

SUPERSEDED

Landscape Design Statement

Town Park, Phase A, Berewood, Waterlooville



D2050

13 January 2014

HAVANT BOROUGH
COUNCIL

16 JAN 2014

RECEIVED

Contents

1. Introduction	3	12. Landscape Management Proposals	22
1.0 Introduction.....	3	12.1 Introduction.....	22
1.1 Site Location	4	12.2 Review Procedure	22
2. Phasing	5	12.3 General Operations	22
3. Site Analysis	6	12.4 Maintenance & Management.....	22
3.0 Site Analysis	6	12.5 Existing Established Trees.....	23
4. Walking distances	8	12.6 Semi-mature, Advanced Nursery Stock and Standard Trees	23
5. The Vision for the Town Park	9	12.7 Ornamental Shrub Planting	23
6. The Proposed Masterplan	11	12.8 Ornamental Grass and Herbaceous Planting	23
7. Accessibility and Circulation	12	13. Compliancy checklist	24
7.1 Vehicular movement.....	12	13.0 Introduction	24
7.2 Pedestrian movement.....	12	13.1 The Newlands Masterplan Design Document - November	24
7.3 Dog Walking Routes	12	2010 (MDD).....	24
7.4 Cycle Routes	12	13.2 The Berewood Design Code - March 2013.....	24
8. The Proposed Masterplan for the Site	13	13.3 Environmental Statement Landscape, Visual and Ecology	24
8.0 The Landscape Masterplan of the southern part Town Park	13	Requirements; Mitigation Measures and Planning Requirements .	24
associated with Phase 2	13	13.4 Town Park – Statement of Conformity	25
9. Character Areas	14	13.4.1 Town Park.....	25
9.1 The Main Entrance to the Town Park	15	13.4.2 Skateboard Facility	25
9.2 The Skateboard Park and Youth Shelter.....	16	13.4.3 Kick About Area	26
9.3 The Locally Equipped Area of Play (LEAP).....	17	13.4.4 Youth Shelter	26
9.4 The Southern Part of the Arboretum	18	13.4.5 Locally Equipped Area of Play (LEAP).....	26
9.5 The Open Parkland Feel of the Town Park	19		
10. Hard Landscape Materials	20	Appendices	
10.0 Hard Landscape Materials Palette	20	Appendix A - Wheeled Sports Park Consultation Results by Timber	
11. Soft Landscape Materials	21	Play (12th June 2013)	
11.0 Soft Landscape Materials Palette	21	Appendix B - Newlands Farm Meadow Restoration Strategy v5 by	
		Biodiversity by Design (December 2013)	

1. Introduction

1.0 Introduction

An outline application for the mixed-use development of Berewood was granted in 2012 by Winchester City Council and Havant Borough Council. The Berewood development lies to the west of Waterlooville, Hampshire, consisting of 2,550 dwellings. The application was subject to an Environmental Impact Assessment. Phase 1 of this development has received Full Planning Permission and is currently being implemented.

fabrik Chartered Landscape Architects have been appointed by Grainger plc to produce a Landscape Design Statement for the Town Park as part of the Phase 2 Reserved Matters Application. The Design Statement describes the overall design of the entire Town Park and detailed proposals for Phase A (the Town Park Phase associated with Phase 2 of the Berewood development masterplan).

This document is provided to illustrate the proposed Town Park Landscape Strategy, the Design Vision required to develop the Landscape Masterplan and the detailed design proposals for the hard and soft landscape elements of the external environment.

There is a site wide masterplan for the Town Park, but this document serves as part of the Reserved Matters application that is focused on Phase A of the Town Park. This is to be delivered with the Phase 2 Residential development.

The following documents should be read in conjunction with this Landscape Design Statement:

- Newlands Masterplan Design Document - produced by Savills in November 2010
- Section 106 Planning Obligation Agreement 2012
- Berewood Design Code - produced by Savills in March 2013
- Landscape Management Strategy - produced by fabrik in January 2014

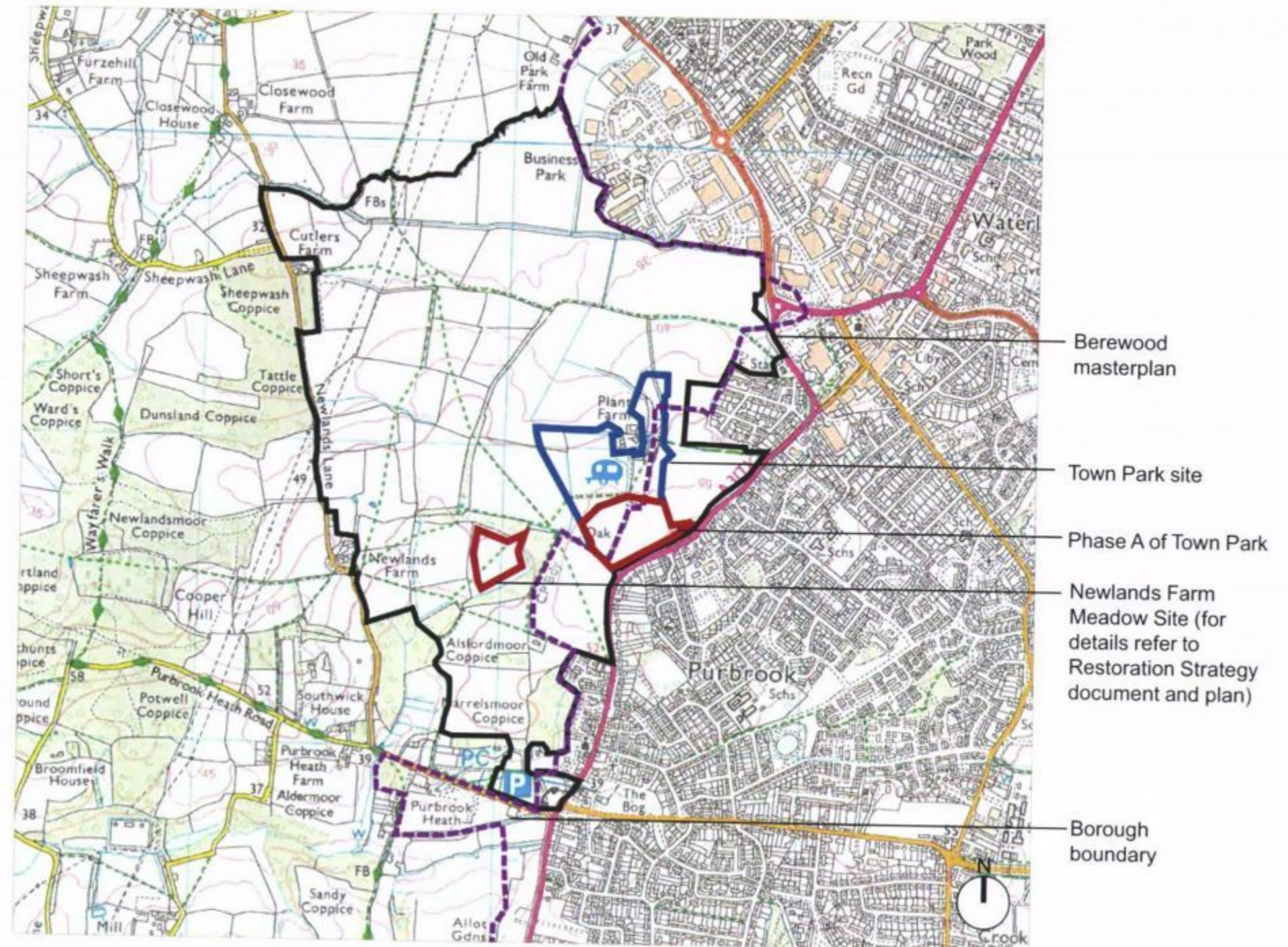
In addition to this document and its associated landscape proposals, the Newlands Farm Meadow Restoration Strategy Plan (D2050.L.TP2.150) has been produced in collaboration with Biodiversity by Design. Newlands Farm Meadow is designated as a Site of Importance for Nature Conservation (SINC) and the Restoration Strategy Plan should be read in conjunction with BbD's Restoration Strategy Document.



Aerial Photograph of the Site showing the surrounding context

1. Introduction

1.1 Site Location



Extract of OS Plan of the Site showing the surrounding context (scale 1:25000)

2. Phasing

Introduction

The Town Park outline masterplan illustrates how the detailed design of the Park has used both the existing landscape context and the aspirations of the Berewood site wide development masterplan, to provide a framework for its integration within its context as well as the new development surrounding it. The Town Park masterplan will also influence how the use of primarily soft landscape elements, hard landscape form and appropriate plant species in a range of sizes can enhance both the existing landscape structure and the proposed development whilst maintaining the overall landscape context.

Site Wide Development Masterplan

This was prepared by Grainger plc for the extension to the west of Waterlooville for a new neighbourhood of approximately 2,550 homes and associated facilities, including a local centre, primary schools, open space and employment. The proposals were formerly known as "Newlands" but are now known as "Berewood".

The entire development site is defined as land to the West of Waterlooville (WoW), south of Hambledon Road and east of Newland Lane. The eastern boundary is formed by London Road, existing allotment land and rear gardens of existing residential development at Marrelswood Gardens, Purbrook Gardens, Forest End and Maurepas Way. The western boundary of the site adjoins open countryside/ agricultural land and is defined by Newlands Lane.

As part of the site wide landscape masterplan, a series of public open spaces are proposed across Berewood. There will be a hierarchy to these spaces from those large in scale that serve the wider community, to small scale intimate pocket parks.

The Town Park Masterplan

The proposal of the Town Park aims to form the key open space within the new development, providing a cohesive hub for the integrating the future community with the existing community. In addition, it will aid with connectivity for site wide biodiversity.

Forming part of the Phase 2 Residential application is the detailed layout and landscape design for Phase 2 Residential area which

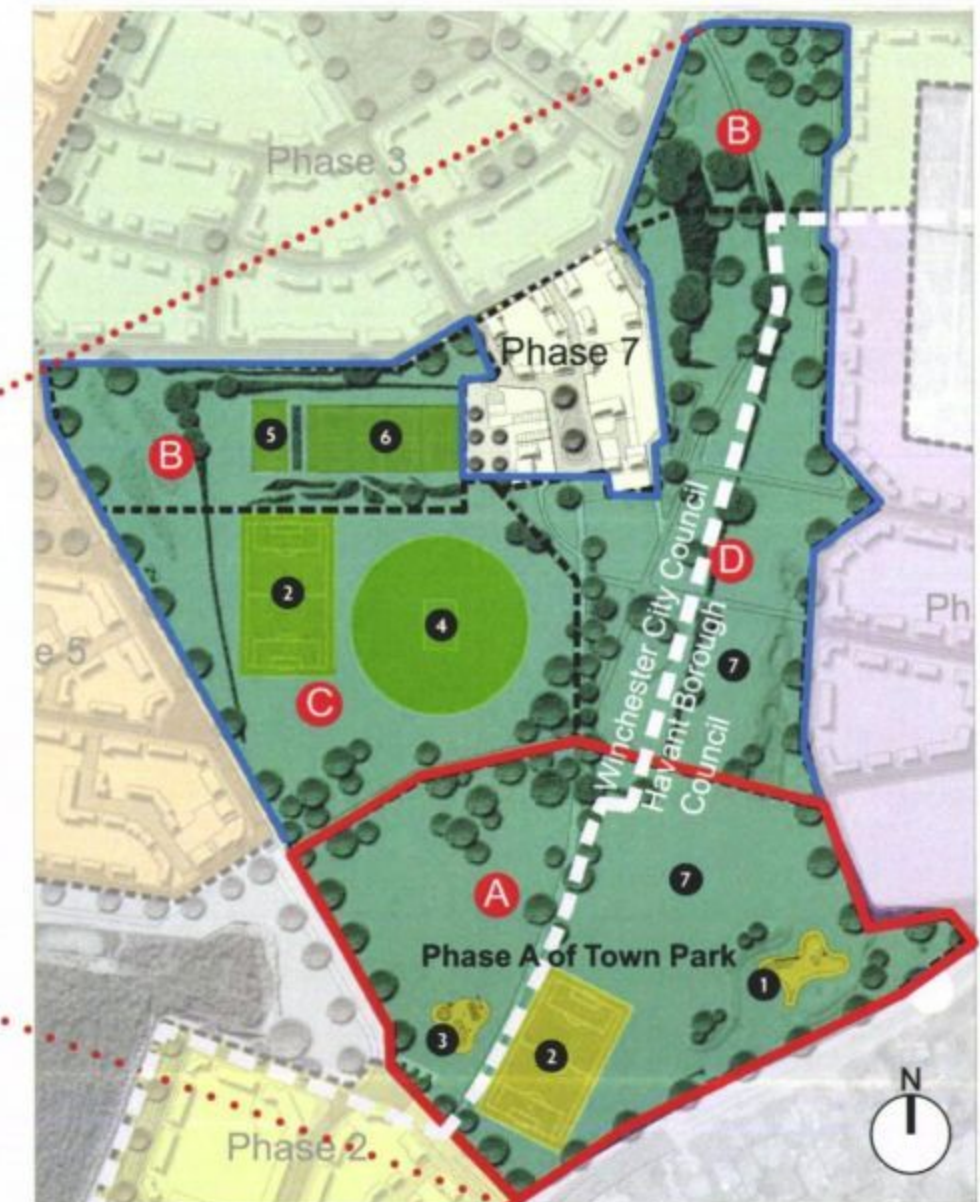
consists of residential development, infrastructure and open space. The open space to be provided within Phase 2 Residential includes the southern part of the Town Park as shown on plan opposite (far right), hereafter referred to as Phase A.

As part of the Phase A implementation of the Town Park, a skateboard park; a youth shelter; an informal kickabout space; and a local area of equipped play will be provided.



Plan showing the Berewood site wide development masterplan

- A** Landscape proposals to be implemented during phase 2.
- B** Landscape proposals to be implemented during phase 3.
- C** Landscape proposals to be implemented during phase 5.
- D** Landscape proposals to be implemented during phase 7.



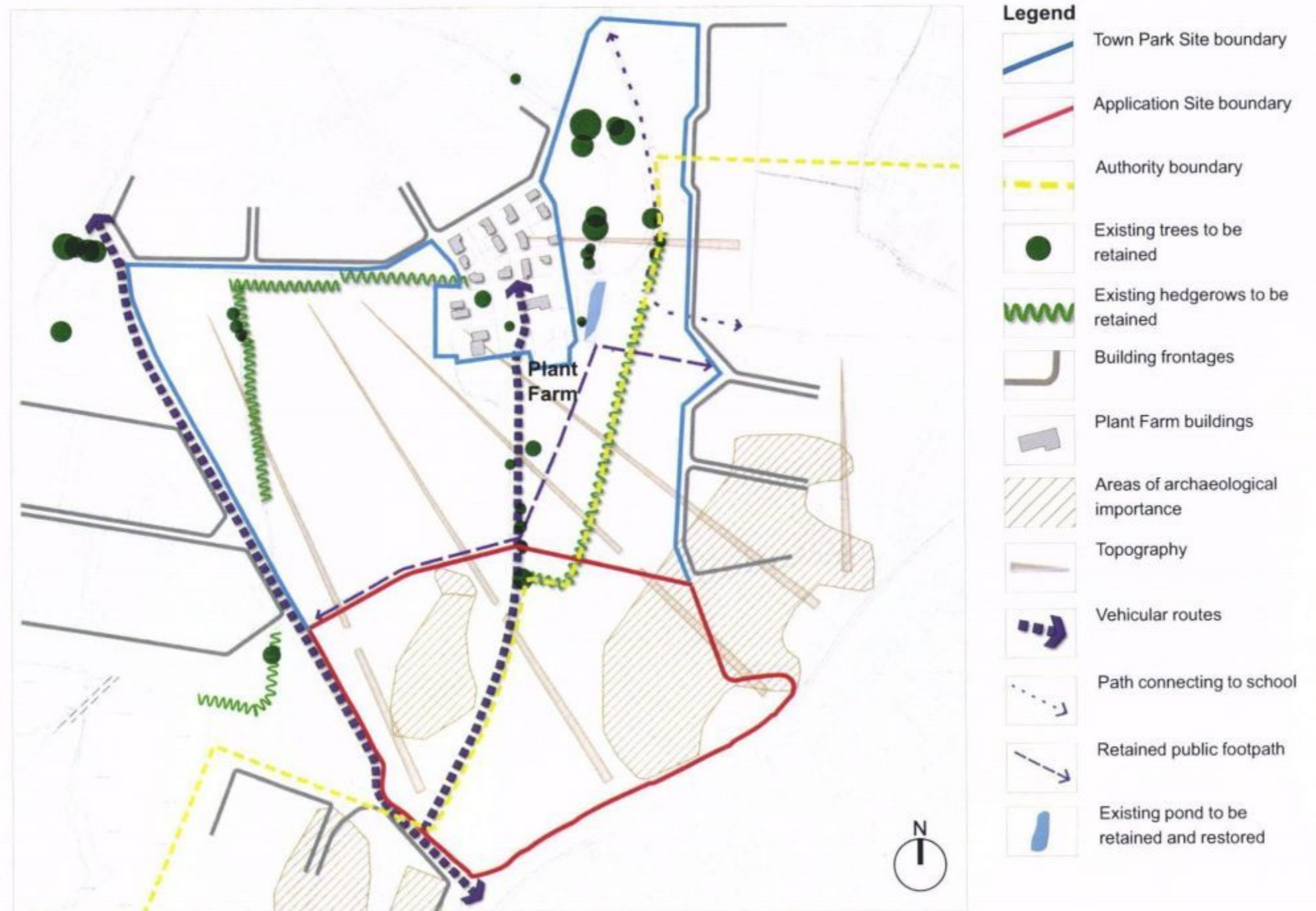
Plan showing the Town Park outline masterplan and phasing

3. Site Analysis

3.0 Site Analysis

The plan opposite summarises the site constraints evident within the Town Park site that have been considered prior to developing the landscape proposals. These constraints have influenced the proposed design, notably the underlying archaeology, retained existing hedgerows and significant trees and the retained public footpath.

It should be noted that the Application Site Boundary for Phase A of the Town Park does not include the existing public footpath, and thus no diversion will be necessary.



Plan showing site analysis

3. Site Analysis (continued)

3.0 Site Analysis (continued)

Historical Landscape

Much of the south of Hampshire sub-region consists of remnants of the Forest of Bere. The present Forest of Bere is much smaller than the Royal Forest. Nevertheless the forest is the nearest and most accessible countryside for many of the residents of south-east Hampshire. It is a mixture of woodland, open space, heathland, farmland and downland, with a number of paths and bridleways for walking and cycling. It has a 19th century oak and 20th century conifer plantations as well as areas of scrub and coppice, streams and ponds.

The remaining parts of the former Royal Forest of Bere are: Creech Wood, West Walk near Fareham, Stoke Park Wood, Queens Inclosure and Botley Wood.

Topography

The entire Town Park site rises to the south from approximately +47m OAD to +60m OAD. Phase A however rises from +55m to +60m OAD.

Land Use

The existing land use is predominantly farmland, with Phase 1 currently under construction.

Existing Trees and Hedgerows

The Berewood development site is relatively representative of land use in the surrounding countryside which includes remnants of the Forest of Bere. These include Plant Row, Marrelsmoor Row and Coppice, High Field Row and Barnfield Row. Dominated by arable and grassland fields bordered with hedgerows and existing trees, the Site contains a series of small woodland fragments to the south of the site and mature tree and shrub vegetation within the centre of the Site. A tree survey of the site has been carried out in relation to the Outline Application. Further tree surveys have been carried out in association with each of the phases, where relevant.

There is also a strong network of hedgerows within the Berewood site which includes hedgerow trees. The majority of trees across the

Berewood site are covered by a number of Tree Preservation Orders (TPOs). Tree species include ash, alder, blackthorn, cherry, Corsican pine, elm, field maple, hawthorn, hazel, holly, lime, Norway maple, maples, oak, scots pine, sycamore, sweet chestnut, willow, white poplar and wild apple.

An arboricultural assessment has been undertaken. It concluded that the Site contains a range of trees including category A (trees identified as high quality and value), category B (trees identified as medium quality and value), and category C (trees identified as low quality and value) grade tree.

The Town Park Phase A contains existing hedgerows to be retained and enhanced, as part of the wider network of hedgerows. There are also existing trees to be retained.

Biodiversity

The proposed Town Park site comprises amenity grassland with pockets of wildflower grassland and woodland. A series of species rich hedgerows are evident, and a woodland copse lies to the north west of the site.

An area of standing water lies adjacent to Plant Farm surrounded by woodland, which includes scattered broad-leaved trees and native scrub. This area however lies outside Phase A.

Services

There is a low voltage overhead power line (33kV) that runs diagonally across the site (Plant Farm to Newlands Farm) that will be relocated. This lies outside Phase A of the Town Park.

Archaeology

There are four archaeological areas within the Town Park. Two of these contain features evidencing Romano-British settlement and late prehistoric and Romano-British features. The remaining areas have been excavated and therefore no further mitigation measures are required in these areas.

The areas with archaeological findings are not to be further excavated and will require building up to achieve the requested finished levels. The proposed locations of tennis courts, play areas and floodlighting will need to avoid these archaeological sensitive areas.

Relevant conditions and surveys have all been completed and signed by WCC. For further details, refer to CgMs Archaeological Mitigation Plan figure 8.1.

Plant Farm

Land at Plant Farm includes a grade II listed farmhouse and also a historic timber framed barn, which is not listed but is considered a significant curtilage building.

The farmhouse will need to be retained and refurbished, whilst the timber framed barn has been identified as worthy of retention along with the brick wall on the eastern boundary of the farm courtyard.

The existing track which partly lies within Phase A leads from Milk Lane to Plant Farm is to be retained and resurfaced.

Public Right of Ways

A Public Right of Way crosses the Town Park on a predominantly east west access, but does not lie within Phase A.

There is however a path (not a public right of way) which connects to a proposed school, running north south of the northern part of the Town Park.

4. Walking distances

The delivery of a new Town Park provides recreational facilities for Waterlooville. Within a 15-30minute walking distance (1200m) a substantial area can be covered from the Park, providing a facility that caters for the existing and future populations of the area.

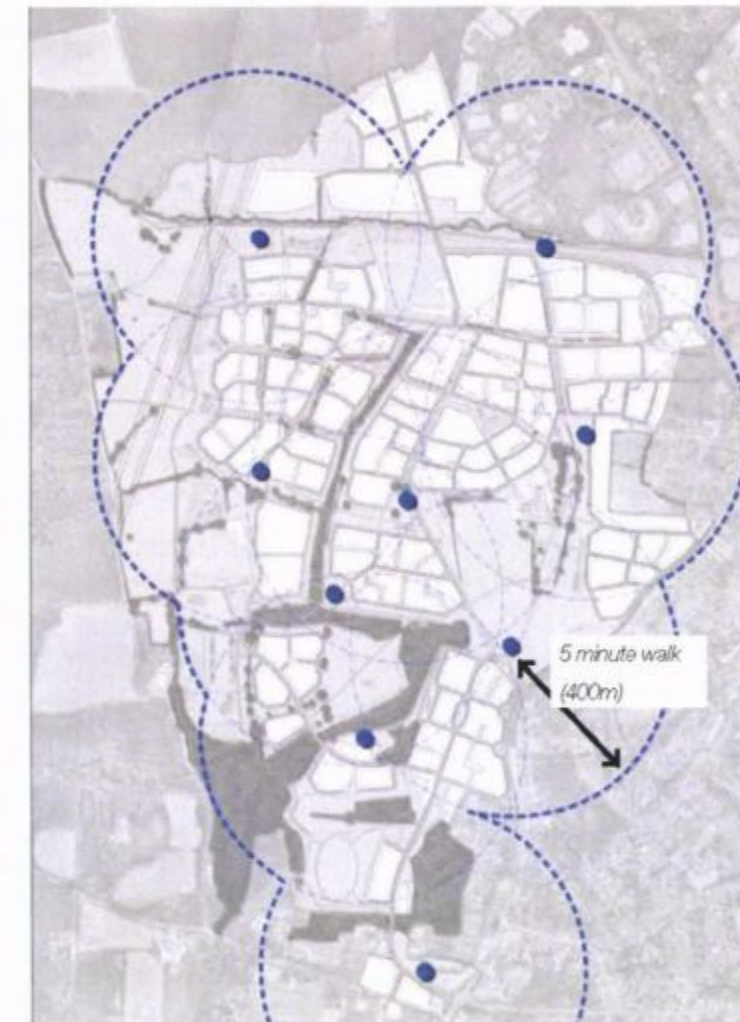
The drawings opposite are abstracts from the approved Design and Access Statement November 2010.



1. District 'Town Park' Concept - Delivering a new park and recreational facilities for Waterlooville within a 15-30 minute walk distance (1,200m) it can cover a substantial area and provide a facility area.



2. NEAPs (Neighbourhood Equipped Areas for Play). The whole of the Berewood development can access formal equipped recreational areas within a 15 minute walk distance (600m based on FIT criteria).



3. LEAPs (Local Equipped Areas for Play). These will be accessible within a 5 minute walk distance (400m based on FIT criteria) of each part of the residential development.

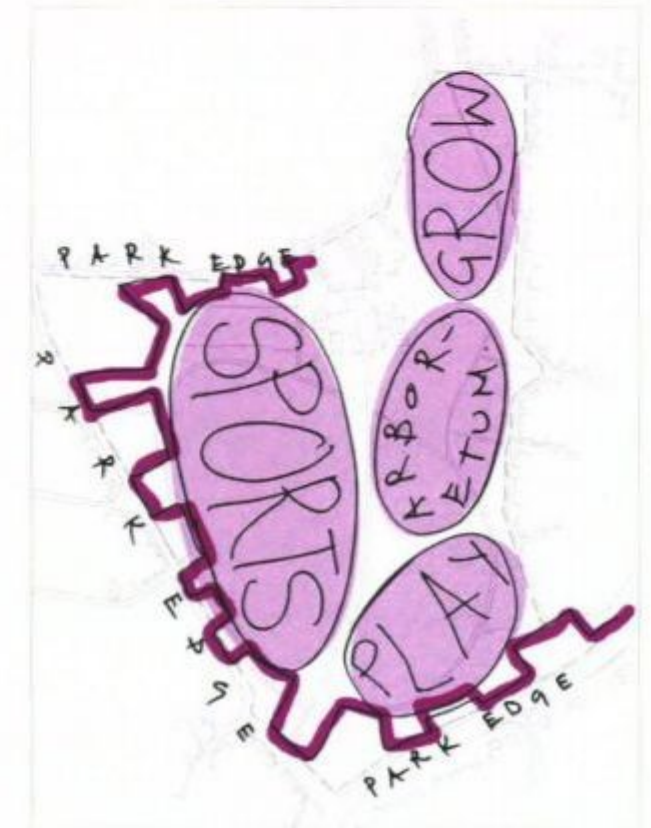
5. The Vision for the Town Park

The vision for the Town Park is to create an attractive parkland landscape, set within mature trees and hedgerows that are remnants of the Forest of Bere, enhanced with proposed tree avenue planting, wildflower swards and grassed mounds.

The overarching concept and principles of the Town Park design are:

- to provide green infrastructure to the site whilst not disturbing areas of archaeological importance;
- to provide a well connected park with clear routes to and from the Town Park;
- to retain existing trees and species rich hedges;
- to provide a diverse landscape with wildflower meadow and orchard areas;
- to provide a cohesive sports and play provision, with sufficient buffer zones;
- to create a mixture of arboretum feel and open parkland character;
- to integrate attenuation areas into the landscape design.

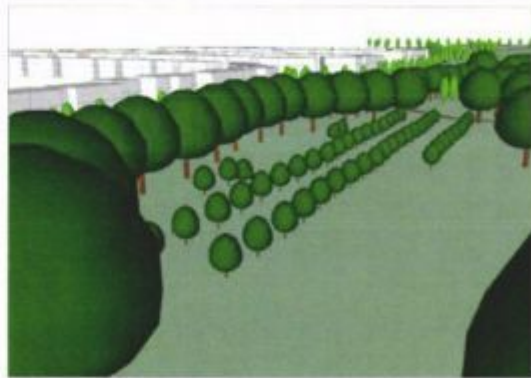
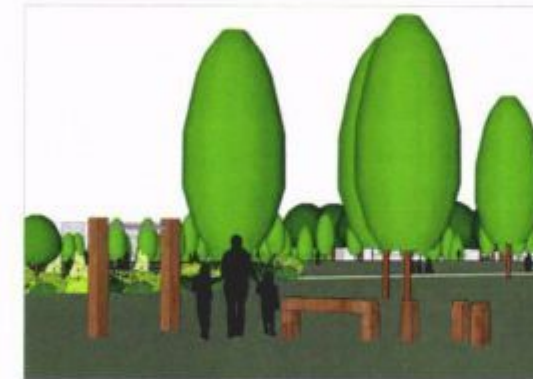
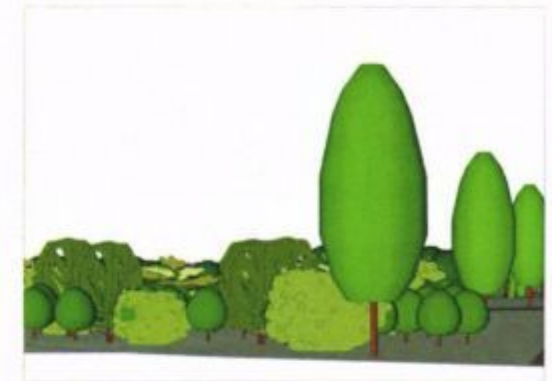
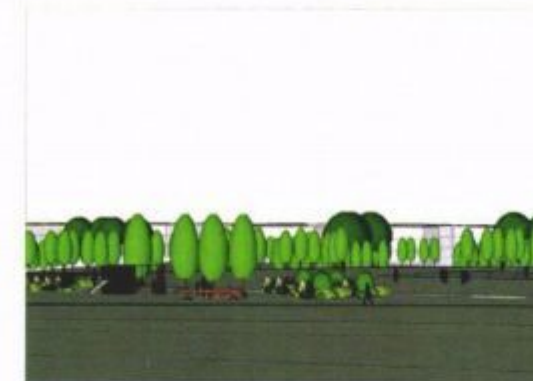
The Town Park features a circular route that unites a series of connecting paths that link to the surrounding masterplan. This connectivity strategy seeks to encourage visitors to walk, rest and play throughout the park, with areas of passive and active activities. The series of paths can be established as the desire lines can evolve into permanent paths over time, allowing the future population to take ownership of their Town Park as it forms the heart of their community.



Plans showing landscape concept for the Town Park

5. The Vision for the Town Park

The images opposite show 3D modelling of the Town Park during the early stages of the design process.



6. The Proposed Masterplan

The Landscape Masterplan of the entire Town Park

The proposals of the entire Town Park provides a range of spaces that cater for both formal active and passive recreation. The following landscape elements are included:

1. An orchard
2. An arboretum
3. A series of connecting swale features
4. Grassed amphitheatres
5. A skateboard park and associated youth shelter
6. Locally Equipped Area of Play
7. A cricket pitch
8. A village green
9. Multi-Use Games Area and Multi-Use Sports Area
10. Mown routes through wildflower meadow swards
11. Trim trails

For further details refer to fabrik drawings:

- D2050 L.TP2. 100 - Site wide masterplan
- D2050 L.TP2. 200-204 - Phase A hard landscape proposals
- D2050 L.TP2.300-304 - Phase A soft landscape proposals



Plan showing landscape masterplan

7. Accessibility and Circulation

7.1 Vehicular movement

A maintenance and emergency access route is provided through the park on the alignment of the existing track to Plant Farm. This road will be upgraded to accommodate this traffic. A gate to the South in Phase A and a gate to the north in Phase D will control access to this route.

Parking for the Town Park will be provided in accordance with the outline consent; this will be located in the Plant Farm environs and will be detailed at a later date.

7.2 Pedestrian movement

In accordance with the outline consent, the Town Park is readily accessible.

The circular path picks up the current 'gateway' paths for Phase A and the intent for future 'gateway' paths for Phases B, C and D. Its circular nature allows connections to be finalised when the adjacent built form is planned in detail.

Paths then cut through and access the park connecting its features, sometimes formally on hard surface and sometimes informally via mown grass paths.

They will be level and without steps, creating a range of routes that have been designed to allow easy access across the park for all users with mobility impairments. The continued flat surfaces across the park will give ideal access for wheelchair users and families with pushchairs. Street furniture will be grouped together where possible to aid visually impaired users to locate seating and litter bins.

The existing Public Right of Way that cuts through the Town Park is retained.

7.3 Dog Walking Routes

This network also accommodates attractive dog walking routes as required on the outline consent.

7.4 Cycle Routes

Again as agreed in the outline consent a number of the paths are combined foot and cycle paths allowing cyclists to enjoy the park. A number of cycle stands are proposed in the 'north' of the main entrance to the south of the Town Park.



Plan showing landscape masterplan

8. The Proposed Masterplan for the Site

8.0 The Landscape Masterplan of Phase A of Town Park (associated with Phase 2)

As illustrated on page 5, different parts of the Town Park will be developed with their associated phases of the Berewood masterplan. The Phase A of the park is associated with Phase 2, and includes the features the following sports and play provision:

1. A skateboard park
2. Youth shelter
3. Locally Equipped Area of Play (LEAP)
4. Informal kickabout space

Dedicated formal areas of play, in accordance with Fields in Trust design guidance local authority policy, are also included. These equipped play areas are to be designed as a complementary suite of play across the Park, using natural elements wherever possible.

The detailed design will be finalised by a specialist play provider post consent of this Reserved Matter application.

In addition, areas of passive activity are designed to encourage interaction with nature for all ages. These areas include:

5. The southern part of the arboretum
6. Mown routes through wildflower meadow swards
7. A grass amphitheatre



Plan showing Town Park of Phase 2

9. Character Areas

The proposals for Town Park of Phase 2 consists of 4 key character areas:

1. The Town Park entrance
2. The Skateboard Park and Youth Shelter
3. The Locally Equipped Area of Play
4. The Southern Part of the Arboretum
5. The open parkland character of the Park



Plan showing the locations of the Character Areas

9. Character Areas (continued)

9.1 The Main Entrance to the Town Park

The majority of entrances into the Town Park have been designed to respond to the emerging masterplan that surrounds the park. The main entrance, however, links directly to the Phase 2 development, connecting to Milk Lane and London Road to the south.

The entrance acts as a 'gateway', introducing the visitor to the park with a series of smaller passive spaces which link to the principal circular route that connects all other paths into the park.

The gateway is announced by a low brick and flint wall backed by a native hedge. The use of brick and flint ties into the materials being used to house services, provide head walls in the SuDS areas and in the elevation of some houses.

The series of sketches opposite illustrate the use of landscape elements to provide more intimate spaces that feed into larger ones. Visitors can either be led to the circular path or into the informal clearings within the wildflower meadow. These clearings allow visitors to reach elevated positions that provide views out across the park.



Extract Plan showing the main entrance into the Town Park



Section A-A'



Section B-B'



Perspectives and Sections of the main entrance to the Town Park

9. Character Areas (continued)

9.2 The Skateboard Park and Youth Shelter

In June 2013 a public consultation workshop was held to discuss the design of the skateboard park and youth shelter. (See Appendix.) The outcome is a skate park design that is integrated with the Town Park topography. Plantings of wildflower and small birch trees define a distinctive area whilst remaining visually permeable.

The grass amphitheatre provides seating opportunities for overlooking the skateboard and adjacent kickabout area.

The detailed design of the skateboard park and youth shelter will be carried out by an appointed skateboard park design specialist, and submitted for consideration by Winchester County Council. This will happen post consent for the Reserved Matters application for Phase A of the Town Park.



Extract Plan showing the Skateboard Park and Youth Shelter

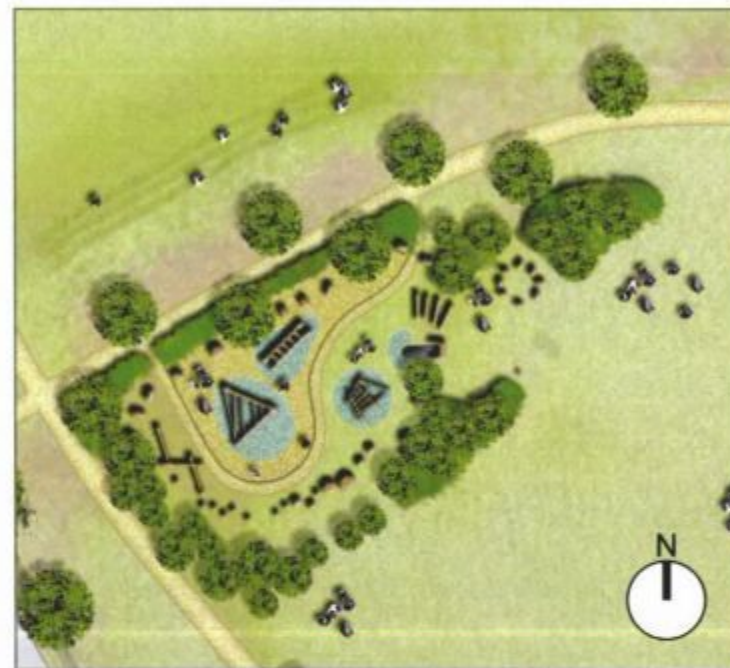
Images showing suggested examples of Skateboard Park and Youth Shelter

9. Character Areas (continued)

9.3 The Locally Equipped Area of Play (LEAP)

The detailed design and layout of the play space is to be developed by an appointed play specialist post Reserved Matters consent for Phase A of the Town Park. The images opposite, seek to illustrate the design precedents associated with a naturalistic design approach and to be considered in the detailed design stages for the proposed LEAP.

The LEAP is for children of early school age (mainly 5-11 year olds) with a minimum activity area of 400 sq m with a minimum 20m buffer to residential dwellings. The activity zone is to be naturalistic in design, to reflect its location within the Town Park and its connection to the Forest of Bere. It is to include natural materials to provide opportunities for children to create their own play spaces and will encourage social interaction with other children. They may also include elements which can provide opportunities for seating by both adults and children alike.



Extract Plan showing the LEAP

Images showing examples of naturalistic play

9. Character Areas (continued)

9.4 The Southern Part of the Arboretum

The Town Park accommodates an arboretum which will act as a mini botanical garden, containing a variety of trees planted individually or in groups.

Whilst the rest of the Town Park accommodates trees of native provenance, the arboretum will have trees from a variety of different origins to provide the park with a sense of uniqueness and an educational experience for families. Visitors can thus experience the space through the seasons, and community projects may be encouraged here.

Wildflower meadow grass to the peripheries of the arboretum will provide additional seasonal interest as well as encouraging biodiversity for local flora and fauna.



Liriodendron tulipifera - Tulip tree



Nothofagus antarctica - Antarctic Beech



Extract Plan showing the Southern Part of the Arboretum



Ginkgo biloba - Maidenhair tree



Trees on varying sizes and seasonal interest provide an arboretum feel

Images showing examples of trees featured within the Arboretum

9. Character Areas (continued)

9.5 The Open Parkland Feel of the Town Park

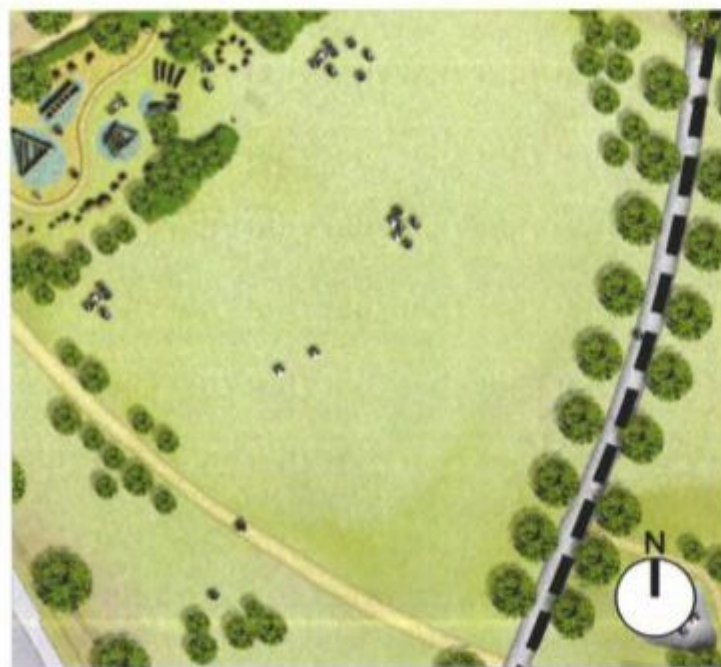
The Town Park includes large areas of open parkland that are sown to wildflower and amenity grass. A circular path connects different access points into the Park, but also allows desire lines to evolve as the Park forms its own character, developing as it grows with its community.



Potential relationships between town park edge and residential development



Open parkland feel of the town park



Extract Plan showing the open areas of parkland



Wildflower meadow with informal mown grass paths

Images showing precedent images of landscape character for the park

10. Hard Landscape Materials

10.0 Hard Landscape Materials Palette

The following hard landscape elements are featured within the Town Park proposals:

Paving materials:-

1. Exposed aggregate paving to paths
2. Tarmacadam
3. Concrete paving slabs beneath seating

Boundary treatments: -

4. Low flint and brick wall
5. Post and rail fencing with hedge behind
6. Wrought iron gates with brick piers

Street Furniture: -

7. Timber and cast iron seating
8. Black polyurethane cycle stands
9. Black polyurethane litter bin
10. Black polyurethane finger post signage

Edging

11. Timber edging
12. Conservation kerb edging



11. Soft Landscape Materials

11.0 Soft Landscape Materials Palette

The following soft landscape elements are featured within the Town Park proposals:

Trees

1. Aesculus hippocastum - Horse Chestnut
2. Quercus Robur - English Oak
3. Acer campestre - Field Maple
4. Crataegus laevigata 'Paul's Scarlett' - Hawthorn

Native Shrub Planting

5. Corylus avellana - Hazel
6. Crataegus monogyna - Hawthorn

Hedging

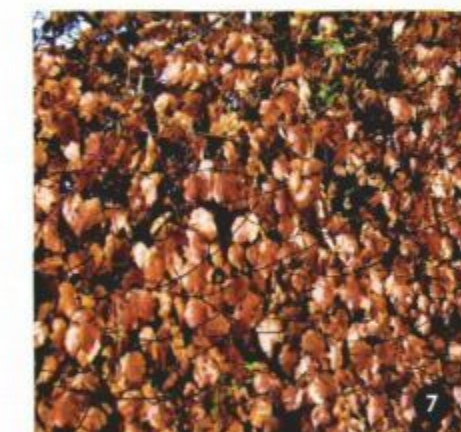
7. Fagus sylvatica - Beech

Ornamental shrubs

8. Ceanothus 'Blue Mound'
9. Choisya ternata

Grasses

10. Wildflower meadow grass with mown paths



12. Landscape Management Proposals

12.1 Introduction

The maintenance of the scheme as it progresses both on site for Phase A and following completion will be critical to its success. Every effort is being made in the detailed design of the project to choose the correct species but this effort will be wasted with poor maintenance.

At this outline masterplan stage for Phase A of the Town Park, it is key to establish the principles of maintenance and the review procedures that the chosen Landscape Contractor will be required to undertake. Detailed landscape maintenance specifications and a landscape management plan are envisaged to be submitted to clear conditions and are envisaged to encompass the following:

12.2 Review Procedure

Timing and responsibility of reviews and method of reporting to ensure the correct communication channels are set up at the start of the project.

12.3 General Operations

The following principles will need to be established:

Working notice, reinstatement procedures, the use of any specialist firms/methods for the control of mammalian pests in line with the environmental health policy of the Local Authority and the use rain water for irrigation means, depths required, watering times and removal of arisings as part of any operation on site. The protection of areas affected by maintenance operations and the safety of operatives and members of the general public will need to be explained in a method statement.

12.4 Maintenance & Management

The Landscape Maintenance Contractor shall give 3 working days notice to the Client before the application of herbicide, the application of fertilizer, watering and each site maintenance visit. The Landscape Maintenance Contractor shall reinstate to its original condition any damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings. The Landscape Maintenance Contractor shall employ specialist firms/methods for the control of mammalian pests in line with the environmental health policy of the Local Authority.

The Landscape Maintenance Contractor shall use portable mains water when watering and will ensure that the plant is wet to the full depth of topsoil, without damaging or loosening plants. With compacted soil, the soil should be loosened or scooped out, to direct water to the rootzone. Watering is to be carried out as necessary for the continued thriving of all planting. Unless specified otherwise The Landscape Maintenance Contractor will dispose of arisings as follows; biodegradable arisings to an approved tip, grass cuttings to an approved tip, tree roots and stumps to an approved tip, shrub and tree prunings to an approved tip and litter and non-biodegradable arisings to an approved tip. Extraneous rubbish not arising from the contract work will be collected and removed from site. The Landscape Maintenance Contractor is to protect areas affected by maintenance operations using boards/tarpaulins. Excavated or imported materials will not be placed directly on to grass.



12. Landscape Management Proposals

12.5 Existing Established Trees

Remove dead, diseased, decaying and damaged wood. Major pruning only to be undertaken after discussion with the Client. Note that permission will be required to carry out any tree surgery works to the trees that are subject to a Tree Preservation Order. This permission is to be obtained from the Local Authority Tree Officer prior to any works being carried out. Replacement planting, if requested by the Local Authority, is to be with species of local provenance.

12.6 Semi-mature, Advanced Nursery Stock and Standard Trees

The planting, establishment, pruning and ongoing maintenance of these trees will need to be clearly specified. Prune to remove dead, dying, diseased branches. The Maintenance Contractor is to advise the Landscape Architect of any major works required and if necessary obtain an assessment from an approved arboriculturalist. Remove suckers from base. Check condition of stakes and ties. Adjust as necessary to prevent rubbing of bark and to ensure tree is upright. Firm up trees which have suffered frost heave or are affected by strong winds. Ensure that sufficient water is applied to maintain healthy growth. Dependant on location, apply N.P.K. slow release fertiliser (at rates recommended by the manufacturer) on annual or two-yearly basis.

12.7 Ornamental Shrub Planting

The planting, establishment, pruning and ongoing maintenance of these shrubs both generally and specifically will need to be clearly specified. The intention is to encourage the establishment of planting to provide continuous cover using a balanced mixed shrub layer. Keep all beds weed free by hand weeding and/or use of approved herbicides. Fork over beds as necessary to keep soil loose with no low or high spots. Clear soil and/or mulch from adjacent hard surfaces. Until review period (year 5) apply a slow release fertiliser during March/April in accordance with manufacturers recommendation.

Prune shrubs to remove dead, damaged or diseased branches, dead flowerheads, etc. Prune to maintain shape appropriate to the species with additional shaping or height maintenance as specified in the tables. Apply sufficient water to maintain healthy growth. Maintain beds rubbish and litter free.

12.8 Ornamental Grass and Herbaceous Planting

The planting, establishment and ongoing maintenance of grass areas and any proposals for replacement will need to be clearly specified. Generally maintain turf in a manner appropriate to the intended use to a height of 30mm. Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt. Prevent waterlogging and compaction. Repair damage due to trampling, abrasion or scalping during mowing. Within ornamental turf and lawns maintain reasonably free from moss, thatch, weed, frost heave, worm and mole casts with edges neat and well defined. Litter and fallen leaves remove regularly to maintain a neat appearance. Before mowing The Landscape Maintenance Contractor is to remove litter, rubbish and debris. Following mowing the Landscape Maintenance Contractor is to leave a neat and even finish, without surface rutting, compaction or damage to grass. Neatly trim around obstructions and sweep clear and remove arisings from adjoining hard areas. Do not use mowing machinery closer than 100mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

13. Compliancy checklist

13.0 Introduction

The proposals for the Town Park Phase A are considered to be compliant with the following consented guidance:

- The Newlands Masterplan Design Document November 2010 (MDD)
- The Berewood Design Code March 2013 (DC)
- Environmental Statement Landscape, Visual and Ecology Requirements; Mitigation Measures and Planning Requirements

13.1 The Newlands Masterplan Design Document - November 2010 (MDD)

Masterplan and Development Framework

Phase A of the Town Park responds to the overarching masterplan principles and accommodates its adaptable block structure, as described in section 2.2 of the MDD.

Connectivity

Phase A of the Town Park accommodates combined cycle/footways and complies with section 2.3.4 of the MDD.

Biodiversity

The following landscape elements have been featured in the Town Park proposals and thus comply with section 2.7.0 of the MDD.

- Connected areas of wildflower grassland
- Retained species rich hedgerows
- Retained woodland areas, enhanced with additional tree planting

Dogwalking routes

These have been considered in the Town Park proposals and thus comply with section 2.7.5 of the MDD.

The Green Infrastructure Strategy

The following landscape elements have been featured in the Town Park proposals and thus comply with section 2.6 of the MDD.

- North-south wildlife arteries
- East-west wildlife arteries

Biodiversity

Phase A of the Town Park accommodates the ecological structure and complies with section 2.7 of the MDD.

Landscape, Recreation and Sports Provision

The following sports provision has been accommodated in the Town Park Phase A proposals and thus complies with section 2.8.0 and 2.8.1 of the MDD.

- A skateboard park and youth shelter
- A locally equipped area of play
- An informal kickabout area

Phase A of the Town Park accommodates and complies with the Play Strategy featured on Figure 62 of the MDD.

The Open Space Hierarchy

Phase A of the Town Park has achieved its open parkland character, and thus complies with section 2.8.2 of the MDD.

Tree Hierarchy

Phase A of the Town Park has complied with section 2.8.6 of the MDD with the following tree strategy:

- Large species for primary routes - avenues for oaks and horse chestnut
- Medium species for secondary routes - Field maples
- Small species - native species in groups

Opportunities for community growing

The Town Park accommodates an orchard to the north, thereby complying with section 2.10.1 of the MDD.

Sustainable Drainage (SuDS)

Phase A of the Town Park does not include any SuDS features. These features and swales are accommodated in subsequent phases of the

Town Park's development. The proposals for SuDS features shown on the entire Town Park do comply with section 2.11.1 of the MDD.

13.2 The Berewood Design Code - March 2013

The Town Park proposals comply with the descriptions featured in Demonstration Area GS5 Town Park, where the Park is the heart of the Garden Suburb residential neighbourhood.

Phase A of the Town Park complies with the Section 2.3 Area 2 Garden Suburbs identity area of the Design Code, in particular Codes GS06 and GS 07. Appendix A Landscape Species has also been adhered to.

13.3 Environmental Statement Landscape, Visual and Ecology Requirements; Mitigation Measures and Planning Requirements

Additionally the proposals positively respond to the mitigation measures and planning requirements of the Environmental Statement (ES).

ES: Landscape and Visual (Chapter 10) and Ecology (Chapter 9)

- Retention or protection of natural features such as mature trees, woodlands, hedgerows, streams and ditches;
- To extend and improve the recreational opportunities to the west of Purbrook and Waterloooville;
- To take advantage of strategic planting within the site;
- To provide informal recreational opportunities;
- Implementation of new tree planting;
- Incorporation of pedestrian and cycle routes;
- Open spaces that are multifunctional and to include meadow grass and native tree and shrub planting. These areas are also to include existing hedgerows and ditches wherever possible.
- The detail design has considered the Root Protection Areas of the existing trees to be retained;
- To provide areas of wildflower grassland; and
- Lighting columns to be designed to minimise impacts on bats, with some trackways left unlit.

13. Compliancy checklist (continued)

13.3 Environmental Statement Landscape, Visual and Ecology Requirements; Mitigation Measures and Planning Requirements (continued)

S106 states that the location and extent of the following:

- a skatepark facility;
- a kick about area;
- a youth shelter

are all to be agreed via a consultation exercise, the process of which is to be agreed with the LPA.

13.4 Town Park – Statement of Conformity

Section 13.4 of this Landscape Design Statement has been written in collaboration with Savills.

The Reserved Matters Application (RMA) for the Town Park has been submitted for the section that is associated with Phase 2 development in accordance with the S106 obligations. In addition, the design and layout for the whole of the town park has been submitted for consultation in accordance with clauses 9.51, 9.61 and 9.71 of the S106. The requirement to provide the town park associated with each phase of development adjoining the park is an obligation in the S106, which states:

13.4.1 Town Park

S106 Clause 9.10 – 9.12 states that: *“Prior to the Commencement of Phase 2 Phase 3 Phase 5 Phase 7 and Phase 8 the Developer shall submit to the Relevant Authority for its approval in writing the precise amount composition layout and location of the Open Space within the Town Park associated with such Phased Area*

The Developer shall lay out and develop the Town Park in accordance with details approved pursuant to Clause 9.10 and also in accordance with the Town Park Plan which:

...identifies the facilities to be provided within the Town Park; and sets

out the various Phased Areas as part of which the Town Park will be provided.”

The Developer shall provide as Open Space such part or parts of the Site as agreed with the Relevant Authority (and including in any event the Town Park) in accordance with the Design Code and the relevant Phased Area Strategy (including any approved timetable) and any Reserved Matters Approval.

Following detailed discussions with WCC and HBC Officers, it was agreed that the Town Park should be submitted as a reserved matters application under 6(i)d. The play facilities – play area, skateboard and youth shelter location must be shown on the masterplan but the detail design can be submitted as a discharge of condition 6(ii)O at a later date. However, the design does need to consider the levels of the site and the relationship with the archaeology. Only the area associated with Phase 2 will be submitted as an RMA, as required by the S106 Obligation clause 9.10.

The following S106 obligations have also been adhered to as part of this RMA application:

13.4.2 Skateboard Facility

S106 Clause 9.51 states that:

“The Developer shall agree with Winchester and Havant the consultation process to be undertaken with potential users of the Skateboard Facility in determining the equipment that shall be installed to provide the Skateboard Facility prior to determining its design and specification such consultation to be conducted by the agreed party prior to Occupation of 175 Residential Units upon the Site.”

As per the requirements of Clause 9.51 and 9.71 of the S106, a public consultation event on the proposed skateboard park and youth shelter was held at Waterlooville Community Centre on 12 June 2013.

Local Primary and Secondary Schools were invited to attend the event which was organised by Savills and Fabrik. The event was attended by Timbeplay, The Works Skate Park Charity and Concrete skate park designers, who provided detailed design advice. The knowledge of skate park design and play space had by those running the event ensured a proactive workshop session to be had with the children that attended. Clear ideas of how the children would and wanted to use the park were obtained and detailed design was developed to inform the final design of the Town Park. In addition, discussions relating to the location and design of the youth shelter were had with the children

In total, 16 young people attended the event comprising an age range of 7 to 15. The attendees were asked their preferred sport use for the site. 31% said they preferred skating, 43% riding scooters and 25% would like to use the ramps to ride their BMX. The preferred use of the park is important as this will have a direct impact on the type of design going forward. The attendees were also asked their preferred style of ramp and activities. Their response is as follows;

- Activities in order of preference: Boxes; Ramps; Transitions; Hips; London Gap; Grind Ramps
- Style in order of preference: Park; Plaza; Street

A summary of the findings from the consultation event is attached as an Appendix.

13. Compliancy checklist (continued)

13.4.3 Kick About Area

S106 Clause 9.61 states that:

"The Developer shall obtain the approval in writing of the Relevant Authority to the precise location size design and specification for the construction laying out and ongoing maintenance each of the Informal Kick About Areas together with a timetable for carrying out the construction and laying out of each of the Informal Kick About Areas prior to the Commencement of the relevant Phased Area associated with the Informal Kick About Area (being Phase 2 and Phase 5 respectively) within the Town Park."

The Informal kickabout area is identified within the landscape masterplan of Town Park Phase A and identified on page 13 of this document and accompanying landscape proposal drawings:

- D2050 L.TPA.100 - Town Park Illustrative Plan
- D2050 L.TPA.200 series - Detailed Hard Landscape drawings
- D2050 L.TPA.230 series - Detailed Soft Landscape drawings

13.4.4 Youth Shelter

S106 Clause 9.71 states that:

"The Developer shall agree with Winchester and Havant the consultation process to be undertaken with potential users of the Shelter in determining the equipment that shall be installed to provide the Shelter prior to determining its design and specification such consultation to be conducted by the agreed party prior to Occupation of 175 Residential Units upon the Site."

13.4.4 Youth Shelter (continued)

As part of the community consultation on the design of the Skate Park, attendees were also asked their opinion on the design and location of the youth shelter. A number of design options were presented and the favourite chosen. With regards to location, the

majority would prefer the youth shelter to be located in close proximity to the skate board park, so as to be able to watch skaters while using the shelter. However, it was suggested by some that two youth shelters would be more appropriate, one close to the skate park and one located further into the park for those that wanted a quieter space to use.

The town park has been designed with a number of areas within it which would allow for a quieter space to sit and enjoy the park. As such, it seemed sensible to locate the youth shelter next to the skate park, which represents the majority view.

13.4.5 Locally Equipped Area of Play (LEAP)

S106 Clause 9.94 states that:

"Prior to Commencement of any of Phase 2 Phase 3 Phase 6 Phase 9 Phase 12 and Phase 13 (being the Phased Area associated with a LEAP or NEAP) or more than a trigger number of Residential Units comprised within the Site as set out in the table below (whichever first occurs) the Developer shall obtain the approval in writing of the Relevant Authority to:

- *the precise location nature and timetable for the provision of the LEAP or NEAP associated with that Phase together with a timetable for carrying out the construction and laying out of the LEAP/NEAP and details of any ongoing maintenance; and*
- *the precise share of the Children's Play Equipment Sum that shall be allocated to that LEAP/NEAP; and*
- *the specification for the provision of children's play equipment on that LEAP/NEAP"*

The LEAP is located within Phase A of the Town Park, as highlighted on the submitted drawings and within the accompanying Landscape Design Statement. As agreed for the detailed design of the Skate Park facility, the detailed design of the LEAP will be submitted to Winchester City Council for further consideration at a later date as

a discharge of condition 6(ii)O. This allows the principle layout of Town Park Phase A to be agreed, and the detailed design of all play equipment worked up prior to its construction.

Summary

The Town Park will be a unique space that allows the local community and the future population of Berewood to take ownership of their Town Park as it forms the heart of their community.

With its feature circular route, it unites its surrounding masterplan with a series of connecting paths. This connectivity seeks to encourage visitors to walk, rest and play throughout the park, with areas of passive and active activities. The series of paths can be established as the desire lines can evolve into permanent paths over time, thereby adapting its use to the needs of its community.

Appendix A - Wheeled Sports Park Consultation Results by Timber Play (12th June 2013)





Charity No. 112787
theworksskatepark.com

RESULTS - Wheeled Sports Park Consultation
Waterlooville
 Date: 12th June
 Time: 4-7pm

Format
 Introduction – presentations on Berewood Park & Concrete
 Workshop - **Technical Capability** Users - BMX, Skate, or Scooter?
 What ages are & what experience do people have that want to use the park?
 Questionnaires handed out (Attached)
Style - Street, Plaza or Park (Bowl, Jumps)
Spectator Platforms
Design – examples for discussion (attached)
Street Furniture & Shelter (attached)
 5.30pm – Q & A

- 16 Wheeled Sports Questionnaires completed

Age	14	14	14	11	14	9	11	12	11	14	15	9	7	14	12	15
Activity																
Skateboard		y				y		y					y			y
Scooter	y			y			y		y	y	y				y	
BMX			y		y								y	y		

- 31% Skate; 43% Scooter; 25% BMX
- Activities in order of preference: Boxes; Ramps; Transitions; Hips; London Gap; Grind Ramps
- Style in order of preference: Park; Plaza; Street











Charity No. 112787
theworksskatepark.com

Other requests:

- Half pipe
- Beginners Area
- Flood lights
- Ripple Floor

Shelters 9 (Information attached)

- 10 questionnaires completed

Results

- G – 40%;
- E – 20%;
- C; B; J; F – 10%







Appendix B - Newlands Farm Meadow Restoration Strategy v5 by Biodiversity by Design (December 2013)

NEWLANDS FARM MEADOW:

RESTORATION STRATEGY



B BIODIVERSITY BY DESIGN

On behalf of Grainger

December 2013

Contents

NEWLANDS FARM MEADOW:..... 1

RESTORATION STRATEGY 1

INTRODUCTION 2

1.1 BACKGROUND..... 2

1.2 OBJECTIVES..... 3

1.3 PLANNING DRIVERS..... 4

2.0 EXISTING CONDITIONS 5

3.0 RESTORATION STRATEGY..... 10

3.1 OVERVIEW 10

3.2 GRASSLAND 11

3.3 WOODLAND 13

3.4 WATER FEATURES..... 15

4.0 PUBLIC AMENITY 17

5.0 GRASSLAND MANAGEMENT..... 18

6.0 CRITERIA FOR SUCCESSFUL GRASSLAND ESTABLISHMENT 19

7.0 RECOMMENDED CONTRACTORS..... 20

INTRODUCTION

1.1 Background

In 2011 Grainger received outline planning permission from Winchester City Council (WCC) and Havant Borough Council (HBC) for a mixed-use development consisting of 2,550 housing units at Newlands (now referred to as Berewood) on the western fringe of Waterloooville in Hampshire. The outline planning application was subject to a full Environmental Impact Assessment. Phase 1 of the multi-phase development has received Full Planning Permission and is currently being built.

As part of Phase 2 of the development a Reserved Matters Application (RMA) is to be submitted for the first component of the Town Park. These proposals are to include a strategy for the restoration of Newlands Farm Meadow (see Figure 1.1 for location); the aim of the present document. Although a reasonable level of detail has been provided in terms of restoration techniques and timings, it is not specifically the intention here to provide a contractor works specification. Additional specifications are likely therefore to be required in certain respects once the scheme has been consented.

Newlands Farm Meadow is designated a Site of Importance for Nature Conservation (SINC) for its semi-improved grassland which was originally found include a significant element of unimproved grassland. However, subsequent to its designation the meadow has been intermittently ploughed and thereby its conservation value has been notably diminished. While there are still some patches of botanical interest (most notably the damper fringe along its southern edge), the majority of the meadow is now species-poor and ssupports in the main common grasses herbs and grasses.

Figure 1.1 Location of Newlands Farm Meadow



1.2 Objectives

The aim of this document is to provide a strategy for the restoration of Newlands Farm Meadow. As the meadow has lost the majority of its botanical interest through ploughing (and perhaps applications of fertiliser, herbicide and pesticide) a range of restoration opportunities should be considered.

In keeping with national and local policy on stemming net losses of biodiversity nationwide and seeking enhancements, objectives of the present strategy aim to achieve a greater variety of ecological and ecosystem functions / characteristics than would be the case were the original grassland and soil structure still broadly intact albeit in a neglected state. These restoration objectives are set out as follows:

- To restore meadow at least to its former botanical richness at time of designation of the SINC thereby also benefitting a range of associated fauna including e.g. invertebrates, reptiles and amphibians (see below).
- To expand the surrounding wooded area (Barnfield Row and Newlands Row) to:
 - Increase wooded habitat for the existing Dormouse population and other woodland fauna.
 - Buffer Barnfield and Newlands Row woodlands against potential increased recreational disturbance likely to result from the new housing. These woodlands are considered particularly vulnerable to recreational disturbance due to their high edge to area ratio.
 - To screen future housing development located immediately to the west which would otherwise detract from visitor enjoyment of the restored meadow site. The new woodland screen will also serve as a buffer against future disturbance emanating from the new housing.
- To create new water features to:
 - Support the integrity of the local Great Crested Newt (GCN) and Grass Snake populations (and of other species with aquatic and riparian life stages) and render them more robust against forthcoming increased recreational pressures.
 - Provide an attractive landscape / amenity feature at the heart of the restored meadow.
- To retain and enhance the existing relatively noteworthy riparian habitat along the southern edge of the meadow (see Section 2).
- To create a noteworthy amenity resource for the new population and existing Waterlooville / Purbrook community. Note that a specific aim of Berewood's green infrastructure, as explained in the Environmental Statement accompanying the outline application, is to ensure that the new population and existing local residents have access to high quality greenspace on their 'doorsteps' thus minimising visits to local coastal European Sites which are under pressure from recreational disturbance.

- To commence the first stage of a wider strategy to create multiple strong east-west green linkages across the Berewood site (including strengthening linkages to the wider Forest of Bere to the west) for biodiversity and people alike.

These objectives are all consistent with those set out in the Environmental Statement (ES).

1.3 Planning drivers

The requirement to restore Newlands Farm Meadow is a commitment from the ES. The green infrastructure phasing strategy in the ES includes the commitment to restore Newlands Farm Meadow (which is to include *'planting of new woodland and creation of a new pond'*) within Phase 2 of the project.

The restoration of Newlands Farm Meadow is also part of a strategy set out in the document *Evidence to Inform a Habitats Regulations Assessment Screening for the Proposed Newlands Development, Waterloooville* to create substantial network of green infrastructure integrated into the new development that is accessible, diverse, aesthetically pleasing, and rich in biodiversity, thereby minimising recreational trips to the local coastline which might result in disturbance to waterfowl within the designated European Sites.

There are no planning conditions specifically requiring the restoration of Newlands Farm Meadow. The planning condition most relevant to the proposals is there is Condition 6 (ii)(f) which is as follows:

'details of ecological mitigation measures (informed by up – to – date ecological surveys and assessment, the details of which shall be submitted to and approved by the Local Planning Authority) required for each reserved matters application, including both ecological works directly related to that reserved matters area and any works associated with that development area but outside of the boundary of that area. Ecological mitigation measures should be in accordance with measures set out within the approved Environmental Statement.'

2.0 EXISTING CONDITIONS

A number of surveys have covered Newlands Farm Meadow and its surrounds. These have included the following:

- National Vegetation Classification (NVC)
- Phase I Habitat
- Dormouse
- GCN
- Reptile
- Breeding bird
- Invertebrates

The findings from these surveys are only summarised here. Further detailed information (including on the protocols followed) is presented within the ES.

There are no International, European or Nationally designated sites covering or close to Newlands Farm Meadow. There are however five SINC's covering or close to the site (see Figure 1). These are:

- Newlands Farm Meadow (covering the entire meadow) – originally designated for its unimproved grassland, although much of its value has been diminished due to intermittent ploughing and other agricultural intensification over many years.
- Newlands Row and Plant Row (abuts the northern, eastern and southern boundaries of the meadow) – designated for its Ancient woodland.
- Alsfordmoor Coppice (ca. 75m to the south-west) - designated for its Ancient Woodland.
- Marrelsmoor Row (ca. 200m to the south) - designated for its Ancient Woodland.
- Marrelsmoor Coppice (ca. 315m to the south-east) - designated for its Ancient Woodland.

The flora of Newlands Farm Meadow is described in more detail below.

Most of the woodland SINC's consists of W10c English Oak – Bracken – Bramble woodland Ivy sub-community. The only other woodland community of notable size was W7a Alder - Ash - Yellow Pimpernel woodland Common Nettle sub-community, which is prevalent in wetter areas. Given the ancient origin of the woodlands, the ground flora is generally limited, mainly due to shading by overgrown coppice, although Wood Anemone and Bluebell are relatively widespread and locally abundant. Butcher's Broom, Sanicle and Early Purple Orchid are occasional to rare.

The ecological description of the Newlands Farm Meadow SINC at time of designation in 1985 was *'damp edge, fairly rich, of otherwise semi-improved hay field'*. Twenty-one species were recorded including Sneezewort, Black Knapweed, Common Spotted Orchid, Meadowsweet, Greater Bird's-foot Trefoil, Hemlock Water Dropwort, Pepper Saxifrage, and Devil's-bit Scabious. .

At time of survey in relation to current development proposals of the wider Berewood site (2007), several distinct vegetation types were present within the SINC. These are summarised below and mapped in Figure 2.1. None of these could be satisfactorily assigned to any published NVC communities or sub-communities. Species lists for all of the vegetation types within the SINC are presented in the ES. Previously recorded relatively noteworthy species such as Sneezewort, Pepper Saxifrage and Devil's-bit Scabious, were no longer present, although Common Spotted Orchid and Greater Bird's-foot Trefoil were, despite the agricultural improvements, still present along the drier margins of the riparian zone. .

- Yorkshire-fog – Common Bent Grassland. Yorkshire-fog – Common Bent grassland occupied most of the SINC. The sward was found to be variable, but Yorkshire-fog and Common Bent were constant throughout and usually abundant. The sward appeared to have been derived from sown pasture and was similar to others within the Grainger landholding overlying moderately acid well-drained soils. The sward was dense and closed and dominated by grasses (overall cover greater than 60%). A number of other grasses and forbs were common throughout, including Smooth Meadow-grass, Creeping Buttercup and White Clover. The grassland may have originated as a sown rye-grass ley (MG6 *Lolium perenne* – *Cynosurus cristatus* grassland) although the signature species of this mix – Perennial Rye-grass and Crested Dog's-tail – were very scarce at the time of survey. Overall diversity was low to moderate and variable, with some patches locally dominated by grasses and others characterised by sprawling legumes, including Red Clover, Greater Bird's-foot-trefoil, Meadow Vetchling and Tufted Vetch. Patches dominated by e.g. Common Couch and Creeping Thistle may have been in areas where localised enrichment of soils has occurred as a result of positioning of livestock feeders. Well-drained soils underlying this grassland were noted to hold sufficient moisture for a number of species of constantly damp but not wet ground to be occasional throughout. These included Marsh Thistle, Greater Bird's-foot-trefoil and Compact Rush species which became more frequent as the land fell very gently toward woodland along the southern edge.
- Hemlock Water-dropwort – Common Fleabane Tall Herb Community. This was a distinctive and relatively species-poor tall-herb community, occupying the lowest ground within the SINC, adjacent to a small woodland-edge stream along the southern edge (see Plate 1). Water-logging and poor soil aeration was evidenced by the abundance of Hemlock Water-dropwort. Other prominent damp-ground associates included Greater Bird's-foot-trefoil, Wood Dock, Common Fleabane and young Grey Willow *Salix*. The community had certain affinities with MG9 but it was not possible to satisfactorily place it within this NVC classification. It is this community (and the one described below) which will be retained and enhanced under the present strategy.
- Meadowsweet – Common Knapweed Tall-herb Community. A small stand of this community was present on low ground close to the stream / ditch and woodland edge along the southern/eastern edge of the meadow. It was dense and coarsely structured, and quite species-poor (Plate 2). Meadowsweet and Common Knapweed

were co-dominant, frequent associates including Common Fleabane, Marsh Thistle, Creeping Thistle and Yorkshire-fog. The community had no obvious affinities with any NVC type.

Plate 1. Tall herb vegetation dominated by Hemlock Water-dropwort



Plate 2. Meadowsweet – Common Knapweed tall herb vegetation



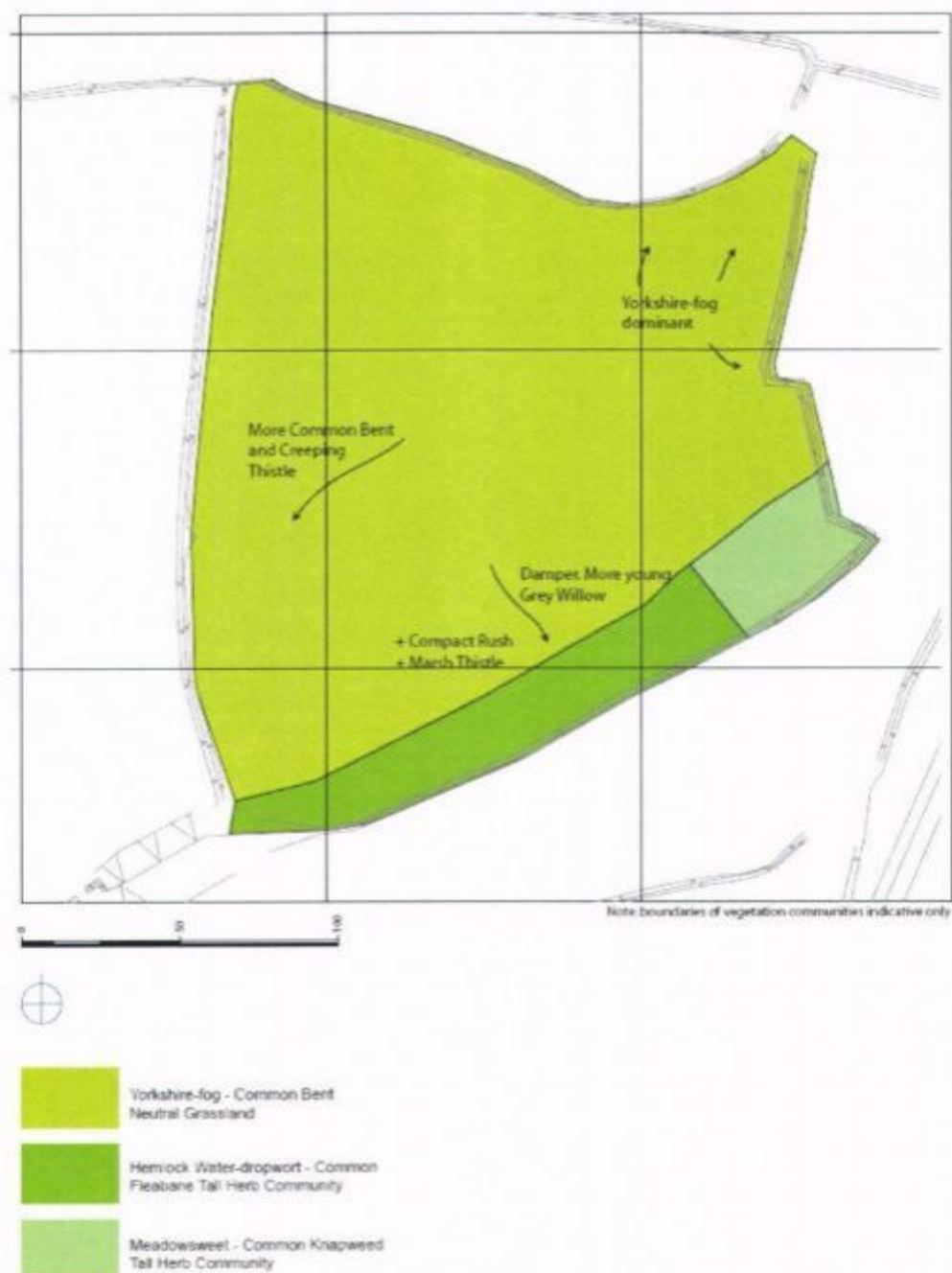
While the Site is bounded by the Newlands Row and Plant Row woodland SINC on its northern, eastern and southern sides, the western boundary is a species-rich hedgerow including

several mature Oak trees. Other species include Ash, Blackthorn, Dogwood, Elder Field Maple, Hawthorn, Hazel, Holly, rose species, Spindle and willow species.

In terms of fauna the following species / taxa known to be present are of most interest:

- Badger (UK protected). Evidence of Badger is present in the surrounding woodland although the nearest Main sett is several hundred metres to the west.
- Dormouse (European Protected Species). Dormice are present in low numbers in the surrounding woodland and some hedgerows.
- Bats (European Protected Species). There are no known bat roosts within the woodland surrounding the meadow although mature trees include many features which might attract roosting bats. Good numbers of Common and Soprano Pipistrelle bats were recorded in 2012 foraging around (and possibly across) Newlands Farm Meadow. Occasional foraging / commuting myotis bat species were also recorded.
- GCN (European Protected Species). No ponds are present within Newlands Farm Meadow although there are six ponds within 400m of the meadow which have been surveyed for amphibians over a number of years. GCNs have been recorded in four of these ponds although only one pond (ca. 340m to west) has been confirmed supporting a viable breeding population. In 2012 the population was classified as being 'Low' in size, although previously the pond was identified as having a 'Medium' population. GCNs as well as other locally present amphibians (Smooth Newt, Common Frog and Common Toad) may forage within Newlands Farm Meadow.
- Reptiles (UK protected). Small numbers of Grass Snakes and Slow Worms have been recorded around the meadow margins.
- Breeding birds (UK protected). Various breeding bird surveys have been undertaken at Berewood since 2003. Most notable with respect to Newlands Farm Meadow was the assemblage of specialist woodland species recorded from the earlier surveys, which has included Bulfinch (Section 41 NERC Act; Amber List), Cuckoo (S41; Red List), Lesser Spotted Woodpecker (S41; Red List), Spotted Flycatcher (S41; Red List), Marsh Tit (S41; Red List) Willow Tit (S41; Red List), and Willow Warbler (Amber List). In 2009 the woodlands were resurveyed to update the previous findings and inform the ES. Three of the notable woodland species recorded in 2003/2005 surveys – Lesser Spotted Woodpecker, Spotted Flycatcher and Willow Tit – were not recorded in the 2009 survey. These species, as well as Willow Warbler, were also not recorded during a 2012 survey. While Bulfinch and Marsh Tit were recorded from the most recent survey, breeding was not confirmed in either case. Cuckoo was recorded in 2012 in Alsfordmoor Coppice several hundred metres to the south-west of Newlands Farm Meadow. The apparent decline and loss of woodland specialists from Berewood's woodlands reflects wider trends and may not indicate a substantial change in Berewood's habitat quality over recent years.
- Invertebrates. No recent detailed invertebrate surveys have been undertaken in Newlands Farm Meadow although in 2012 large numbers of insects (including many bees) were recorded in the more flower-rich damper southern edge area.

Figure 2.1 Distribution of existing plant communities at Newlands Farm Meadow

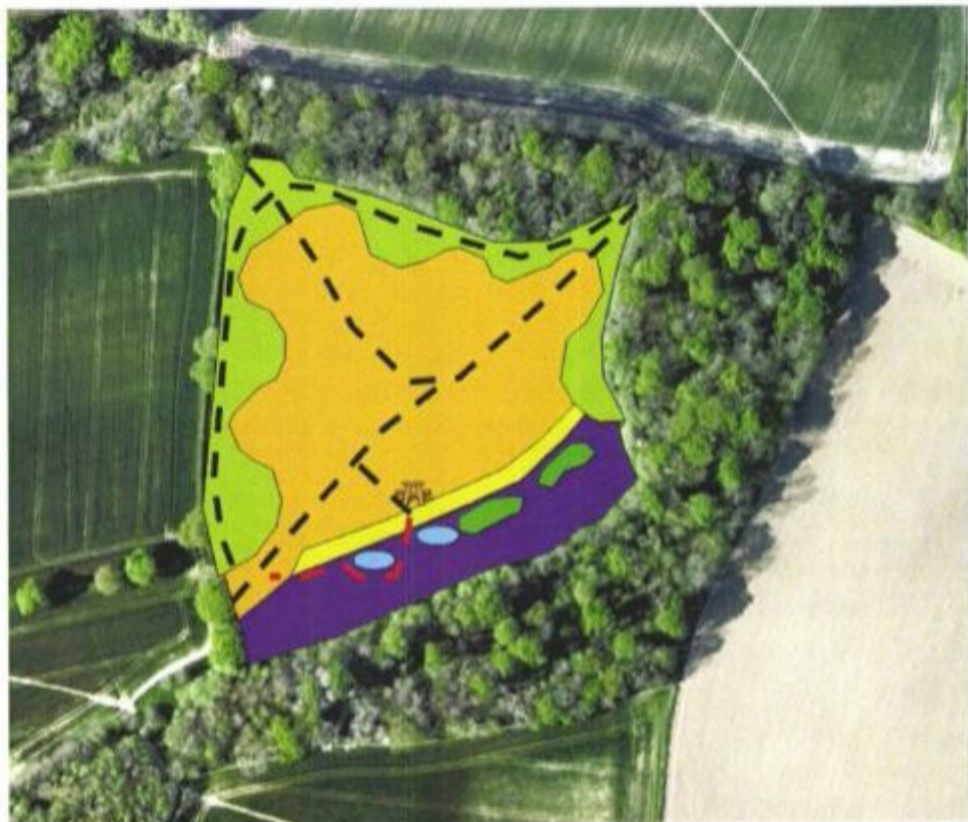


3.0 RESTORATION STRATEGY

3.1 Overview

The restoration proposals for Newlands Farm Meadow are set out below and shown in Figure 3.1. Detailed design drawings have been produced separately by the project landscape architects.

Figure 3.1 Newlands Farm Meadow restoration proposals



Key

New dense shrub planting	
New wildflower meadow	
Retained damp edge	
Retained meadow strip including orchids	
Retained willow scrub (ca. 10% of damp area)	
New pond	
New footpaths including woodland walk	
New short boardwalk through damp area & via ponds	
Picnic area	

3.2 Grassland

The approach for restoring an attractive species-rich wildflower meadow is to be as follows:

- Year 1 (2014):
 - Clearly mark the existing riparian strip along the southern edge of the meadow and exclude from restoration treatments described below. Add an additional 5m strip to the protected riparian edge to provide a buffer and to protect some of the existing noteworthy flora in this zone, which includes clusters of Common Spotted Orchid and Greater Bird's-foot Trefoil.
 - Forage harvest existing grassland in mid May 2014.
 - Deposit cuttings in an appropriate location on Site. (N.B. the abundance of ragwort, thistles and other tall herbs would render the cut material unsuitable for hay.)
 - Spray resulting flush with herbicide, e.g. Glyphosate, in early June. (N.B. the aim of the herbicide application [and subsequent cultivations/disc harrows – see below] is to produce a near clean sterile soil in terms of undesirable seeds such as thistles and ragwort.)
 - Wait for weed die off then cultivate mid-late June
 - If a significant flush of weeds comes up spray-off again with herbicide in mid July.
 - If no flush of weeds comes up disc harrow to a depth of 25mm in mid July. If a second application of herbicide has been applied wait for weed die-off before applying disc harrow.
 - Disc harrow to a depth of 25mm in mid August.
 - If flush of weeds comes up spray-off with herbicide late August.
 - Disc harrow to a depth of 25mm in mid autumn.
- Year 2 (2015):
 - Disc harrow to a depth of 25mm in mid spring.
 - If flush of weeds comes up spray-off with herbicide in early summer.
 - Disc harrow to a depth of 25mm in mid summer.
 - Disc harrow to a depth of 25mm in late summer.
 - Prior to wildflower sowing in early autumn, undertake a second cultivation to uproot remaining weeds and create a suitable tilth.

- Clearly mark the boundaries of the proposed woodland areas (see below) to ensure these areas are not inadvertently seeded, thus avoiding competition between the sown meadow and woodland ground flora species.
- Sow wildflower mix -
 - Season and timing. Autumn sowing to allow for vernalisation needed by some seeds. Do not sow in strong winds.
 - Proposed seed mix. Sow MG8 Crested Dog's-tail – Marsh Marigold grassland. The palette and recommended species seed proportions is listed in Table 3.1. (N.B. while Marsh Marigold is only likely to germinate and successfully establish in a very few small patches which are particularly wet, the majority of the species in this particular palette are characteristic of the local area and adapted to the slightly damp conditions).
 - Bulking-up seed mix. Bulk-up of seed mix with sawdust from untreated timber or washed silica sand.
 - Sowing rate. To be specified in contractor work specification but likely to be 4g/m².
 - Sowing technique. Sow seed manually (manual techniques include use of rotary hoppers) or by machine.
 - Rolling. Ensure good seed contact with the prepared seedbed by rolling after seed application.
- Supplement mix with plugs of the following species characteristic of either local grasslands - Devil's-bit Scabious, Sneezewort, Pepper Saxifrage, Greater Bird's-foot Trefoil and Betony. Note that nearly all of these species were originally present prior to agricultural intensification (and indeed Greater Bird's-foot Trefoil still is present). The one exception is Betony which can be found a few hundred metres to the south-west in Purbrook Heath SINC. Seeds and plugs should be of local provenance. Plugs are to be planted in single-species patches ca 5 m² in area at one patch per 100m².
- Year 3 (2016):
 - Apply a topper in early summer to knock off large weed species emerging through the wildflower sward.
 - Spot spray weeds in any problem areas.

Table 3.1 Proposed wildflower seed mix - MG8 Crested Dog's-tail – Marsh Marigold grassland (N.B. to be supplemented by plug planting of Devil's-bit Scabious, Sneezewort, Pepper Saxifrage, Greater Bird's-foot Trefoil and Betony)

Species	Scientific name	Seed proportion
Slender Creeping Red Fescue	<i>Festuca rubra</i> ssp. <i>litoralis</i>	38%
Crested Dogtail	<i>Cynosurus cristatus</i>	19.5%
Rough-stalked Meadow Grass	<i>Poa trivialis</i>	12%
Small-leaved Timothy	<i>Pheleum bertolonii</i>	10%
Common Knapweed	<i>Centaurea nigra</i>	4%
Ox-eye Daisy	<i>Leucanthemum vulgare</i>	3%
Meadow Buttercup	<i>Ranunculus acris</i>	3%
Self Heal	<i>Prunella vulgaris</i>	2.7%
Ribwort Plantain	<i>Plantago lanceolata</i>	2%
Meadowsweet	<i>Filipendula ulmaria</i>	1.7%
Autumn Hawkbit	<i>Leontodon autumnale</i>	1.3%
Great Burnet	<i>Sanguisorba officinalis</i>	1%
Rough Hawkbit	<i>Leontodon hispidus</i>	0.6%
Creeping Bent	<i>Agrostis stolonifera</i>	0.5%
Marsh Marigold	<i>Caltha palustris</i>	0.4%
Ragged Robin	<i>Lychnis flos-cuculi</i>	0.3%

3.3 Woodland

Woodland planting is to accord with the following guidance:

- Location.** New woodland is to be established along the western, northern and north-eastern boundaries of the Site to increase habitat for Priority woodland species in the national Biodiversity List (Section 42 of the Natural Environment and Rural Communities Act 2006) and buffer the existing Ancient woodland (N.B. woodland planting along the western boundary is to provide a buffer between the meadow and future housing development). New woodland is not to be created along the southern boundary is because the existing damp conditions here support an interesting vegetation and associated invertebrate community, while also buffering the adjoining woodland against future recreational disturbance. The approximate alignment of the new woodland is shown in Figure 3.1. Detailed planting plans have been provided separately by the project landscape architect.
- Design details.** The woodland edge is to be scalloped to increase sheltered woodland edge ecotone. The scalloping is to create embayments of around 3m depth every 10m. Planting is to consist mostly of low growing trees and shrubs to:
 - Create an attractive stepped woodland edge.
 - To create a relatively impenetrable edge thereby minimising the growth of desire lines into the existing woodland and associated recreational disturbance.
 - Provide optimal foraging and nesting structure for Dormice and birds.

The scalloped edge is not to include sharp angles that might prohibit mowing.

- Tree/shrub palette.** Tree and shrub species selected are to be broadly consistent with the local woodland community W10c Pedunculate Oak-Bracken-Bramble woodland (Ivy sub-community), although large tree species are to be excluded for the reasons

outlined above. The proposed palette is provided in Table 3.2. Several fruit trees have been added for food value to people and wildlife. Alder Buckthorn and Goat Willow, which are both present locally, have been included to attract egg laying Brimstone and Purple Emperor butterflies respectively. Note that Wild Service Tree and Small Leaved-lime have both been included and are both present locally.

- **Timing of planting.** Tree seedlings are usually best planted in winter. No woodland planting is to commence until the meadow weed treatment strategy outlined above has been completed to minimise the potential for trees, shrubs and woodland ground flora to become overwhelmed by vigorous weed species.
- **Ground flora.** A woodland seed mix is to be sown within the new plantation following protocol for the main wildflower meadow area. A palette is provided in Table 3.3 which is based on the Emorsgate seed mix EW1. Not all of these species are likely to survive on the soil types existing on Site and not all will survive without the appropriate shade conditions from the outset. However, a number of species will survive that are able to tolerate quite open conditions (N.B. some shade will be afforded by whips in tree guards). The overall community will then evolve, but with a greater chance that a rank dominant ground flora of just a few competitive species will be avoided.

Table 3.2. Proposed W10c Pedunculate Oak-Bracken-Bramble woodland (Ivy sub-community)

Common Name	Species
Alder Buckthorn	<i>Frangula alnus</i>
Blackthorn	<i>Prunus spinosa</i>
Bullace	<i>Prunus domestica institia</i>
Crab Apple	<i>Malus sylvestris</i>
Goat Willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Small Leaved-lime	<i>Tilia cordata</i>
Wayfaring Tree	<i>Viburnum lantana</i>
Wild Cherry	<i>Prunus avium</i>
Wild Service-tree	<i>Sorbus torminalis</i>
Yew	<i>Taxus baccata</i>

Table 3.3 Proposed woodland ground flora seed mix

Common Name	Scientific Name	(%seeds by weight)
Crested Dog's-tail	<i>Cynosurus cristatus</i>	35
Red Fescue	<i>Festuca rubra</i>	26
Common Bent	<i>Agrostis capillaris</i>	10
Wood False-brome	<i>Brachypodium sylvaticum</i>	6
Wood Avens	<i>Geum urbanum</i>	3
Selfheal	<i>Prunella vulgaris</i>	2.5
Red Campion	<i>Silene dioica</i>	2.5
Garlic Mustard	<i>Alliaria petiolata</i>	2
Crested Hair-grass	<i>Deschampsia cespitosa</i>	2
Hedge Bedstraw	<i>Galium album</i> - [<i>Galium mollugo</i>]	2
Foxglove	<i>Digitalis purpurea</i>	1.5
Wild Angelica	<i>Angelica sylvestris</i>	1
Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	1
Nettle-leaved Bellflower	<i>Campanula trachelium</i>	1
Meadowsweet	<i>Filipendula ulmaria</i>	1
Wood Sage	<i>Teucrium scorodonia</i>	1
Bluebell	<i>Hyacinthoides non-scripta</i>	0.8
Ramsons	<i>Allium ursinum</i>	0.5

Common Name	Scientific Name	[%seeds by weight]
Betony	<i>Betonica officinalis</i> - [<i>Stachys officinalis</i>]	0.5
Hedge Woundwort	<i>Stachys sylvatica</i>	0.5
Ragged Robin	<i>Silene flos-cuculi</i> - [<i>Lychnis flos-cuculi</i>]	0.2

3.4 Water features

Two ponds are to be created at the southern end of Newlands Farm Meadow within the existing riparian habitat. Performance and **outline** design requirements are to be as follows:

- **Shape and size.** Ponds are to have an irregular oval shape and be approximately 100 square metres in area with one axis around 10 m in length when bank full.
- **Depth.** Both ponds are intended to permanently hold water to provide year-round visual appeal. Both ponds are to be lined with puddling clay to prevent drying out. Deep sections, which for health and safety reasons are not to be created along the pond margins, are to be ca. 1.6 to 2m at the spring high water level. Deep sections are to occupy about one quarter of the pond area and are to prevent marginal and emergent plants from encroaching right across the pond. The extensive shallows are to gently undulate gradually at about 3° to 5° levelling off at a maximum depth of 30cm at the spring high water level, before dropping off more sharply to the deeper sections.
- **Bank slopes.** Bank slopes are to be very shallow, not exceeding 1:20, with a broad, almost flat zone near the pond edge.
- **Planting.** As these ponds are intended to have a high visual amenity value they are to be planted with marginal, emergent and aquatic plants immediately after construction, rather than relying on natural colonisation which might result in a small number of aggressive species (e.g. bulrush) dominating. The recommended palettes for the lower bank, emergent and aquatic zones are provided in Tables 3.4-3.6. [N.B. Plant source material must be guaranteed free of invasive alien species.]

Table 3.4 Proposed bankside planting

Species	Scientific name	%
Meadowsweet	<i>Filipendula ulmaria</i>	18%
Purple-loosestrife	<i>Lythrum salicaria</i>	10%
Common Comfrey	<i>Symphytum officinale</i>	10%
Marsh Foxtail	<i>Alopecurus geniculatus</i>	8%
Lesser Water-parsnip	<i>Berula erecta</i>	8%
Water Mint	<i>Mentha aquatica</i>	8%
Marsh-marigold	<i>Caltha palustris</i>	6%
Common Spike-rush	<i>Eleocharis palustris</i>	6%
Tufted Hair-grass	<i>Deschampsia cespitosa</i>	4%
Yellow Iris	<i>Iris pseudacorus</i>	4%
Brooklime	<i>Veronica beccabunga</i>	3%
Cuckooflower	<i>Cardamine pratensis</i>	2%
False Fox-sedge	<i>Carex otrubae</i>	2%
Southern Marsh-orchid	<i>Dactylorhiza praetermissa</i>	2%
Jointed Rush	<i>Juncus articulatus</i>	2%
Lesser Spearwort	<i>Ranunculus flammula</i>	2%
Ragged-robin	<i>Silene flos-cuculi</i>	2%
Greater Water-parsnip	<i>Sium latifolium</i>	2%
Marsh Woundwort	<i>Stachys palustris</i>	1%

Table 3.5 Proposed Species for Emergent Planting

Species	Scientific name	%
Flowering Rush	<i>Butomus umbellatus</i>	20%
Water Dock	<i>Rumex hydrolapathum</i>	20%
Sweet Flag	<i>Acorus calamus</i>	18%
Water-plantain	<i>Alisma plantago-aquatica</i>	15%
Common Club-rush	<i>Schoenoplectus lacustris</i>	15%
Amphibious Bistort	<i>Persicaria amphibia</i>	12%

Table 3.6 Proposed species for shallow aquatic planting

Species	Scientific name	%
Amphibious Bistort	<i>Persicaria amphibia</i>	35%
Horned Pondweed	<i>Zannichellia palustris</i>	26%
Common Water-starwort	<i>Callitriche stagnalis</i>	20%
Arrowhead	<i>Sagittaria sagittifolia</i>	12%
Spiked Water-milfoil	<i>Myriophyllum spicatum</i>	7%

4.0 PUBLIC AMENITY

Mown footpaths are to be created across the meadow and two picnic tables will be provided near the centre of the meadow. Grassland immediately surrounding the picnic tables are to be mown regularly, i.e. at the same time as the footpaths are mown.

Footpaths are also to wind through the new woodland planting on the western and northern sides of the meadow. Accessibility along these is to be mostly retained through the regular passage of walkers, although mowing will be required in the early years (before trees are sufficiently high to shade out grasses and herbs) and in the longer term, overhanging and encroaching trees and shrubs will need to be occasionally cut back.

A short boardwalk loop is to be installed through the wet riparian zone to further enhance experiential quality and the meadow's ecological educational value (N.B. a new primary school is proposed a short distance to the west). Vandal-proof interpretation boards are to be installed along the boardwalk and at the picnic area.

5.0 GRASSLAND MANAGEMENT

A detailed site-wide management plan covering the whole of the Berewood site is currently being produced. With respect to the restored wildflower meadow area the following management is proposed:

1. To allow flowers to set-seed mowing is not to be undertaken before September. Arisings are to be removed (and composted within on-site facilities) to reduce soil nutrient status although small piles are to be left *in situ* as refuge for reptiles, invertebrates etc.
2. The annual mowing regime is also to extend across the existing riparian strip.
3. Existing willow, which is currently providing habitat for nesting Whitethroat, is to be retained at 10% coverage.
4. The cutting regime is to be locally varied to allow thatch to develop for sheltering solitary bees as well cover for small mammals.
5. 25% of sward is to be left uncut each year so as not to destroy early stages of invertebrate development while also making available seed heads for foraging invertebrates and birds. The uncut grassland area is to be rotated to prevent nutrient build-up and consequential impoverishment of floral diversity.
6. Cut material is only to be used as hay if contamination (e.g. from dog faeces) is considered negligible.
7. Grazing with livestock is only to occur if the safety of the animals can be reasonably guaranteed.

6.0 CRITERIA FOR SUCCESSFUL GRASSLAND ESTABLISHMENT

Criteria against which to assess '*successful establishment*' is provided in the tables below. The tables give values for target maximum and minimum % cover in the mean of ten 1x1m quadrats within the sown area in question. Quadrats are to be located using a stratified random sampling technique. This would involve the division of the seeding area into five equal areas and then sampling randomly two quadrats in each sub-area. In addition to this test, if any part of the seeded area larger than 0.1 square metres is found to be bare, this will also indicate a potential failure of establishment.

In cases where a sward is assessed and agreed to have failed to establish, repairing of the sward would consist of re-seeding with the specified or an alternative appropriate perennial seed mixture. The Contractor is to undertake this re-seeding work as often as is required until growth is established across all areas of perennial grassland. All such re-seeding works are to be undertaken using the same methodology as the original works. This re-seeding method is also to be used where seeded areas, which were initially established, subsequently fail.

Table 6.1 Successful establishment criteria [N.B. assessing species presence in year three will require a particularly high level of botanical expertise including the ability to identify species as present from vegetative growth only and from small specimens]

Assessment Year [Assess in Spring]	Minimum mean percentage ground cover of sown species growing in the sward in 10 random 1m ² quadrats	Maximum mean percentage bare ground in 10 random 1 m ² quadrats or over the whole area if localised areas clearly exceed this (e.g. due to herbivore damage)	Minimum percentage of the total number of species sown found in the whole sown area
1	80	20	Not assessed
2	90	10	Not assessed
3	97.5	2.5	90

7.0 RECOMMENDED CONTRACTORS

In order to ensure works are carried out to a high standard and appropriate plant stock and seed is used the following local contractors are recommended:

- Cultivation and spraying - Brian Cull & Partners Agricultural Contractors
- Wildflowers - Flower Farms, Carvers Hill Farm, Shalbourne,
- Trees and shrubs - Burntwood Nurseries



DOCUMENT CONTROL

JOB NAME: BEREWOOD
CLIENT: GRAINGER
REPORT TITLE: NEWLANDS FARM MEADOW RESTORATION STRATEGY
STATUS: REVISION 1

PREPARED BY:

PRINT NAME

Dr Lincoln Garland

POSITION

Associate

SIGNATURE

CHECKED BY:

PRINT NAME

Dr Mike Wells

POSITION

Director

SIGNATURE

APPROVED BY:

PRINT NAME

POSITION

SIGNATURE

REVISIONS:

Rev No.	Comments	Date
0	For Client Review and Approval	April 2013
1	For submission to council	December 2013

Disclaimer:

This report was prepared by Biodiversity by Design Ltd at the instruction of, and for sole use by, our client. It does not in any way constitute advice to any third party who is able to access it by any means. Biodiversity by Design Ltd excludes to the fullest extent lawfully permitted all liability for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.