

Saughton Park



Stage 3 Design Report



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1.0 INTRODUCTION

Saughton Park is identified as one of Edinburgh's Premier Parks within the City of Edinburgh Council's Green Space Strategy. As such it provides a heritage asset and community facility for the West of Edinburgh and the City as a whole with activities that draw on a catchment of users from across the town and beyond. It has a rich and varied history linked strongly with the development of the area.

In July 2013 Saughton Park secured Round1 funding support from the Heritage Lottery Fund (HLF) under the Parks for People Initiative. This has facilitated work to progress towards an application for Round 2 funding. The Round 1 Application successfully identified strong heritage merit, need for conservation and demonstrated strong local need and support. The initial vision established at Round1 has been developed in a comprehensive, well considered, sensitive and imaginative manner to realise and set forward this Stage 3 Design Proposal.

Investment in Saughton Park offers a significant opportunity to:

- Improve the use and enjoyment of the park by the public.
- Enhance and conserve the historic and nature value of the site.

A report prepared in 1840 by the forward thinking Dr Lowe, Resident Physician at Saughton Hall Private Lunatic Asylum includes the following description:

Saughton Hall Private Lunatic Asylum ... is intended for the reception only of the higher classes of society; and to render it as much as possible a curative establishment....The House itself is ... surrounded by a



Saughton Park Boundary & Context

park interspersed with fine old wood, and has all the appearance of a private mansion. The scenery around is particularly beautiful. On the north is the finely wooded Hill of Corstorphine, ... on the south and west are Collinton [sic] woods and the Pentland Hills; while to the east stands Edinburgh Castle and Arthur's Seat ; forming on the whole a series of picturesque views rarely commanded by any one site.



Box Hedging at the Rose Garden

1.1 Stage 3 Design Proposals

This report has been prepared with and on behalf of project partners; The City of Edinburgh Council, The Royal Caledonian Horticultural Society and The Friends of Saughton Park to illustrate current design proposals (developed to RIBA Stage 3 'Detailed Proposals') for the conservation, restoration and enhancement of the park environs.

1.2 Existing Conditions

Saughton Park is one of Edinburgh's six 'Premier Parks' and is located in the west of the City. It is located on the north bank of the Water of Leith, approximately 3.5 miles west of the City Centre. The park is approximately 14.23 hectares / 35 acres in area and sits on the rivers floodplain.

The park provides a range of facilities typical of a traditional public park, developed from a former private estate in the early 19th century into a Private Lunatic Asylum with gardens it subsequently was purchased by the Corporation in 1900 for use as a public park .

Most significant in the Park's development was its use for the Scottish National Exhibition in 1908. During a six month period it gained profile and prestige with final admissions totalling 3.5 million. Extensive built installations created a flamboyant appearance. A film exists in the Scottish Screen Archive that clearly communicates the pomp and ceremony of the time and establishes a glimpse into the fascinating Park's history. A full chronology of the Park is contained in the Conservation Management Plan developed as part of this bid.

Saughton Park in its current form stands testament largely to the Victorian era; however remnants of the original 17th and 18th Century Private Estate periods remain. Ad hoc municipal maintenance and replacements however communicate a Park in decline particularly within the Walled Garden area which so



Paths and Promenades—The Main Drive



Historic Walled Garden Walls & Gates



Statue of *Mahatma Gandhi* in the Winter Garden



Stable Block

many park users do not even know exists. The park provides a generous greenspace and is currently a vital well used asset to the local community. Current visitor numbers have been established as circa 460,000. with only around a third of these visiting the Walled Garden.

Key elements include:

- **Paths and Promenades** - attractive tree lined routes including a 'Main Drive' promenade, following the north wall of the Walled Garden and providing connections with the Water of Leith Cycle Network and the John Muir Way long distance path network along its west - east axis. Paths are wide and largely hard surfaced.
- **Winter Garden** – At the western entrance to the Park lies the Winter Garden providing cover in bad weather, self service kitchen facilities within the Conservatory space, toilets and disabled access.
- **Stable Block** – currently part of the Council Maintenance Depot the Stable Block is neglected and defensive in its appearance.
- **Historic Walled Garden** – The walls of the Walled Garden are among the oldest remaining elements on site at Saughton. Significant plant growth, lack of attention and inappropriate security measures combine to reduce the predicted lifespan of these walls. Key to the Garden's character are its compartments, formed in Yew hedging they enable varied approaches to planting within each room and encourage a sense of visitor exploration.
- **Italian Garden** – The sunken garden within the park is located close to the Winter Garden however is dominated by a proliferation of Presentation benches and annual bedding plants. Wheelchair access within this area was identified as problematic through consultation due to stepped access and tight turning spaces



Rose Garden & Sundial



Italian Garden



Sports Pitches



Lack of Path Connections

- **Key Views and Vistas** – flat landform and simplicity of layout offer a variety of attractive views upstream, downstream and across the river. The key view and relationship between the Park and the River has been largely lost through natural regeneration on the banks of the Water of Leith. Tree avenues form vistas along key east west paths however dense evergreen shrubs/ and tree growth on the Walled Garden's north boundary limits views and creates target areas for anti social behaviour.
- **Sundial & Rose Garden** – As the only Listed structure within the Park the Grade C Listed Sundial forms the focus of the Rose Garden. Well maintained box hedging encircles the historic layout of the Rose Garden with climbers on lightweight trellis structures.
- **West Lodge Entrance & Gates** – this historic entrance provides the secondary vehicular access point. Aligned to the Ford's Road bridge the gates and original railings convey the character of the Park's history however are in need of repair and realignment with Park signage and lighting upgrades considered a priority..
- **Reintroduce the Former Bandstand** – Consultation has identified a strong local desire to have the Bandstand rebuilt, it is currently in Council storage.
- **Sports pitches** – Lying to the north of the historic Walled Garden the football pitches are heavily used.
- **Play Park**—The largest play facility in the west of the City Saughton is a destination for play. Scope to increase its size and offer is identified however works would be outwith the HLF bid. Opportunities for increased 'natural play' and access for all are areas which will be explored in coming years.
- **Water of Leith area**—Saughton is unique amongst Edinburgh's other premier Parks in its relationship to the City's river 'The Water of Leith' which winds its way through the city and provides well used long distance cycle and path networks. The noise of water



Mature specimen trees



Herbaceous borders



West Lodge Entrance & Gates



Reintroduce the Bandstand

tumbling over the Weir and a connection with the wider natural landscape significantly benefit the Park on its southern and eastern boundaries.

- **Skate Park**—for many in Edinburgh Saughton is known primarily for its Skate Park, a £700,000 facility introduced in May 2010 it has wide appeal and is self policed.
- **Mature trees** – give structure and character to Saughton Park and its Gardens and contribute to habitat value. Within the central core of the Walled Garden considerable specimen trees create an Arboretum with winding grass paths.
- **Open Greenspace** – extensive flat areas offering opportunity for informal recreation .
- **Car Parks** – located to the east and west of the Walled Garden car parking is provided for park visitors. Current layout, poor quality and the overall appearance of the environs do not satisfactorily address pedestrian & cycle access into the park and means of connecting the park to the City centre and wider long distance networks.



Water of Leith grassland



Original railing remnants



Historic Gates



Exhibition Bridge

1.3 Park Assets

Saughton Park is a place of significance in the history of this area of Edinburgh both from its time as a privately owned estate landscape and as a public park for 115 years, with features of importance from all three key periods of its development. Today it is a public park with aspects of its fabric and layout that demand attention to preserve its value, and to enable it to include a full range of facilities typical of one of Edinburgh's Premier Parks

It is the park's Walled Garden, beside the Water of Leith, that makes it special and has the potential to be its finest feature. Although its current facilities may be typical, the setting and mature quality of the retained Yew landscape compartments, and its long term involvement from The Royal Caledonian Horticultural Society make the future potential for these gardens as a showcase for horticultural excellence a real prospect.

The Park as a recreational resource:

Although of varied quality the park is very much valued as an important local greenspace and recreational resource providing:

- A network of tree-lined paths
- Open space for informal recreation and relaxation
- A Winter Garden with informal cafe/ conservatory
- Good access to public transport links via Balgreen Road, Gorgie Road, Stevenson Road and its proximity to the Balgreen Tramstop.
- Well used sports pitches
- Large play park
- Skate park
- Floral displays and accessible areas for disabled users

The Park as an events venue :

- **Walled Garden:** used as a focus for community events including Saughton Bear Hunts, Spring Fever, Garden Parties and use by the Friends of Group.
- **Paths:** - Organised Walks and Cycling make use of the wide and extensive path network



Activities & Events in Saughton Park

2.0 DESIGN CONCEPT

2.1 Design Aims & Objectives

The Design aims and objectives are closely aligned with the Conservation Management Plan and the Activity Plan. The client team, identified at an early stage that successful redevelopment of the park must consider local needs and opportunities and focus on:

1. Celebrating the heritage of Saughton Park

Consolidating the existing built features of Saughton Park for future generations to learn from and providing increased interpretation of the park's rich heritage.

2. Promoting horticultural excellence

Providing a centre where horticultural displays inspire visitors and where a top class volunteer Gardening Gang provide a high level of support to the park's craftsman gardeners.

3. Creating a welcoming park for all

By making the park more inclusive and welcoming, providing accessible facilities for all and a much improved visitor offer

4. Putting the community into the centre of park life

Developing design proposals which relate directly to what the community have identified. Providing physical infrastructure to facilitate increased volunteering and use of spaces by the community.

5. Developing a vibrant cultural programme

Establishing proposals which reflect the interests and diversity of the local community and develop a unique Saughton Park character which celebrates all that the park has to offer.

6. Getting fresh air fit

Providing improved fitness opportunities, circuitous routes around the whole park and the Walled Garden and augmenting these with fitness stations. Incorporation of cafe vending window facilities to

encourage walkers to collect and go.

Reference has also been made to other supporting work, specialist surveys and documents including:

- Park Structures Condition Appraisal
- Arboricultural Survey
- Management and Maintenance Plan
- Visitor Surveys
- Consultation Responses/ Feedback
- Interpretation Plan
- Bandstand & Monument Condition Report and Restoration Proposal
- Ecological Surveys
- Archaeological Surveys
- Bat Survey
- Green Travel Plan

The Management Policies set out in The Conservation Management Plan are carried forward into design development as follows and highlighted through their fit within project aims:

2.1.1 Celebrating the heritage

1. Improve linkages within park zones:

- Establish clear visual connections between the historic Walled Garden, the recreational sports pitches and the Water of Leith areas of the park
- Improved approaches to the park from the east and west.
- Path upgrades with new links and paved areas relating to existing and proposed facilities

2. Conserve built heritage features within the Park:

- Implementation of buildings and structures conservation programme dealing with all the key heritage features ie. Stable Block, Walls, Exhibition

Bridge, the Rose Garden Sundial and the Walled Garden gates

- Develop new uses for existing buildings ie Stable Block and two other small structures
- Continued tree restocking and tree-work based on the full tree survey to retain excellence of standard
- Ensure regular inspection and maintenance of all buildings, walls, gateways and bridge.

3. Enhance identity and interest through establishing presence of Saughtonhall and reintroducing missing features:

- Create a footprint of Saughtonhall within the surfacing adjacent to the cafe, re-imagine the further extensions through pleached tree planting.
- Reintroduce the Bandstand.
- Provide for exhibition cases within the designed buildings to enable display of artefacts found during the Archaeological dig.
- Coordination of signs and removal of unnecessary signs.
- Coordination of fences and street furniture to achieve consistent quality.

4. Improve the layout of the Walled Garden

- Improve continuity from west to east within the Walled Garden.
- Create a circuitous route around the internal walls
- Adapt Yew hedging by small sections of removal and of sections of lowering to enable visual connections and views through to historic walls.
- Redesign of the Royal Promenade providing clear vista connections and surfacing upgrades.

5. Removal of redundant/ inappropriate features:

- Removal of barrier woody riverbank vegetation to restore views to the river .
- Improved planting to enhance habitat value.

6. To enhance biodiversity to meet Local Biodiversity Action Plan (LBAP) targets through the use of:

Wildflower Meadows (Riverside Edge)
New Native Tree Planting
Bat, Bird & Insect Boxes
Education & Interpretation
Bee Hives

7. To mitigate climate change:

Enhance and develop Walking / Cycle/ routes to work.
Use sustainable/ renewable/ locally sourced materials for new works where possible
Ensure low maintenance energy requirements (eg LED / solar lighting installations)
Retain & enhance tree cover

8. To reduce waste: Promote recycling in construction
Repair & renewal of existing features

9. To manage water needs Consider opportunities for rainwater collection. Seek to minimise hard surface area run-off.

2.1.2 Promoting horticultural excellence

If Saughton is to live fully up to its potential the Walled Garden will need to provide horticultural displays unparalleled within the City's other Public Parks. It is not Princes Street Gardens, no duplication is sought therefore early agreement that bedding plants would provide only limited accents was established.

10. Maintain and improve best features of the garden compartments whilst rationalising repeated and low value displays:

- Maintain tradition of Rose Garden
- Remove extensive small beds of annuals and replace with cohesive design approach within individual compartments.
- Introduce opportunities highlighted within the brief of horticultural training with The Royal Caledonian Horticultural Society and the Saughton Volunteers.
- Encourage community garden involvement in the delivery

of the Physic Garden which will facilitate integrated interpretation with Saughtonhall.

- Utilise the Caley courtyard and potting shed as a space for horticultural demonstrations.
- Maximise the Cafe integration with the Kitchen Garden to communicate themes of healthy lifestyles and history.

2.1.3 Creating a welcoming park for all

It is important that proposals are inclusive, encourage active use & participation and are barrier free. This will be delivered through:

11. Improving gateways and entrance areas to create welcome and establish a favourable impression whilst conserving components considered to be of heritage value:

- New entrance walling, rationalised layouts and improvements to vehicular access.
- Establishing appropriate standards of car parking and improving quality of first impressions.
- Segregate vehicles and pedestrians/ cycles through redesign of Ford's Road entrance point.
- Provide improved disabled parking facilities encouraging access by all.

12. Coordinate and upgrade surfacing, site furniture, fencing barriers, bollards etc and select appropriate components within a Design Guide for use within the park:

- Establishes a base level quality and ensures that the maintaining authority is happy with and has approved the selection.

2.1.4 Putting the community into the centre of park life

Encourage use of the Park by all ages and abilities of user. This will be delivered through:

13. Improving ease of access & physical connections:

- Upgrades to facilitate ease of cycle and pedestrian movement to and within the Park. Introduction of new connection along the Park's western boundary

14. Rebuilding the bandstand:

- Reintroduce a bandstand to the western area of the Park in



line with consultation feedback

- Encourage seating and relaxation by all ages
- Full restoration of structure including lighting and power supplies

15. New Cafe/ Toilet Facilities

- Contemporary design for new Cafe/ toilet facilities which reflect the historic setting in their layout and provide a gateway into the Walled Garden.
- Providing new external plaza focussing on the Saughtonhall footprint
- Enhancing the setting and connections to the wider Garden.

16. Play Park

- Provision of a dog free grass area for children to run around in.
- Removal of high elements of play equipment which cut across the vista to the Exhibition gates.

2.1.5 Developing a vibrant cultural asset

The Audience Development Plan seeks to create an inclusive, active and multi-functional greenspace that:

- Helps people to learn about their own and other peoples heritage.
- Conserves the local heritage and tells the story of Saughton Park in the context of Edinburgh's wider history.
- Creates a park for all generations and cultures to experience and enjoy and which supports civic pride
- Helps the widest range of people to lead active lives, enjoy the outdoors and participate and make decisions about heritage

This will be delivered through:

17. Increasing overall levels of use

- Improving physical access and connections

- Improving sense of safety & security
- Enhancing sense of quality and welcome

18. Increasing number of new users

- Enhancing the park experience
- Encourage new users from specific target groups by maximising appeal to:
 - Younger children and family groups & carers
 - 12 -16 year olds
 - Over 60's
 - Visitors with disabilities

19. Increasing awareness & understanding

- Through interpretation & references to past uses supported by interpretive signage and establishing clarity of the evolution of the house, landscape and gardens through interpretation.

- Education linked strongly with Saughtonhall

20. Creating new opportunities

- Enhancing facilities to improve capacity and extend use eg. The Caley Garden, Cafe and Stable facilities
- Establishing new uses for existing features eg. Laurie Shelter Orienteering Hub

2.1.6 Getting fresh air fit

It is important that proposals are inclusive, encourage active use & participation and are barrier free. This will :

21. Encourage more active use of the sport pitch area and introduce active recreation other than organised sport

- Form perimeter paths around the sports pitches for jogging and cycling
- Introduce fitness stations to support active lifestyles

22. Re-establish a surfaced path for pedestrians and cyclists through the Water of Leith riverside parkland.



Introduce additional Bird & Bat boxes and create a grouping of Beehives

2.2 The Vision

The Saughton Park Revitalisation Project aims to restore the park to its former glory as a major visitor destination which showcases horticultural excellence and offers exceptional recreational and visitor facilities, opportunities for learning and volunteering and engenders a sense of pride in the neighbouring communities.

3.0 THE SAUGHTON PARK MASTERPLAN

Taking on board the detailed objectives, the Park Masterplan has been developed to RIBA Stage 3 Detailed Design.

The overarching principles established at an early stage of the development of the Masterplan for Saughton Park's Revitalisation were the need to consolidate facilities as much as practicable in order to both build the site as a 'destination' and to minimise its staffing burden.

The proposals create a core area adjacent to and including the existing Stable Block where visitor/ training and site staff facilities combine around a central courtyard which will become a focus area for events/ plant sales/ markets and site interaction.

The building designs are inextricably connected to the Park's context and to the history of Saughtonhall. The existing remnants of the old house and its Walled Garden stone walls define the strategy for the insertion of the new buildings. Proposals seek to reinforce garden compartments and establish a series of courtyard gardens all with varied character establishing a rhythm of exploration and thresholds. The memory of the old house is defined and brought back to life through its associated landscape treatment.



Key components comprise:

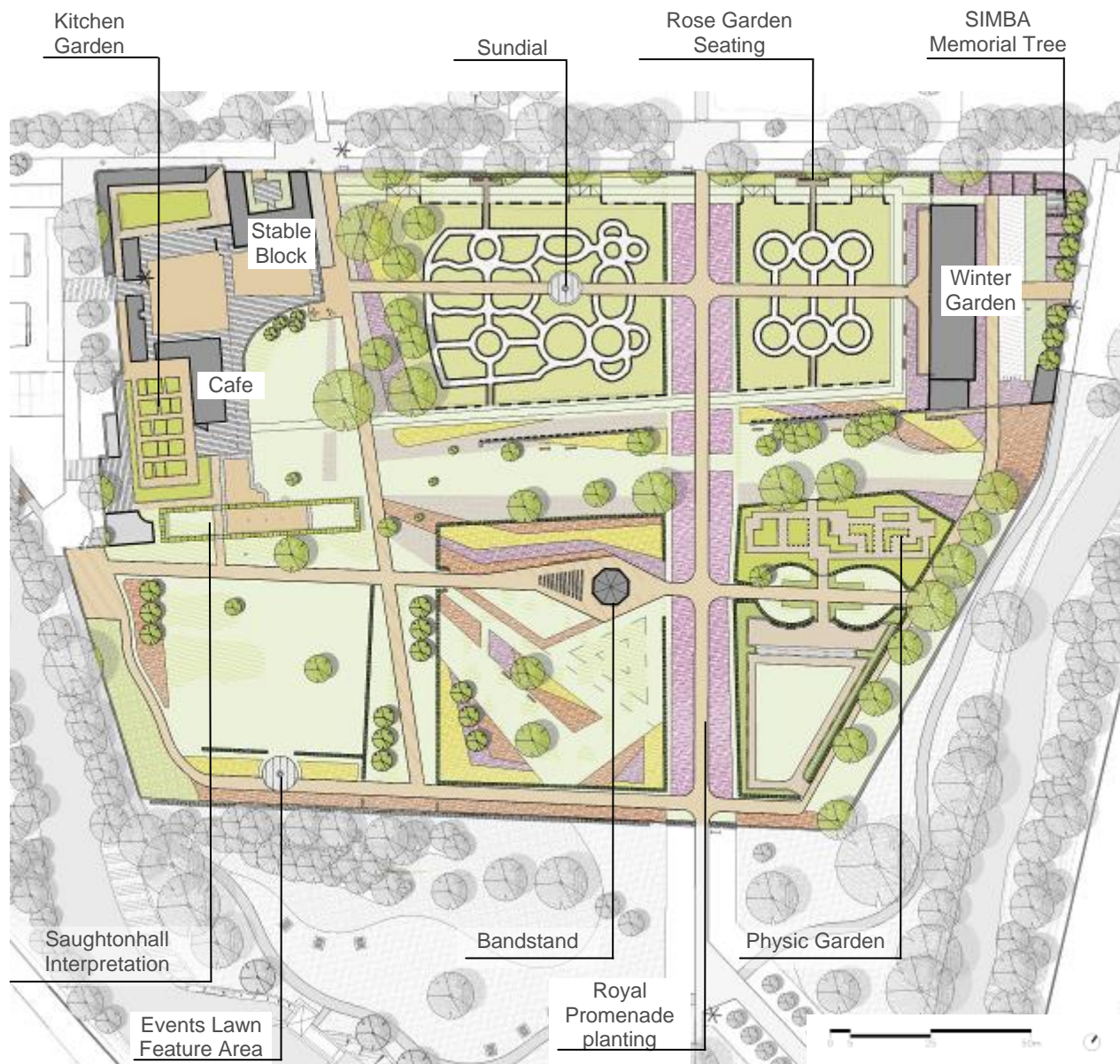
Park Restoration Works

- Stable Block Restoration
- Winter Garden Renovation of the existing structure.
- Royal Promenade planting
- Walled Garden Walls conservation
- Access Improvements & Main Drive
- Walled Garden Compartments Consolidation
- The Rose Garden Sundial specialist conservation
- Bandstand Reintroduction
- Interpretation of Historic Features
- Planting & Tree Management
- Gardeners Compound Store Restoration
- Reopen long view to the Scottish Exhibition Gate Piers.
- Realign north south pitches path

New Physical Works

- New Cafe
- Main Toilets including both disabled and Changing Places facility
- Bothy facilities
- Park Entrance/ Arrival Improvements
- The Physic Garden
- The Kitchen Garden
- Simba Memorial Tree improvements to setting
- Site Furniture co-ordination & renewal.
- New combined off road pedestrian/ cycle route .
- Water of Leith Viewpoints
- Living Landscapes wildflower grassland meadows
- Saughton Bee Hives
- Peripheral Jogging routes and Fitness Stations
- Associated Works to Car Parks, Sports pitches, Play facilities and a potential Micro-hydro scheme continues to be explored and funding bids submitted.

The Walled Garden



4.0 BUILDING DESIGNS

Architecture developed by Sutherland Hussey Harris Architects and Richard Shorter Architects

4.1 Stable Block Restoration

The Caley is located in the existing old stable block. This is both where the staff managing the park and the volunteers are to be located. An office for six people is located within the south-east wing of the existing building, toilet and shower facilities are contained within the north-west wing and a large multi-functional space is contained within the main body of the existing building.

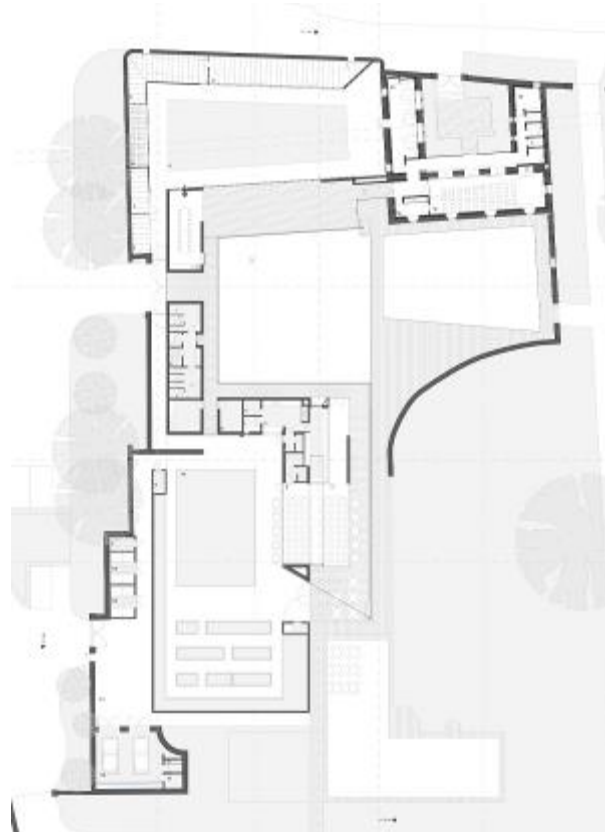
A new link is proposed connecting these various activities, allowing each space to function independently of each other. The link contains a small library of reference books on horticulture and ecology, and also connects directly to the small external space contained within the existing building.

4.2 New Cafe

Provides eighty covers indoors, all enjoying a variety of views out - the kitchen garden to the south-west, the memory garden to the south-east and the walled garden to the north-east. External undercover seating is provided both along the north-east and south-east edges, whilst al fresco dining can be enjoyed both within the kitchen garden and to the south, within the memory garden. It is envisaged that the cafe will have a long servery, connected to kitchen with cold store and small manager's office

Main Toilets

Located immediately adjacent to the main entrance from the parking, and provision is made for male, female, disabled and a changing place. Its central location also allows easy access from the adjacent cafe and the bothy.



Plan of Park Hub/ Cafe/ Stable Block



Current State of Stable Block



Artist's Impression of Stable Block



Section Through Stable Block

Bothy facilities

A modest sized room of 3.6m x 9m with storage, sink and wood-burning stove, to be used independently of all the other functions, and big enough to hold a class of kids to learn about the park, ecology and horticulture. It opens onto a covered space under the new mono-pitched roof which can be used either as a market space, an event space or simply a place for classes to take place on warm but wet days.

Gardeners Compound

The service yard is located on the south-west corner of the site, and is accessed directly off the west car park through an existing gateway. This is an area screened from the public gaze and secure. The existing garage structure is retained, and renovated to provide storage of sensitive material (such as the chemical and fertilizer store), whilst on the north-west edge of this area a new lean-to is proposed to house the garbage and recycling for the whole complex, and a general store for garden equipment.



Overview of Park Hub & Cafe



Proposed Cafe - Outside



Multifunctional Courtyard Space



Proposed Cafe - Outside

4.3 Winter Garden

Renovation of the existing structure. The two existing glasshouses are connected by a flat roof brick structure, all of which have deteriorated over time and are no longer fit for purpose. The design proposes the removal of the polycarbonate roof from the glasshouses and the removal of the existing link structure. The two glasshouse structures are retained but combined to form one single structure centred on the existing axis running east - west from the rose garden to the new cafe hub. The existing structure is modified along its west facade with the introduction of a galvanised steel loggia, creating a more gracious facade towards the gardens and another kind of micro-climate for particular plants to be grown.

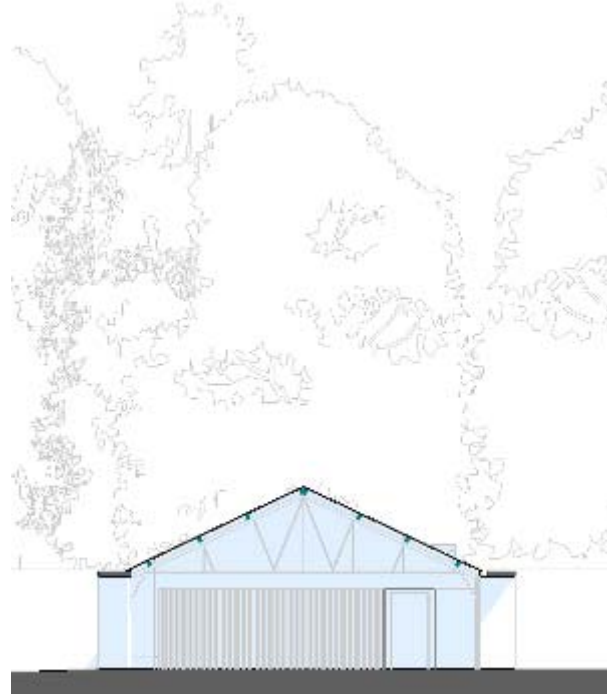
4.4 Structural Designs

*Structural Engineering inputs developed by
David Narro Associates*

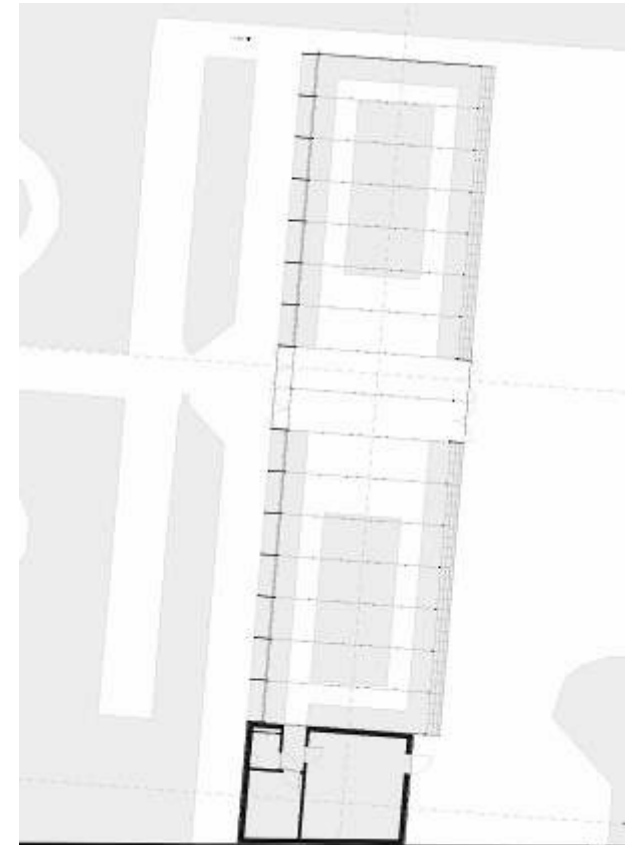
Winter Garden

The southern section of the current greenhouse that is currently being used as a seating area is to be taken down along with the adjoin concrete block buildings. The larger northern section of the greenhouse is to be retained and repaired. This will include renovate the existing structure to form a modern glasshouse with loggias to the western elevation. A new blockwork store and plant room is to be built adjoining the glasshouse.

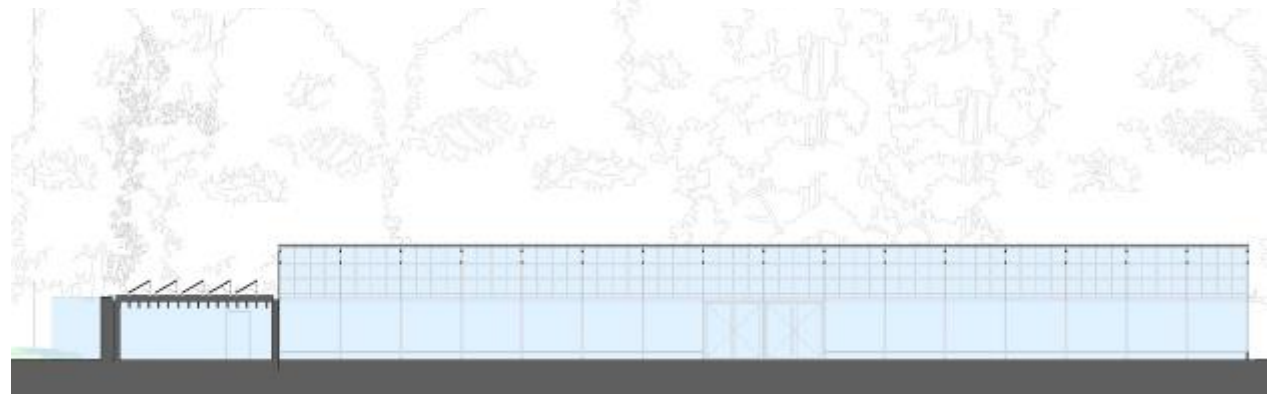
The current polycarbonate cladding is nearing the end of its useful life and will be replaced with glass. This will require additional framing to be added to the current frame in order to support the additional weight of the glass. During this process the steel members and the connections of the frames can be checked for signs of



Section Through Winter Garden



Plan of Winter Garden



Section Through Winter Garden

decay or wear and repairs identified. The proposed steel loggia fins will be fixed back to the existing steel frames. A new plant room block is to be constructed to the side of the glasshouse. This will consist of blockwork wall clad in timber on conventional reinforced concrete strip footings with a felted flat roof on a timber structure.

Former Stables Building

The former stables building requires some structural repairs to the existing masonry walls including repointing, making good of any previous repairs and blocking up openings. There are some locations where the timber structural elements are rotten and decayed owing to water ingress. The proposals include a number of new slappings through the existing masonry walls. The ties within the timber roof structure in part of the building are to be replaced to suit the removal of the attic joists. This alteration to the roof structure will only occur in the central section of the stables. Elsewhere the roof structures will be retained as they are and a self-contained timber structure lining formed within the walls and ceiling above. A glazed link is to be built across the south side of the courtyard linking the two wings of the building. There will also be a link to the new buildings at the west gable end of the stables.

New Build Cafe, Toilets and Bothy

The new build for café and gardeners rooms are to be built in the former service yard to the west and south of the stables building. The existing steel framed shed and remains of other service buildings are to be taken down and the site cleared. The new structures will be predominantly a timber structures, using steel and concrete elements where required. The foot print of the new building encroaches over the area of site once occupied by Saughton Hall and its adjoining service buildings. This may have implications on the foundation design for the new building. This is to be further investigated at the next stage in the site investigation

exercise. The assumed substructure solution at this stage is conventional strip and pad reinforced concrete foundations with a reinforced concrete ground bearing slab. Built off the substructure will be loadbearing timber stud walls and steel SHS posts to support the roof structure. The new roof will comprises engineered timber rafters supported onto the stud walls. Where there are large cantilevered sections and long spanning beams solid glulam beams and timber trusses will be used. The continuous canopy that runs from the café to the offices and open sided covered area at the north will comprise of a steel preformed section bolted to the roof eaves beam and rafters ends.

Site Investigations

An initial desk top site study has been carried out to gain an initial understanding of the site and its ground conditions. The British Geological Survey geology maps indicate that the ground to be a combination of soft to firm consolidates silty clay with layers of silt, sand and gravels. These fluvial deposits overlay a sandstone formation at a depth of 10-15m.

Historic OS maps data show the footprint of Saughton Hall. The archaeology report confirms the extent of footings of the hall in part, although the trial trenches dug did not extend over the full area of the proposed new buildings. A further more detailed site investigation exercise is to be carried out on site during the initial stages of the next phase of works to establish the nature and condition of ;

- the existing building and wall foundations
- the existing former Saughton Hall foundations
- the ground and rock head levels around the area of the proposed extensions and new builds
- of ground water and testing to give an indication of any potential ground contamination.

Information gained from the site investigation will allow for the design of new foundations. It will also identify if



Saughtonhall & Walled Garden
OS Map Published 1914, Revised 1912. NLS - Historic Maps

the ground conditions, including historic footings, will have an impact on the foundation design.

Materials Testing

Bill Revie of Construction Materials Consultants Ltd was commissioned to analyse and report on the render material samples taken from parapet and gate piers on the Exhibition Bridge. The report notes the composition of existing render materials. The structural repairs for the bridge are identified within the Structural condition report; for the re-application of the render refer to Richard Shorter Architect's information.

5.0 LANDSCAPE DESIGN ELEMENTS

Developed by Ironside Farrar Ltd with specialist inputs from Peter McGowan Associates

5.1 Park Entrance/ Arrival Improvements

Creation of improved site access points which accommodate the swept paths of required maintenance and emergency services vehicles is crucial to the viability of the Masterplan. Additional proposals look to clearly mark the Park's boundaries/ entrances with high quality signage reflecting the sites rich heritage and raising the Park's profile on the adjoining road network.

5.2 Access Improvements & Main Drive

Works along the Main Drive will see the removal and setting back of 1100mm high adjacent fencing to sit behind the trunks of the tree avenue and in so doing reintroduce an appropriate scale and balance to the route. The Drive itself will be resurfaced with a full new construction of asphalt to the current path and a resin bonded edge to replace the grass verge running at the base of the historic Walled Garden walls. New 5m high lighting columns with LED sources will be introduced within the southern strip where overhanging tree issues are less problematic.

5.3 Planting & Tree Management

Resulting from the outcome of the Arboricultural Survey and based on its recommendations combined with a site walkover with The City of Edinburgh Trees & Woodlands Officers proposals look to remove poor and suppressed trees along the Main Drive replacing with



Artists Impression of Walled Garden North Gate



West Entrance with changes to the width of Entrance Gates and management of pedestrian/ vehicle traffic



East Entrance with improvements to the visibility splay and enhanced sense of arrival from the road.

new, remove all scrub and shrub vegetation directly adjacent to key footpaths, remove naturally regenerated trees on the banks of the Water of Leith.

5.4 Walled Garden Compartments

Consolidation of the existing garden compartments is highlighted within the Conservation Management Plan as essential to retaining their historic character. Existing Yew hedging establishes this backdrop with enhancement works being undertaken to re-establish the horticultural quality of the Rose Garden, Italian Garden, Events Lawn, Arboretum Walk and Winter Garden planting.

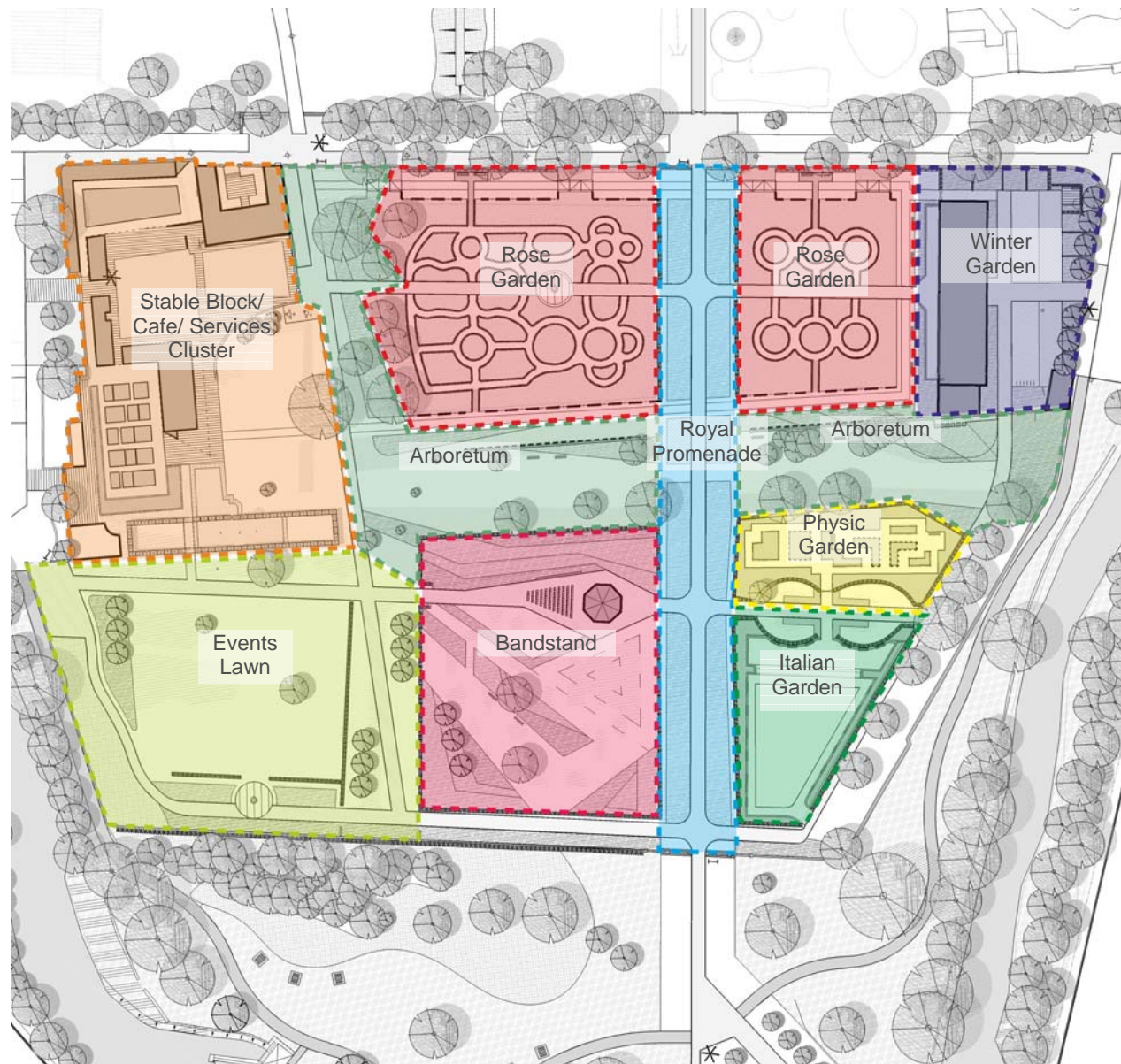
5.5 Relocation of Play Equipment and Path Realignment

Within a visual corridor enabling reopening of historic view from Stevenson Drive to the 1908 Scottish Exhibition Gate Piers.

Realignment of the north/ south sports pitches path to better connect with the historic Walled Garden entrance adjacent to the Stable Block and enable retention of mature tree.



Realign Royal Promenade and extend the views & connection between both sides of the park.



Walled Garden Compartments

5.6 The Rose Garden Sundial

Specialist conservation proposals have been prepared to ensure the longevity and quality of the Grade C Listed Sundial is retained. A low wall seating area establishes the sundial as the key focus with interpretive carved text incorporated.

5.7 The Kitchen Garden

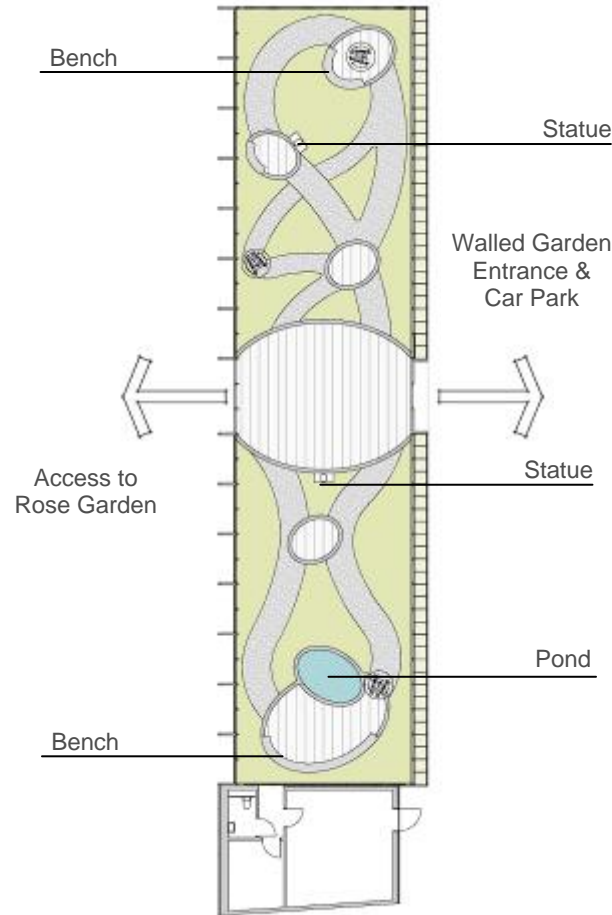
A walled garden containing raised planters and ground level planting for herbs and vegetables, directly linked to the cafe.

5.8 Simba Memorial Tree

Proposals provide a new garden setting for the memorial tree and existing bench without need for any relocation. All design proposals will be developed only if they receive approval directly from the charity and its families.

5.9 New Off Road Cycle Route

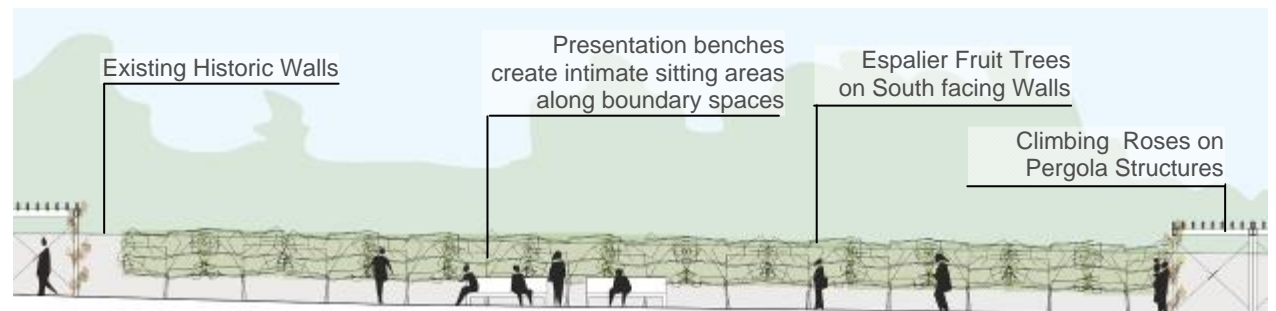
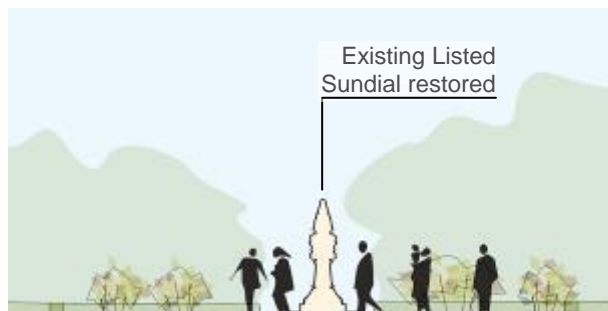
Resulting directly from discussions at community consultation and followed up with CEC Cycle Officers a new off road combined pedestrian/ cycle route is proposed parallel to Balgreen Road. Re-establishing the historic north east Exhibition entrance and establishing a key visual presence at the Balgreen Stevenson Drive junction.



Artist's Impression of Proposed Winter Garden



Statue of Mahatma Gandhi In the Winter Garden



5.10 Water of Leith Viewpoints

Creation of a new seating area with views south to the river providing a termination of the Park's long north/south axis and encouraging an interaction with the natural landscape. Introduction of a path route which hugs the wall and facilitates views to the Weir and the potential Micro hydro scheme. Being considered outwith this bid

5.11 Bandstand Reintroduction

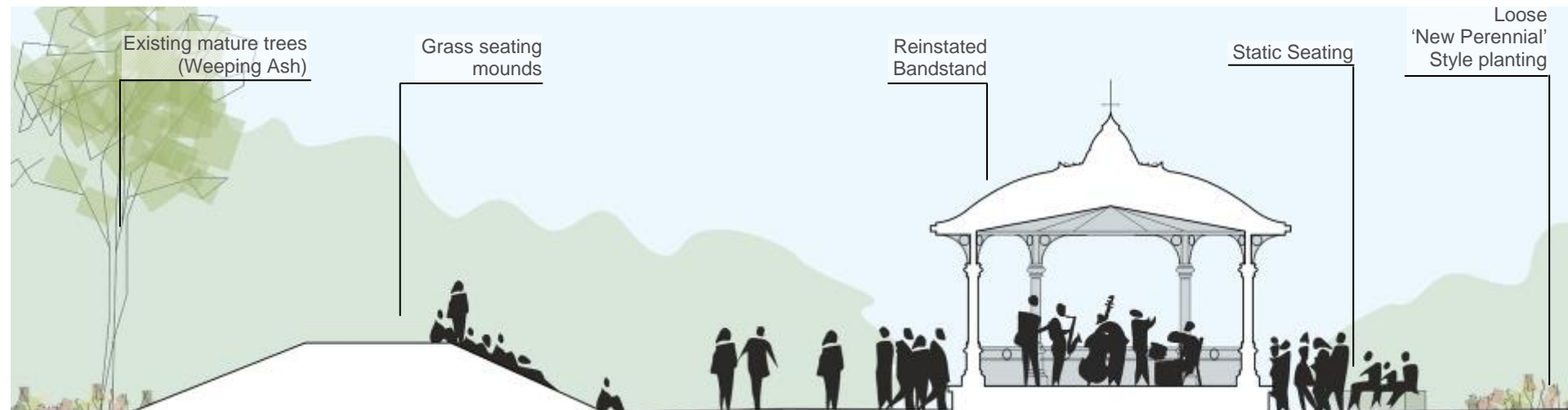
Specialist proposals for the reintroduction and conservation of the former Saughton Bandstand have been undertaken. Proposed as sitting just west of the key north/ south route the Bandstand will introduce a key vista from the historic west gate and encourage passers-by into the contemporary planted space.

5.12 Saughton Bee Hives

Introduction of 6no Bee hives to the area south of the Winter Garden. This area will allow a focus on bee and insect loving plants within the Physic Garden where



Artists Impression of Proposed Bandstand Area



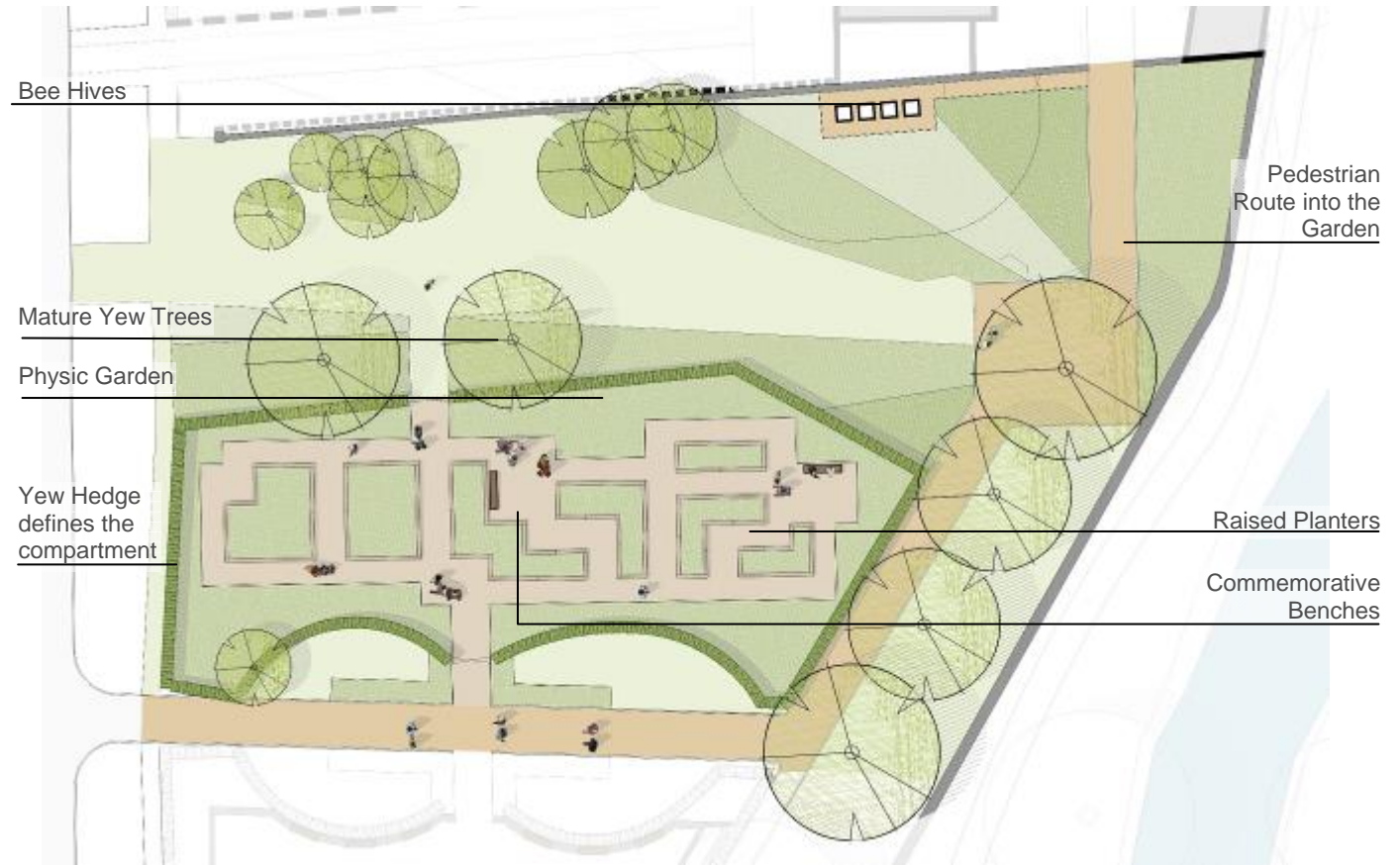
interpretation can be accommodated. An observation hive will be incorporated within the Winter Garden.

5.13 The Physic Garden

Providing intellectual links with the interpretation of Saughtonhall the Physic Garden will allow the retelling of the Asylums early involvement in therapeutic medicines. This garden area will continue to be a focus of the Community Gardeners and Skills Path group.

5.14 Site Furniture Co-ordination & Renewal

Of quite significant importance is the creation of a single palette of core materials for use throughout the site. Signage, lighting, site furniture need not all be eye catching however they will convey unity and ease the site's long term maintenance for City of Edinburgh Council. Continued use of existing Presentation benches is recommended however introduction of more is not.



5.15 Living Landscapes

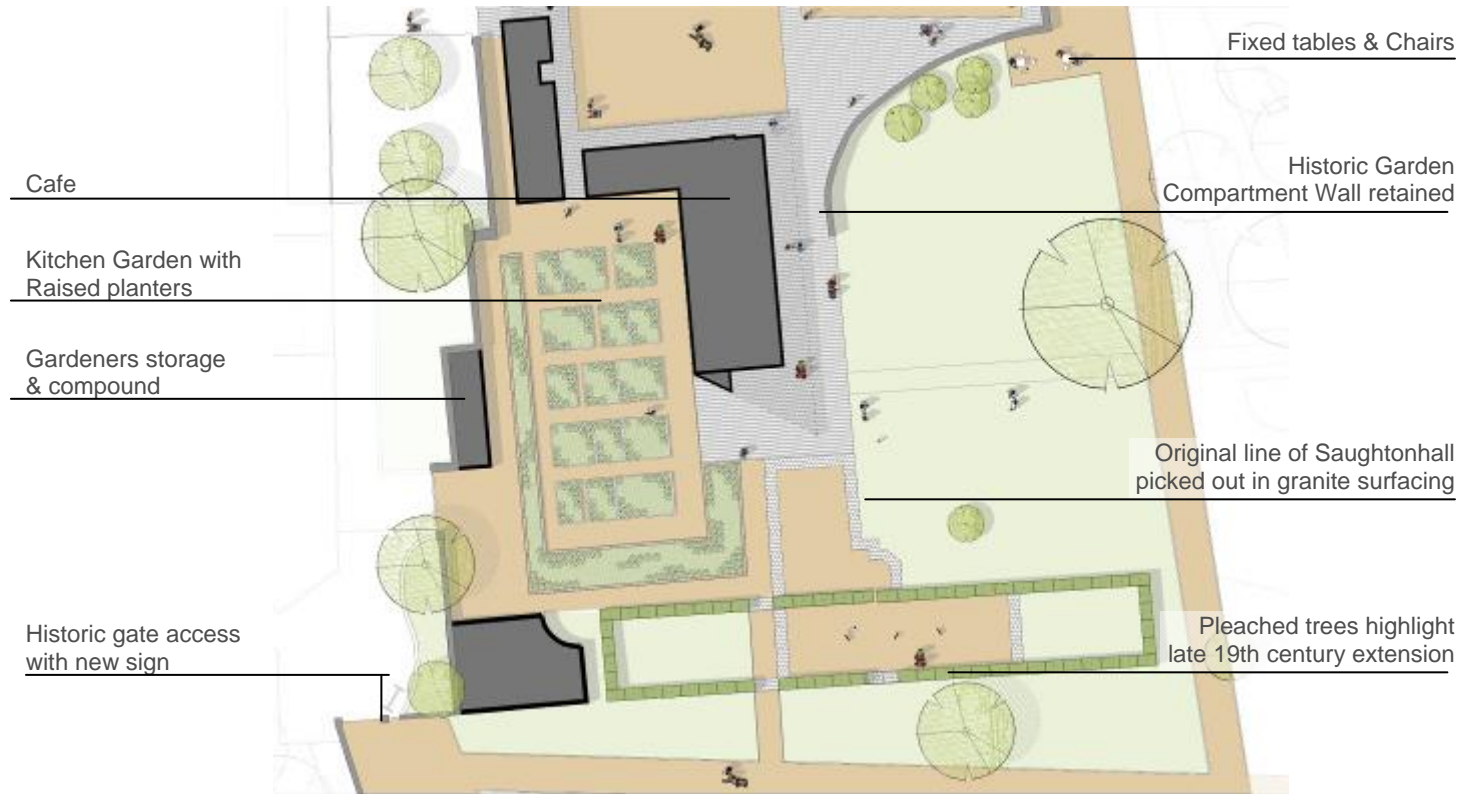
Creation of wildflower grassland meadows where the cutting regime is significantly reduced is proposed adjacent to the Water of Leith and within park perimeter areas. A need to retain a cut edge is highlighted to ensure an appearance of maintenance is established and understood by the public. Picnic areas within these areas will have slabbed surfacing beneath them.

5.16 Jogging routes

Enhanced provision of circuitous routes for health benefits enabling use as part of a training regime



Artist's Impression of Wildflower Meadow & Park Entrance



and combined with Fitness Stations within view of localised CCTV.

5.17 Associated Works

Whilst outwith the Heritage Lottery Funded works it is worth noting that considerable upgrades are proposed within each of the Car Park areas establishing an improved arrival experience for visitors and supporting the core Park Revitalisation works. Additionally a Micro-hydro scheme continues to be explored for inclusion within the Weir structure of the Water of Leith, all park proposals continue to maximise the potential use of renewable energies.



Kitchen Garden



Royal Promenade



Events Lawn Setting

6.0 SUSTAINABLE ENERGY USE & BUILDING DESIGN

Developed by The Keenan Consultancy Mechanical & Electrical Engineers and BREEAM Specialist Advisors RSP Consulting.

LOW CARBON SYSTEM OPTIONS

The sustainable low carbon options which may be viable are:

- Ground /Air Source Heat Pumps
- Small Scale Wind Energy
- Solar Water Heating
- Photovoltaic (PV) – solar electricity
- Hydro electricity generation (not discussed in this report as this is being dealt with separately by the Client at this stage)

Ground / Air Source Heat Pumps used essentially to replace conventional gas or oil fired boiler systems to provide space and domestic water heating. They utilise the stored heat held within the ground or from the air, and transfer it to the space and water heating systems via a heat pump. For every unit of electricity used to pump the heat, 3-4 units of heat are produced (COP 3.0/4.0), making them equally efficient in terms of running costs. The most important factor in the use of ground source heat pumps is the ground loop needed to capture the stored heat from the ground, and these come in two forms, the deep borehole, and horizontal loop. The horizontal loop solution currently under investigation for this project needs approx. 10m for every 1kW of heating load.

The Air source option requires external space and also has to be correctly designed (or oversized) to operate at lower external temperatures as the COP can drop to 1.0 to 1.5 which makes the technology expensive in the winter. These are fantastic alternatives when off the

gas grid.

Heat pump systems work at their most efficient when delivering water at the lower end of the useable temperature range, and are therefore most suited to underfloor heating installations which will typically operate at a flow temperature of 45oC. As this supply temperature requirement increases, so the efficiency reduces. Traditional radiator systems operate at flow temperatures of 80oC, and so are not ideally suited to heat pump installations.

The benefit of heat pumps are in the savings that can be generated in running costs, when compared to conventional systems, and this can be beneficial in safeguarding future energy price rises. However there are significant capital costs involved when comparing to conventional systems. There is RHI available to the market for these installations with strict performance and equipment requirements.

Small Scale Wind Energy installations are used to harness wind energy, and convert it to electricity. This is done by converting the rotary movement of a shaft into DC electricity, which is then stored in a battery system. This stored DC electricity is converted via an inverter into AC mains electricity for use in the property.

Wind turbines vary in size depending on the type of use, with a typical domestic system being rated at approximately 6kW. A good wind site will produce an average output of 30% of the rated capacity of the turbine.

In principal, you can achieve around 1200kWhr per year from a 1m radius wind turbine. Please note an average family home will use around 4000kWhr per annum if gas central heated.

Due to the unpredictable nature of wind power, this type of system should not be used where critical supply is a

requirement, i.e. fire alarms, lifts, etc., and should only be used as a method of reducing the maximum load on the mains supply.

Solar Water Heating systems utilise the energy radiated from the sun, and convert it into stored energy in the form of hot water. This technology is probably the most developed of renewable energy systems, and offers a large number of different systems to suit many applications. Solar water heating systems comprise of three main components, namely a solar panel, a storage cylinder, and the plumbing system to connect these items together. The solar panel is effectively a heat exchanger which transfers the sun's energy to a fluid circulating around the system. The generated hot water is stored in a cylinder, and this stored hot water is used to supply the required outlets via a conventional plumbing system.

As with wind power, the unpredictable nature of the sun means that this form of renewable energy is primarily utilised as a back-up to the main form of water heating in the property, but if installed, will provide an element of safeguarding of future energy costs. Typically, for a traditional domestic size installation, an area of between 2m² and 5m² of southeast to southwest facing roof would be required to locate the solar collectors.

This principally will reduce the annual Hot water bill by around 10-15%. This technology also receives support from the RHI but again requires specific performance and technology (meters) installed.

Photovoltaic (PV) Solar Electricity systems utilise the sun's energy in the same way as solar water heating, in that large collectors are placed in a position to capture the radiated energy. The difference, however, is that PV systems convert this energy into electricity to run

appliances and lighting. The electricity generated by the solar panel is direct current (DC) and this is converted using an inverter system to alternating current (AC) for use in the property which it serves.

A typical domestic installation would require approx. 10-15m² of roof area, in order to generate sufficient electricity to provide for half of the required electrical load (assuming that gas was used for heating the property). As with wind power, the unpredictable nature of the sun means that this form of renewable energy is primarily utilised as a back-up to the main electricity supply in the property, but if installed, will provide an element of safeguarding future energy costs.

There are now several different types of collector, ranging from solar tiles and panels which are integrated into the roof, to those that sit on top. Solar tiles tend to be the more expensive, with those mounted on top being the cheapest. PV's have a financial payback of between 7-10 years using the following reasonable assumptions:

- 10 hours of daylight per day
- 60% diversity on the annual daylight hours
- Demand for electricity during daylight hours.
- 50% of generated electricity utilised on site.
- Electricity cost of 13p/kWhr.
- Feed in Tariff rate of 12.49p/kWhr. (Medium level return for 4kW system until April 2015)

Photovoltaic systems suffer from the same unpredictability as other solar collector systems in their ability to provide a constant source of energy.





7.0 SITE INTERPRETATION

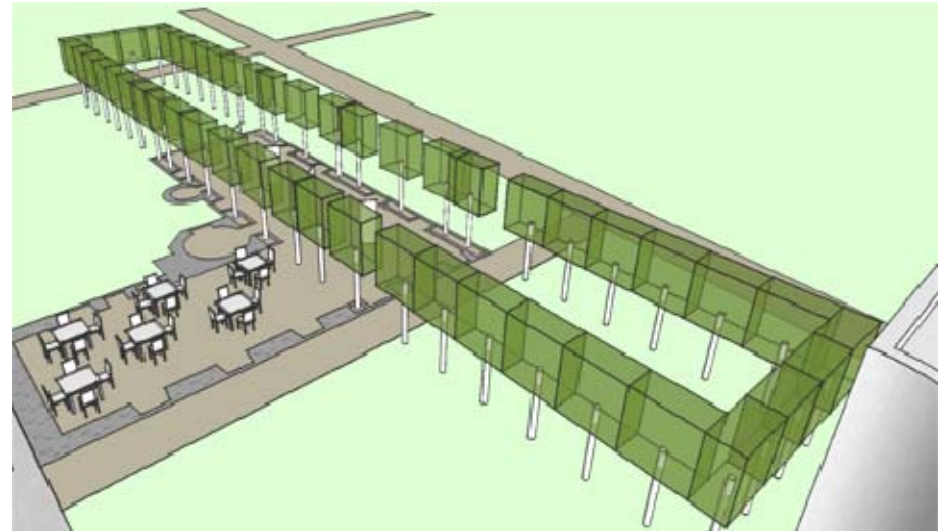
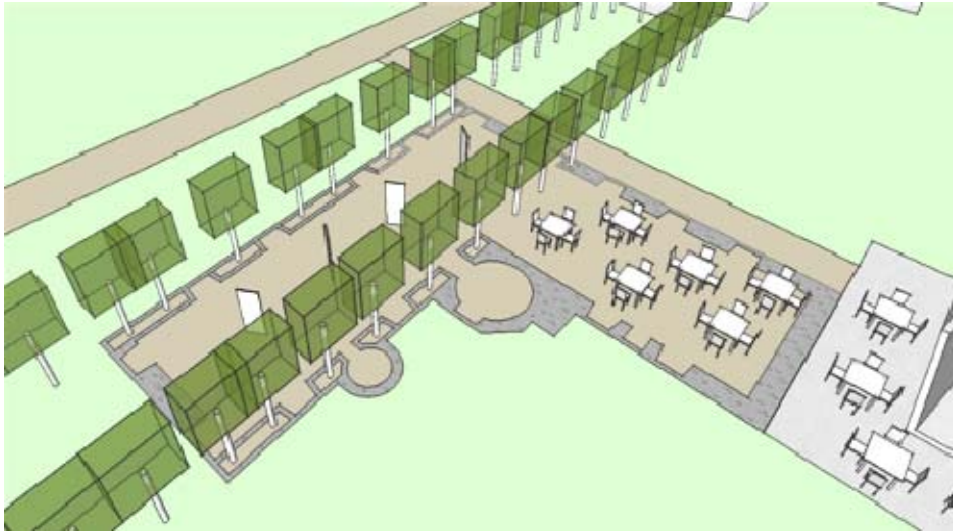
The Interpretation Plan for Saughton Park was developed by Rachel Hunter and highlighted the following key issues:

- Poor visitor information and interpretation
- Lots of interest expressed during Development Phase
- FoSP History sub-group
- History Festival activities
- Stories and memorabilia
- Overarching theme: Revealing the origins of Saughton Park
- Main storylines:-History of the Hall and Grounds
- Garden therapy
- Scottish National Exhibition
- Park history
- Horticulture and links with Caley
- Natural History

Landscape and architectural proposals have been developed to incorporate wherever possible potential elements of Interpretation at this early project stage. Site Interpretation will include:

- Heritage Exhibition to celebrate re-opening of park
- Site of Saughtonhall marked out
- Display of archaeological finds in or near café
- 'Story of Saughton' Interpretation Panels
- Interpretation at key points of interest
- Temporary interpretation, e.g. Demo Garden onion beds and links with WWII
- Winter Garden interpretation, labels and captions
- Printed materials available as paper copies or web based, audio downloads, activity sheets, etc
- Activities to include history walks & talks, events to celebrate History Festival, etc
- Possible art work in future (subject to funding)

Saughton Hall Interpretation



Interpretation Within the Garden



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August 2015