

FRENCHAY HOSPITAL, BRISTOL

WIDER GREEN INFRASTRUCTURE LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN

ON BEHALF OF REDROW HOMES

TOWN & COUNTRY PLANNING ACT 1990 (AS AMENDED) PLANNING AND COMPULSORY PURCHASE ACT 2004

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1. INTRODUCTION

Purpose Of The Management Plan

1.1 The purpose of this landscape and ecological management plan is as follows:

- To ensure that clear objectives for the public open space landscaped areas within the Wider Green Infrastructure of Frenchay Hospital are agreed and laid down;
- To set clear standards for the performance of landscape maintenance work following handover from the landscape contractor;
- To identify, manage and resolve possible conflicts between different users of the site;
- To develop work programmes and schedules for landscape maintenance staff;
- To help in the allocation of financial resources for landscape maintenance;
- To help monitor success and progress against management targets;
- To ensure that the ecological interest of the site is protected in the long-term.

Planning Background

1.2 This Landscape and Ecological Management Plan (LEMP) has been produced to support the Reserved Matters application for the Wider Green Infrastructure of the Frenchay Development.

1.3 This LEMP is written in accordance with the approved LEMP, (ref. R.0395_01F) produced in order to discharge planning condition 17 in relation to the planning application (Application number: PT13/0002/O).

Management Aims

1.4 The main aims for the Wider Green Infrastructure landscape management and maintenance are:

- To ensure that existing site features are appropriately managed to maximise longevity and allow them to retain their size and natural shape;
- To retain, protect and enhance the nature conservation value of existing and new habitats across the site and to protect and enhance biodiversity;

- To ensure long-term management of retained and created habitats to maintain quality and offer suitable habitat for wildlife;
- To ensure that newly planted areas become established;
- To present an attractive and safe environment for home owners, workers and other users;
- To ensure that hard and soft landscape areas are fit for purpose and do not pose a health and safety hazard to the public;
- To carry out maintenance work according to best practice using sustainable techniques and materials;
- To offer recreational space for residents and locals, whilst meeting the needs of wildlife;
- To use locally indigenous species, where appropriate, to reinforce local distinctiveness and character and provide maximum benefit to local wildlife;
- To ensure provision and connectivity for wildlife within and between new and existing habitats;
- To provide an appropriate level of management intervention ranging from a moderate (recreational areas) to a minimal approach;
- To fulfil all the legal requirements in relation to the protection, management and enhancement of the ecological features of the management site, in particular, those that relate to nature conservation;
- To ensure the protection and management of target species/groups, including bats, badger, birds, reptiles, amphibians, invertebrates and local flora;
- To contribute to LBAP targets and strategies, by increasing net biodiversity on the site;
- To monitor the success of management and undertake reactive management and modification of the operations of the Landscape and Ecological Habitat Plan, where required.

1.5 Note: refer to the Arboricultural Management Plan produced to discharge the planning conditions associated with the Lime Avenue (by Pegasus, October 2015)

for comments upon the cyclical re-pollarding and epicormic growth removal to the trees within the Lime Avenue.

Timings

- 1.6 The management and maintenance tasks set out in this plan are to be undertaken by a landscape maintenance contractor once construction works are complete.
- 1.7 During demolition all existing landscape features to be retained will be protected using tree protection fencing as shown on the Tree Protection Plan. This will ensure that the landscape features to be retained, including any sensitive areas, will be protected from damage during demolition.
- 1.8 Any tree works required prior to demolition will be as set out in the Arboricultural Method Statement.

Funding

- 1.9 The maintenance of the landscape features detailed within this LEMP will be supported as agreed within the S106 through contributions paid by the developer and Parish Council contributions where relevant (eg. Croquet and Cricket Pitch).

Review

- 1.10 This document is based on the detailed wider green infrastructure landscape proposals submitted as part of the RM application and should be seen as an operational guide, subject to change and improvement as the different landscape features mature and develop. We recommend that this management plan is reviewed and republished at five yearly intervals to ensure the management aims are still required and relevant.

2. SITE DESCRIPTION

- 2.1 The Wider Green Infrastructure landscape proposals are located along the north east, eastern and southern boundary.
- 2.2 Henceforth the Wider Green Infrastructure landscape proposals will be referred to as 'the site' within this document.
- 2.3 The existing landscape framework within the site typically comprises: retained parkland trees, historic or otherwise, in particular a mature lime avenue; retained woodland planting along the north-east and eastern boundaries; and an area of open parkland south and east of the lime avenue. The majority of the existing tree planting will be retained and supplemented with additional tree planting.
- 2.4 Recreational facilities will be provided within the southern area of retained green space, as per the Public Open Space Measurements Plan (Appendix 2). These will include two tennis courts (relocated), a croquet lawn, a two lane petanque pitch and a cricket pitch.
- 2.5 A large equipped area for play will be located at the western end of the southern portion of the site.
- 2.6 The retention of the southern line of the lime avenue within the site, a historic feature, will enable a significant element of the landscape framework to be retained. The avenue will be managed to clear undergrowth and allow the remaining trees space to grow. Management of the retained and new planting associated with the lime avenue must be undertaken as per the Arboriculture Management Plan relating to discharge of conditions associated with a Lime Tree Avenue at a Former Hospital Site, produced by Pegasus Oct 2015.
- 2.7 Features that provide the highest ecological value on the site will endeavour to be retained as the design progresses from outline to detailed design. These include: woodland habitats; boundary parkland grassland and trees; and the woodland belt along the north-east boundary, which supports a main badger sett.
- 2.8 Below are the landscape enhancements and features which are included in the Wider Green Infrastructure detailed landscape proposals:
 - New planting of evergreen and deciduous parkland trees chosen to enhance the historic landscape character;

- Enhancement of existing grassland and creation of new grassland areas, with a variety of types such as amenity grass, long species rich grass and wildflower meadows;
- Ornamental planting, such as shrub/herbaceous plants around the equipped play area;
- Retention, positive management and enhancement planting to the existing pond;
- Retain existing access routes through open spaces with appropriate hard surfacing;
- The Allotments will be retained and improved through clearance of scrub vegetation with the plots laid out, levelled and topsoiled (refer to Appendix 4 for the management table for the Allotments);
- Providing appropriate street furniture such as benches, seats, picnic benches, litter bins, signage, information boards, dog bins etc.; and
- Provision of recreational opportunities in the form of tennis courts, a croquet lawn, a two lane petanque pitch, a cricket pitch (with pavilion) and an equipped area for play.

2.9 In addition to habitat retention and enhancement, the scheme will include the creation of hibernacula within woodland habitats from deadwood and log piles, as well as the installation of new bat roosting and bird nesting features on retained trees.

Exclusions

2.10 As previously discussed, the management of the Lime Tree Avenue is considered within the Arboriculture Management Plan (produced by Pegasus Oct 2015) submitted to discharge the relevant planning conditions associated with a Lime Tree Avenue at a Former Hospital Site and is not included within this LEMP.

2.11 As stated above, in paragraph 2.8 the Community Woodland is subject to an additional management plan, thus this LEMP should be read in conjunction with the Woodland Management Plan produced by Barton Hyett Associates (reference R2114_WMP_June 2017).

3. ENVIRONMENTAL CONSIDERATIONS

- 3.1 This section details the environmental considerations that need to be taken into account in order to enable a full landscape and ecology management strategy for the site.

Horticultural Peat

- 3.2 Horticultural peat is not to be used as mulch on any beds or as a soil conditioner, and wherever possible plants grown without peat will be preferred to those grown in peat.

Recycled Materials

- 3.3 Where appropriate use should be made of materials made from recycled components, e.g. wood chip mulch.

Pesticides/Herbicides

- 3.4 The existing pond and it's margin is to be maintained with the minimum use of any chemicals to control weeds or pests. Weed control of areas of transplant tree and shrub planting is to be achieved by using mulch mats and hand weeding. The control of invasive and pernicious weeds can be carried out with targeted applications of glyphosate-based herbicides.

Water Management

- 3.5 Where necessary maintenance staff are to water plants at appropriate times of the day to ensure minimum water evaporation. If appropriate and available, recycled water should be used, e.g. from rainwater harvesting.

Habitat Management

- 3.6 Opportunities for the creation of additional micro-habitats and habitat enhancement should be taken wherever possible. For instance this could include working with the local Wildlife Trust to erect bat and bird boxes; and allowing deadwood, jagged stumps, splits, fungal growths and holes in tree trunks to remain unless they are creating a safety hazard.
- 3.7 Ivy should be removed where it is growing into tree canopies and causing arboricultural concern, or where it is causing reduced light levels and affecting the success of the woodland ground flora. Any ivy to be removed shall be inspected by an Ecologist prior to the works to ensure no roosting or hibernating bats are present.

4. GENERAL MAINTENANCE

- 4.1 All trees and shrubs shall be checked at each maintenance visit for damage, security, firmness, fixing and support.
- 4.2 Any new shrubs, hedges or trees which fail¹ to shall be replaced annually with the same variety at the size specified on the original landscape planting plans. Trees and shrubs should be checked in September and marked with paint, or noted on a plan, as necessary. Replacements will be planted during the following planting season. If a particular species fails to establish successfully then an alternative, comparable species should be considered as replacement, in agreement with the landscape consultant and the LPA.
- 4.3 Amenity bark mulch shall be topped up annually to a depth of 75mm where there is bare soil in planted areas. To avoid accidentally damaging plants herbicides will not be used to control weeds once foliage covers 75% of the ground surface.
- 4.4 There will also be a 1m diameter circle of mulch around trees in grass in order to suppress grass and weed growth and minimise the risk of mower/trimmer damage.
- 4.5 All root protection areas of retained trees will be kept free from disturbance e.g. a rotavator will not be used in these areas.
- 4.6 Care should be taken not to overwater trees. Until well established all new shrubs and trees are to be watered during the growing season following any dry periods of 7 days. Planting areas are to be brought up to field capacity at each visit and each tree is to receive 40 litres or as required. Care should be taken to ensure applied water is absorbed into the rootzone and does not run off the surface.
- 4.7 Following the initial growing season soil water will be assessed in the root zone of trees when there has been no rain for 14 days. Trees will then be watered if required.
- 4.8 No pruning works to trees, hedgerows or shrubs are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive, unless works are essential for public safety. Essential works outside of this time period should be subject to checks by an Ecologist to ensure there are no nesting birds present.

¹ Note - The S106 requires the POS to be maintained in perpetuity, therefore does not limit the time period for the planting of replacements.

- 4.9 All tree surgery work is to be carried out to BS 3998:2010 Tree Work - Recommendations, and should be undertaken by a suitably qualified and competent contractor. If tree works are required, a suitably qualified Ecologist should be contacted to advise on bat roosting suitability, and a pre-works survey may be required. Future tree works to trees covered by a TPO may be subject to TPO applications to be submitted to the LPA.
- 4.10 It is recommended that all new and existing planting on site be subject to on-going management according to ecological principles to maximise the value of these habitats to wildlife. Such an approach will involve minimised use of pesticides and vegetation pruning works to take place outside of the bird nesting season.
- 4.11 If required, a separate tree protection scheme will ensure that the retained trees are not damaging during the construction process.
- 4.12 If it is found that any trees to be retained have been damaged a process of assessment by a suitably qualified Arboriculturist and ongoing monitoring to assess their condition will be undertaken.

5. MAINTENANCE SPECIFICATION

Retained Trees

Management Aim

- To prolong the life and enhance the aesthetic and wildlife value of the existing trees.

Management Objectives

- To maintain the health and visual amenity of retained trees;
- To maintain a varied age and structure of trees on site;
- Maintain appropriate level of ivy cover on trees to enhance opportunities for bats and birds without causing adverse effects on tree health;
- To take care in construction and maintenance operations near the retained trees; and
- To enhance their ecological/ biodiversity value;

- 5.2 All tree surgery work is to be carried out to BS 3998:2010 Tree Work - Recommendations, and should be undertaken by a suitably qualified and competent contractor. If tree works are required, a suitably qualified ecologist should be contacted to advise on bat roosting suitability, and a pre-works survey may be required.
- 5.3 Where suitable, deadwood taken from tree pruning will be retained in situ and woodpiles will be created using cut materials from tree management works.
- 5.4 Hygiene works will be avoided, for example, fungal fruiting bodies should not be removed nor trees felled unless classified as dangerous. Where a tree poses a health and safety hazard, advice will be sought from a qualified Arboriculturalist.
- 5.5 No pruning works to trees are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive, unless works are essential for public safety. Essential works outside of this time period should be subject to checks by an Ecologist to ensure there are no nesting birds present.
- 5.6 All root protection areas of retained trees will be kept free from disturbance e.g. no rotavation will take place in these areas.
- 5.7 Refer to Appendix 3 Section 1 for the Retained Trees Management Table.

Retained Woodland

Management Aim

- To maintain and enhance existing woodland habitats on the site for the benefit of wildlife;
- To increase the functionality of the existing woodland as a visual amenity resource.

Management Objectives

- To maintain the health and visual amenity of retained woodland;
- To enhance the ecological / biodiversity value of retained woodland;
- To improve the biodiversity of woodland understorey flora and ensure it covers 10-30% of the woodland area;
- To provide a total tree canopy cover of between 70% and 90%;
- To minimise pedestrian access within areas of woodland to protect habitats;
- To improve the condition of retained woodland through the removal of any existing rubbish/litter/debris and unwanted-structures; and
- To ensure no Schedule 9 non-native plant species are present (Wildlife and Countryside Act 1981).

5.8 No pruning works to trees or shrubs are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive, unless works are essential for public safety. Essential works outside of this time period should be subject to checks by an Ecologist to ensure there are no nesting birds present.

5.9 A detailed survey of the retained areas of woodland will be performed by a qualified Arboriculturalist, following which in conjunction with the Local Planning Authority an initial management programme will be produced for the retained woodland, along with a plan illustrating the /detailing the removal works, to be approved by the local planning authority. This is likely to include thinning operations to improve the structure and allow continuous canopy cover that will aid in its long term management.

5.10 In the year following any initial works, as set out by the Arboriculturalist, selective thinning of the retained woodland will take place to encourage diversity

ground flora and varied age structure. Exact details of thinning works will be confirmed following the initial detailed survey of woodland areas.

- 5.11 During the initial survey the trees will be inspected for defects and poor health. If an Arboriculturalist identifies any trees as diseased or a health and safety risk, then necessary remedial works will be carried out as soon as possible. Consultation with the Ecologist with regards to potential for roosting bats will be undertaken prior to any action being taken. Following the initial inspection, a qualified Arboriculturalist will assess the necessary timescales for on-going inspections for defects and poor health, typically at three yearly intervals.
- 5.12 Any exposed cavities, hanging and fallen dead wood (which does not pose a health and safety risk or block public access routes) will be retained in situ to provide valuable habitat for bats, birds, reptiles, amphibians and invertebrates
- 5.13 Annual monitoring surveys will take place by a qualified Ecologist to identify any non-native invasive species required for removal.
- 5.14 In certain areas of the retained woodland, where important ecological habitats are located or for areas allocated for nature conservation, pedestrian access will be discouraged. Where frequent pedestrian access is noted within these sensitive areas (i.e. where paths are developing), additional planting of shrub species will be implemented to discourage access. This may then require temporary fencing until shrub/understorey planting is established enough to form a barrier.
- 5.15 Natural regeneration will be encouraged following storm damage/strong winds, by allowing light back to the woodland floor a greater diversity of woodland ground flora and fauna will be encouraged.
- 5.16 Refer to Appendix 3 Section 2 for the Retained Woodland Management Table and to the Woodland Management Plan produced by Barton Hyett Associates (reference R2114_WMP_June2017)

Retained Coppice Areas

Management Aim

- To coppice areas of woodland using a traditional good management practice to encourage biodiversity.

Management Objectives

- To maintain the coppiced trees to ensure their on-going health and longevity;
- To encourage the biodiversity value of the woodland floor fauna and flora;
- To remove invasive species; and
- To keep coppice woodland areas free from litter and other waste.

- 5.17 An initial survey will be undertaken by a qualified arboriculturalist of the existing areas of coppice woodland to establish the species mix and what level of coppicing has been undertaken historically. Using this information a regime of coppicing will be established, with 25% of the species cut back every five years on rotation, the timings for coppicing are dependant upon the species and will be confirmed following the initial survey.
- 5.18 Coppicing will allow light back to the woodland floor and encourage a greater diversity of woodland ground flora and fauna. By managing the woodland at different stages of regrowth, slightly different ecosystems are established.
- 5.19 It is recommended that coppicing take place during the dormant winter months, i.e. from December to March. No pruning works are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive, unless works are essential for public safety. Essential works outside of this time period should be subject to checks by an Ecologist to ensure there are no nesting birds present.
- 5.20 Refer to Appendix 3 Section 3 for the Retained Coppice Areas Management Table.

Retained Scrub

Management Aim

- To manage the existing areas of scrub to maximise biodiversity and habitat value.

Management Objective

- To maintain the retained scrub to ensure their on-going health and longevity;
- To enhance the biodiversity value of the retained scrub;
- To remove invasive species; and
- To keep areas free from litter and other waste.

- 5.21 An initial review will be undertaken of the existing areas of scrub to establish the current level of management. Using this information a regime of rotational cutting will be established, with 20% of the scrub being cut back every third year. When cutting, avoid creating access routes.
- 5.22 Adjacent patches of scrub should not be cut sequentially, as this reduces the foliage available for invertebrates to feed on.
- 5.23 Edges should be cut as a scalloped edge between scrub and adjacent low vegetation (e.g. grass/shrub/tree stands).
- 5.24 It is recommended that cutting of scrub take place during the dormant winter months, i.e. from December to March. No pruning works are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive.
- 5.25 Refer to Appendix 3 Section 4 for the Retained Scrub Management Table.

Retained Pond

Management Aim

- To maintain the pond and associated marginal / aquatic planting as a safe and attractive landscape feature with ecological value.

Management Objectives

- To maintain the pond in a safe and attractive condition;
- To keep the pond free from litter and rubbish;
- Maintain planting in a good condition and to control weeds / algae and other opportunistic or invasive species; and
- To ensure the marginal and aquatic planting maintains ecological value.

- 5.26 An initial survey of the pond by a qualified Ecologist will be undertaken to establish the current type and extent of vegetation, following which recommendations will be made for the initial management of the pond i.e. removal of overgrown / invasive planting or algae.
- 5.27 Additional planting of appropriate aquatic and marginal plant species will take place to increase the biodiversity of the pond whilst retaining a habitat of ecological value, refer to Appendix 1 for the Pond Enhancement Proposals plan (drawing reference R0395_16).
- 5.28 The management of the pond should ensure a safe and attractive water feature whilst maintaining biodiversity value.
- 5.29 Any maintenance of the existing pond will be undertaken between October and February to avoid impacts on amphibians using these features for breeding and to lie outside of the general bird-nesting season.
- 5.30 Refer to Appendix 3 Section 5 for the Retained Pond Management Table.

New Tree Planting

Management Aim

- To ensure successful establishment of new tree planting;
- To present a visible indication of high quality maintenance.

Management Objectives

- To maintain newly planted trees to ensure good survival rate and development;
- To minimise competition from grass and weeds; and
- To maintain well-shaped healthy trees which do not present a hazard to site users.

- 5.31 An annual Quantified Tree Risk Assessment of all trees will be carried out by a qualified Arboriculturist and any necessary remedial works carried out as soon as possible. All arisings shall be removed from site.
- 5.32 All tree work should be carried out in accordance with BS 3998:2010 (or any subsequent updates). New tree management and maintenance and any replacement tree planting should be carried out in accordance with BS 8545:2014.
- 5.33 Tree stakes and ties will be regularly checked during the establishment period and adjusted as necessary to ensure that the developing trees are not damaged. Stakes and ties will be removed by the landscape maintenance contractor at the earliest opportunity (between year 3 and year 5) when he considers that the trees are self supporting. All stakes and ties will be removed from site to a legal disposal facility.
- 5.34 There will be a minimal pruning policy for trees as pruning wounds can provide a source of infection. Formative pruning of new trees will be carried out to remove dead and diseased wood and to create a well-balanced tree with a single leader. Clear stems of 2 metres will be maintained by rubbing off any shoots and when the trees reach 5 to 6 metres high lower branches will be removed to give a clear stem height of approximately 2.4 metres.
- 5.35 No pruning works are to be undertaken during the general bird-nesting season of 1st March to 31st August inclusive, unless works are essential for public safety.

Essential tree works outside of this time period should be subject to checks by an Ecologist to ensure there are no nesting birds present.

- 5.36 If trees die the reason for death shall be investigated and addressed before replanting a replacement. If death is due to the planting conditions these shall be ameliorated. If death is due to pests or disease and likely to be present in the future a resistant species or an alternative similar tree shall be selected.
- 5.37 Where trees have become moribund due to compaction or lack of nutrients soil aeration techniques and the use of inoculants shall be considered.
- 5.38 Care should be taken not to overwater trees, the soil water will be assessed in the root zone of the trees when there has been no rain for 14 days. Trees will be watered if required. Once established (i.e. after 2 to 3 years) trees should not require watering.
- 5.39 All newly planted trees over 1.5m high will be held so that movement at the root collar is minimised until new roots have developed to anchor the tree. Trees will establish anchor roots better, increase stem girth and form a better stem taper if it is allowed to move in the wind (whilst remaining firmly fixed at ground level). Therefore, low staking (75mm dia x 1.5m length) will be used and attached to the tree at approximately 600mm above ground level. The trees will be staked using proprietary rubber ties and must be firmly fixed with a spacing device to prevent chafing against the tree.
- 5.40 Refer to Appendix 3 Section 6 for the New Tree Planting Management Table.

Amenity Grass, Long Species Rich Grass, Wildflower Meadow and Bulbs

Management Aim

- For amenity grass areas to present visible indication of high quality, regular site maintenance;
- For the long species rich grass / wildflower meadow grass and bulb areas to be maintained as attractive landscape features with high ecological value.

Management Objectives

- To maintain amenity grass and long species rich grass areas at specified height;
- To control weeds in amenity lawns;
- To keep grass areas free from litter and other waste;
- To allow bulbs areas to flower each year and to enhance species richness by maintaining a local seed base;
- To limit scrub invasion within wildflower areas;
- To increase the floristic diversity of these areas, and manage for benefit to wildlife; and
- To keep grass areas in good condition.

5.41 Note: Grass growth regulator will not be permitted

5.42 In preparing grass areas it will be ensured that root protection areas of retained trees will be kept free from disturbance e.g. no rotavation will take place in these areas.

5.43 Amenity grass areas shall have a well kept appearance at all times and shall be regularly cut per annum to maintain a height of between 25 and 65mm. Long species rich grass shall be cut less regularly to maintain a height of 100-150mm, cutting will be suspended from late May to late July/early August to allow species to flower and seed.

5.44 Arisings shall be swept from hard surfaces adjacent to amenity grass / long species rich grass areas after each visit.

5.45 Junctions between amenity grass or long species rich grass areas and plant beds and hard surfaces shall be regularly edged and trimmed to maintain a neat and

tidy appearance. In order to avoid damage to trees in amenity grass areas / long species rich grass areas no mower or strimmer will be allowed within 1 metre of a tree trunk.

- 5.46 Litter shall be hand picked and bagged from all grass areas prior to cutting. Bags shall be removed from site and legally disposed of.
- 5.47 Areas of failed grass shall be prepared and re-sown with the specified seed mix either in April or September.
- 5.48 Long species rich grassland will be established using an appropriate seed mix suitable for regular mowing, an example of which is Emorsgate's 'General Purpose Meadow Grassland Mixture' EG1, but alternatives from other suppliers may be acceptable. No herbicide shall be used on longer grassland areas to allow species richness and to encourage wildflowers.
- 5.49 Wildflower meadow will be established using an appropriate wildflower seed mix, an example of which is EW1 – Woodland Mixture by Emorsgate, but alternatives from other suppliers may be acceptable.
- 5.50 The wildflower grassland to along the north eastern boundary will be cut on a rotational basis, creating a varied sward structure and diversity of micro-climate conditions that will benefit invertebrates. A single cut will be undertaken in late August/September to ensure that the main flowering and seeding period is avoided. All arisings will be removed from these areas following the cut. To the southern boundary the wildflower grassland areas will be cut as a whole, with a single cut as per the north eastern boundary.
- 5.51 For croquet lawn and cricket pitch grass maintenance refer to the following section.
- 5.52 Refer to Appendix 3 Section 7 for the Amenity Grass, Long Species Rich Grass, Wildflower Meadow and Bulbs Management Table.

Croquet Lawn and Cricket Pitch

Management Aim

- Maintain croquet lawn and cricket pitch to ensure fit for purpose during playing season.

Management Objectives

- To maintain grass of croquet lawn and cricket pitch;
- To control weeds in croquet lawn and cricket pitch;
- To keep croquet lawn and cricket pitch free from litter and other waste;
- To ensure croquet lawn is suitably demarcated; and
- To keep croquet lawn and cricket pitch in overall in good condition.

5.53 If weeds, pests or diseases are evident, herbicides and pesticides should only be applied according to manufacturer's recommendations, and by qualified personnel holding the relevant certificate issued by the National Proficiency Test Council (NPTC).

5.54 Refer to Appendix 3 Section 8 for the Croquet Lawn and Cricket Pitch Management Table.

Ornamental Planting - new shrub /herbaceous planting

Management Aim

- To establish areas of new ornamental planting and to present visible indication of high quality, regular site maintenance.

Management Objectives

- To maintain newly planted shrubs, herbaceous and ground cover to ensure a good survival rate and development;
- To minimise competition from grass and weeds;
- To keep planted areas free from litter and other waste.

- 5.55 Formative pruning will be kept to a minimum but where necessary diseased and damaged wood will be removed. Where shrubs overhang path edges they will be neatly clipped back in order to maintain the full width of pedestrian access routes.
- 5.56 Planting beds will be checked regularly throughout the growing season for pests and diseases and treated as necessary. If a particular plant becomes subject to a fatal pest or disease it shall be replaced by an alternative resistant plant with a similar form and habit, if approved by the LPA.
- 5.57 Refer to Appendix 3 Section 9 for the Ornamental Planting Management Table.

Playground Equipment and Ball Stop Net

Management Aim

- To regularly inspect and maintain play / recreation areas and the ball stop net to comply with current legislation and regulations.

Management Objective

- To maintain the play / recreational equipment and the ball stop net in a safe and viable state which ensures freedom from unacceptable risk.

- 5.58 All play equipment, both formal and informal, and the ball stop net will be inspected annually by a qualified independent specialist (e.g. RoSPA) to identify any obvious hazards. All formal pieces of play equipment will undergo frequent checks to ensure the equipment is safe and fit for purpose. The high-quality appearance of the equipment will be maintained through maintenance inspections with work undertaken as required.
- 5.59 Whilst annual inspection is not mandatory law, Section 3 of the Health and Safety at Work Act 1974 states that a risk assessment must be carried out on all playgrounds.
- 5.60 Installation, inspection maintenance and operation of play equipment and safety surfacing must adhere to BS EN 1176 and BS 7188. Routine and operational inspection must be carried out as per the manufacturers recommendation and according to the risk assessment.
- 5.61 Refer to Appendix 3 Section 10 for the Play Equipment Management Table.

Hard Landscape - including footpaths, paved areas and street furniture

Management Aim

- To present the visible indication of high quality, regular site maintenance.

Management Objectives

- To keep paths, paved areas, petanque pitch and tennis courts free of debris, litter, graffiti & dog faeces;
- To keep weed colonisation at a minimum and acceptable level;
- To maintain paths, paved areas, petanque pitch and tennis courts in safe condition;
- To maintain street furniture, incl. seating and bollards and replace if necessary; and
- To maintain railings, fences and walls in good condition.

5.62 Hard areas and elements will be regularly checked for subsidence, damage and wear and will be repaired / topped-up at the earliest opportunity using the original specified material. Areas where damage poses a hazard to pedestrians shall be cordoned off with bollards and high visibility tape until repair can be actioned.

5.63 Painted and stained surfaces shall be checked at five yearly intervals. Where necessary surfaces shall be prepared and repainted/stained using the same product to maintain the integrity of the original design.

5.64 A “no tolerance” policy will apply to graffiti which shall be removed as soon as it appears and where necessary specialist contractors shall be employed to carry out this work.

5.65 Refer to Appendix 3 Section 11 for the Hard Landscape Management Table.

Invasive Species

Management Aim

- To eradicate invasive species.

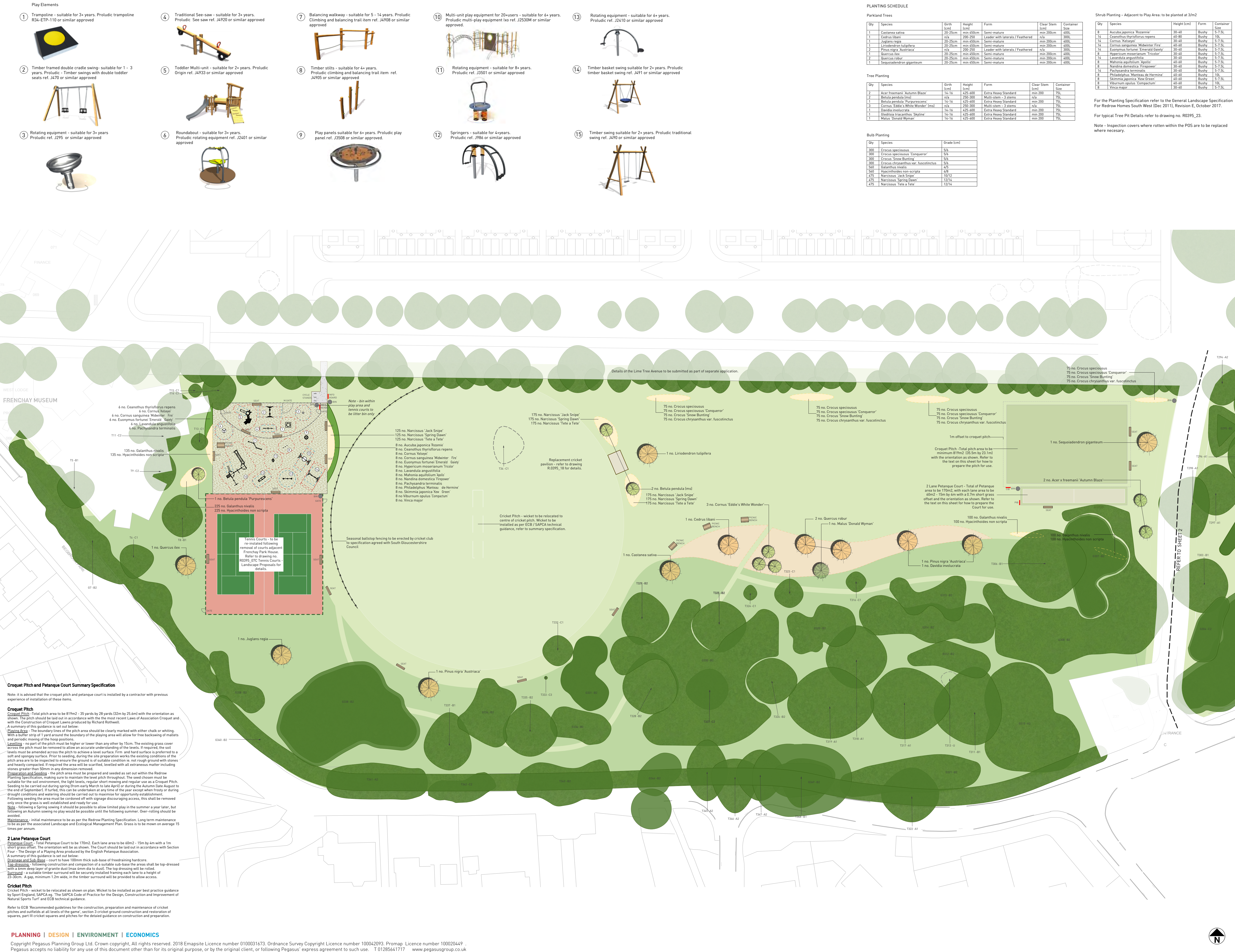
Management Objectives

- To control and prevent the spread of invasive species.

- 5.66 The control of invasive species, such as False Virginia Creeper and Cotoneasters, within the site to ensure that they cannot be spread throughout the site or to adjacent land.
- 5.67 For a list of what is classed as an invasive species refer to invasive species like under Schedule 9 of the Wildlife and Countryside Act 1982 (as amended).
- 5.68 The removal of these species from the site would contribute to the national aims and objectives of preventing, reducing and eliminating the impacts from these species in the UK.
- 5.69 Refer to Appendix 3 Section 12 for the Invasive Species Management Table.

APPENDIX 1

DETAILED WIDER GREEN INFRASTRUCTURE LANDSCAPE PROPOSALS



Existing trees to be retained to B55837 - refer to drawing R400_02 - Tree Retention and Loss Plan for further details. Root protection areas shown as a pink dashed circle around each tree. Trees without a tree label or root protection area have not been subject to a detailed survey.

Existing trees to be removed

Parkland tree planting

Tree planting

Bulb planting

Areas of existing amenity grass

Areas of existing amenity grass to be maintained as long grass - to be maintained between 100-150mm in height

Areas of proposed wildflower meadow - Emorsgate EW1 Woodland Mixture, or equal approved

Areas of shrub planting

Areas of safety surfacing for play equipment to be bound rubber mulch - to be brown and beige colour mix

Proposed footpath for access to play area to be tar spray and chip (with 2-5mm buff coloured aggregate) edge to be pin kerb.

Proposed pieces of play equipment with safety zone (red) and free space area (blue)

Proposed litter bins - Zenith Litter & Dog Bin by Furnitubes 90L capacity and powder coated black ZEN 500, or equal approved. To have 'Litter & Dog Waste' label.

Proposed play space information board - board is to be located at the edge of the play space as shown. The board is to be metal in construction and to include the following information:

- information on the space
- operational information (rules of the space)
- name and telephone number of the operator of the facility with an invitation to report any incident or damage

Proposed croquet pitch information board - board is to be located at the edge of the croquet pitch as shown. The board is to be metal in construction and to include the following information:

- a short history of croquet
- a summary of how to play and score a basic game of croquet
- a diagram of how to lay out the hoops
- operational information (rules of the space)
- name and telephone number of the operator of the facility with an invitation to report any incident or damage

Proposed petanque court information board - board is to be located at the edge of the petanque court as shown. The board is to be metal in construction and to include the following information:

- a short history of petanque
- a summary of how to play and score a basic game of petanque
- operational information (rules of the space)
- name and telephone number of the operator of the facility with an invitation to report any incident or damage

Proposed play space railings - to be 1m in height, vertical rail with flat top, galvanneal and powder coated in black.

Proposed pedestrian gate - to be minimum 1.2m wide gate to match the railings. To be galvanneal and powder coated orange or yellow (a contrasting colour to fence which complements colours in play items) and self closing.

Proposed maintenance gate - to be 3m wide gate to match the railings, galvanneal and powder coated black.

Proposed seat - Zenith Horizon Seat by Furnitubes, 3 person seat with end arms, side to side slats, roof fixed with the metal elements powder coated black ZEN 6A, or equal approved

Proposed picnic bench - Zenith Horizon Picnic Benches and Table by Furnitubes, 6 person seat, side to side slats, roof fixed with the metal elements powder coated black ZEN 6A x2 and ZEN T6, or equal approved

Cycle stands - Sheffield Cycle Stand by Furnitubes, 800mm wide, roof fixed and powder coated black SHE 688, or equal approved

Indicative extent of ball stop netting - refer to note on drawing

1m offset for Croquet pitch

Wider Green Infrastructure - Detailed Landscape Proposals. Sheet 1 of 2.

Frenchay Hospital

Client: Redrow Homes

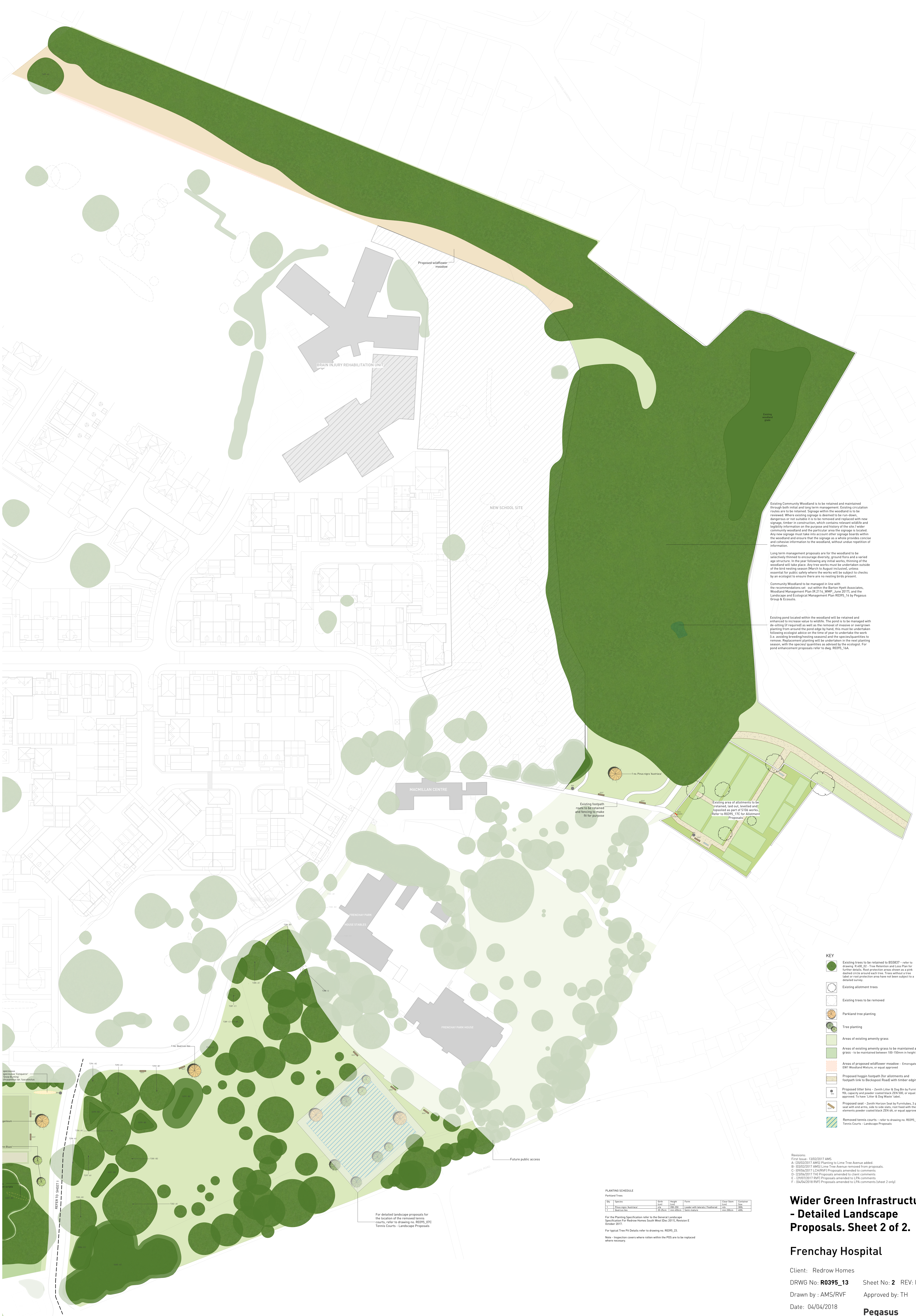
DRWG No: **R0395_13** Sheet No: 1 REV: F

Drawn by: AMS/RVF Approved by: TH

Date: 04/04/2018

Scale: 1:500 @ A1

Pegasus Design



Existing Community Woodland is to be retained and maintained through both initial and long term management. Existing circulation routes are to be retained. Signage within the woodland is to be reviewed. Where existing signage is deemed to be run-down, dangerous or not suitable it is to be removed and replaced with new signage, timber in construction, which contains relevant wildlife and legibility information on the purpose and history of the site / wider community woodland and the particular area the signage is located. Any new signage must take into account other signage boards within the woodland and ensure that the signage as a whole provides concise and cohesive information to the woodland, without undue repetition of information.

Long term management proposals are for the woodland to be selectively thinned to encourage diversity, ground flora and a varied age structure. In the year following any initial works, thinning of the woodland will take place. Any tree works must be undertaken outside of the bird nesting season (March to August inclusive), unless essential for public safety where the works will be subject to checks by an ecologist to ensure there are no nesting birds present.

Community Woodland to be managed in line with the recommendations set out within the Barton Hyatt Associates, Woodland Management Plan (B2116, WMA, June 2017), and the Landscape and Ecological Management Plan R0395_14 by Pegasus Group & Ecoville.

Existing pond located within the woodland will be retained and enhanced to increase value to wildlife. The pond is to be managed with do sitting (if required) as well as the removal of invasive or overgrown planting from around the pond edge by hand. This must be undertaken following ecologist advice on the time of year to undertake the work (i.e. avoiding breeding/nesting season) and the species/quantities to remove. Replacement planting will be undertaken in the next planting season, with the species/quantities as advised by the ecologist. For pond enhancement proposals refer to dwg. R0395_16A.

- KEY**
- Existing trees to be retained to BS5837 - refer to drawings R030_02 - Tree Retention and Loss Plan for further details. Root protection areas shown as a pink dashed circle around each tree. Trees without a tree label or root protection area have not been subject to a detailed survey.
 - Existing allotment trees
 - Existing trees to be removed
 - Parkland tree planting
 - Tree planting
 - Areas of existing amenity grass
 - Areas of existing amenity grass to be maintained as long grass - to be maintained between 100-150mm in height
 - Areas of proposed willow meadow - Encourage EWT Woodland Mixture, or equal approved
 - Proposed hoggan footpath (for allotments and footpath link to Backstop Road) with timber edging
 - Proposed litter bins - Zenith Litter & Dog Bin by Furniburel 110, capacity and powder coated black ZEN 100, or equal approved. To have Litter & Dog Waste label.
 - Proposed seat - Zenith Horizon Seat by Furniburel, 3 person seat with end arms, side to side slats, not fixed with the metal elements powder coated black ZEN 1A, or equal approved
 - Removed tennis courts - refer to drawing no. R0395_07 Tennis Courts - Landscape Proposals

PLANTING SCHEDULE									
Pondside Trees									
Qty	Species	Size	Height	Form	Clear Span	Container			
1	Black nightshade	100	100-150	Leader with lateral & feedstock	100	100			
1	Black nightshade	100	100-150	Leader with lateral & feedstock	100	100			

For the Planting Specification refer to the General Landscape Specification For Redrow Homes South West (Dec 2011), Revision E October 2017.

For typical Tree Pit Details refer to drawing no. R0395_23.

Note - Inspection covers where rotten within the PDS are to be replaced where necessary.

Wider Green Infrastructure - Detailed Landscape Proposals. Sheet 2 of 2.

Frenchay Hospital

Client: Redrow Homes

DRWG No: **R0395_13**

Sheet No: **2** REV: F

Drawn by : AMS/RVF

Approved by: TH

Date: 04/04/2018

Scale: 1:500 @ A0



APPENDIX 2

PUBLIC OPEN SPACE MEASUREMENTS PLAN



KEY

Informal Recreation and Natural Green Space
Total area: 91640m2

Children and Young People's Play Area
Total area: 2957m2

Tennis Courts, Cricket Pitch, Croquet Pitch and Petanque Pitch
Tennis courts: 1226m2. To comply with LTA standards.
Cricket Pitch: 5800m2
Croquet Pitch: 819m2
Petanque Pitch: 170m2

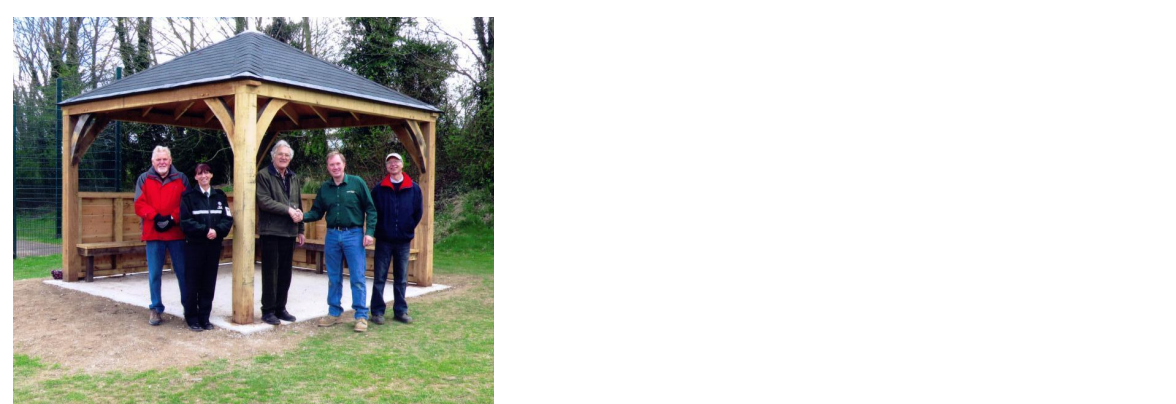
Allotments
Total area: 2006m2

Approximate tree retention - to be confirmed at the detailed design stage

Trim trail items
To be naturalistic in character e.g. timber, supplied with a simple low-level sign indicating the intended use. Items will sit within a loose fill surface such as bark mulch and be provided with a sign explaining how to use the item.



Youth shelter
To be a bespoke shelter designed to complement the character of the village green. The shelter will be simple in style and will sit on a tarmac surface. Seating will be provided around the base.



Revisions:
First Issue- 03/06/2016 AMS
A- (15/06/2016 AMS) Children and Young People's Play amended to suit LPA comment
B- (21/06/2016 AMS) Children and Young People's Play amended to suit LPA comment
C- (13/07/2016 AMS) Children and Young People's Play amended to suit LPA comment
D- (25/07/2016 AMS) Minor amendment to LPA comment.
E- (05/08/2016 RVF) Minor amendment to layout.
F- (13/02/2017 AMS) Amended to suit Phase 2, 3 and 4 updated layouts and detailed design of wider green infrastructure.
G- (15/06/2017 RVF) Amended to suit Phase 2, 3 and 4 updated layouts and detailed design of wider green infrastructure.
H - (27/06/2017 TH) Amended to suit Phase 4 updated layouts and client comments
I - not used
J - (28/07/2017 RVF) Amended to suit Phase 2 updated layouts
K- (16/10/2017 RVF) Phase 2/3A layout updated
L- (14/11/2017 LCH) Phase 4 layout updated
M- (01/12/2017 RVF) Phase 3B layout updated
N- (13/04/2018 RVF) Amended to LPA comment and Phase 3A layout updated

Public Open Space Measurements

Frenchay Hospital, Bristol

Client: Redrow Homes
DRWG No. **R0395_08** Sheet No. REV: N
Drawn by : RVF/LCH Approved by: RVF
Date: 13/04/2018
Scale: 1:1250 @ A1



APPENDIX 3

MANAGEMENT PLAN TABLES

APPENDIX 3 – MANAGEMENT PLAN TABLES

1. RETAINED TREES MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
1.1	Check tree safety	Identify hazards and carry out necessary maintenance work. Keep records up to date	Visual tree assessment with instrumental back up where necessary. Monitoring to be undertaken by qualified arborist. Tree works to be carried out to BS3998:2010	Every third year (or on a timescale deemed necessary by the arboriculturalist)
1.2	Keep paths/highways/parking areas clear from branches/vegetation.	Pruning/cutting back	Prune tree branches from encroaching onto adjacent paths and highways. Trees shall be pruned to a height of 5m over highways and 3m over paths	As required annually, avoiding bird nesting season of March to August inclusive
1.3	Maintain diversity of plant species	Removal of invasive species	Dig by hand and remove by hand; removal of invasive species using appropriate eradication method (refer to section 5.10)	Annual
1.4	Control tree species that do not belong and are not part of the long term design	Check and remove any species that do not belong	Clear by hand and remove from site	Annual
1.5	Keep litter and rubbish free	Remove litter and fly tipped rubbish	Remove by hand	Monthly, or as required

2. RETAINED WOODLAND MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
2.1	Check tree safety	Identify hazards and carry out necessary maintenance work. Keep records up to date	Visual tree assessment with instrumental back up where necessary. Monitoring to be undertaken by qualified arborist. Tree works to be carried out to BS3998:2010	Initial inspection at Year 1 – on-going timescales to be confirmed by qualified arboriculturalist (typically at every third year)
2.2	Keep paths / highways / parking areas clear from branches / vegetation.	Pruning / cutting back	Prune tree branches / hedgerows from encroaching onto adjacent paths and highways. Trees shall be pruned to a height of 5m over highways and 3m over paths	As required annually, avoiding bird nesting season of March to August inclusive
2.3	Control exotic tree, shrub and herbaceous species that do not belong in a native woodland setting	Check and remove any exotic and invasive species	Clear by hand and remove from site	Annual, or as necessary
2.4	Removal of rubbish and keep litter and rubbish free	Remove litter and fly tipped rubbish	Remove by hand	Monthly or as necessary
2.5	Improvement of biodiversity of woodland ground flora	Ensure suitable light levels within the woodland are created and maintained. Ensure newly planted woodland ground flora is allowed to successfully establish and is not crowded out by invasive species.	Thinning of woodland (targeted removal of poor quality specimens and heavy shade casting species) and removal of unwanted invasive species as required. All arisings should be removed from site unless suitable to retain for ecological benefits.	Annual

Note: any standing deadwood that is removed will be retained in piles within the wooded areas, providing additional habitat areas for wildlife. Piles are to be no more than 600mm in height. The wood at the bottom of the pile is to be set 1/3rd into the ground.

3. RETAINED COPPICE AREAS MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
3.1	To maintain the coppiced trees to ensure health and longevity	Rotational coppicing	Coppice approximately 25% of the coppice area on a five-year rotational basis.	Coppicing to take place between December – March, refer to Woodland Management Plan
3.2	Maintain healthy coppice trees	Visual inspection for any fungal activity or disease	Remove affected wood as appropriate	Late September - early October - whilst trees are still in leaf
3.3	Maintain healthy coppice trees	Remove dead, damaged or dying branches	Remove as appropriate	Annually, or as necessary
3.4	Control exotic tree and shrub species that do not belong in a coppice woodland setting	Check and remove any exotic and invasive species	Clear by hand and remove from site	Annually, or as necessary
3.5	Keep coppice areas clear of litter and other waste	Remove litter and other waste to a registered waste disposal facility	Remove by hand	Annually, or as necessary

4. RETAINED SCRUB MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
4.1	To maintain the scrub to ensure health and longevity	Rotational cutting	Coppice approximately 20% of the scrub on a 3-year rotational basis. Do not cut adjacent patches sequentially. Avoid creating access routes when cutting.	Every third year in December - March
4.2	Maintain healthy scrub	Visual inspection for any fungal activity or disease	Remove affected scrub as appropriate	Late September - early October - whilst scrub is still in leaf
4.3	Maintain healthy scrub	Remove dead or dying scrub plants	Remove as appropriate	Annually
4.4	Control exotic shrub species that do not belong in a scrub setting	Check and remove any exotic and invasive species	Clear by hand and remove from site	Annually
4.5	Keep coppice areas clear of litter and other waste	Remove litter and other waste to a registered waste disposal facility	Remove by hand	Annually, or as necessary

5. RETAINED POND MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
5.1	Maintain diversity of plant species	Control invasive plants, algae and naturally occurring weeds	Eradicated invasive species using appropriate method and necessary licenses. Remove arisings to the appropriate place.	Between October and February inclusive
5.2	Maintain integrity of the pond	Control encroaching marginal and aquatic planting	Prune/cut back foliage and root systems as necessary	Between October and February inclusive
5.3	Maintain integrity of marginal and aquatic planting	Monitor and record any notable losses. Report to owner.	On instruction from owner replace missing plants and maintain to ensure survival	October/November
5.4	Maintain appearance of planting	Cut/prune back as required to maintain attractive, healthy appearance	Prune/cut back foliage as necessary. Divide any clump forming herbaceous perennials in early spring, as required	Annual during Autumn/Early Spring
5.5	De-silt and keep pond and immediate areas free of litter and other waste	Remove silt, litter and other waste	Remove by hand	Monthly, or as necessary

6. NEW TREE PLANTING MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
6.1	Reduce competition from grass and weeds	Keep 1m radius circle at base of tree, weed and grass free	Spray grass and weeds with glyphosate based herbicide. Do not use strimmers around the base of trees.	April/June/August
6.2	Ensure that trees grow straight and are not damaged	Check that stakes and ties and guards are intact and secure. Check that stakes are not rubbing against the bark and that the tie is not too loose, too tight or broken.	Visual inspection Adjust or replace stakes, ties and guards as necessary. Re-plant in an upright position and re-firm any trees suffering from windrock.	Monthly
6.3	Ensure that trees become self supporting	Remove stakes once root growth is well established. Visual inspection to confirm stability.	Check tree stability by gentle shaking. Remove stakes, ties and guards when tree is established.	3 to 4 years after planting
6.4	Make good damage caused by vandalism	Visual inspection to check for vandalism. Report to owner.	On instruction from owner replace as per planting specification.	November/December or as required
6.5	Ensure that trees develop healthily	Remove dead, damaged or dying wood	Prune in accordance with BS 3998:2010	As required annually, avoiding bird nesting season of March to August inclusive
6.6	To keep newly planted trees free from pests and disease	Qualified horticultural staff to inspect and check on health of trees	Deal with individual problems as they arise keeping use of pesticides to a minimum	Monthly from March to October
6.7	Maintain good shape and remove hazards	Check for damage in canopy and low branches over footpaths	Prune in accordance with BS:3998:2010	Autumn, or as necessary
6.8	Ensure continued health of trees	Check and respond as necessary	Water and fertilise if required to ensure the that the tree continues to develop Investigate any continued failed growth of trees and take remedial action.	As necessary
6.9	Ensure dead trees are replaced	Replacement of failed trees once deemed appropriate by qualified horticultural staff.	Remove dead tree and replacement as per original approved specification unless otherwise agreed to plant alternative species.	November/December

7. AMENITY GRASS, LONG SPECIES RICH GRASS, WILDFLOWER MEADOW AND BULB PLANTING MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
7.1	Control height of amenity grass / long species rich grass	Cut amenity grass to between 25-65mm. Cut long species rich grass to between 100-150mm.	Mow large areas with a tractor drawn gang mower and smaller areas with pedestrian or sit-on mowers as necessary Clean adjoining path areas after mowing	Amenity grass - cut on average of 15 times per annum. Review cutting regime in drought conditions. Long grass cut as required per annum to maintain prescribed height - do not cut in drought conditions.
7.2	Allow bulbs in amenity grass to flower and spread	Allow bulbs to build up energy reserves	Do not cut grass in bulb areas until 6 weeks after flowering – collect arisings	Varies according to flowering of bulbs
7.3	Allow wildflower grassland areas to regenerate	Southern boundary: cut the wildflower grassland to 50mm after flowering and again at end of season. North-eastern boundary: on a rotational basis cut 1/3rd of the wildflower grassland to 50mm after flowering and at end of season - rotate to a different 1/3rd of the wildflower grassland each year on a three-year cycle.	Cut the wildflower grassland with forage harvester or similar for larger areas, and a strimmer of similar for smaller areas. Collect arisings.	Cut in late July and September or April depending on weather conditions
7.4	Keep amenity sward in good condition	Check and report to owner on damaged areas	On instruction from owner repair damaged or failed areas and re-sow seed. Apply feed treatment. Undertake aeration/thatch removal, if required	April or September

Ref	Management Objective	Maintenance task	Method	Timing
7.5	Keep all grass areas free from litter	Litter removal	Hand picking	Amenity areas - before each cut and monthly October - March. Long grass / meadow areas – monthly, or as necessary

8. CROQUET LAWNS AND CRICKET PITCH MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
8.1	Control of croquet lawn ²	Cut grass, water if required	<ul style="list-style-type: none"> - The grass should be cut using good quality mowers ie. cylinder mower that provide an even and true cut, cutting to be undertaken in different directions to prevent a 'grain forming'. It should not be cut in adverse conditions or drought conditions. Blades should be checked regularly for damage and should be ground as needed to keep them sharp. Adjust the bottom blade as required to ensure the grass is cut cleanly and not torn or squeezed to ensure a uniform cut is achieved. Clean adjoining hard surfaces after mowing, removed arisings - Water grass if required in drought conditions 	<p>During summer (approx. 3 times per week during periods of good growth), mow at 5-6mm and for topping in the winter months to remove any growth at 8-10mm.</p> <p>Review watering & cutting regime in drought or outdoor weather conditions.</p>
8.2	Maintain the quality of the croquet lawn	Various (seasonal) tasks to enable growth and improve quality of croquet lawn	<p><u>Spring schedule of maintenance</u></p> <ul style="list-style-type: none"> - <u>Rolling</u> if required to level lawn - <u>Scarification and thatch collection</u> to be undertaken to remove moss from lawn - <u>Feeding</u> (as per manufacturer's recommendations) - <u>Aeration</u> - to encourage growth and improve drainage, if required. - <u>Mowing</u> – keep grass short, allowing to dry out and grow tight. - <u>Pest control</u> ie. worm/fungicide to be treated with pesticide if required, to be applied by a competent person in accordance with best practice guidance (ie. COSHH and COPR). 	<p><u>Spring:</u></p> <ul style="list-style-type: none"> - Occasionally, if required - Once (light scarification), if required - Once, per annum - If required - Weekly - As needed during Spring.

² Maintenance tasks detailed above (ref. 8.1 and 8.2) are produced in accordance with best practice guidance Croquet Lawn: Construction, Maintenance and Development produced by the Croquet Association, Seasonal Schedule for Croquet lawns, available at <http://www.oxfordcroquet.com/care/seasonal/index.asp> and Croquet Lawns: their Construction, Maintenance and Development available at: <http://www.oxfordcroquet.com/care/calawns/index.asp>

8.2 cont.	Maintain the quality of the croquet lawn	Various (seasonal) tasks to enable growth and improve quality of croquet lawn	<u>Summer schedule of maintenance</u> <ul style="list-style-type: none"> - <u>Mowing</u> – refer to 8.1. - <u>Scarification and thatch collection</u> – one light scarification to be undertaken if needed. - <u>Irrigation</u> – to promote growth dependent on weather and ground conditions. - <u>Aeration</u> – to encourage growth and improve drainage, if required. - <u>Pest control</u> ie. worm/fungicide to be treated with pesticide if required, to be applied by a competent person in accordance with best practice guidance (ie. COSHH and COPR). 	<u>Summer:</u> <ul style="list-style-type: none"> - Mowing – refer to 8.1 - Once, if required - 0-3 times per week, depending on the weather review regime in drought or outdoor weather conditions. - If required - As needed during Summer.
8.2 cont.	As above.	As above.	<u>Autumn schedule of maintenance</u> <ul style="list-style-type: none"> - <u>Mowing</u> – to be undertaken if required to keep the grass short when grass is still growing - <u>Scarification and thatch collection</u> – one major scarification to be undertaken if needed. - <u>Aeration</u> - <u>Pest control</u> ie. worm/fungicide to be treated with pesticide if required to be applied by a competent person in accordance with best practice guidance (ie. COSHH and COPR). - <u>Over-seeding</u> – to be undertaken to increase grass density. - <u>Surface repair</u> – to adjust levels, remove damage and re-turf. Undertake seed, adjustment of topsoil and turf where required - <u>Top dressing</u> – sieve, and top dress where required to address redress levels - <u>Feeding</u> – apply slow release fertiliser suitable for turf if required, application as per manufacturer's recommendations. 	<u>Autumn:</u> <ul style="list-style-type: none"> - If required, subject to grass's growth rate - Once – (major scarification), if required - If required - As needed during Autumn. - If required. - As needed. - As needed during Autumn. - Once, per Autumn, if required.

8.2 cont.	As above.	As above.	<p><u>Winter schedule of maintenance</u></p> <ul style="list-style-type: none"> - <u>Mowing</u> – to be undertaken if grass is still growing to prevent trapping of moisture and ensure tight growth - <u>Brushing</u> – to be undertaken if required to break up surface water and encourage evaporation. - <u>Fungicide treatment</u> – apply preventative spray, if deemed necessary. 	<p><u>Winter:</u></p> <p>As necessary</p> <p>As necessary</p> <p>Monthly, as necessary</p>
8.3	Cricket Pitch - ball stop net	Routine visual inspection of the ball stop net	<ul style="list-style-type: none"> - Check ball stop net to ensure suitable to stop high speed cricket balls, ensure posts are secure, check no holes/faults are within the net and that all fixings are secure. If the ball stop net is found to be faulty and at risk of failing in its function, cricket match to be stopped, with wicket cordoned off and a warning notice attached, to ensure safety of play area users. The net should be repaired as soon as possible, and cricket matches stopped until the ball stop net is fit for purpose. - Record each visit and corresponding actions/repairs on a spreadsheet. 	Weekly / after each formally organised cricket game, or as necessary.
8.4	Control of cricket pitch ³ – wicket area (non-turf)	General maintenance of cricket wicket	<ul style="list-style-type: none"> - Check condition of wicket area (that the playing surface is clean and even ie. does not have any undulations). - Ensure compaction by rolling (with a light weight roller, roll in both directions, apply water to aid compaction when rolling if the pitch is dry, or undertake rolling after it has rain). - Sweep leaves and other detritus from the surface by hand. - Apply prophylactic treatments of moss killer and algaecide. - Wash (any stains/dis-colourations) if required. - Remove weeds and grass growth from the periphery. - Repair the surface⁴ if required. - Re-mark the crease lines as per supplier's specification. 	<p>Weekly, or as necessary</p> <p>Pre-season rolling to be undertaken prior to play, during the playing season roll weekly to ensure a firm playing surface.</p> <p>As necessary.</p> <p>Monthly, or as necessary.</p> <p>As required during the playing season.</p> <p>As required, ensure grass is cut.</p> <p>Repair surface as per manufacturer's specification, as required to ensure a playable surface is maintained.</p> <p>If required, prior to play.</p>

³ Maintenance tasks detailed above for Cricket pitches are produced in accordance with best practice guidance produced by the SAPCA 'Code of Practice for the Design, Construction and Improvement of Natural Sports Turf' and the 'Code of Practice for the Maintenance of Synthetic Sports Surfaces' which should be read in conjunction with the English Cricket Board guidelines to ensure compliance.

⁴ Note – as per the 'Code of Practice for the Maintenance of Synthetic Sports Surfaces' pg. 84, it is important that no repairs to the surface are carried out in the areas where a ball is likely to pitch, as it could cause a dangerous bounce.

8.5	Control of cricket pitch ³ – outfield area	General maintenance of cricket outfield	<ul style="list-style-type: none"> - <u>Mowing</u> throughout year to ensure a good sward. Review cutting regime in drought conditions. Cutting to be undertaken using good quality mowers to suit job eg. a cylinder mower. - Apply <u>pesticide</u> if required, to be applied by a competent person in accordance with best practice guidance (ie. COSHH and COPR). - If present, worm casts to be dispersed/ treated using an approved suppressant (as directed by manufacturer). Undertake brushing or drag-matting of the square to help disperse casts when friable. - Protect grass against <u>disease</u> – treat with approved fungicide if required (applied as per manufacturers’ instructions). - <u>Aeration</u> to be undertaken if required. - Apply a spring <u>feed</u> (suitable for cricket outfield) if required. - <u>Rolling</u> - to be undertaken in 2 directions along and across the line of play (to be avoided in particular wet periods). - <u>Weed control</u> – refer to 8.6 	<ul style="list-style-type: none"> - Spring/Summer: weekly/to approx. height 20-25mm. Winter: mow when necessary to height no longer than 35mm. - Apply as required. - Apply on 1 or 2 occasions during problem period (October to March) - As required. - As required, on one occasion through October to March. - As required, during Spring as per manufacturer’s specification. - Suitable conditions generally found from early March onwards.
8.6	To control weeds in croquet lawn and cricket pitch	Use herbicide to combat weeds	A selective herbicide designed to combat the weeds present will be used. If appropriate weeds within Croquet lawn are to be hand weeded. Ideally the herbicide should be applied at least two weeks after the most recent fertiliser treatment and at a time when grass growth is strong and healthy. Weed control to be undertaken by competent person with regard to relevant herbicide regulations.	May to September if required (as advised by the manufacturers) Note – Cricket pitch may require herbicide treatment every few years (to be undertaken Spring -Autumn) dependent of weed coverage.
8.7	To keep croquet lawn and cricket pitch free from litter and other waste	Remove litter and other waste	Litter and other waste will be hand picked and bagged from the lawn/pitch areas prior to cutting. Bags will be removed from site and legally disposed of in a registered waste disposal facility.	Before each cut, when cutting is not necessary once per month.
8.8	To keep the cricket pitch in overall good condition	Routine visual inspection of cricket pitch	Undertake routine visual inspection to identify obvious hazards or respond to complaints by public in relation to cricket pitch. Inspect pitch in terms of overall condition and check for signs of vandalism.	Weekly or more frequently if prone to vandalism

9. ORNAMENTAL PLANTING MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
9.1	Keep planted beds free from weeds to reduce competition and improve visual amenity	Weeding Keep planted beds topped up with mulch to prevent weeds and to present attractive appearance	Weed clearance by hand, hoe or fork as required. Take care not to disturb shrub roots and avoid excessive treading of bed surface. Topping up or replacement of mulch until close cover is achieved - use recycled wood chip mulch	Monthly from March to October or as required
9.2	Maintain integrity of planting scheme	Monitor and record any plant losses. Report to owner.	On instruction from owner replace missing plants and maintain to ensure survival	October/ November
9.3	Keep planting beds free from excess leaf litter and fallen twigs and branches	Removal of leaves and tree debris	Leaf blower and leaf collection equipment	November to December
9.4	Keep paths and car parking bays clear from vegetation.	Pruning/cutting back	Prune back shrubs from encroaching onto the adjoining areas.	Pruning ideally to be avoided during bird nesting period (March to August inclusive)
9.5	To keep newly planted shrubs, perennials and ground cover in prime condition and appearance.	Qualified horticultural staff to inspect and check on condition of ornamental planting.	Prune dead foliage, flowers and extension growth as necessary. Divide perennials as necessary. Formative and seasonal pruning to shrubs to create a natural shape - do not routinely clip shrubs. Apply organic fertiliser, if required. Re-plant in an upright position and re-firm plants that suffer from wind-rock.	As required depending on species
9.6	To keep newly planted shrubs and perennials free from pests and diseases	Qualified horticultural staff to inspect and check on health of ornamental planting.	Deal with individual problems as they arise keeping use of pesticides to a minimum	Monthly from March to October
9.7	To keep newly planted beds free from litter and	Remove litter and fly tipped rubbish	Remove by hand	Monthly

10. PLAY EQUIPMENT MANAGEMENT TABLE

Ref	Management Objective	Maintenance	Method	Timing
10.1	To identify obvious hazards or respond to complaints by public	Routine visual inspection of play area	Check for signs of vandalism and remove any litter, glass etc. Check safety surface for faults/loose fill for depth. If parts are found to be unsafe and cannot be immediately repaired the equipment should be immobilised or cordoned off with a warning notice attached. Record each visit, and corresponding actions on a spreadsheet. Note – Inspections to be undertaken by suitably qualified/competent professional.	Weekly or more frequently if prone to vandalism
10.2	To identify obvious hazards or respond to complaints by public	Routine visual inspection of the ball stop net	Check ball stop net to ensure suitable to stop high speed cricket balls, ensure posts are secure, check no holes/faults are within the net and that all fixings are secure. If the ball stop net is found to be faulty and at risk of failing in its function, cricket match to be stopped, with wicket cordoned off and a warning notice attached, to ensure safety of play area users. The net should be repaired as soon as possible, and cricket matches stopped until the ball stop net is fit for purpose. Record each visit and corresponding actions on a spreadsheet.	Weekly / after each formally organised cricket game
10.3	To check the operation and stability of the equipment	Operational inspection of all items of equipment, fences and gates	Check all working parts and oil and grease bearings as necessary. Check all ropes, chains and shackles. Check anti slip surfaces eg. on step treads Check that structures and foundations are secure. Check for trip hazards and obstructions in surrounding area. Check for finger traps. Check wooden items for splinters and cracks. Check metal items for corrosion and sharp edges. Check that plastic/polythene items for brittleness and sharp edges. If parts found to be unsafe and cannot be immediately corrected the equipment should be removed or immobilised and cordoned off with a warning notice attached. Check each item against a checklist (as provided by manufacturer for play equipment item) and record each visit on a spreadsheet.	Monthly

Ref	Management Objective	Maintenance	Method	Timing
10.4	To establish overall level of safety of the equipment.	Annual technical inspection of play area	<p>To be carried out by RPII (Register of Play Inspectors International) trained and certified inspectors or manufacturers inspection engineers. Includes a non-dismantling inspection of all equipment supported by a detailed technical report highlighting any action required.</p> <p>If parts are found to be unsafe and cannot be repaired immediately the equipment should be removed or immobilised and cordoned off with a warning notice attached.</p>	Every 12 months
10.5	To establish overall level of safety of the ball stop net.	Annual technical inspection of the ball stop net	<p>A comprehensive safety audit and technical inspection shall be carried out by a qualified professional/recognised body or ROSPA (Royal Society for the Prevention of Accidents)</p> <p>If the net is found to be unsafe and cannot be repaired immediately, the cricket wicket is to be cordoned off with a warning notice attached to state that cricket activity is to be stopped immediately until repairs are carried out, this will enable the play area to remain in use. The recommended repairs should be undertaken as soon as possible.</p>	Every 12 months
10.6	To generally maintain superficial appearance of equipment and street furniture.	As necessary	Sand down and repaint or re-stain equipment, seats, bins and fences to specification supplied by supplier.	As necessary

11. HARD LANDSCAPE MANAGEMENT

Ref	Management Objective	Maintenance task	Method	Timing
11.1	Keep paths paved areas, petanque pitch and tennis courts free of debris, litter, graffiti and dog faeces	Empty litter / dog bins and ensure generally bins themselves are clean. Remove litter and faeces from paths paved areas, petanque pitch and tennis courts. Clean stained / graffitied surfaces	Remove and replace bags from bins and deposit in legal tip. Wash / wipe clean bins as required. Sweep or hand pick litter and faeces from paths, paved areas, petanque pitch and tennis courts. Use pressure washer to remove chewing gum, staining and graffiti.	Twice weekly April to September, weekly October to March
11.2	Keep paths, paved areas, petanque pitch and tennis courts free from leaf and tree debris	Removal of tree litter and debris, including leaves and branches	Removal, collection of all tree litter and debris, including leaves, conkers, branches and transport to tip	November and Dece
11.3	Keep paths, paved areas, petanque pitch and tennis courts free of weeds	Weed killing	Spray with herbicide containing glyphosate using knapsack sprayer	April/June and August
11.4	Maintain fencing, walls, signage, seating and other street furniture in a safe, clean and graffiti free condition	Monitor and report to owner on damaged or unsecure areas	Replace, repair / clean as instructed by owner. Note – this does not include listed walls around the Allotments (listed walls will be repaired and maintained in accordance with the surveys and specification of repairs set out within the report agreed under Schedule 1 of the Section 106, prepared by Mann Williams and Ridge.)	As necessary

12. INVASIVE SPECIES MANAGEMENT TABLE

Ref	Management Objective	Maintenance	Method	Timing
12.1	To control and prevent the spread of invasive species	Monitor site for invasive species	Eradicate appropriately using any necessary licences. Remove waste to the appropriate place. Records to be kept.	Monthly

APPENDIX 4

ALLOTMENTS MANAGEMENT PLAN

Appendix 4 – Allotment Management plan

Management Aim

- To present the visible indication of high quality, regular site maintenance;
- To provide high quality, secure and accessible allotments which are effectively managed and maintained.

Management Objectives

- To keep paths and hard surfaced areas free of debris, litter, graffiti & dog faeces;
 - To keep weed colonisation at a minimum and acceptable level;
 - To maintain footpaths and hard surfaced areas in safe condition;
 - To maintain gates, water troughs and other allotment furniture, including seating and signage in good condition and replace if necessary;
- 1.01 The maintenance of the allotments covers the communal areas and features e.g access routes, boundary treatments, water troughs, and any untenanted plots.
- 1.02 The management and maintenance tasks associated with the soft landscaping features within the allotments eg. grass will be maintained as amenity grass and retained trees will be maintained as per the previous sections detailed within this landscape and ecological management plan:
- 1.03 Areas of hard surfacing/allotment furniture where damage poses a hazard to pedestrians shall be cordoned off with bollards and high visibility tape until repair can be organised.
- 1.04 A “no tolerance” policy will apply to graffiti which shall be removed as soon as it appears and where necessary specialist contractors shall be employed to carry out this work. Whilst dogs are not allowed within the allotment area, provision has been made to removed dog faeces should a dog enter the space.
- 1.05 Management of the individual plots will be undertaken by the allotment owners themselves. Untenanted plots to be cleared and covered with polythene, to prevent weed growth and soil structure deterioration, immediately after vacation by previous plot owner.

- 1.06 Note - listed allotment walls will be repaired and maintained in accordance with the surveys and specification of repairs set out within the reports agreed under Schedule 1 of the Section 106, prepared by Mann Williams and Ridge.
- 1.07 Management of the infrastructure of the allotment will be undertaken by a management company, or the developer until a management company is instructed.
- 1.08 The management plan for allotments to be read in conjunction with the landscape proposals for the allotments drawing reference R0395_17A.

1. ALLOTMENT MANAGEMENT TABLE

Ref	Management Objective	Maintenance task	Method	Timing
1.1	User feedback	Monitor feedback from Allotment users	Respond and repair as necessary	As necessary
1.2	Keep litter and rubbish free	Remove litter and fly tipped rubbish	Remove by hand and replace bags from bins and deposit in legal tip.	Fortnightly
1.3	Maintain water troughs in good working condition	Check, maintain and repair (if necessary)	Check self-filling mechanism is functioning correctly, repair as instructed by owner. Fix leaks as soon as identified. Empty trough if water appears to be stagnant and allow to self-fill with fresh water.	Monthly
1.4	Maintain all hard landscape areas including footpaths, walls, signage and seating and other street furniture in a safe and clean condition	Monitor and report to owner on damaged areas/items and repair as instructed by owner.	Repair using original material/product to maintain integrity of space. Areas where damage poses a hazard to users, the area shall be cordoned off with bollards and high visibility tape until repair can be organised. <i>This does not include the maintenance of the listed walls, refer to 1.6.</i>	Monthly
1.5	Keep paths / hard surfaced areas clear from branches/vegetation and weeds.	Removal of invasive species Keep path and associated hard surfaced areas clear of weeds	Dig by hand and remove by hand; removal of invasive species using appropriate eradication method Kill weeds using a herbicide spray containing glyphosate using a knapsack sprayer – April, June and August	Monthly 2 or 3 times per annum
1.6	<u>Existing features</u> Listed walls	The two listed walls will be repaired and maintained in accordance with the surveys and specification of repairs set out within the reports agreed under Schedule 1 of the Section 106, prepared by Mann Williams and Ridge.		
1.7	Amenity grass and retained trees	The grass will be maintained as amenity grass and maintained as per the previous management tables detailed in Appendix 3 within this LEMP. The existing trees to be retained will also be maintained as set out in Appendix 3 for retained trees.		