ORNITHOLOGICAL SITE ASSESSMENT SUMMARY REPORT

Land at Wharncliffe Chase, Wharncliffe Estate, South Yorkshire

March 2015



Waxwings Ornithology

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On behalf of;

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Land at Wharncliffe Chase, Wharncliffe Estate, South Yorkshire (central grid reference SK 315 961)

Cover photograph;

Wharncliffe Chase film-set site location, looking north-east 26th March 2015 – D.M.Pearce.

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1. INTRODUCTION

1.1 Background to Proposed Activities

Waxwings Ornithology was requested by ITV Jericho Ltd on 25th March 2015 to undertake an assessment of impact upon birds on land at Wharncliffe Chase on the Wharncliffe Estate, South Yorkshire regarding proposals to construct a temporary film-set and filming of a period drama from early April to late-October 2015. The film-set will simulate a small settlement in the early industrial revolution era in the 1870's.

1.2 Details of Proposed Activities

Initially, in order to access the site filming location with HGV's and/or tractor and trailer and tele-handler along the un-made track leading south-east from the termination of the made track (c.500m south of Chase Lodge) to deliver the pre-fabricated film-set, ITV Jericho Ltd propose to lay temporary track matting and load spreading track-way panels. This is to protect the ground and ensure safe and smooth entry and exit of vehicles. Prior to this, sections of the un-made track which is deep rutted will be made good with suitable hard-core material (to be agreed) to provide a relatively flat surface on which the temporary track and pad matting surface will be laid. An area of temporary track and pad matting surface will also be laid to the west of the film-set site in order to provide a turning area for vehicles. The surface will also provide access to other vehicles and personnel to the proposed film-set location during the filming periods. The temporary track surface will remain in-situ until completion of filming in mid-October 2015.

Following completion of site access works ITV Jericho Ltd propose to construct a temporary film-set (see Appendices) comprising from 30 to 40 low-level, pre-fabricated, wooden structures which will be built off-site and delivered flat-packed for construction on site. The wooden structures comprising the film-set will require securing to the ground as they are 'wind vulnerable' and will be achieved using stakes and plastic drums filled with inert ballast which may require partially sinking into the ground. As part of the film-set, there is also a requirement for a soil track between the wooden structures to replicate the main street of the settlement. In order to achieve this ITV Jericho Ltd propose to carefully strip back and remove a shallow linear section of grass and soil surface. The surface material removed will be stored on site and replaced once the project is completed. The temporary film-set will remain in-situ until completion of filming operations in mid-October 2015.

Commencement of works on site is proposed for early April 2015 (date to be agreed) with anticipated film-set completion by 22nd May 2015. Filming (weekdays) is proposed to be undertaken in three blocks; the first of five to seven days duration (22nd May to 29 June 2015) and two subsequent blocks of between five to seven days duration (13th July to 24th August 2015 and 27th September to 23rd October 2015). In the intervening periods the film-set will remain in-situ and unused and subject to security provided by the television company. Throughout the periods of film-set construction and during filming there will be a

number of personnel and also equipment relative to the production present on site. Filming will be completed by 23rd October 2015 and film-set strike to dismantle and remove the film-set will commence on 24th October. Following removal of the film-set site restoration works will commence.

1.3 Site Assessment

The site is situated around ten kilometres south of the town of Barnsley, South Yorkshire and around three kilometres to the south of Wortley village within the Barnsley Metropolitan Borough boundary. The land is around one kilometre east of the Wharncliffe Crags escarpment (c.SK 295 980 south to SK 306 950), of open aspect and is primarily used for sheep grazing/rearing. The area is open access land created under the Countryside and Rights of Way Act 2000; a search of magic.defra.gov.uk [28/03/2015] revealed no site designation. Within two kilometres of the central grid reference of the site proposed for the film-set (SK 315 961) there are three designated sites within the Sheffield City Council boundary; Wharncliffe Crags Site of Special Scientific Interest (SSSI) (Geology) and Wharncliffe Heath Local Nature Reserve (LNR) which are two kilometres north-west and Wheata Woods (LNR) two kilometres south-east.

An initial site visit was made on 26th March 2015 by D.M.Pearce (Waxwings Ornithology), a consultant ornithologist and experienced field ornithologist to assess the effects of the proposed works on breeding birds and P. Middleton a consultant ecologist and experienced botanist to assess the effects of the proposed works on the habitat. Weather conditions were dry and sunny with a strong north-west wind, visibility was good throughout. The site visit from 14.30 – 16.30 incorporated a walkover survey of the area proposed for the film-set, a drive round survey to assess other areas of Wharncliffe Chase proposed for filming with J. Muirhead (Location Manager, ITV Jericho Ltd) and discussions of the proposed activities with regard to impacts upon birds during the breeding bird season March to August, outside the breeding season to late October and impacts upon the habitat from a botanical aspect.

Within the Wharncliffe Chase site the land proposed for the film-set is in an Entry Level Stewardship (ELS) agreement with Natural England which commenced in 2013 and has option EL3 (permanent grassland with very low inputs) applied.

1.4 Assessment of Ornithological Value of the Proposed Site

Pre-existing ornithological data for breeding birds recorded at the Wharncliffe Chase site within the one kilometre square SK 3196, which contains the proposed film-set area, was obtained through a data-search from the Barnsley Bird Study Group (BBSG) breeding atlas project database for 2006 – 2011.

1.5 Summary of Relevant Legislation with Regard to Birds

The primary legislation affecting wild birds in England and Wales is the Wildlife & Countryside Act (1981) as amended. The basic principle of this act is that all wild birds, their nests, and eggs are protected by law and some rare species are afforded additional protection from disturbance during the breeding season. The Wildlife & Countryside Act (1981) states that 'it is an offence, with certain exceptions, to:

1. intentionally kill, injure or take any wild bird,
2. intentionally take, damage or destroy the nest of any wild bird while it is in use or being built,
3. intentionally take or destroy the egg of any wild bird,
4. intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependant young of such a bird'.

1.6 United Kingdom Conservation Status of Birds

The fourth major review of the status of birds occurring in the United Kingdom, Channel Islands and the Isle of Man – Birds of Conservation Concern 3 (Eaton et al 2009) presents lists of conservation concern based on assessments using objective listing criteria and most recent data. The listing criteria assess global conservation status, historical population decline, recent population decline (numbers and geographical range), European conservation status, rarity, localised distribution, and international importance of populations. Lists are denoted Red, Amber and Green in a simple 'traffic light' system to provide a single, easily understood measure for each species to convey concern and hence to help set priorities for conservation action. Species are assigned to each list depending upon the scale of population decline and concern which includes breeding and non-breeding populations;

- Red list criteria – Severe population decline over 25 years/longer term,
- Amber list criteria – Moderate population decline over 25 years/longer term,
- Green list criteria – Species not currently considered of conservation concern.

United Kingdom Biodiversity Action Plan Bird Species are those identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP) and included on a list of priority bird species, initially created between 1995 and 1999, and subsequently updated in response to the Species and Habitats Review Report published in 2007. The UK BAP has recently (July 2012) been succeeded by the UK Post-2010 Biodiversity Framework which is focused at a country-level rather than at a UK-level with the list of priority bird species remaining an important reference source for bird conservation.

2. RESULTS

2.1 Birds

Table 1. Breeding Bird Species Recorded in SK 3196 (BBSG 2006 – 2011)

Species			Scientific Name	SK 3196		
				Record Date	Breeding Pairs	Breeding Status
Grey Partridge		UK	*Perdix perdix*	Apr-June 09	1	Probable
Cuckoo		UK	*Cuculus canorus*	Apr-June 09	1	Probable
Green Woodpecker			*Picus viridis*	Apr-June 09	1	Confirmed
Skylark		UK	*Alauda arvensis*	Apr-June 09	4	Confirmed
Willow Warbler			*Phylloscopus trochilus*	Apr-June 09	3	Confirmed
Mistle Thrush			*Turdus viscivorus*	Apr-June 09	2	Probable
Redstart			*Phoenicurus phoenicurus*	Apr-June 09	2	Probable
Whinchat			*Saxicola rubetra*	Apr-June 09	1	Confirmed
Wheatear			*Oenanthe oenanthe*	Apr-June 09	1	Probable
Tree Pipit		UK	*Anthus trivialis*	Apr-June 09	4	Confirmed
Meadow Pipit			*Anthus pratensis*	Apr-June 09	7	Confirmed
Linnet		UK	*Carduelis cannabina*	Apr-June 09	1	Probable
Crossbill	1		*Loxia curvirostra*	Apr-June 09	1	Possible
Yellowhammer		UK	*Emberiza citrinella*	Apr-June 09	2	Confirmed
KEY						
Species of Conservation Concern - Red Listed, Amber Listed, Green Listed						
Schedule 1 Protected Species, U.K. Biodiversity Action Plan Species (UKBAP)						

Results of the walkover survey within SK 3196 undertaken on 26th March 2015 revealed few records of bird species, largely due to the windy conditions but included records of Skylark *Alauda arvensis* (1), Mistle Thrush *Turdus viscivorus* (1), Green Woodpecker *Picus viridis* (1) and Carrion Crow *Corvus corone* (3). Information on bird species present on site outside the breeding season period was gained from recent BBSG Annual Bird Reports (2008 - 2012).

2.2 Botanical Interest

An assessment of botanical interest for the area proposed for the film-set was made by P. Middleton during the site visit on 26th March 2015

The predominant habitat on Wharncliffe Chase is acid grassland dominated by Mat Grass *Nardus stricta* together with large areas of Bracken *Pteridium aquilinium*. There are also tussocky areas with abundant Purple moor grass *Molinia caerulea* and frequent wet flushes with abundant Soft Rush *Juncus effusus* together with occasional Tufted Hair-grass *Deschampsia cespitosa*. Some areas of the heath have been improved, especially to the north of the site near Chase Lodge. In this area, where the clay-pigeon shoot takes place the grassland is dominated by Perennial Ryegrass *Lolium perenne*. All of Wharncliffe Chase is heavily grazed by sheep and consequently, when this occurs, Matt grass becomes dominant.

The area of the heath where the proposed film-set is to be located is less diverse than the majority of the heath. There is evidence of improvement with Perennial Ryegrass being relatively abundant, however, Mat Grass still persists. The area is more heavily grazed than the more acid areas and consequently, the sward is extremely short. The area can be best described as a mosaic of semi-improved grassland and Bracken together with tiny areas of Soft Rush.

2.3 Reptiles

Considering the habitat and the short, close sward grassland with no suitable refugia, reptiles are unlikely likely to inhabit the area proposed for the film-set and are therefore not considered an issue.

3. EVALUATION OF RESULTS

3.1 Breeding Birds – Disturbance, Displacement and Loss of Breeding and Feeding Habitat

Breeding birds will be present on site between late March and early-August. Of the breeding birds recorded within SK3196 (Table 1), Grey Partridge *Perdix perdix*, Skylark and Meadow Pipit *Anthus pratensis* are the key ground nesting bird species which require consideration with regard to on-site access works and the proposed film-set. Grey Partridge and Skylark are red-listed species of conservation concern and Meadow Pipit is an amber listed species of conservation concern. Grey Partridge and Skylark are also UK BAP species (see section 1.6). Of these only Skylark was recorded during the site visit on 26th March.

The primary issues which require consideration in relation to the proposed activities on the site at Wharncliffe Chase are disturbance of potential ground nesting breeding birds when access works and film-set construction commence and are subsequently in progress and also the overall loss of breeding habitat within the context of the site by the presence of the film-set. Displacement of breeding birds is not considered an issue at this site.

Grey Partridge prefer areas with thick, taller vegetation such as grassland, heathland and cultivation for breeding which commences in late April and may continue into August with repeat laying if eggs are lost, although only one brood is reared (Cramp & Simmons 1979). Skylark breed predominantly in short vegetation, particularly grassland, but also in growing crops. Breeding commences in April and with up to four broods possible may continue into late July and possibly August in some areas (Cramp 1988). Meadow Pipit breed in open country, such as grassland and moorland. The onset of laying is affected by temperature in last third of March, but breeding usually commences in mid-April and continues through to late July, with two broods possible, and may continue into August (Cramp 1988).

With regard to site access works and construction of the film-set Grey Partridge can be discounted as the habitat where works are proposed is considered to be unsuitable for this species as much of it contains

shorter vegetation with a lack of suitable cover for breeding and protection of chicks. As only one pair was recorded from the data search and breeding status reported as probable there is no issue with disturbance or loss of breeding habitat for this species.

Skylark and Meadow Pipit are therefore the main species of concern at this site, particularly given the suitability of the habitat for breeding by both species. Although four pairs of Skylark and seven pairs of Meadow Pipit were recorded from the data search this was within the one kilometre square (SK 3196) as a whole and is therefore considered low breeding density for both species. However, Skylark is a red listed species of conservation concern and Meadow Pipit an amber listed species so consideration must be given to prevent any disturbance of early breeding birds through site access works and construction of the film-set from early April through into late-May. Loss of breeding habitat and displacement is not considered an issue as the area proposed for site access works and the film-set are small within the context of Wharncliffe Chase as a whole. Furthermore, there are large areas of suitable breeding habitat present for Skylark and Meadow Pipit in the wider area surrounding the proposed site for the film-set.

Of the species recorded within SK 3196 relative to the proposed film-set location, Whinchat *Saxicola rubetra* and Yellowhammer *Emberiza citrinella* also nest on the ground and may nest in Bracken which is present across the site. Although only one and two pairs respectively were confirmed breeding on site (2009) from the data search consideration should also be given to these species. The issue arises where small areas of growing Bracken may need to be cut during the filming stage and the potential for active nests of these species and also Skylark and Meadow Pipit to be present.

There are no concerns with regard to loss of feeding habitat for any of the bird species recorded on the site within the proposed film-set location. Area taken up by the access track matting, load spreading track-way panels and the film-set is negligible within the context of Wharncliffe Chase. In addition there are no issues with regard to disturbance or displacement of breeding birds relative to the three filming periods.

3.2 Evaluation of Effects through Proposed Activities Outside the Breeding Bird Season

Once constructed the film-set will remain in-situ until filming is completed in late-October and the last block of filming of five to seven days duration (27th September – 23rd October 2015) will be undertaken outside the breeding season. Following completion of filming the set will be dismantled and site restoration works required will commence. Birds which have bred on Wharncliffe Chase between March and August will disperse throughout the site as the breeding season subsides or leave the site entirely to winter elsewhere. Due to the habitat type present on site few birds will be recorded outside the breeding season. Migrant Skylarks and Meadow Pipits may occur during September and October and feed on site in small numbers but otherwise there will be no impacts to birds in the period August to October through presence of the film-set, filming and personnel present on site.

3.3 Botanical and Ecological Constraints

The ELS option (EL3) applied to the land at Wharncliffe Chase through the land management agreement with Natural England (see section 1.3) has been applied in order to increase species-rich grassland on site. Subsequent effects of this option will be progressive throughout the duration of the agreement which expires in June 2020. Stripping back the ground surface to remove a shallow linear section of grass and soil for the track within the film-set will remove the ryegrass and high nutrient soil enabling the establishment of acid grass species. However, with regard to the agreement consent for this must first be obtained from Natural England. Given the botanical and ecological assessment undertaken on site the proposed film set area and tracks near to the proposed film-set area are currently considered of low ecological value. Consequently there are currently no botanical or ecological constraints identified.

4. RECOMMENDATIONS AND MITIGATION

4.1 Prior to Access and Film-set Construction Works (early April 2015)

1. The key issue on site is the potential for disturbance to early breeding Skylark and Meadow Pipit which may have active nests, particularly in the film-set area. The day prior to works commencing on site a walkover survey to check for any active nests should be undertaken covering all areas to be used, including the access tracks, the film-set area and the area south of Chase Lodge proposed for the staging area for vehicles, personnel and equipment.

4.2 Film-set Works Period (early April – 22nd May 2015)

1. Once it is established that there are no active nests in the areas proposed for works, subsequent early occupation of the site with regard to this is important before any birds begin to nest
2. No restrictions for on-site timings; 07.30 – 19.00 is acceptable
3. Maintain ground protection throughout
4. Considering that the track for proposed removal of the shallow linear section of grass and soil surface within the film-set area is of low ecological value, little damage will be caused by carefully stripping back the surface. Consent to undertake this must first be obtained from Natural England. The material removed should be stored safely on site for re-use in restoration once filming is completed. This will be undertaken at the television company's expense.
5. No Smoking outside designated staging area at all times (fire risk to surrounding grassland).

4.3 Filming Periods (22nd May - 29th June; 13th July – 24th August; 27th September – 23rd October)

1. No restrictions for on-site timings; 07.30 – 19.00 is acceptable
2. Maintain ground protection throughout

3. Crew and equipment to remain within reasonable distance of the film-set to avoid any potential disturbance to ground nesting birds such as Skylark and Meadow Pipit which may be breeding in surrounding areas on site
4. Small areas of Bracken within or surrounding the film-set which are not required to be 'in-shot' should be cut at the earliest opportunity once growth has started and subsequently as necessary. This will avoid the small Bracken beds becoming taller throughout the season and forming potential nest sites for Whinchat and Yellowhammer from late April to July. As these two species are present in very low densities on site and there is suitable habitat elsewhere across the site for breeding this raises no conservation issues with regard to these species. However, checks for any active nests should always be made before any cutting takes place
5. No Smoking outside designated staging area at all times (fire risk to surrounding grassland).

4.4 Site Restoration Works (from 24th October 2015)

1. Once the film-set area is cleared the previously stripped grass and soil can be reinstated, raked level and rolled. Alternatively, the previously stripped area can be left to regenerate naturally or sown with an acid grassland mix following agreement with Natural England on seed mix. Seed mix used should preferably be of local provenance. If this is difficult to source locally contact Kings: www.kingscrops.co.uk - 0800 587 9797 (codeKSS1) or Wildcare: www.wildcareshop.com – 0451 833181 (code 5002)
2. When the film-set is removed there will also be areas of bare ground, these can also be sown with an acid grassland mix (following recommendations as above)
3. All site restoration works to be undertaken at the television company's expense.

5. CONCLUSIONS

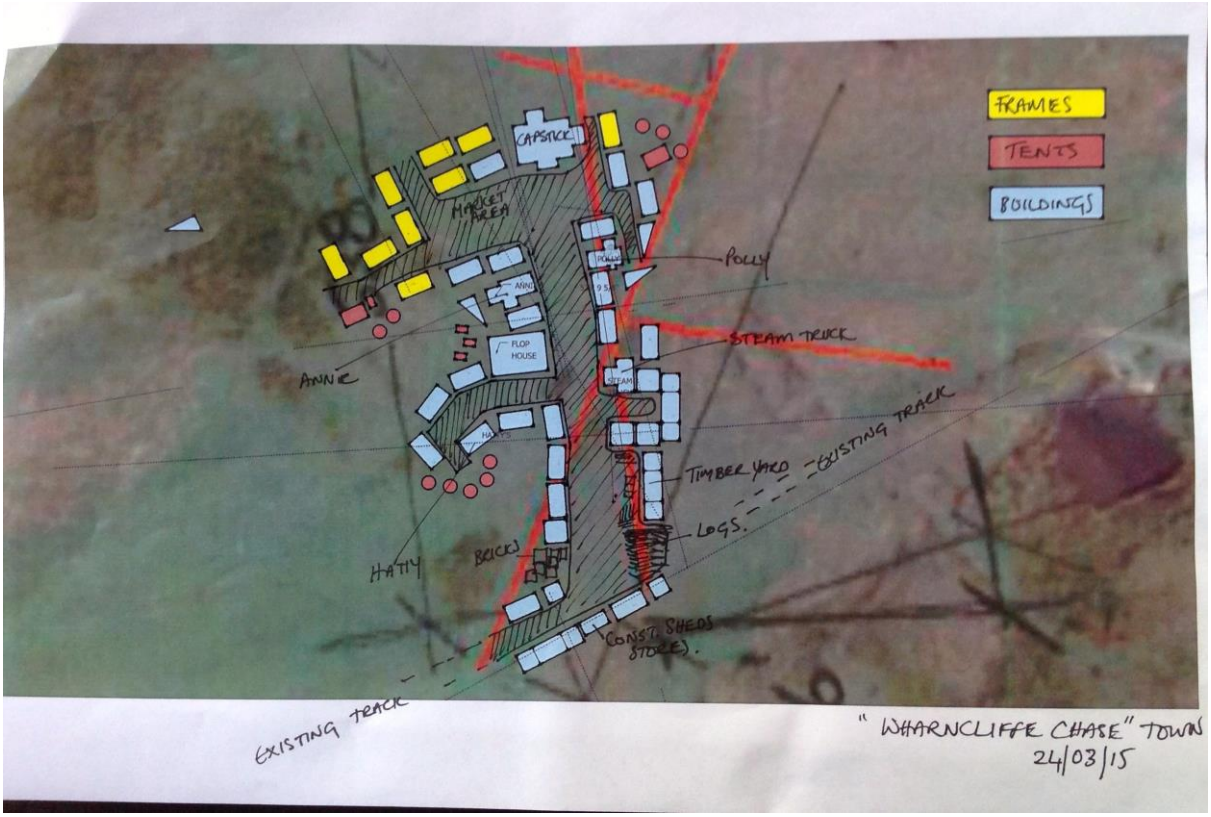
Providing the recommendations and mitigation proposals given above are adhered to the presence of personnel, site access works, film-set construction and periods of filming on the Wharncliffe Chase site relative to this project should not cause undue disturbance to breeding birds. There will be no impact or effect upon the Wharncliffe Crags SSSI, Wharncliffe Heath LNR or Wheata Woods LNR. Specific ornithological advice will be available throughout the duration of the production should this be required.

There are many ways funding from this project could benefit the estate, including bird populations present and this should be discussed and agreed with the landowner at the earliest opportunity. Key future benefits would be to raise awareness of the importance of increasing local biodiversity and importance of the need to conserve bird populations, however small, throughout the wider area.

6. APPENDIX 1



7. APPENDIX 2



8. REFERENCES

Cramp, S. & Simmons, K.E.L. (eds.) 1979. The Birds of the Western Palearctic, Volume 2, Hawks to Bustards. Oxford University Press, Oxford.

Cramp, S. (ed.) 1988. The Birds of the Western Palearctic, Volume 5, Tyrant Flycatchers to Thrushes. Oxford University Press, Oxford.

Eaton M.A., Brown A.F., Noble D.G., Musgrove A.J., Hearn R.D., Aebischer N.J., Gibbons D.W., Evans A. & Gregory R.D. (2009). Birds of Conservation Concern 3. The population status of birds in the United Kingdom, Channel Islands and isle of Man. British Birds 102: 296.