

REFUSED

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Bird Management Plan

Proposed Sand and Gravel
Development and Minerals
Processing Operations, with
Restoration to Farmland &
Nature Conservation on
Land at White Cross Farm,
Nr Wallingford, Oxfordshire,

JULY 2021

Quality Assurance Review

Project Name: Bird Management Plan for the proposed minerals scheme on
Land at White Cross Farm, nr Wallingford, Oxfordshire

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PLANS

BMP-1	Location Map & Airfield Radius
BMP-2	Site Plan
BMP-3	Proposed Plant Area Layout Plan
BMP-4	Conceptual Site Restoration Plan

1.INTRODUCTION

- 1.1.1 This Bird Hazard Management Plan has been prepared as part of the Environmental Impact Assessment in support of the planning application for the proposed minerals development at White Cross Farm, Wallingford. The Land at White Cross Farm (The site) is situated within the 13km safeguarding radius of RAF Benson Aerodrome and therefore aerodrome safety is a key consideration of the planning determination. Aerodrome safety has therefore been taken in to consideration within the design management and mitigation of the proposed development.
- 1.1.2 This document has been prepared to manage and monitor the potential changes in the populations of hazardous bird species on the site. The sand and gravel operation may introduce new habitats that have the potential to attract flocks of birds which could create hazardous movements of bird species above the site. It is considered that during the development the potential for the site to attract hazardous bird species is low due to the frequent pumping of water and backfilling operations to restore the land back to original levels.
- 1.1.3 The following document provides an overview of the site operations and restoration proposals, the bird strike risks, management and mitigation objectives. The aim of this Bird Management Plan is to show that the proposed development can achieve a method of working and restoration scheme that does not increase the potential of bird strike whilst providing beneficial afteruse and conservation.
- 1.1.4 These types of operations and restoration concepts are typical of numerous sand and gravel operations located near airfields.

2. SITE DESCRIPTION

2.1 Site Location

- 2.1.1 The application area is located on the western bank of the River Thames and covers some 19 hectares within the County of Oxfordshire. The site is centred at Grid Reference [SU 605 877] (as shown in Plan BMP-1) and is located approximately 1km south of the village centre of Wallingford, 2km north east of Cholsey.
- 2.1.2 The site lies about 3km south west of RAF Benson and 4.5km northwest of Chiltern Airports Ltd (Parachute School). It is not considered that the proposed development will have an impact on Chilterns Airports Ltd.
- 2.1.3 The site is accessed via an agricultural entrance off Reading Road (A329). The application area comprises mainly agricultural land that has been used for arable and livestock grazing.
- 2.1.4 The majority of the site lies on the floodplain of the River Thames. Ground levels rise from about 43.5m AOD in the east adjacent to the River Thames to 46m AOD in the west at the A329, as shown in Plan BMP-2. Published OS maps show minor drains across the site, one drain trends north south through the centre of the site that is partially vegetated with trees and scrub. A drainage ditch is also present within the north eastern part of the site which flows beneath the A4130 and issues into the River Thames.
- 2.1.5 The area surrounding White Cross Farm is generally agricultural land, with occasional pockets of woodland and a few minor watercourses. The topography is dominated by the southerly flowing River Thames that lies at a level of about 42.4m AOD, with grassland present on the flanks of the river which forms the floodplain. The Chiltern Hills AONB to the east and the North Wessex Downs AONB to the south west.
- 2.1.6 There is one public right of way present within the site boundary, which is the Thames Path which is a long distance National Trail. This path runs adjacent to the River Thames the length of the site (Plan BMP-2).

2.2 Outline Development Proposals

- 2.2.1 It is proposed that the River Terrace Sand & Gravel reserves within the proposed extraction area (15.5ha) will be extracted on a over a period of 4-5 years. The level of output from the site is expected to average some 140,000 tonnes per annum.

- 2.2.2 The minerals will be processed within a defined plant area which will be located on the higher land off the floodplain in the north western part of the site, see Plan BMP-3. The soils around the plant area would need to be stripped prior the plant construction so creating screening bunds would provide a suitable and useful storage solution for the soils and will ensure that the processing plant will be screened from the public highways. These soils will be retained and later used in the restoration. Top soil bunds will be no more than 3m in height and subsoil bunds no more than 5m in height.
- 2.2.3 Within this area, it is proposed that a washing and screening plant will be constructed, together with two silt settlement lagoons where the wash water from the mineral processing will be discharged and a clean water lagoon. A stocking area around the plant will also be necessary from which the HGV's will be loaded. The plant area is likely to be around 46m AOD, while the washing and screening plant itself is likely to be about 9m high, the highest point being around 55m AOD.
- 2.2.4 It is proposed that soils and overburden will be stripped in phases in advance of the excavation of the sands and gravels within the proposed extraction area. As the mineral extraction progresses inert backfill material will be imported and deposited within the excavation void to return the levels to original contours.
- 2.2.5 A scheme of dewatering has been proposed as part of the quarrying operations that will limit the areas of open water are proposed on the floodplain during the operational period except for natural seasonal flooding and silt lagoons. Measures to ensure wildfowl are not attracted to any lagoons on the site are described in Section 5.
- 2.2.6 The proposals for progressive backfilling of the site as the mineral excavation develops will enable the site to be restored in a sustainable manner. The proposed final restoration scheme will be completed about a year after the cessation of mineral extraction, which will include mainly agricultural land in the western half of the site and mainly grassland with a series other mixed habitats in the eastern part of the site (see BMP-4).

3. POLICY & AERODROME SAFEGUARDING GUIDANCE

3.1 NPPF

The NPPF paragraph 144 states that local planning authorities should ensure that when granting planning permission for mineral development, that there are no unacceptable adverse impacts on the aviation safety and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality.

3.2 Oxford Minerals and Waste Local Plan – Part 1 – Core Strategy (Feb 2017)

3.2.1 *Policy C5: Local environment, amenity and economy* Proposals for minerals and waste development shall demonstrate that they will not have an unacceptable adverse impact on:

- the local environment;
- human health and safety;
- residential amenity and other sensitive receptors; and
- the local economy;

including from:

– noise; – dust; – visual intrusion; – light pollution; – traffic; – air quality; – odour; – vermin; – **birds**; – litter; – mud on the road; vibration; – surface or ground contamination; – tip and quarry-slope stability; – differential settlement of quarry backfill; – subsidence; and – the cumulative impact of development.

Where necessary, appropriate separation distances or buffer zones between minerals and waste developments and occupied residential property or other sensitive receptors and/or other mitigation measures will be required, as determined on a site-specific, case-by-case basis.

3.2.2 *Policy M10: Restoration of mineral workings*: Mineral workings shall be restored to a high standard and in a timely and phased manner to an after-use that is appropriate to the location and delivers a net gain in biodiversity. The restoration and after-use of mineral workings must take into account:

- the characteristics of the site prior to mineral working;
- the character of the surrounding landscape and the enhancement of local landscape character;
- the amenity of local communities, including opportunities to enhance green infrastructure provision and provide for local amenity uses and recreation;
- the capacity of the local transport network;
- the quality of any agricultural land affected, including the restoration of best and most versatile agricultural land;

- *the conservation of soil resources*
- *flood risk and opportunities for increased flood storage capacity;*
- *the impacts on flooding and water quality of any use of imported material in the proposed restoration;*
- ***bird strike risk and aviation safety;***
- *any environmental enhancement objectives for the area;*
- *the conservation and enhancement of biodiversity appropriate to the local area , supporting the establishment of a coherent and resilient ecological network through the landscape-scale creation of priority habitat;*
- *the conservation and enhancement of geodiversity; and*
- *the conservation and enhancement of the historic environment; and*
- *consultation with local communities on options for after-use.*

3.3 Civil Aviation Authority

3.3.1 The Civil Aviation authority has several published documents that relate to Safeguarding of Aerodromes;

CAA- Advise Note 3 'Wildlife Hazards around Aerodromes (Aug 2016)

CAP 738 – Safeguarding of Aerodromes

CAP 772 – Wildlife Hazard Management at Aerodromes (replaced CAP 680)

3.3.2 CAA Advise note 3 provides advice on landscaping design, species threshold figures and monitoring and risk management in order to reduce the potential attractiveness of landscaping schemes to hazardous bird species. “Proactive prevention can often enable effective biodiversity and planning challenges to be met without compromising the very real risk to aircraft and flight safety.”

3.3.3 CAP 738 offers guidance to those responsible for the safe operation of an aerodrome, to help them assess what impact a proposed development or construction might have on that operation.

3.3.4 CAP 772 details what information should be contained within a wildlife hazard management plan for an aerodrome site. It takes into consideration habitats that attract wildlife species on and off an aerodrome site, such as sand, gravel and clay pits, reservoirs, lakes and ponds. CAP 772 also provides detailed information on the importance of effective habitat management on and off aerodrome sites and useful techniques to employ when managing the habitats on a site.

3.3.5 The Civil Aviation Authority: CAP 772 states that “virtually all land types and land uses (including natural habitats) attract wildlife in some way. Safeguarding should therefore

address developments that could become wildlife attractants with the potential to increase the wildlife strike risk at a nearby aerodrome.”

3.4 Ministry of Defence – Royal Air Force Benson Safeguarding

- 3.4.1 The Land at White Cross Farm, Wallingford is situated approximately 3km south east of RAF Benson and therefore falls within the limits of the 13km circular safeguarding area. The 13km safeguarding zone represents a circular zone around an aerodrome reference point (ARP) which identifies the need for consultation about potential bird attractant developments (CAA, 2006).
- 3.4.2 An aircraft on a normal approach will descend into this zone approximately 8 statute miles (13km) from the runway (CAP 772). Airfield Safeguarding Areas (13km/8 mile radius) are designated around airports and civil and military airfields. Within these safeguarding zones, consultation between developers and owners or operators of relevant airfields will be required in order to consider potential bird strike or other hazards.
- 3.4.3 The proposed working and restoration concept, habitat management and mitigation measures for the site were therefore developed with the aim to reduce bird strike hazard while enhancing the opportunities for nature conservation and biodiversity.

4. Habitat Management & Risk Management

4.1 Quarry Operational Phase Habitat Management

- 4.1.1 During the operational phase of the mineral extraction and processing there are proposals for a lagoon adjacent to the plant for use in the sand and gravel washing and processing plant, as shown in Plan BMP-3.
- 4.1.2 It is proposed that this lagoon will be designed and constructed in an engineered manner to ensure that it is steep sided and deep (>4m) to prevent any marginal vegetation growth developing, such as reed beds. There will be no fish stocked in the lagoon and it will be operated solely as an out flow for the wash water from the processing plant.
- 4.1.3 To ensure that birds such as swans, geese and lapwings do not flock to the lagoon areas, additional safeguards such as ropes with bunting attached could be stretched across the lagoons, should hazardous birds be seen using the lagoon.
- 4.1.4 The phases of the excavation area will be de-watered (unless a flood event occurs) to allow working of the mineral in a 'dry state'. During the operational phase the excavation of sand and gravel, pumping, plant movement and other associated works will generally deter birds from the site.
- 4.1.5 The site experiences seasonal flooding on a regular basis where flood waters cover much of the eastern area designated for mineral extraction. During flood events all plant and machinery will be removed from the floodplain and the excavation will fill with water. These waters will be pumped (de-watered) on cessation of flooding to allow mineral extraction to continue.

4.2 Proposed Quarry Restoration Management

- 4.2.1 The quarry restoration scheme proposes no large open water bodies as part of the conceptual scheme, as shown in Plan BMP-4. Following the cessation of mineral extraction and backfilling operations, the final conceptual restoration scheme will comprise mainly agricultural land in the western half of the site and mainly floodplain grazing marsh grassland with mixed habitats of wet woodland, marsh and a range of smaller scale floodplain mixed habitats
- 4.2.2 These measures will deter target species of birds as there will be no large open water areas of the site during the operational or restoration phase of the development. On completion of the mineral operations, the silt lagoon adjacent to the plant area will be planted with a series of wet woodland species and possible reed beds to minimise the

amount of open water, whilst enhancing the biodiversity and long-term nature conservation objectives on OCC within the Thames floodplain area

- 4.2.3 The newly created small pockets of reedbed will contribute to the reduction of open water area and are unlikely to attract birds that are listed by the CAA as hazardous, due to their small size. By including these types of habitats within the site restoration it will make a valuable contribution towards Local and UK BAP habitat conservation.
- 4.2.4 The wet woodland and broadleaved woodland is proposed around the small pond will complement the natural landscape and banks of the River Thames while deterring the target bird species. All planting will be managed to prevent them becoming potential roosting sites, and to reduce food supply. The types and species of vegetation are to be agreed with the relevant stakeholders prior to planting.

4.3 Risk Management

- 4.3.1 The overall expected usage of the site by potentially hazardous bird species is considered to be negligible. Habitat management is critical within the operational, restoration and aftercare period for preventing bird strike risk from occurring however, it must be considered that additional bird deterrent techniques may be required if risks arise and habitat management fails.
- 4.3.2 Risk management will comprise managing and monitoring of habitats and wildfowl on the site and will be undertaken regularly during mineral and restoration operations, together with the aftercare period.
- 4.3.3 During the operational and restoration aftercare, monitoring will take place on a regular basis throughout the calendar year. Monitoring will be made at agreed times of day and all suitable habitats will be surveyed. The applicant will maintain records of bird monitoring and control and make the records available to the Mineral Planning Authority (MPA) and Ministry of Defence (MOD, RAF Benson).
- 4.3.4 During the visits, checks will record the bird species, activity, location and numbers. During breeding seasons the monitoring visits will inspect and document any signs of breeding by the hazardous species.
- 4.3.5 Target bird species and trigger levels to monitor are as follows:
- Geese – 50
 - Swans – 20
 - Gulls – 100
 - Lapwings – 100

All 'trigger levels' are subject to review and adjustment with input from relevant stakeholders.

4.3.6 Should the numbers of bird species rise above the agreed levels, the relevant stakeholders will be notified and appropriate mitigation measures along with increased frequency of monitoring shall be agreed upon to minimise the risk will be implemented.

4.3.7 Where necessary mitigation measures may include the following:

- Visual repellents e.g. Flags, red tape, reflectors
- Bird scaring measures e.g. manual dispersal methods or distress calls
- Population control (taking into account relevant legislation and licenses)
- Habitat review and change. This is a last resort should all other mitigation methods fail.

4.3.8 The use of chemical repellents is not appropriate. It is considered that exclusion through physical barriers (e.g. weighted plastic balls) is not appropriate as it can have a detrimental impact on the amount of sunlight that enters the lakes and other animal species.

4.3.9 During the operational phase the excavation of sand and gravel, pumping, plant movement and other associated works will generally deter birds from the site. Other quarry sites have noted that permanent presence of audible or visual bird repellents can lead to familiarisation, making the technique ineffective. The use of these bird deterrent techniques therefore needs to be non-routine and monitoring will determine when use of these is necessary.

5. Summary

- 5.1 This Bird Management Plan forms part of the Environmental Impact Assessment as part of the Planning Application for the extraction of sand and gravel and marina development at White Cross Farm, Wallingford. Due to its location within the 13km safeguarding radius of RAF Benson the site operator is required to manage bird strike hazard and the potential impact from bird species.
- 5.2 Proposed methods for hazard management include:
- Correct site design
 - Habitat management
 - Development of a regular monitoring regime with action methods.
 - Maintaining dialogue and consultation with relevant stakeholders including RAF Benson safeguarding officers.
 - All bird scaring actions to be undertaken by those who are deemed competent. Level of relevant training, experience and capability to be agreed by all relevant parties.
- 5.3 The habitat management and implementation of deterrence measures, should they be necessary, make it unlikely that the proposed development and restoration will result in an increased risk of bird strike.



BMP -1

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Title **Site Location**

Project **Bird Management**

Site **White Cross Farm, Wallingford**



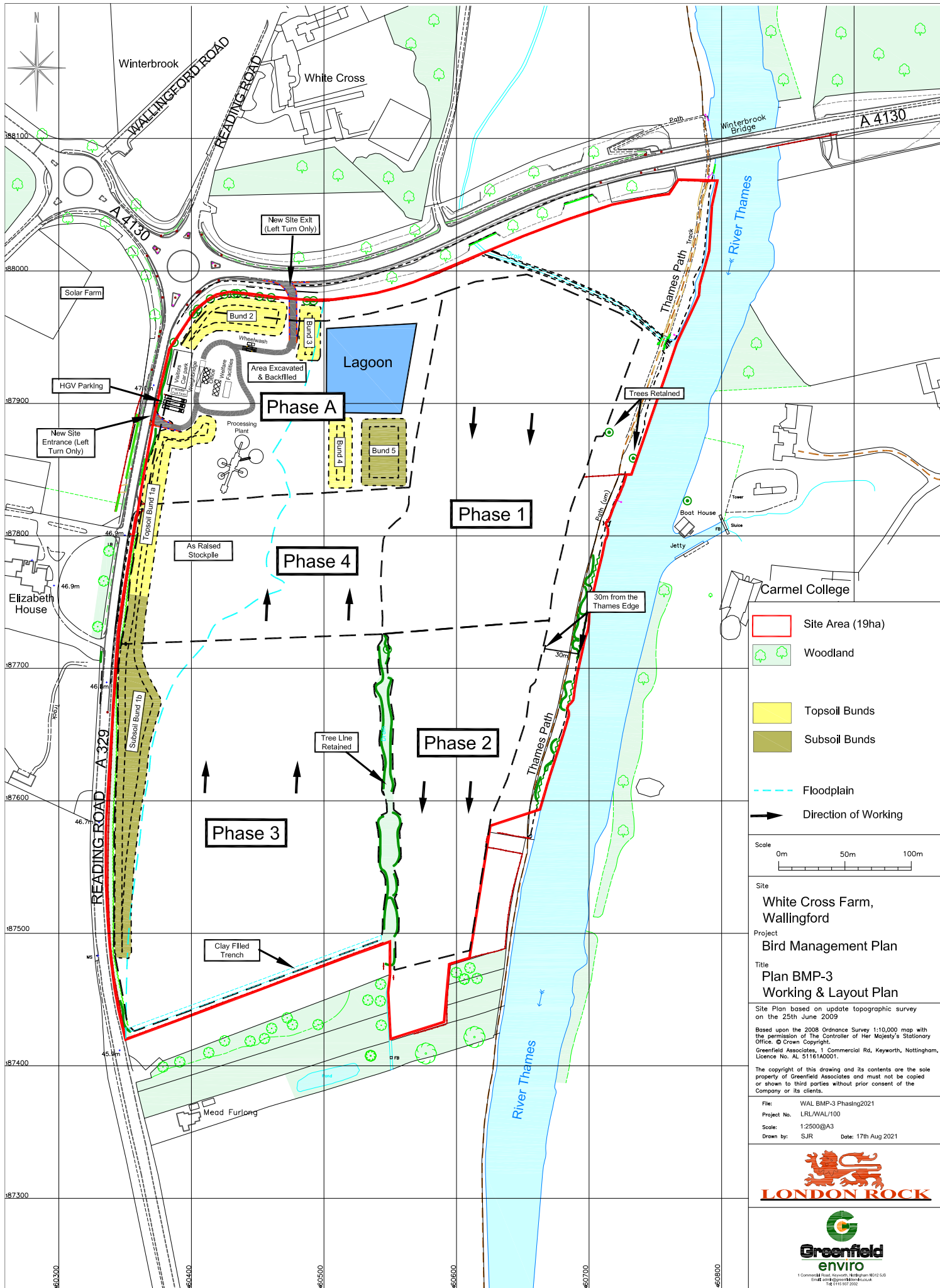
Application Area

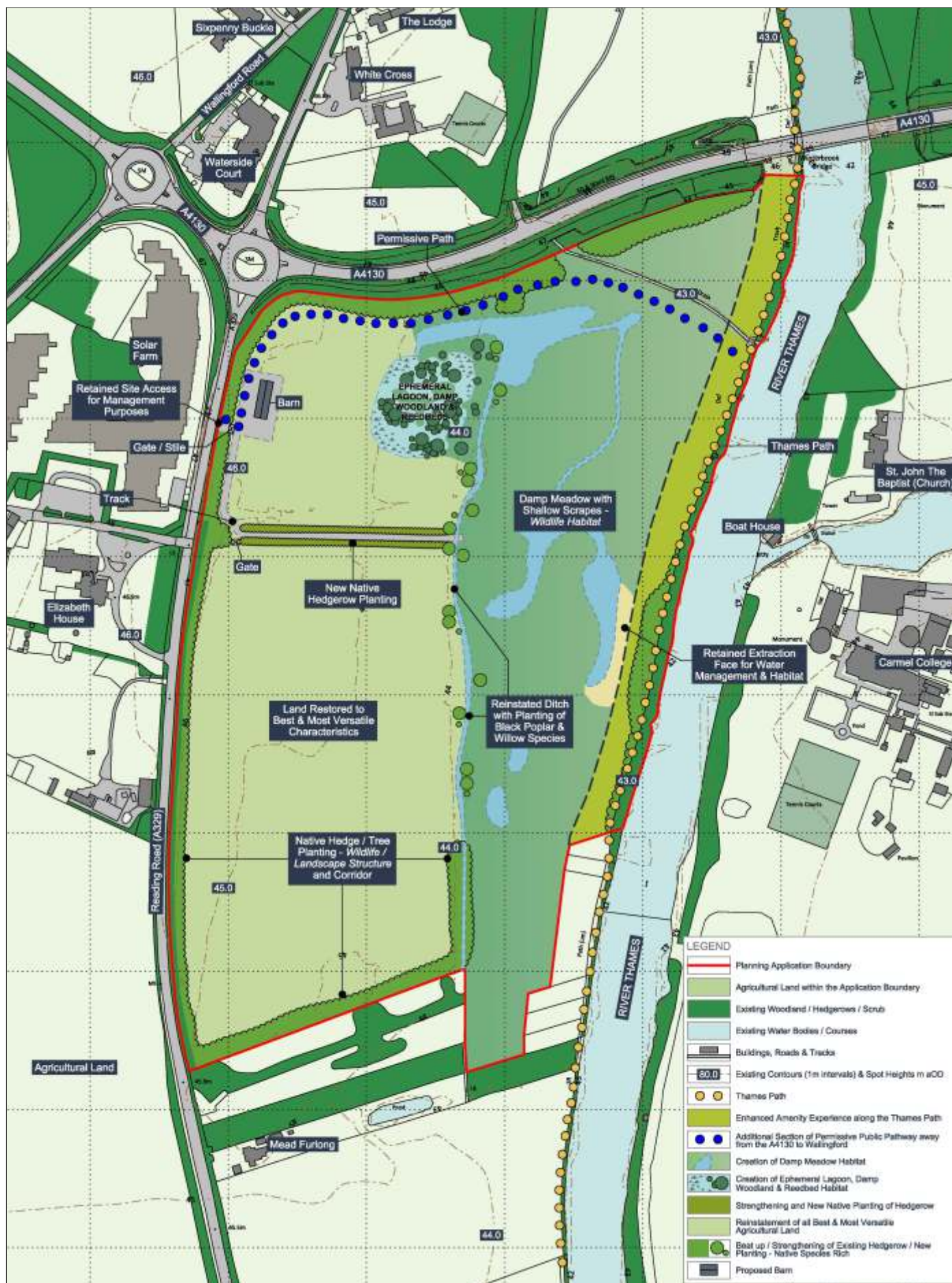


Distance from Airfield

Scale 0m 500m







BMP -4

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Title **Site Restoration**

Project **Bird Management**

Site **White Cross Farm, Wallingford**

 Application Area

Scale 0m 500m

