pier and Intertidal Area

<u>Species found breeding in the survey area</u>

House sparrow *Passer Domesticus*
Two breeding pairs under the eaves of the filling station adjacent to the ferry terminal

Starling *Sturnus vulgaris*

At least 4 pairs nesting in the roof area of the CalMac ferry terminal building.

[1] A Tyler, Uig Ferry Terminal Phase 1 Habitats and Otter Survey, June 2017

Sedge Warbler *Acrocephalus schoenobaenus*

One pair nesting in the shrub vegetation between the road and the shore west of the ferry terminal.

Wren *Troglodytes troglodytes*

One pair nesting in the shrubs near the ferry car park.

Other birds recorded during the survey

Pied Wagtail *Motacilla alba*

Seen flying near the ferry car park.

Swallow *Hirundo rustica*

Flying over shore near pier – probably nesting in croft buildings near survey area

Herring Gull *Larus argentatus*

7 birds recorded in the vicinity of the pier

Eider *Somateria mollissima*

Flock of 5 birds on sea loch within 200m of pier.

4 Assessment

There are no designated sites for breeding or wintering birds within 20km of the Uig Ferry Terminal. There are records for breeding corncrake within the township of Uig, and there is suitable long vegetation within the survey area, but no calling corncrakes were recorded during the survey. The breeding birds found during the survey are all common species found throughout Skye and the Highlands and Islands. The survey timing was sub-optimal for Black Guillemot *Cepphus grylle* however the habitat present did not provide suitable nesting sites, for that species.

The desktop study did not identify any published data on wintering birds in Uig Bay, other than the single WeBS count. Uig Bay was not included on the Areas of Search for inshore aggregations of waterbirds outside the breeding season by the JNCC Seabirds at Sea team surveys. Eider were recorded during the breeding bird survey and it is known that they are also present as a wintering species.

5 Further Survey Recommendations

As the breeding birds in the vicinity of the ferry terminal are relatively common in Skye, and there were no Schedule 1 breeding birds, there is no immediate requirement for further breeding bird survey work.

There is a lack of information on wintering seabirds in the vicinity of the ferry terminal. There is no published data to suggest that Uig Bay is a nationally important area for seaduck. Eider are present throughout the year, and, although eider can feed in the intertidal areas, the proposed development is unlikely to have an adverse effect on the eider population in Uig Bay.

Appendix 1 Uig Ferry Terminal Breeding Birds

Legend

House sparrow

Starling

Sedge warbler

Wren

N

16. Socio-economics and Public Access

No Appendices

17. Terrestrial Noise and Vibration

17.1 Acoustic Terminology

17.2 Noise Model Input Data

17.1 Acoustic Terminology

Appendix 17.1 – Acoustic Terminology

Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure (measured in pascals, Pa). Because of this wide range a noise level scale based on logarithms is used in noise measurement called the decibel (dB) scale.

The human ear system does not respond uniformly to sound across the detectable frequency range and consequently instrumentation used to measure noise is weighted to represent the performance of the ear. This is known as the 'A weighting' and annotated as dB (A) or LpA dB. The table below lists the sound pressure level in dB (A) for common situations.

Sound Pressure Levels for a Range of Situations

Typical Noise Levels dB(A)	Example
0	Threshold of hearing
30	Rural area at night, still air
40	Public library Refrigerator humming at 2m
50	Quiet office, no machinery Boiling kettle at 0.5m
60	Normal conversation
70	Telephone ringing at 2m Vacuum cleaner at 3m
80	General factory noise level
100	Pneumatic drill at 5m
120	Discotheque - 1m in front of loudspeaker
140	Threshold of pain

The noise level at a measurement point is rarely steady, even in rural areas, and varies over a range dependent upon the effects of local noise sources. Close to a busy road, the noise level may vary over a range of 5 dB(A), whereas in a suburban area this may increase up to 40 dB(A) and more due to the multitude of noise sources in such areas (cars, dogs, aircraft etc.) and their variable operation. Furthermore, the range of night time noise levels will often be smaller and the levels significantly reduced compared to daytime levels.

The equivalent continuous A-weighted sound pressure level, LAeq dB (or Leq dBA), is the single number that represents the average sound energy measured over that period. The LAeq is the sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period.

Human subjects are generally only capable of noticing changes in steady levels of no less than 3 dB(A). It is generally accepted that a change of 10 dB(A) in an overall, steady noise level is perceived to the human ear as a doubling (or halving) of the noise level. (These findings do not necessarily apply to transient or non-steady noise sources such as changes in noise due to changes in road traffic flow, or intermittent noise sources).

A parameter that is widely accepted as reflecting human perception of the ambient noise is the background noise level, L_{A90}. This is the noise level exceeded for 90% of the measurement period and generally reflects the noise level in the lulls between individual noise events. Over a 1-hour period the L_{A90} will be the noise level exceeded for 54 minutes.

The $L_{Amax,slow}$ and $L_{Amax,fast}$ measurement parameters are the maximum instantaneous sound pressure level attained during the measurement period (30 seconds, 5 minutes etc.), measured on the ‘slow’ or ‘fast’ response setting of the sound level meter. This is sometimes expressed as L_{Amax} dB or L_{max}

dB(A). Even though sounds appear fairly steady to the human ear they are seldom if ever steady in level. To accommodate this factor, sound level meters (SLMs) are generally provided with at least two meter responses or exponential averaging circuits. Fast meter response has a time constant of 1/8th of a second (125ms) and approximates the integration time of human hearing. The slow time response (time constant = 1 second) is intended to obtain an approximate average value of rapidly fluctuating levels from simple meter readings.

17.2 Noise Model Input Data

Appendix 17.2 – Noise Model Input Information

Assumed Construction Activities

List of Assumed Construction Activities and Construction Plant

Construction Activity	Plant	Sound Power Level L_w dB(A)	No. of plant	Overall L_w dB(A)	On-time (%hrs per 1hr)	Reference
PERIOD 1						
Formation of temporary compound	Road roller	108	1	108	83	BS5228 Table C.5 no 19
	Excavator (tracked)	110	1	110	83	BS5228 Table D.3 ave no.s 34-40
	Dumper	101	1	101	83	BS5228 Table C.5 ave no.s 81-92
PERIOD 2						
Diesel generator at temporary compound	Diesel Generator 150KVA	93	1	93	100	BS5228 Table C.6 no 39
Berthing structure demolition works	Breaker mounted on excavator	118	1	118	75	BS5228 Table C.1 no 9
	Loading lorry	107	1	107	50	BS5228 Table C.2 ave no.s 26-28
	Lorry	105	3	110	50	BS5228 Table D.7 ave no.s 121-122
Circular cell piling	Vibratory piling rig for steel sheet piling	116	2	119	50	BS5228 Table C.3 no 8
Berthing structure construction works	Concrete pump + cement mixer truck (discharging)	95	1	95	50	BS5228 Table C.4 no 24
	Telescopic handler	98	1	98	100	BS5228 Table C.4 no 55
	Mobile telescopic crane	95	1	95	100	BS5228 Table C.4 no 46
	Hand-held circular bench saw	107	1	107	50	BS5228 Table C.4 no 72
	Diesel Generator	89	1	89	100	BS5228 Table C.4 no 76
	Water pump (diesel)	96	1	96	100	BS5228 Table C.4 no 88
Formation of marshalling area	40T excavator	107	2	110	83	BS5228 Table C.2 no 14
	40T Load Dumpers	104	4	110	83	BS5228 Table C.4 no 4
	Backhoe Loader 30T	95	2	98	83	BS5228 Table C.4 no 14
	Road roller	108	1	108	83	BS5228 Table C.5 no 19
Dredging and disposal	Cutter suction dredger (CSD)	103	1	103	100	GW-TM* no CNP 070
	Hopper barge	104	2	107	50	GW-TM* no CNP 061
PERIOD 3						
Diesel generator at temporary compound	Diesel Generator 150KVA	93	1	93	100	BS5228 Table C.6 no 39
Dredging and disposal	Cutter suction dredger (CSD)	103	1	103	100	GW-TM* no CNP 070

	Hopper barge	104	2	107	50	GW-TM* no CNP 061
Approachway steel tubular piling	Vibratory piling rig for steel sheet piling	116	2	119	50	BS5228 Table C.3 no 8
Approachway deck construction	Concrete pump + cement mixer truck (discharging)	95	1	95	50	BS5228 Table C.4 no 24
	Telescopic handler	98	1	98	100	BS5228 Table C.4 no 55
	Mobile telescopic crane	95	1	95	100	BS5228 Table C.4 no 46
	Hand-held circular bench saw	107	1	107	50	BS5228 Table C.4 no 72
	Diesel Generator	89	1	89	100	BS5228 Table C.4 no 76
	Water pump (diesel)	96	1	96	100	BS5228 Table C.4 no 88
Removing the steel superstructure	Tracked excavator	111	1	111	75	BS5228 Table C.1 ave no.s 16-17
	Gas cutter	107	1	107	50	BS5228 Table C.4 no 18
	Tracked crane	100	1	100	30	BS5228 Table C.4 ave no.s 50-52
	Loading lorry	107	1	107	30	BS5228 Table C.2 ave no.s 26-28
	Lorry	105	2	108	50	BS5228 Table C.2 ave no.s 121-122
Cutting existing piles	Welding / cutting steel piles	101	1	101	100	BS5228 Table C.3 no 31
Lifting heavy cons. material	Craneage for piling	98	1	98	100	BS5228 Table C.3 no 30
Driving linkspan piles	Vibratory piling rig for steel sheet piling	116	2	119	50	BS5228 Table C.3 no 8
Construction of ticket office, fishermans compound and new dry berth	Concrete pump + cement mixer truck (discharging)	95	1	95	50	BS5228 Table C.4 no 24
	Telescopic handler	98	1	98	100	BS5228 Table C.4 no 55
	Mobile telescopic crane	95	1	95	100	BS5228 Table C.4 no 46
	Hand-held circular bench saw	107	1	107	50	BS5228 Table C.4 no 72
	Diesel Generator	89	1	89	100	BS5228 Table C.4 no 76
	Water pump (diesel)	96	1	96	100	BS5228 Table C.4 no 88
PERIOD 4						
Diesel generator at temporary compound	Diesel Generator 150KVA	93	1	93	100	BS5228 Table C.6 no 39
Dredging and disposal	Cutter suction dredger (CSD)	103	1	103	100	GW-TM* no CNP 070
	Hopper barge	104	2	107	50	GW-TM* no CNP 061
Demolition of existing ticket office	Breaker mounted on excavator	118	1	118	75	BS5228 Table C.1 no 9
	Loading lorry	107	1	107	50	BS5228 Table C.2 ave no.s 26-28
	Lorry	105	3	110	50	BS5228 Table D.7 ave no.s 121-122

PERIO 5 (MAINTENANCE)

Maintenance dredging	Grab hopper dredging ship	110	1	110	100	BS5228 Table C.7 no 2

** The Government of the Hong Knog, Environmental Protection Department (1996). 'Technical Memorandum on Noise From Construction Work Other Than Percussive Piling'.*

18. Commercial and Recreational Fisheries

No Appendices

19. Commercial Fisheries

No Appendices

20. Marine Archaeology and Cultural Heritage

No Appendices

21. Summary of Mitigation

No Appendices

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