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PROFESSIONAL ECOLOGICAL SOLUTIONS



ECOLOGY

TREE PROTECTION FENCING

SITE PREPARATION & CLEARANCE

HABITAT MANAGEMENT & ENHANCEMENT

Report	Outline Proposal for BCA
Site Name	Land East of Posbrook Lane, Titchfield
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Client	Foreman Homes Ltd
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1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Foreman Homes to prepare an outline proposal for the creation of a dedicated Bird Conservation Area (BCA) within a part of the land east of Posbrook Lane, Titchfield site. This proposal is being submitted at request of Hampshire County Council with the intention to provide an area that will be created (and with future on-going management) endeavour to provide suitable habitats to attract and benefit wintering bird species associated with the nearby Solent & Southampton Water Special Protected Area (SPA) and Titchfield Haven National Nature Reserve (NNR).

1.2 Location

The site comprises of a parcel of land located immediately east of Posbrook Lane, PO14 4JD (centred on OS grid reference SU537 051) (**Fig 1**). The west of the site is bounded by Posbrook Lane, the north of residential houses, the east by horse pasture and the Meon River and the south by arable fields. The wider environ is semi-rural with the site residing to the south of Titchfield village.

Figure 1. Redline location plan of the site with the BCA area within the blueline.



1.3 Proposals

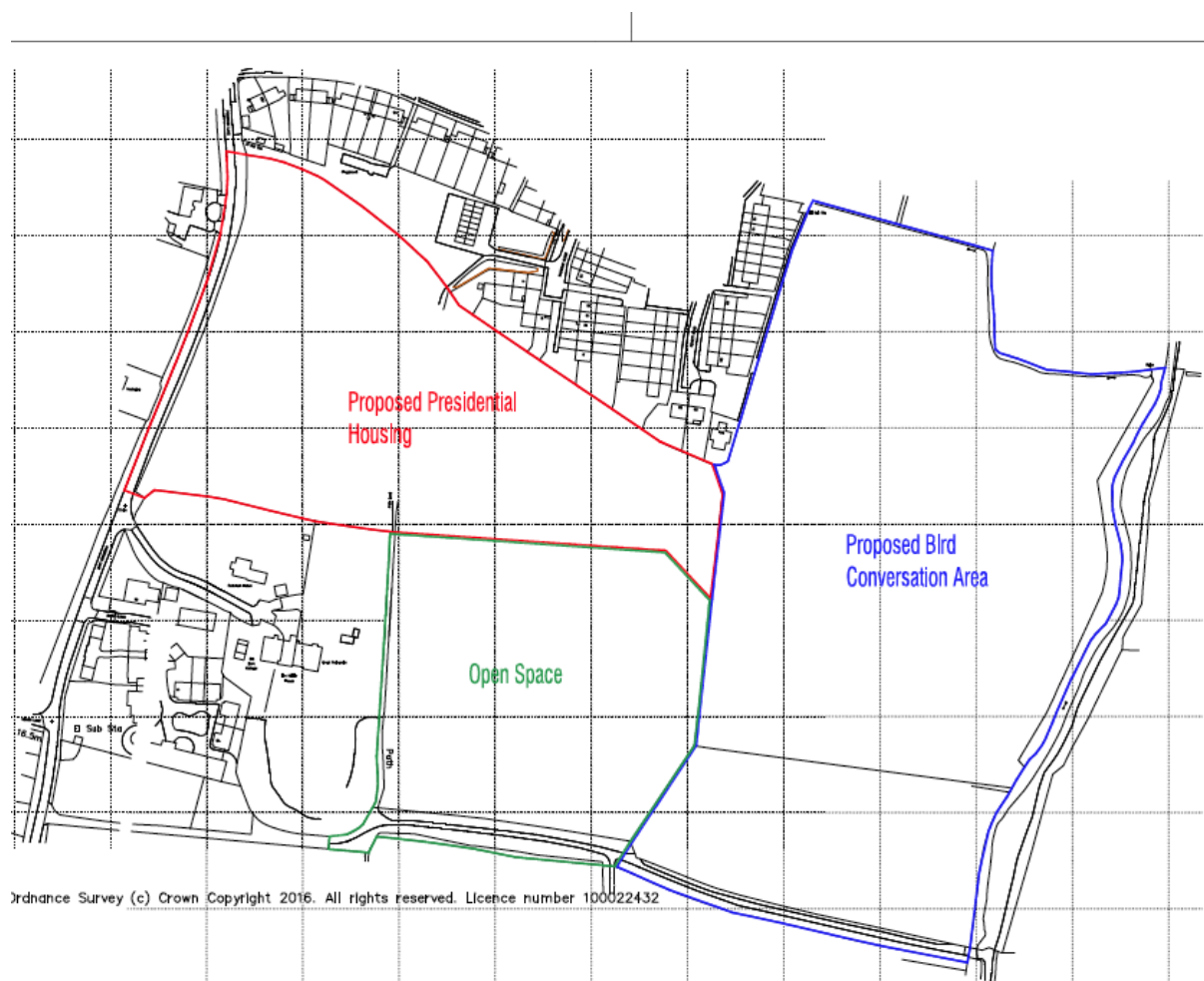
The proposals entail an outline application for the erection of up to 57 dwellings, together with associated parking, landscaping and access from Posbrook Lane.

1.4 Current Land Usage

The site encompasses a pastoral field that has been subject to continued informal grazing by horses. This grazing maintains a reasonably short grassland habitat across the site. The grassland itself is reasonably species poor with limited patchy scrub dispersed within the central and south-east, likely remnants of previous intact hedgerows. The area subject to the proposed creation of a BCA (**Fig 2**) is situated in close proximity to several designated areas of conservation value in particular; Titchfield Canal, Posbrook Meadows, Titchfield Haven NNR and Solent & Southampton Water (SPA). In addition, an identified wader roost is present within 0.1 Kilometres to the south at Great Posbrook Farm and Hollom Farm Meadows are also located in near proximity to the east.

The proposed Bird Conservation Area measures approximately 5.79ha. The land is subject to a gradual shallow fall from the west descending eastwards towards the Meon River. At the central eastern boundary alongside Titchfield canal lies a main badger sett.

Figure 2. Redline / blueline plan showing the extent of the areas proposed for development, POS and the BCA.



1.5 Consultation

As part of the work for the previous application on site (refused under P/17/0681/OA), this document was written in line with a consultation response received from Rachel Jones of Natural England. Given the BCA design is being retained as agreed for the previous application, this consultation response has been reproduced below in **Fig 3**.

Figure 3. Extract from Natural England's letter request dated 13th October 2017 for further information.

SUMMARY OF NATURAL ENGLAND'S ADVICE

FURTHER INFORMATION REQUIRED TO DETERMINE IMPACTS ON DESIGNATED SITES

As submitted, the application could have potential significant effects on the Solent and Southampton Water Special Protection Area. Natural England requires further information in order to determine the significance of these impacts and the scope for mitigation.

The following information is required:

- Further consideration of the size, design and management of the Bird Conservation Area is needed to ensure the continued ecological function of the site is maintained and enhanced in perpetuity.
- A costed management plan will be required to support the long-term management of the site. The management plan should include full details of the infrastructure to be provided by the applicant, along with details of the ongoing maintenance / replacement requirements with costs calculated for perpetuity (usually taken as 80 years).
- The management plan should also include details of the management body (or bodies) who will be responsible for maintaining the site, along with the details of the arrangements for monitoring the ongoing delivery of the agreed management.
- Consideration will also need to be given to providing appropriate 'step-in' rights for Fareham BC to take over the management of the Bird Conservation Area should it be required.

Without this information, Natural England may need to object to the proposal.

Please re-consult Natural England once this information has been obtained.
Natural England's advice on other issues is set out below.

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Relevant Legislation

The Conservation of Habitats and Species Regulations 2010 (known as the 'Habitats Regulations') (HMSO, 2010), pass two EEC Directives into UK law. The Regulations protect sites and species deemed to be of conservation importance across Europe. The most relevant parts of the Regulations to development related activities are:

- The protection of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)
- The protection of species listed within Schedule 2 of the Regulations, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale, this confers some level of habitat protection.

2.2 National Planning Policy

The development would seek to comply with relevant Planning Policy, at a local, regional and national level.

Planning Policy Statement 9 (PPS9) was superseded by the National Planning Policy Framework (NPPF 2019). The NPPF states that the planning system should contribute to and enhance the natural and local environment by:

- Recognising the wider benefits of ecosystem services.
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- The conservation of International and National statutorily designated sites.
- Protection of ancient woodland and veteran trees.
- The creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- The preservation, restoration and recreation of priority habitats and ecological networks.
- The recovery of priority species populations.

2.3 Local Planning Policy

Policy CS4 of the Fareham Borough Local Plan (GI and Geological Conservation) includes a requirement to protect habitats important to the biodiversity of the Borough, including statutory (such as SPAs) and non-statutory (such as Sites of Importance for Nature Conservation SINCS) designated sites. It also states that:

'Where possible, particularly within identified Biodiversity Opportunity Areas, sites will be enhanced to contribute to the objectives and targets set out in the UK, Regional, County and Local Biodiversity Actions Plans'.

There is also a requirement to provide GI as part of future development proposals stating:

'GI will be created and safeguarded through:

- *Investing in appropriate management, enhancement and restoration, and the creation of new resources including parks, woodland and trees and wildlife habitats;*
- *Not permitting development that compromises its integrity and therefore that of the overall GI framework'.*

It also details that mitigation to prevent adverse effects on sensitive European sites in and around the Borough will be implemented in conjunction with other local authorities. This mitigation will include provision of alternative recreational space and developer contributions where appropriate. It states:

'Development likely to have an individual or cumulative adverse impact will not be permitted unless the necessary mitigation measures have been secured'.

Additional relevant local policies (DSP13 and DSP15) are provided within the *Local Plan Part 2: Development Sites and Policies* (FBC, 2014).

'Policy DSP:13 Nature Conservation

Development may be permitted where it can demonstrate that;

- i) designated sites and sites of nature conservation value are protected and where appropriate enhanced;*
- ii) protected, priority and target species populations and their associated habitats, breeding areas, foraging areas and protected and where appropriate, enhanced;*
- iii) where appropriate, opportunities to provide a net gain in biodiversity have been explored and biodiversity enhancements incorporated; and*
- iv) The proposal would not prejudice or result in the fragmentation of the biodiversity network.*

Proposals resulting in detrimental impacts to the above shall only be granted where the planning authority is satisfied that;

- i) Impacts are outweighed by the need for, and benefits of the development; and*
- ii) Adverse impacts can be minimised, and provision is made for mitigation and, where necessary, compensation for those impacts.*

Enhancements that contribute to the habitat restoration targets (and population strengthening), set out in the HBAP will be supported.

'Policy DSP15: Recreational Disturbance on the Solent Special Protection Areas

Planning permission for proposals resulting in a net increase in residential units may be permitted where 'in combination' effects of recreation on the Solent Coastal Special Protection Areas are satisfactorily mitigated through the provision of a financial contribution.

In the absence of a financial contribution toward mitigation, an Appropriate Assessment may be required to demonstrate that any 'in combination' negative effects can be avoided or can be satisfactorily mitigated through a developer provided package of measures.

Any application for development that is of a scale, or in a location, such that it is likely to have a direct effect on a European-designated site, will be required to undergo an individual Habitats Regulations Assessment. This may result in the need for additional site-specific avoidance and/or mitigation measures to be maintained in perpetuity. Where proposals will result in an adverse effect on the integrity of any Solent Special Protection Areas, planning permission will be refused.'

3.0 BASELINE

3.1 Proximity of Designated Sites

Table 1 below outlines the proximity of the statutory designated sites relative to the development site of relevance to this document.

Table 1. Nearby statutory designated sites of relevance to this report.

Site Name	Conservation Status	Distance from Site	Qualify Criteria / Features
Solent and Southampton Water	SPA	0.7km southeast	The site qualifies for breeding populations of Common Tern (<i>Sterna hirundo</i>), Little Tern (<i>Sterna albifrons</i>), Mediterranean Gull (<i>Larus melanocephalus</i>), Roseate Tern (<i>Sterna dougallii</i>), Sandwich Tern (<i>Sterna sandvicensis</i>); and Overwintering Black-tailed godwit (<i>Limosa limosa islandica</i>), Dark-bellied Brent Goose (<i>Branta bernicla bernicla</i>), Ringed Plover (<i>Charadrius hiaticula</i>), Eurasian Teal (<i>Anas crecca</i>) and an internationally important overwintering waterfowl assemblage.
	Ramsar	0.7 km southeast	The site comprises estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. Supporting an important assemblage of rare plants and invertebrates with at least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants. Species to qualify the site for Ramsar status include migratory Ringed Plover, overwintering Dark-bellied Brent Goose, Eurasian Teal, and Black-tailed Godwit, as well as overwintering waterfowl assemblage.
Titchfield Haven	SSSI / NNR	0.5 km south east	Titchfield Haven was formerly the estuary of the River Meon, which receives most of its water from the chalk. Tidal water is excluded by one-way tidal valves and the former estuary is an extensive fresh marsh, the river being flanked successively by large reed <i>Phragmites australis</i> beds and wet, unimproved meadows dissected by drainage ditches and further diversified by pools, 'flashes' and patches of fen. In addition, extensive 'scrapes' have been constructed. The area is an important resort for surface-feeding duck, with winter populations of 2,000 wigeon <i>Anas penelope</i> , 1,500 teal <i>Anas crecca</i> , and smaller numbers of other surface feeding ducks. It possesses a rich wetland breeding bird community including bearded

			reedlings <i>Panurus biarmicus</i> and large populations of reed warblers <i>Acrocephalus scirpaceus</i> and sedge warblers <i>Acrocephalus schoenobaenus</i> .
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3.2 Solent Waders & Brent Goose Strategy

The site is currently listed as being a Primary Support Area within the most update to Solent Wader and Brent Goose Strategy (SW&BGS)¹ (**Fig 2**). Full details of the species recorded on site are not provided however the HBIC data lists the following information for the F48B parcel: max count 82, SPA score 3 and number of records 15. This information is used to create a score for the site which informs it's subsequent classification (further information available via <https://solentwbgs.files.wordpress.com/2019/05/swbgs-2019-interim-report-year-two-dw.pdf>).

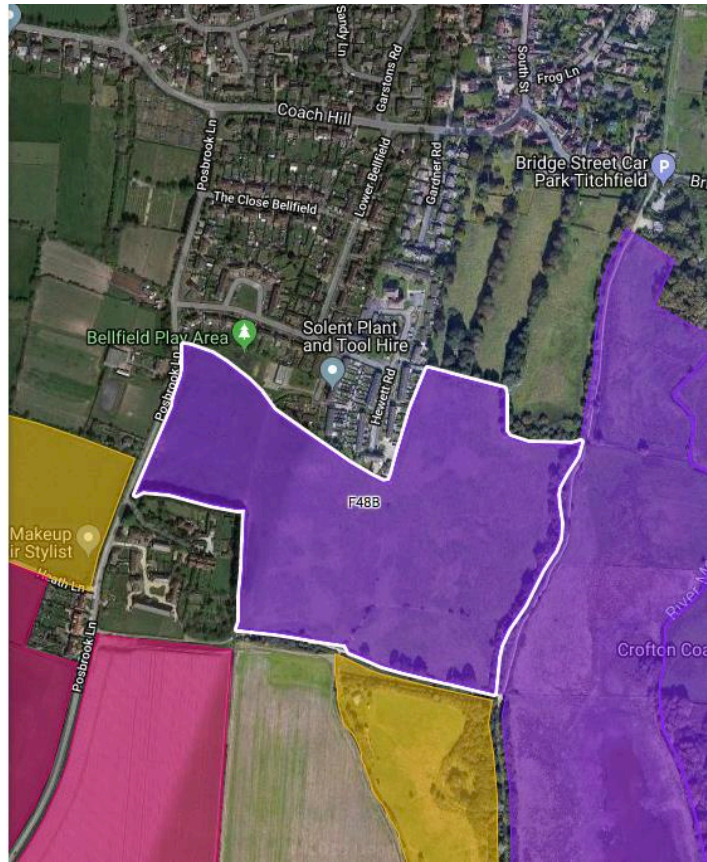
¹ <https://solentwbgs.wordpress.com/page-2/> (accessed 28/10/2019)

Figure 2. The site (F48B) outlined in white with the entirety covered by a PSA designation under the SW&BGS.

name
F48B

description

Site_code F48B
Easting 453783
Northing 105086
Area_ha 11.93
Classification Primary



4.0 BIRD CONSERVATION AREA OPPORTUNITY

The SW&BGS (2018) outlines the following information for mitigation and offsetting requirements where impacts to a PSA will result from a proposed development. These factors have been addressed as far as is practicable within the following sections / chapters of this report:

The Primary Support Areas are land that, when in suitable management, make an important contribution to the function of the Solent waders and brent goose ecological network. However, it is generally considered that, where on-site avoidance or mitigation measures are unable to manage impacts, there may be opportunities for the loss or damage to these areas to be off-set by the provision of new sites to ensure a long-term protection and enhancement of the wider wader and brent goose ecological network.

The options for off-setting impacts on Primary Support Areas will be considered on a case-by-case basis and will be subject to ensuring the continued ecological function of the wader and brent goose sites is maintained and enhanced i.e. ensuring that there are significant net benefits to the wader and brent goose ecological network through the creation and on-going management of replacement (off-setting) sites. This may be a site identified within the Strategy provided there is sufficient scope for enhancing and securing its function within the wader and brent goose ecological network, or a site that if brought into appropriate condition has the potential for future use.

There will be a requirement for the off-setting area to fulfil the same special contribution and particular function of the areas lost or damaged for the same species of birds. The appropriateness of any off-setting areas in respect of fulfilling the required ecological function will be judged against the following criteria, ranked in order of importance:

A. Habitat Type – the proposed off setting site must support habitats, or be suitable for recreating habitats that provide the same, or enhanced, ecological function as those that are to be lost or damaged.

B. Disturbance – the ecological function of an off-setting site is likely to be seriously undermined if subject to regular disturbance from recreational use and unmanaged public access. The appropriateness of the location of the off-setting site and the proposed measures to prevent indirect effects will need to be fully assessed.

C. Area of habitat – where the replacement habitat would be of equal ecological quality the area required should be of a similar extent to the site being lost or damaged. There may be situations however, where a greater area is required when habitat created may be of poorer quality to that lost or damaged, or there is a high level of risk involved. Similarly, if significant ecological enhancements are possible that increase the carrying capacity of the replacement site above that of the Primary Support Area affected then a smaller area of replacement habitat might be acceptable. This might include the partial loss of a Primary Support Area providing the remainder can be made significantly improved in habitat quality with long term management so as to provide for a greater capacity for the target species than the original site. In all such cases the test will be to ensure the replacement habitats provide a clear and permanent net gain for the target species.

D. Timing and availability of habitat – operational at the time it is required. Essentially, ‘in time’ to offset the adverse effects which are being addressed, with evidence to show it is functioning and readily available to SPA birds prior to any loss or damage to the original site.

E. Geographic location – for ecological reasons of structure and function it is considered appropriate for the off-setting habitat to be provided as close to the original site as practicable.

The solution should also be capable of being:

F. Validated in respect of achieving its ecological function / purpose; and

G. Monitored for effectiveness; and

H. Adapted to adjust to unfolding circumstances in future management; and

I. Resilient in the face of predictable future pressures such as natural population fluctuations and climate change.

20. The land will need to be restored to a suitable condition and managed specifically for the waders and / or geese, ideally as a nature reserve owned or leased by LPA or NGO partner (or similar stable management body such as Land Trust) in perpetuity.

21. The management of the land must be set out in an agreed costed management and monitoring plan and sufficient funds provided to the agreed manager of the site to cover full costs in perpetuity. The preferred approach to secure long term funding for all off-setting areas is to provide an endowment whereby the interest is used for on-going management. This approach secures long term funds in perpetuity.

22. Given the difficulty of 1) justifying the need for a scheme and 2) providing the appropriate level of mitigation up front (ie making the off-setting area available prior to the loss or damage to the original site), it is the preferred approach that acceptable schemes affecting Primary Support Areas should come forward through the local plan process. This will ensure an early assessment of viable off-setting areas and consider how the necessary management can be secured and delivered upfront. A local planning authority could adopt a habitat banking approach to release potential sites provided that the above criteria can be met.

23. Joint working between the LPA, Steering Group and applicant is advised in all cases. However, it is ultimately the applicant’s responsibility to identify and secure viable replacement sites for the loss of any non-designated wader and brent goose sites.

4.1 Opportunity

Currently the proposed conservation area includes positive environmental elements that are associated with areas known to be used by SPA bird species. No significant bird usage of the site was identified by the ECOSA surveys during the Winter of 2015-2016. Further results however have come to light in respect of survey work that has been carried out by the Solent Wader & Brent Goose Strategy and additional surveys by ECOSA over the Winter of 2016/17 which recorded a peak count

of 31 (ECOSA) and 82 Black-tailed Godwit foraging on site. It is understood that this usage of the site by a species for which the SPA is designated qualifies the entire site as a 'Primary Support Site' to the SPA.

Although, the site is in close proximity to a known wader roost, Titchfield Haven National Nature Reserve and the SPA, the geographical location inland from the Solent, lack of open water or wetland features and with some irregular human disturbance likely influences the areas limited current reported usage by SPA birds.

The site does however include existing factors that could be contributory towards attracting waterfowl. The short grassland and open aspect of the area would potentially likely attract geese and other waterfowl. However, the site lacks key elements and factors as mentioned above and most predominantly of those being that there are no wetland or water bodies of any type that feature on the site.

Notwithstanding the above, inclusion of constructed features, adaptations and mitigation measures would contribute to an increased likelihood and potential usage by at least some of the bird species for which the SPA is designated as well as attracting bird usage by a number of other species associated with wetland and less disturbed environs.

Essentially areas that regularly attract waders and wildfowl include features and environs such as wetland features, have clear flight and sight lines and have reduced risk of human disturbance.

4.2 Limitations, Investigation & Planning

To enable increased potential for the site to attract waders and wildfowl associated with the SPA various habitat features and mitigation measures will need to be implemented. However, the sites current topography and hydrological conditions could likely provide hurdles or limitations as to the practicality of being able to implement the most desirable wetland creation scheme. Hydrological and soil conditions will also determine the design of any wetland features in terms of how and where water will be sourced to feed these features.

A clear vision for the site needs to be understood by all stakeholders from the outset, but this cannot be clearly provided until an understanding of the limitations and particularly in terms of the practicality and volume of area available for the construction of wetland features is able to be established.

To provide an attractive and adequate area that has the optimum potential to be useful for SPA birds, thorough investigation will need to be carried out of soil and hydrological conditions. This can then inform a clear vision to implementing the most effective outcome possible and provide the most desirable environment opportunities for SPA birds. It is important that all stakeholders will be able to agree an appropriate design informed by investigative surveys that will lead to an appropriate wetland creation scheme.

5.0 BIRD CONSERVATION AREA NECESSARY FACTORS & DESIGN

5.1 Introduction

As previously mentioned certain favourable factors need to be taken into consideration and included within any dedicated SPA Bird Conservation Area that will enable the optimum likelihood of attracting waders and wildfowl species. These include:

- Clear site & flight lines
- Little or no human disturbances including dog walking disturbances
- Seasonal wetland areas for bird feeding and roosting
- Short grassland for bird grazing, roosting and feeding

Two further factors are also key and need to be taken into consideration in relation to the Posbrook site; the known badger sett located on the eastern boundary and the potentially challenging topography.

All the above elements will need to be considered within the design of the scheme. Each factor if not optimally considered, located or designed could have negative influence in achieving the desired vision for the area.

5.1.1 Factors

Clear Site & Flight Lines

Currently the site has a reasonably open aspect although tree lines on the east, north and southern boundaries will need to be taken in to consideration when designing wetland and any waterbodies on site. Location of these wetland features cannot be restricted to being in such close proximity to tree lines that birds will not use them. If clear flight lines are unable to be maintained over the majority of the wetland areas this would undoubtedly reduce the bird usage.

Human & Dog Walking Disturbance

This could be considered easily remedied through the provision of appropriate fencing and signage however some walkers and dog walkers tend to be resilient in respect of continuing the status quo in terms of where they believe to have rights to walk. With this in mind features and mitigation measures will need to be included to lessen any likelihood of human disturbance. As well as including appropriate fencing, ditches and strategic planting will also be included to lessen any human disturbance.

Seasonal Wetlands

Soil, infiltration and hydrological surveys will ultimately determine the type and location of waterbodies that will be achievable within the finalised design of the scheme as well as water sources to feed the wetland areas. Investigative surveys will determine any large-scale landscape engineering that will need to take place to enable optimum design and location of any wetland features.

Short Grassland

On-going management will be necessary to provide suitable grassland structure to allow for favourable roosting and feeding. The easiest and most cost-effective solution being, an appropriate grazing regime being implemented on site.

5.2 Design

Plan 1 shows design and layout incorporating elements of capital works associated with implementing the construction of the BCA. It is intended to be reasonably comprehensive however, dialogue with the identified organisation body that will ultimately take on future management of the BCA may require further additional elements to be included and /or favour alterations to provided prescription of Capital Works listed below and shown within **Plan 1**.

5.3 Capital Works

Bullet points below list and detail initial capital works that will be implemented partially prior to any residential development within the western area of the site commencing and during the build program for the new housing.

5.3.1 Access Track

A vehicular access track to enable maintenance, management, stock handling and recovery will be located at the southern boundary access gateway. This will incorporate a suitable vehicle trailer turning space.

The constructed access roadway will be of a specification to include an inert recycled aggregate top layer. This will not consist of sharp stones, rubble or gravel as the top finished surface layer. The track will measure 4 metres in width and be appropriately specified and constructed to be durable within the area located.

5.3.2 Wetland Creation

To enable favourable conditions to increase regular usage by SPA birds an area will be created to provide shallow water conditions. This will favour both feeding and roosting opportunities for SPA birds including Black-tailed Godwits.

This newly created wetland area will be gravity fed through the use of roof water from the new residential development to the west and secondarily through natural surface runoff. Due to the topography of the site these wetland areas will be created using a cut and fill method to enable level shallow water bodies with the construction of embankments/dikes. These will require fine sediment soils for compaction to form into stable and impervious embankments. If necessary use of imported clays maybe required if soil conditions are not conducive i.e. are too impermeable for water to be held in this area. Proposed positioning and size of this shallow wetland is shown on **Plan 1**. The wetland area proposed will measure approximately 7,352m².

5.3.3 Defensive Boundary Hedgerow and Ditch

As part of creating a safe and sheltered area for SPA birds lessening any risk of human disturbance will be a high priority. One of the elements to achieving this will be to create a defensive hedgerow and planted ditch line on the western and southern boundaries. Location of this hedging and ditch is shown on **Plan 1**. *N.B Specific Planting scheme for the ditch line will be dependent upon hydrological conditions. The hedge line will consist of at least 10 native species including climber species. i.e. Honeysuckle and Hop.*

5.3.4 Signage & Educational Interpretation Boards

'Deep Water' and 'No Access' signs will be necessary to be displayed along the defensive ditch system and as well at the BCA's vehicular access gateway. In addition, 2 interpretive boards will be erected to promote the BCA's function and environmental benefits. Proposed locations for these are shown on **Plan 1**.

5.3.5 Stock Fencing/Pen

The entire site will be fenced to provide an instant stock proof barrier as shown on **Plan 1** with the addition of a stock handling pen installed and located at the southern access track (**Fig 4**). The site will also include a fence to allow for the site to be divided into 2 separate grazing compartments.

Design of the fencing will be as such that it will enable both cattle and if required sheep grazing on site. **Fig 3** provides image of suitable stock fencing type/specification to include stock netting and 2 strand barbed wire. Image 6 shows an example double gated stock pen.

Figure 3. Stock Fencing (*Jackson & Son fencing*).



Figure 4. Example of a stock handling pen.



5.3.6 Pond Construction

A single pond will be constructed in the north-eastern corner of the site as shown on **Plan 1**. This will be designed and constructed to provide suitable breeding and foraging opportunities for amphibians and reptile species. Design will be reflective of recommended advice and design concept detailed within the 'Ponds for Amphibians & Reptiles' published by Freshwater Habitats Trust in association with Amphibian Reptile Conservation (ARC) and Amphibian Reptile Groups UK.

6.0 COSTED MANAGEMENT PLAN

6.1 Introduction

This chapter provides detail of associated costs for the on-going management of the BCA after all Capital Works as outlined in the previous chapter have been completed as part of the pre-commencement of the construction of the residential housing and hand over of the BCA to a suitable management company, NGO or local authority. These initial Capital Works will be carried out by and supplied by the developer and their relevant sub-contractors.

All on going costs are provided in good faith and have been calculated with a practical sense in terms of providing maintenance for all elements in relation to the implemented Capital Works and on-going management of the BCA.

An online UK future inflation calculator was used to predict costs of labour and materials based on an increase of annual rates of 1.5% for wage/labour and 2.5% material over the last 10 years. The costs are relevant to an understanding that costs will be required for an 80-year period.

6.2 Associated on Going Management Costs

6.2.1 Access Track (Half tray with geotextile)

Access track maintenance is predicted to be required in years 2040 and 2060. A 20 % cost of the original cost has been allowed for both maintenance stages inclusive of relevant inflation rates. Costs are based on an original access track being no more than 200 metres in length and 4 metres in width and to include a turning area.

2040	2060
£5,646	£9,252

6.2.2 Wetland Area & Pond De-silting

Over time the created wetland features will require maintenance in respect of de-silting maintenance and potentially unwanted vegetation removal. Costs have allowed for two 5-day periods during years 2030 and 2060 for de-silting operations inclusive of 24 tonne 360-degree excavator and two 6 tonne dumpers inclusive of labour to implement these operations if required.

2030	2060
£6,616	£13,879

6.2.3 Stock Fencing

Due to the use of recycled plastic posts and the longevity of these posts, replacement of the posts will not be required however 10% material replacement will be allowed for at time of initial erection of the stock fencing and provided to the future BCA management organisation. Two replacement rewires have been accounted for in years 2040 and 2060 predicted costs of which are shown below:

2040	2060
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£4,948 £10,351

6.2.4 Access Gateway & Stock Pen

The Capital Works will include the erection of recycled plastic access gateway/stock pen and associated posts and fixings. Due to the longevity of the materials no replacement of the gateway materials will be required. However, 20% of the original cost of the materials will be provided to account for un-associated material maintenance that maybe required.

10% of associated original cost £3,000

6.2.5 Defensive Boundary Fencing

A 10% allocation of the initial Capital Works cost for this element has been provided as a maintenance cost along with a cost for the entire fence to be replaced in year 2055.

Maintenance Budget	2055
£1,489	£38,069

6.2.6 Signage & Interpretation Panels

Three replacements of signage and interpretation boards have been provided within the costs below. Two interpretation boards and 20 warning Signs have been allocated.

Interpretation Panels x 2 replaced twice	2040	2060
	£2,117	£3,469
Warning Signage x 20 replaced twice	2040	2060
	£168	£275

6.2.7 Grazing

It is proposed that a local conservation grazing herd be employed to provide an appropriate grazing regime on site to provide suitable short grass management over the majority of the site. Costs in relation to this are difficult to forecast. An arbitrary figure of £20,000 has been provided with consideration that the organisation that will take on the BCA will need to be consulted before any confirmation of costs are verified.

6.2.8 Boundary and Reptile Receptor Area Scrub Clearance

To enable reduction and control of scrub along the boundary and within the reptile receptor area of the BCA costs have been provided on an 8-yearly basis for a 4-man crew for 2 days with appropriate machinery to carry out such works. Appropriate grazing will also be employed at a suitable time of year within the reptile receptor area.

2024	2032	2040	2048	2056	2064	2072	2080
£2,139	£2,606	£3,176	£3,870	£4,715	£5,745	£7,000	£8,528

6.2.9 Staffing Costs

General staffing of overseeing the site, bird monitoring and associated administration costs are preliminarily proposed as requiring 1 day per week for the first 12 months adjusting to half day per week thereafter. At a salary rate of 25K per annum the costs are outlined below:

2018-2019	2020-2100
£5,408	£377,636

Table 2. Calculated on-going management costs

<i>N.b Material Costs are subject to Vat.</i>	<i>Costs 2020-2100</i>
Access track	£14,898
Wetland De-silting	£20,495
Stock Fencing	£15,299
Access gateway Stock Pen	£3,000
Defensive Boundary	£39,558
Signage/Interpretation	£6,029
Grazing	£20,000
Scrub Clearance	£37,779
Staffing Costs	£383,044
Total	£540,102

7.0 FUTURE RESPONSIBILITY

7.1 Pre-construction 2018-2019

All capital works associated with the BCA will be the responsibility of the applicant Foreman Homes. Construction of the BCA will commence at the earliest opportunity to enable the BCA's infrastructure to be in place prior to first occupation of the housing development. At this time monitoring of the works will be encouraged by the future responsible organization for the BCA to provide agreement to contractual works. All capital works will be overseen by an experienced ecologist and land manager.

7.2 Appropriate Future BCA Management Organization

An appropriate organization will be identified for the BCA to be handed over to. The on-going management funds will enable the entrusted organization to deliver on-going maintenance of the BCA along with and where necessary replacement of infrastructure over the next 80 years.

In addition, the future management organization will be responsible for monitoring the success of the newly created bird conservation area in respect of its success in attracting and its usage by SPA bird species.

7.3 'Step in Rights'

If an agreement with an appropriate organization body were not possible or if during the term of the on-going 80-year management the managing organization were not considered to be acting or managing the site appropriately or for other reasons for which Fareham Borough Council considered it inappropriate for the managing organization to continue responsibility for the BCA. Requirements will be put in place to enable legal 'step in rights' for Fareham Borough Council to take over the running and responsibility for the BCA.

8.0 DISCUSSION

This outline plan is intended to offer an initial vision of a proposal that will enable a gain in providing wetland habitat. Capital works and on-going management will be deliverable through the proposed housing development that will clearly benefit biodiversity and with the intention of providing suitable habitats valuable for SPA bird species.

It is important that stakeholders are consulted throughout the process and that the Bird Conservation Area once capital works are completed is handed over to an appropriate organisation or authority that are provided with appropriate resources to continue the on-going management in perpetuity.

It is recommended that if the planning application were to be granted that a condition is included within the planning that requires an update to this report to further refine the design and management strategy once stakeholders are consulted further and investigative surveys carried out to enable an achievable design scheme to be implemented.

Plan 1. Bird Conservation Area



Figure 1. Defensive Boundary Ditch, Hedgerow & Fencing



Figure 2. Design Example of Engineered Wetland

