

LAND AT DUCK'S NEST, ARBORFIELD

SANG Delivery and Management Plan
Prepared for: David Wilson Homes (Southern)

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DRAWINGS

DNF-SANG-001.1: SANG Strategy Plan

DNF-SANG-001.2 to 006: Detailed Planting Plans

1.0 INTRODUCTION

This report has been prepared by SLR Consulting Ltd on behalf of David Wilson Homes (Southern) in relation to Land at Duck's Nest, Arborfield (the Site). It sets out the proposed approach to the creation of a bespoke Suitable Alternative Natural Greenspace ('SANG') to mitigate the potential recreational impacts of the proposed residential development on the Thames Basin Heaths Special Protection Area (SPA).

This report has been prepared to support a Detailed Application for the change of use of the Site to a SANG.

This report presents an assessment of the Site against current Guidelines for the Creation of Suitable Alternative Natural Greenspace (SANG) as published by Natural England (version dated August 2021). It further sets out the overarching landscape and ecological management objectives for the SANG, what the SANG will deliver in terms of visitor experience and facilities, long-term management prescriptions and the delivery strategy for the SANG.

This report has regard to the ecological and landscape features present within the Site and those new features that will be created as part of the future SANG development.

General management considerations (Section 4) have been formulated to inform and underpin the detailed management prescriptions contained in Section 5.

Landscape proposals for the SANG have been produced (Figures 001.1 - 001.6) which set the over-arching landscape principles of the SANG and provide detailed planting design to enable the final setting-out and installation of the SANG.

1.1 Purpose and Policy Context

The SPA, which was designated on the 9th March 2005 under the Habitats Regulations, is a composite site formed of remnant parcels of lowland heath across Surrey, Berkshire and Hampshire. The qualifying features forming the basis of the SPA designation are three bird species; the nightjar, woodlark and Dartford warbler. Published research has shown that a significant proportion of recreational visitors to the SPA arrive from within 5km. Further published research has demonstrated a clear link between recreational pressures (particularly though not limited to dog walking) and reduced reproductive success of bird species which form qualifying features for the SPA.

Proposals involving a net increase of one or more dwellings within a 400m-5km radius of the SPA are therefore required to implement avoidance and mitigation measures. The 13 Local Planning Authorities surrounding the SPA, together with the South East England Partnership Board and Natural England, established the Thames Basin Heaths Joint Strategic Partnership (JSP). In 2009 the JSP agreed a Delivery Framework to enable the development of housing in the vicinity of the SPA without resulting in adverse effects on the integrity of the SPA. The Delivery Framework sets out an approach based on the implementation of avoidance and mitigation measures:

- The provision of Suitable Alternative Natural Greenspace (SANG)
- Strategic Access Management and Monitoring (SAMM) for the SPA itself, funded by development

Wokingham Borough Council's Core Strategy sets out the key elements of the vision for the development of the borough until March 2026. Policy CP8 Thames Basin Heaths Special Protection Area states that no additional residential development will be permitted within 400m of the SPA boundary, and *"residential proposals involving increases of one or more net additional dwelling within 5km (linear) of the SPA will need to be assessed for whether there is likely to be significant impacts. This distance covers 70% of all visitors. Furthermore, within the area from which 80% of visitors come (equates to 7km linear), the Appropriate Assessment recognises that proposals of 50 dwellings or more dwellings will need to be assessed for whether they are likely to generate significant impacts"*. Policy CP8 further notes that SANG is *"to be provided and maintained in perpetuity in line with the quality and quantity standards advocated by Natural England"*.

Developers should provide or contribute to SANG at a standard of at least 8ha per 1000 residents and the purpose of SANG is to provide new alternative natural greenspaces which are attractive to new and existing residents for recreational activities such as dog walking, thereby alleviating pressure on the SPA sites.

The SANG will provide an attractive alternative natural and semi-natural environment, adjacent to proposed new homes at the site and in close proximity to the existing population of Arborfield Cross and Arborfield Garrison. Careful design would ensure that the SANG would integrate well into the surrounding countryside. Designed as a predominantly natural environment, with limited physical infrastructure, the SANG will distinguish itself from typical amenity open space through the provision of varied habitat types, informal access and the provision of areas designated for dog walkers to allow suitable and controlled off-lead access.

In the case of the site, the creation of the c. 10.5ha SANG at the Site is proposed to meet this requirement to accommodate the required length of path and to ensure that the various quality criteria are met resulting in a greater area than that required by just the capacity assessment alone.

It is clear, therefore, that the proposed SANG adjacent to the Site will deliver a significant residual capacity. This residual capacity will be retained for use in mitigating future developments within the 4km SANG catchment (to be set out within the S106 Agreement).

1.2 Ecological Assessment

The habitats in the area of the proposed SANG are predominantly modified grassland bordered by hedgerows and adjacent areas of woodland.

Two trees with the potential to support roosting bats were identified within the area of the proposed SANG, one tree in the north of the proposed SANG was assessed to have high potential and the other, in the east on the boundary between the SANG and residential development was assessed to have moderate potential. The grassland habitats, hedgerows and woodland edge also provide suitable foraging and commuting habitat for bats with common and soprano pipistrelle and noctule bats recorded during activity surveys of the site. The proposed SANG is not likely to have a negative impact on the bat species using the area. The trees with bat potential will be retained as part of the proposals and use of the SANG is not likely to disturb bats using the site for foraging and commuting as the site will be predominantly used during daylight hours, no lighting is being proposed within the SANG therefore there will not be any increased levels of disturbance at night when bats are active. The increased habitat diversity within the SANG including waterbodies and areas of scrub and woodland may also increase the invertebrate diversity of the site resulting in improved foraging opportunities for bats.

Slow worm and grass snake have both been recorded in the field to the south-west of the A327 and the grassland habitats throughout the proposed SANG areas are suitable foraging and basking habitat for common reptile species. The proposals for the SANG include areas of grassland including wildflower meadows and wet grassland along with areas of scrub and woodland planting which will ensure high quality habitat for reptile species remains on site. The management of the SANG will result in the grassland having a more varied sward structure than currently exists on site which will create better micro-climates to increase the opportunities for reptiles and the areas of woodland and scrub will provide increased areas of habitat suitable for shelter. There will be increased daytime disturbance by visitors to the SANG, however the extensive areas of unmown grassland and areas of woodland and scrub will ensure there are areas of low disturbance suitable for reptiles.

A number of breeding birds have been identified using the site, all of which are common and widespread within grassland, scrub and hedgerow habitats. The proposals including the more diverse grassland and areas of scrub, woodland and ponds will increase the nesting and foraging opportunities for breeding birds within the SANG area.

The habitats on site are suitable for great crested newt (GCN) however eDNA surveys of the ponds adjacent to the A327 returned negative results for GCN eDNA, so it has been assessed that they are likely absent from the

site. The proposed habitats including a wildlife pond within the SANG will increase opportunities for GCN and other common amphibians.

2.0 SITE DESCRIPTION AND BACKGROUND

The Site is located on land at Duck's Nest, Arborfield and comprises agricultural land to the north of the A327 (Observer Way). The site is publicly accessible via PRoW ARBO 17 and a pedestrian link from Eversley Road.

Mature, broadleaved, woodland is present along the north-western boundary of the parcel of land.

2.1 Topography

The topography of the site and its context is gently undulating with the site varying in elevation from a high point along a ridgeline at approximately 80m AOD, along PROW ARBO 17, to 65m AOD.

2.2 Current Site Conditions

Main landscape features to be retained:

- Section of remnant hedgerow.
- Two individual existing trees.
- Existing, native, broadleaved woodland where present at the boundaries of the site.

Retention and enhancement of these key landscape features will assist in the ability of the SANG to integrate well into the existing local landscape and provide additional enhancements in the longer-term through supplementary planting.

2.2.1 Tree Preservation Orders

None within the boundary of the SANG.

2.2.2 Influence on SANG design

As a predominantly grassed site, with a generally natural character, the Site is well-suited to the creation of a SANG landscape, through the creation and establishment of new species-rich (wildflower and wet grassland) across the existing pastoral fields, with new native tree, woodland edge and shrub planting to supplement and strengthen the existing landscape features.

The existing farmland use of the open fields will influence the range and species diversity of the potential grassland to some degree, due to the likely higher nutrient levels of the soil, however through careful preparation, weed control and initial management, it should be feasible to establish a diverse, species rich sward with good native floral interest.

The existing topography can also be used to an advantage to create an interesting walking experience for users of the new SANG and affording views out toward the surrounding open countryside which will assist in assimilating the SANG as a semi-natural environment, with limited detracting physical features.

3.0 SANG OBJECTIVES AND DELIVERABLES

3.1 SANG Requirements / Quality Criteria

A site quality checklist for the creation of a SANG was produced by DEFRA and agreed by Natural England in 2021, which is reproduced below. The wording in the list below is precise and has the following meaning:

- Requirements referred to as “must” or “should have” are essential
- The SANGS should have at least one of the “desirable” features.

3.1.1 Must

1. For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance of the developments linked to it. The amount of car parking should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANGS and the SPA.
2. It should be possible to complete a circular walk of 2.3 – 2.5 km around the SANG.
3. Car parks must be easily and safely accessible by car and should be clearly sign posted.
4. The accessibility of the site must include access points appropriate for the particular visitor use the SANGS is intended to cater for.
5. The SANGS must have a safe route of access on foot from the nearest car park and/or footpaths.
6. All SANGS with car parks must have a circular walk which starts and finishes at the car park.
7. SANGS must be designed so that they are perceived to be safe by users: they must not have tree and scrub covering parts of the walking routes.
8. Paths must be easily used and well-maintained but most should remain unsurfaced to avoid the site becoming urban in feel.
9. SANGS must be perceived as semi-natural spaces with little intrusion of artificial structures except in the immediate vicinity of car parks. Visually sensitive way-markers and some benches are acceptable.
10. All SANGS larger than 12ha must aim to provide a variety of habitats for users to experience.
11. Access within the SANGS must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.
12. SANGS must be free from unpleasant intrusions (e.g. sewage treatment works smells, etc.).

3.1.2 Should have

13. SANGS should be clearly sign-posted or advertised in some way.
14. SANG should have leaflets and/or websites advertising their location to potential users. It would be desirable for social media to be used as well, with the goal of reducing paper use. Although a leaflet for a new home is desirable. It could advertise the TBH Partnership website at <https://www.tbhpartnership.org.uk/greenspace>

3.1.3 Desirable

15. It would be desirable for an owner to be able to take dogs from the car park to the SANGS safely off the lead.

16. Where possible it is desirable to choose sites with a gently undulating topography for SANGS.
17. It is desirable for access points to have signage outlining the layout of the SANGS and the routes available to visitors.
18. It is desirable that SANG provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water is encouraged and desirable on sites. However large areas of open water cannot count towards capacity.
19. Where possible it is desirable to have a focal point such as a view point, monument etc. within the SANGS.

3.2 SANG Proposals

The SANG will provide the following principal measures;

3.2.1 Composition

- Semi-natural spaces devoid of large artificial structures (way markers and benches are acceptable).
- Mosaic of habitat types.
- Inclusion of woodland or semi-wooded areas.
- Long views taking advantage of site topography.

3.2.2 Accessibility

- SANG to be accessible to all.
- Two of the car park spaces will be allocated for disabled users.
- Centrewire Woodstock large mobility kissing gates or equivalent will afford pedestrian access from the car park to the SANG. Fitted with a RADLOCK latch system, release of the sliding latch with a RADAR key allows the gate to be opened beyond the normal closing point allowing large mobility vehicles access. The design inhibits the passage of motorbikes.
- Mix of surfaced and un-surfaced paths.
- Within SANG, access should be generally unrestricted, especially to allow dogs to exercise freely.

3.2.3 Adequate car parking

- Surfaced carpark of suitable size to adequately service the SANG.
- Clearly signposted and easily accessed.
- Safe access on foot from car park to SANG area.

3.2.4 Circular walking routes

- To contain several walking routes of different length, with a primary route of at least 2km and a secondary route of at least 1.5km.
- Walks should start and finish at designated car park.
- Easily used routes that are well-maintained.
- Optional challenging routes to create variety.

- Routes connect into wider footpath network to facilitate longer walks into the countryside

3.2.5 Advertising

Provision of sign posts, leaflets, websites to educate the new and existing community about the new SANG facility.

3.3 Description of Proposals

Landscape proposals for the SANG have been produced (Figures DNF-SANG-001.2 to 006) which set the overarching landscape principles of the SANG and should inform any detailed specifications produced subsequently to enable the final setting-out and installation of the SANG.

The SANG landscape proposals have been informed by the agreed objectives and deliverables, as set-out above and the proposals can be summarised as follows;

- Retention of all existing boundary trees and remnant hedgerow, strengthened by new native woodland and woodland edge planting to provide robust and reinforced boundaries to contain the SANG.
- Extensive areas of new species-rich meadow grassland sward established, along with areas of rough, hedgerow grassland and floral rich wildflower meadow.
- New dog-proof fencing to enclose the SANG. Fencing to be timber post and rail, composed of treated softwood, with a galvanised mesh to prevent dogs from passing through.
- A new surfaced car park to serve the SANG, including spaces for disabled users. Car park to be surfaced in either bound gravel / hoggin or reinforced plastic cellular grid backfilled with gravel, accessed via a new access road connected from the proposed residential area.
- Gated access into SANG in the form of a mobility kissing gate and double-leaf timber maintenance gates to facilitate grassland maintenance and public access, taken directly from the proposed car park.
- A network of surfaced and un-surfaced recreational footpaths, min. 1.8m wide, surfaced in bound gravel / hoggin with timber edgings to provide all-year-round access to the SANG area.
- A network of secondary mown footpath routes through the grassland areas to provide additional walking routes seasonally.
- A circular walk of a total length of 2.31km, starting from the carpark taking in the whole SANG area.
- New copses of native woodland and woodland edge planting, temporarily enclosed by post and wire fencing to prevent trampling of young saplings by dogs and walkers during establishment.
- New native tree planting.
- Creation of pond features, (dog pond and a fenced wildlife pond) with wet grassland and marginal / aquatic planting to act as a 'focal' features along the looped walk. The wildlife pond to be enclosed in dog-proof fencing.
- A series of timber benches strategically located around the path network for rest, relaxation and contemplation.
- Way-finding signage posts at key locations along the internal path network.
- A series of interpretation signage boards located around the Site to provide information to visitors about the SANG, but also to educate on the Site's biodiversity.

- General additional ecological enhancement features such as log piles / reptile hibernacula, to be created using the arisings from localised facilitation vegetation clearance.

Specifications for SANG furniture, including seating, signage, interpretation boards and fencing, are provided in Appendix 1. It is envisaged that the final specification will be agreed between the appointed contractor, developer and Local Authority and secured by planning condition.

3.4 Assessment of Proposed Scheme

A review against each criterion outlined above for the Site in the context of Natural England's 2008 Guidelines for Creation of SANG is provided below in Table 1.

Published research has identified dog walking as a key pressure causing disturbance at the SPA and so a greater emphasis was placed on establishing a dog friendly SANG facility, where dog walkers could exercise their dogs freely and widely to provide a viable alternative option to visiting the SPA.

Table 1 - Review of suitability based on Guidelines for the Creation of SANG

SANG Quality Criteria	Baseline Situation	Comments on Deliverability
For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance of the developments linked to it. The amount of car parking should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANGS and the SPA.	There are no existing parking facilities.	The site is primarily intended for local use, but as a benefit of the scheme, access to a surfaced carpark circa 45 x 20m (currently shown with 11 standard and 1 accessible parking bay) has been proposed from an internal road within site. Should the residual capacity be used by development at a future date the car park would already be in place.
It should be possible to complete a circular walk of 2.3 – 2.5 km around the SANG.	Public access is currently available along Footpath ARBO 17 only, at the western edge of the site.	A new circular route of 2.31km has been proposed and is accessible to all (hoggin path or similar) and a second with more challenging slopes (mown paths; approximately 0.51km additional paths). This connects to Footpath ARBO 17 and to the proposed pedestrian link on Eversley Road.
Car parks must be easily and safely accessible by car and should be clearly sign posted.	Not applicable.	Access proposed from internal road within site with a surfaced carpark circa 45 x 20m (currently shown with 11 standard and 1 accessible parking bay). The entrance can be easily signposted and the details of such should be agreed with the Highways
The accessibility of the site must include access points appropriate for the particular visitor use the SANGS is intended to cater for.		

		Authority and secured by condition.
The SANGS must have a safe route of access on foot from the nearest car park and/or footpaths. All SANGS with car parks must have a circular walk which starts and finishes at the car park.	Not applicable.	Safe access paths are proposed direct from the car park, through a mobility kissing gate, directly onto the SANG's circular walk, which could start and finish at the car park. Dog proof fencing around the car park and SANG would allow dogs to be safely exercised off-lead directly from the car park which is a desirable criteria.
SANGS must be designed so that they are perceived to be safe by users: they must not have tree and scrub covering parts of the walking routes.	The area identified for the SANG is currently open fields with two no. existing trees and a short length of hedgerow. Existing woodland and woodland belts are present on the edges of the SANG.	New, mixed native woodland and woodland edge has been proposed along the boundaries of the site adjacent to the A327 (Observer Way) to shelter the SANG area from the road and to provide new green infrastructure links. Additional mixed native woodland and woodland edge has been proposed alongside existing areas of woodland / hedgerow to reinforce and enhance existing vegetation. Small, mixed, native woodland copses and scattered trees have been proposed between lengths of path to create variety, but the heart of the proposed SANG remains open with wildflower meadow and long sightlines across the site to the wider countryside from the highest point of the landform.
Paths must be easily used and well-maintained but most should remain unsurfaced to avoid the site becoming urban in feel.	The existing Footpath ARBO 17 is a grass track.	Accessible paths have been proposed as hoggins, a material which would naturalise over time, but would ensure accessibility to all across the SANG. The more challenging secondary route would be formed of mown paths.

SANGS must be perceived as semi-natural spaces with little intrusion of artificial structures except in the immediate vicinity of car parks. Visually sensitive way-markers and some benches are acceptable.	Whilst the Site comprises open agricultural fields there is a degree of influence from residential and commercial uses to the north and east and from the road infrastructure and traffic associated with the A327 (Observer Way).	The introduction of species-rich and wildflower meadow will create a more natural feel to the existing fields. As will in implementation of native shrub planting, woodland copse and scattered broad-leaved trees. Woodland and woodland edge planting along the boundaries of the Site with the A327 (Observer Way) will screen views of road infrastructure and traffic removing the greatest detractor.
All SANGS larger than 12ha must aim to provide a variety of habitats for users to experience.	The Site currently comprises rough grassland with broad-leaved woodland along some boundaries, two broad-leaved trees and a remnant length of hedgerow.	Native planting proposed within the SANG would create a variety of habitats including woodland and woodland edge, mixed native shrubs, wildflower meadow, wet grassland and marginal / aquatic planting associated with the proposed ponds.
Access within the SANGS must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.	Current access along Footpath ARBO 17 is unfenced and dogs should be kept on leads.	The SANG would be fenced with timber post and rail with dog-proof mesh to ensure dogs can be exercised off-lead freely.
SANGS must be free from unpleasant intrusions (e.g. sewage treatment works smells, etc.).	There is some noise and visual intrusion from the A327 (Observer Way).	Proposed woodland and woodland edge planting along the Site's boundaries with the A327 (Observer Way) would screen the road and associated traffic creating a buffer and providing a greater sense of enclosure and tranquillity.
SANGS should be clearly sign-posted or advertised in some way.	Not applicable.	Signage and interpretation boards are proposed for the Site to advise users of the walking route and the features of the Site, including information about site ecology. Bespoke leaflets will be created and provided to new occupants of the proposed residential area advertising the facility.
SANG should have leaflets and/or websites advertising their location to potential users. It would be desirable for social media to be used as well, with the goal of reducing paper use. Although a leaflet for a new home is desirable. It could advertise the TBH Partnership website at https://www.tbhpartnership.org.uk/greenspace		

		The SANG will be added to the list of sites on the Council website and the developer will make the best endeavours to locally advertise the Site to the wider community, to promote use of and educate the public regarding the SANG.
It would be desirable for an owner to be able to take dogs from the car park to the SANGS safely off the lead.	Not applicable.	The location of the carpark is accessed from an internal road within the proposed residential area. The entire area of the SANG is enclosed with dog-proof fencing to ensure dogs would be able to be exercised off lead directly from the carpark.
Where possible it is desirable to choose sites with a gently undulating topography for SANGS.	The topography of the site and its context is gently undulating with the site varying in elevation from a high point along a ridgeline at approximately 80m AOD, along PROW ARBO 17, to 65m AOD.	The varied topography of the Site adds interest for visitors by creating views over the surrounding landscape.
It is desirable for access points to have signage outlining the layout of the SANGS and the routes available to visitors.	Not applicable.	The proposals include for extensive signage strategy to provide wayfinding around the Site and interpretation boards can outline the various routes available, including a map of the Site.
It is desirable that SANG provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water is encouraged and desirable on sites. However large areas of open water cannot count towards capacity.	The existing site is formed of open agricultural fields with rough grassland, limited individual trees, a section of remnant hedgerow and woodland along some boundaries.	Proposed planting of woodland and woodland edge, mixed native shrubs, wildflower meadow, wet grassland and marginal / aquatic planting associated with the proposed ponds would create a naturalistic space with areas of open water.
Where possible it is desirable to have a focal point such as a view point, monument etc. within the SANGS.	Not applicable.	Both the high points at the western end of the Site and the proposed dog and ecological ponds create focal points along the circular routes, with carefully positioned benches to provide contemplation of the view.

3.5 Ecological Enhancements

The SANG design proposals (see Figures 001.2 - 001.6) have been primarily designed to take account of the requirements of the SANG criteria, as set out by Natural England, both 'must / should have' and 'desirable' characteristics. However, the proposals have also been designed to improve the biodiversity value of the Site.

These ecological enhancements can be summarised as;

- Wildflower grassland planting, to increase floral species diversity in the open, grassland areas.
- Wet grassland around the margins of proposed ponds at lower elevations of the site.
- The increased habitat diversity and structure (within the grasslands) and in areas of woodland, woodland edge and scrub planting will increase invertebrate diversity on the site which in turn will increase the foraging opportunities for a variety of species including birds, bats, reptiles and amphibians.
- Provision of a fenced wildlife pond in addition to the two dog ponds.
- Woodland and woodland edge and scrub planting to improve habitat connectivity across the Site as well as provide visual screening along the A327 (Observer Way) boundary. This will also increase nesting opportunities for breeding birds including priority species such as song thrush.
- The creation of log piles and hibernacula from any required vegetation clearance will provide shelter for reptiles, amphibians, mammals such as hedgehogs and invertebrates such as stag beetle.

4.0 GENERAL MANAGEMENT CONSIDERATIONS

4.1 General Management Aims

The key aims of management in the SANG are as follows:

- Promote the potential biodiversity value through the management and creation of a diversity of habitats and therefore encourage local wildlife in the long term.
- Provide a high-quality open space for new and existing residents that serves to mitigate for the visitor pressure on the SPA and act as a viable alternative to the SPA, drawing visitors from the surrounding area.
- Provide a range of interesting habitats and focal features for local residents to engage with their natural surroundings.
- To successfully integrate existing green infrastructure features such as woodland, woodland edge, hedgerows, native shrubs, ponds (dog and wildlife) and meadow grassland (wet and wildflower) into the newly created SANG.
- Provide a space that is both stimulating and engaging to the new residents and seeks to bring together the community.
- Provide opportunities for the general public to engage with nature.
- To create, maintain and, where possible, enhance the habitats on site, including grasslands, individual trees and woodland at the boundaries of the site, in order to promote ecological connectivity.
- Create and maintain additional ecological features on site, such as hibernacula, enhancing opportunities for wildlife by providing habitat for invertebrates, as well as widespread reptiles, amphibians, birds and bats.
- Retain deadwood in situ where possible for the benefit of fungi and saproxylic invertebrates.
- Retain trees to mature age and into senescence wherever practicable.
- Maintain the Site as a place for public recreation and enjoyment.

4.2 Management Structure

The first 12 months planting maintenance of the SANG will remain the responsibility of the landscape sub-contractor who undertook the works, as appointed by the developer, whose responsibility it will remain to maintain the Site until it is handed over.

Following this period, a suitable future managing agent will need to be put in place to secure the future maintenance of the newly created SANG in perpetuity. It is anticipated that this will be the Land Trust or a suitably qualified Management Company (ManCo), as appointed by the Developer(s), who will take on the responsibility for the management of the SANG covered by this plan in perpetuity. The Land Trust have been approved by Natural England and a number of Local Planning Authorities (LPA) as an appropriate body to manage SANGs, and as at December 2020 currently have over 30 active SANGs projects across southern England, with over 140ha of SANGs under Land Trust management. The funding of such a ManCo will be provided by the developer through a commuted sum/endowment payment.

Details for the transfer of the land, to be set out under the terms of a S106 Agreement, shall include provision for appropriate 'step-in' rights for the Local Authority should the ManCo be deemed to be failing in its

responsibility to manage the SANG correctly. Full details of the future management and maintenance of the SANG is anticipated to be secured via planning condition.

4.2.1 Monitoring of Works

In order to ensure that the capital creation works outlined in this report are being carried-out to a satisfactory level by the appointed contractor, the developer shall appoint a suitably qualified professional (Chartered Landscape Architect / Ecologist or equal) to undertake an independent inspection / audit of the works and provide a short report of their findings that can be made available to the LPA and/or Natural England for inspection.

Audits should take place quarterly during the capital creation, to ensure works are being fully implemented as prescribed. Any defects identified and/or recommendations made within the audit reports should be remedied at the next available opportunity and each report should include a short statement clarifying whether actions identified in the previous visit have been suitably rectified or identify actions for the remedy at the next available planting season. In the case of the SANG being delayed in hand-over to the managing agent, thus remaining in the ownership and care of the developer, responsibility for organising any such audit should remain with the developer until hand-over.

Subject to ownership and management responsibility being transferred to the Land Trust, third party monitoring of the implementation of management will not be required.

4.3 Management of Landscape Components

The following section identifies the main landscape and habitat areas on the SANG, proposed habitat creation and the overall management themes for each component.

Additional detail relating to management would be provided in a Landscape and Ecological Management Plan by condition if required.

4.3.1 Existing Hedgerows and Trees

The SANG area currently contains a mix of pastoral fields with woodland at its boundaries. Boundary woodland, two existing trees and a short length of native hedgerow will be retained, along with rough grassland edge habitats. Scattered native trees will be established in discrete areas of the SANG to create shade and variety.

4.3.2 Woodland, Woodland Edge and Native Shrubs

New, mixed native woodland and woodland edge has been proposed along the boundaries of the site adjacent to the A327 (Observer Way) to shelter the SANG area from the road and to provide new green infrastructure links.

Additional mixed native woodland, woodland edge and native shrub planting has been proposed alongside existing areas of woodland and hedgerow to reinforce and enhance existing vegetation.

Small mixed, native woodland copses and scattered trees have been proposed between lengths of path to create variety, but the heart of the proposed SANG remains open with wildflower meadow and long sightlines across the site to the wider countryside at the highest point of the landform.

These will be beneficial to wildlife and will be used in conjunction with grassland margins in order to create biodiverse eco-tones capable of supporting a greater range of flora and fauna.

4.3.3 Wildflower Meadow Grasslands

This habitat will be created through the over-seeding the existing grassland sward with suitable local wild flower species mixes that takes into account the previous land management and the nature of the soils.

There would be a period of creation and monitoring and management of establishment. The longer-term management of meadow grasslands will predominantly be through annual cut in late summer/autumn with up to 50% of the area left uncut in any year.

4.4 DETAILED MAINTENANCE PRESCRIPTIONS

4.4.1 General Management Principles

All pruning / removal works to existing vegetation, including trees, should be undertaken outside of the bird-nesting season. For clarification, the main bird-nesting season is typically taken to run from March to August inclusive. Where this is not possible, an ecologist will need to check for nesting birds immediately prior to commencement of works.

Where tree surgery is planned or where an approved tree surgeon has recommended remedial work for health and safety reasons, the potential for bats to be present must be considered before work is carried out. This should include, at a minimum, a ground-based assessment of the tree(s) by a licenced bat ecologist.

Consideration should be given to the potential for protected species to be impacted upon by any proposed works; and impacts avoided or mitigated as appropriate. Advice should be sought from an ecologist (see accompanying Ecological Impact Assessment).

4.4.2 Existing Trees

In years 1 & 4, isolated existing trees (2 No.) will be inspected by a suitably qualified arboriculturist, registered with the Arboricultural Association.

Retained trees will be monitored for any sign of defects or poor health annually or after severe weather. Any signs of ill health or damage will be noted and remedial action taken when required.

If trees show signs of poor growth in a heavily trodden area, with no observable pests or diseases, feed and aerate the root area or in severe cases, undertake specialist de-compaction using an 'air-spade.'

Similarly, if trees appear to be suffering any signs of nutrient deficiency a general fertiliser should be applied as appropriate and in accordance with manufacturer's instructions and hoed into bare soil beneath canopy line; annually as required.

Routine annual pruning of mature trees should be carried out only in exceptional circumstances if a health and safety issue is identified or for the benefit of tree health. Prior to undertaking such works, advice should be sought from the principal designer / principal contractor.

Tree work should be carried out in accordance with BS 3998 and the Health and Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'. Branches should be cut in accordance with the Arboricultural Association Leaflet 'Mature tree management'. In each case cut back to live wood using appropriate tools and do not prune during the late winter / early spring period.

Remove any rubbish or objects / structures which have become attached or accumulated within the canopy or on the trunk of the tree. Any standing or attached dead wood should be left in situ unless it is causing an obstruction or poses a risk to health and safety.

In the unlikely event that any mature trees are due to be removed, these will first be inspected by a bat licenced ecologist to check for suitable bat roosting features before removal by a suitably qualified forestry contractor. If

trees marked to be removed are found to offer suitable bat roosting features further ecological survey and assessment may be necessary.

Tree works are best undertaken in the period November to February when there is no constraint from nesting birds and trees are dormant, resulting in less damage from pruning.

All tree work should be carried out by a suitably qualified professional tree surgeon, a registered member of the Arboricultural Association.

Existing fallen deadwood will be retained in situ wherever possible for the benefit of fungi and saproxylic invertebrates, in the form of log piles. Any felled timber will be left in log piles (length of logs not to exceed 1m) within secluded areas of the woodland to act as hibernacula for wildlife

4.4.3 Existing Woodland Areas at the boundaries

It is not evident that a current and formal management plan for the woodland around the boundaries of the SANG exists. None of the woodland is under the control of the Developer and therefore there are no rights of access to monitor individual trees within the woodland or remove trees.

Annual checks should be made to monitor individual trees on the boundaries of the woodland (such as overhanging trees) to ensure that boundary trees remain safe for public access (in perpetuity). Arboricultural checks will involve monitoring any signs of ash and ash die back, as well as the health and safety of other mature tree species. Additionally, any young, self-seeded trees within the boundary of the site may be selectively marked for removal.

Boundary trees will be monitored on an annual basis by undertaking a walkover inspection. The inspection will identify those trees where remedial work is essential to overcome any elevated risk of harm posed by the trees. The annual inspection will identify any impact due to pests, disease or inclement weather (including the effects of ash dieback) and make management recommendations accordingly.

4.4.4 Existing Hedgerows

A short length of remnant hedgerow is present within the north-eastern part of the SANG.

The existing hedgerow will be monitored for any sign of defects or poor health annually or after severe weather. Any signs of ill health or damage will be noted and remedial action taken when required.

The existing hedgerow will generally be left to grow-out, but where deemed necessary to avoid excessive height and lateral growth, be managed with a cut every 3 to 7 years, on rotation, with one side cut each year, in January to February (outside of the bird nesting season) to a height appropriate to its context, generally 3-4m tall, but no greater than 2m where a hedgerow resides close to proposed dwellings or where passive surveillance of adjacent open space areas would be reduced.

Any cutting will be undertaken with the aim of promoting an 'A' line profile. Due to the short length of the remnant hedgerow pruning is likely to be more suitable. Arisings will be removed.

Any significant and stable dead wood will be kept on site to form log piles within woodland and woodland edge areas to form habitat that can be used by saprophytic organisms and hibernating fauna.

4.4.5 Proposed Woodland, Woodland Edge and Native Shrub Planting

Inspect trees / shrub shelters monthly to ensure they are secure and in position and re-firm / replace as required. Once trees / shelters are deemed to be too small and the trees have established, they should be removed and disposed of off-site.

Prune and re-shape native transplants at the appropriate time according to individual requirements to promote good form and encourage strong growth, minimum annually

Transplants will be re-firmed in the ground after strong winds, frost heave or other disturbances. New trees will be routinely inspected, at least annually, for pests and diseases.

New planting will be monitored annually to ensure successful establishment.

The area at the base of new planting should be retained free from weed growth by occasional strimming between new planting stations, at least quarterly.

Any protective post & wire and post & rail fencing should be maintained in a good state and repaired / replaced as required.

4.4.6 Proposed Tree Planting

Inspect stakes and ties to trees, twice yearly or after severe weather. Test for soundness in early and late winter and replace tight or ineffective ties. Ties should be replaced in slightly different position. Remove stakes and ties as soon as trees are self-supporting to benefit tree establishment. Ensure that stake(s) are wholly removed from the ground and that the remaining hole is filled with clean topsoil.

Apply annually, where necessary at the discretion of land managers, a single dose of evenly spread, 11:22:9 NPK, slow release fertiliser to the base of the tree at a rate of 50g per tree, from March – April; replace any mulch layer.

Re-firm trees in ground after strong winds, frost heave or other disturbances.

Monitor and replace failed planting with new plants between October and March. Ensure planting is conducted into well-prepared ground.

Trees should be routinely inspected for pests and diseases and any remedial action taken swiftly to prevent the spread of disease and control pests.

Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.

Annually review and undertake crown pruning of young trees by removing dead branches and reducing selected side branches, ensuring development of a single strong leader. Pruning should be carried out in accordance with BS 7370-4.

Maintain a mulch layer at the base of each tree by annual topping-up to a depth of 75mm to a diameter of 1m around the trunk. Ensure mulch layer is free from weeds by hand cultivation.

Tree Watering

Newly planted trees should be watered when planted and for the first 2 summers as required. This is likely to be at the beginning of the growing season (April/May) and regularly throughout the summer, particularly during spells of hot weather.

4.4.7 Proposed Meadow Areas (Wildflower and Wet)

Over-seeding of species rich wildflower mix, containing yellow rattle, is to be undertaken during spring and autumn to areas denoted as Wildflower Meadow. No nutrient improvement to the existing soil will be undertaken prior to sowing or during management and where feasible, topsoil and subsoil should be mixed through deep ploughing to reduce fertility.

The Wildflower Meadow areas will be managed as follows;

- Year 1 – Undertake a two-stage cut to account for the presence of reptiles. Cut sward to 150mm, remove arisings, leave for 48 hours and the cut to 50mm. Light chain-harrow to expose soil surface before over-seeding, once the sward has reached 100mm, it should be maintained at this height between April and October through regular two-stage cuts for the first growing season to control weed growth and allow for the slower growing perennial wildflowers to establish.
- Year 2 – Regular cutting to maintain a grass height of approximately 100mm should continue from April till May, at which point the sward should be left to establish to a greater height, before further cuts as required in late July and Sept down to 100mm.
- Year 3 onwards – For all areas, cut as required in late summer/early autumn to a height no lower than 100mm to maximise vascular plant vitality.

NB:- Should any sward length become excessively long to manage successfully with a single cut by the appointed contractor, an additional late spring cut can be taken in late April to check growth.

Where feasible, arisings should be removed and composted to an appropriate location.

The wildflower areas will be hand-weeded or spot swiped for any perennial weeds such as docks *Rumex* sp., nettles *Urtica* sp. and ragwort *Senecio jacobaea*.

Areas of persistent weeds should be 'capped off' by cultivation and sowing of a pure grass seed mix at the best available growing season (e.g. September)

4.4.8 Wet Grassland and Marginal / Aquatic Planting

Marginal pond vegetation may need to be cut-back to prevent the pond becoming clogged with plants or dead organic matter. Further management is unlikely to be required in the first five years, but this should be monitored.

Emergent pond vegetation on the margins should not be allowed to exceed a general marginal zone, 2m from the bank edge. If required, management and cutting back should occur in the autumn months.

Any arisings from the cutting of emergent vegetation should be left at the edge of the pond for at least 24 hours, to allow any associated fauna to escape, before being collected up and removed from the Site.

Excessive growth of certain emergent plants may be controlled by the careful glove application of a translocated herbicide (e.g. glyphosate), if this becomes necessary.

Marginal areas are to be kept free of litter and debris.

The presence of algae is to be monitored seasonally and swift remedial action taken to prevent its spread once discovered. Initially, natural methods including the placement of barley straw is to be explored before any chemical action is taken.

Any signage to be checked as part of regular maintenance visits to ensure it is serving its purpose. Repair or replace post / sign if required.

Water quality to be tested annually by a suitably qualified professional. Findings to be recorded by the Management Company and appropriate actions to be taken.

Any form of dredging to the pond is to be prohibited, unless previously agreed with the Local Authority Ecology Officer.

4.4.9 SANG Furniture (including signage)

Undertake bi-annual checks of all street furniture to ensure that it remains soundly and safely installed. Re-install any loose furniture.

If any street furniture requires replacement due to damaged, the area should be cordoned off with appropriate signage. The replacements should be installed as soon as possible, subject to availability / delivery times. Installation should be carried out by a suitable qualified installer.

In the case of SANG furniture containing timber elements, ensure that the timber has not become worn or the preservative treatment eroded by continual use or UV exposure. Any worn or damaged timber should receive an application of proprietary timber preservative to match the colour and treatment of the adjacent timber.

In the case of street furniture containing painted metal elements, ensure that any painted surface has not become worn or eroded through continual use. Any worn or damaged paint work should be rectified by the application of an appropriate paint to match the existing.

Undertake bi-annual checks for graffiti. The contractor should keep accurate records of any graffiti and should make every endeavour to remove / remediate street furniture that is subject to graffiti.

Litter and dog waste bins are to be emptied as required.

4.4.10 Hard Surfaces

As required, ensure all hard surfaces are maintained free from debris, litter and fallen leaves through regular sweeping. Remove any arisings from site.

Undertake regular inspections to ensure that all hard surfaces are sound and free from cracks or trip hazards. Patchy, worn areas or where the hard surface finish has visibly failed, are to be clearly fenced-off from the public and repaired as new as soon as feasibly possible.

Areas of hard surfaces to be spot treated bi-annually with an appropriate herbicide (e.g. Glyphosate) to remove any weeds, moss or algae growth.

4.4.11 Fencing and Gates

Ensure that all fencing is maintained in a safe, hazard-free state to facilitate the effective function of its intended use.

Undertake bi-annual inspections to ensure that all fencing is sound and free from damage.

Damaged or broken sections of timber and wire fencing should be securely repaired or replaced as required with treated softwood and mild steel wire as appropriate.

Remove any temporary fencing to planted areas once the planting has established.

5.0 DELIVERY

5.1 Delivery Strategy

Paramount to the successful establishment of the SANG area is the development of a clear delivery strategy. This will ensure that a complete and functional SANG is available from day one of occupation on the new development site for which this bespoke SANG is providing mitigation.

Once the SANG is complete, measures should be secured to provide education at the existing SPA site to encourage wider users to travel to the new SANG as a viable alternative to the SPA site e.g. signage and leaflets.

5.2 Responsibility for Delivery

It will remain the sole responsibility of the developer to fund the layout and delivery of the entire SANG in full. The land must be enhanced to SANG standard in a single phase, through in-kind works as established and secured with a s106 Agreement.

As has been outlined, it is anticipated that the freehold will be conveyed to the Land Trust or other suitable ManCo, together with agreed funding for in-perpetuity management via an endowment payment. A 'Letter of Intent' confirming the Land Trust's readiness to take formal ownership of the proposed SANG and thereafter remain responsible for its provision and maintenance in perpetuity. The Land Trust has been consulted in the refinement of site design and management prescriptions set out here-in.

The ManCo will then have responsibility for the in-perpetuity maintenance of the SANG in accordance with the management prescriptions set out here-in, with step-in rights reserved for Wokingham Borough Council should the ManCo be considered to be failing in their responsibilities.

DRAWINGS

