



The Tree Hub

Glasgow Botanic Gardens
Gateway to Scotland's Trees



Life Drawing

Trees capture our pasts

Fill the present with colour and emotion

Paint our futures with hope



Introduction

This study explores a multi-faceted project. Its scope includes the following objectives:

- Increasing awareness and understanding of a nationally important arboreal legacy and its lasting effect on much of Scotland's landscape today.
- Reaching out across Scotland to provide orientation information and encourage visits to sites of particular importance (hence the use of the word HUB in the project title) and in the process support Scotland's domestic and international tourism.
- Educating visitors, through interpretation, about this important part of Scotland's history and the colourful figures involved.
- Providing further interpretive education about trees in general and their environmental importance; education that will be tailored to impact on peoples' perception of trees and change/improve their behavioural attitude towards them.
- Utilising Glasgow Botanic Gardens as a vehicle for the project. Located at the centre of Scotland's largest population centre, it attracts 400,000 visitors per year from a very wide cross section of the conurbation's demographic (from the wealthiest to the most deprived). It is consequently an ideal location. Plus, as an established botanical garden and arboretum it already has a strong connection to the story in both historical and contemporary contexts.
- Adding an extra interpretive dimension to the gardens and increasing the critical mass of its facilities.
- Working in partnership with other environmental agencies and botanical gardens in imparting the above messages and information.
- Involving local communities at every stage of the development process.
- Supporting the Commonwealth Games 2014 programme, particularly with regard to improving the experience of visitors to Glasgow and the rest of Scotland with a view to encouraging return visits.
- Encouraging further education on a broad front as well as supplementing and enhancing the roll of the Gardens Education Officer, especially in her work with school related curriculum visits to the Gardens that currently number 4100 per annum. If this project is implemented it is estimated that this number could rise to 5000 pa.

The study was commissioned by the *Friends of Glasgow Botanic Gardens*.



The Friends of Glasgow Botanic Gardens was established as a charitable organisation in the early 1990's. It is run entirely by volunteers. Their aim is "the enhancement of education for the public benefit by supporting and furthering the activities of Glasgow Botanic Gardens as a centre for education, research and public amenity"

In practical terms the organisation has a winter programme of talks to the Friends covering specialised plant collections and general matters relating to environmental issues, culminating with the Kibble Lecture in April, which is open to all.

As well as this project, the Friends are launching the Certificate in Practical Horticulture, in April 2013. It will be operated in partnership with the Royal Botanic Garden Edinburgh.

In addition the Friends continue to manage their recently launched web site, which is the only primary, online source of information for the Gardens.

They also organise visits to other major gardens in Scotland both public and private and assist in expanding horticultural knowledge. In the latter regard, the Friends have access to the extensive library within the Gardens.

Their fundraising is directed towards the enhancement of the plant collections within the Gardens and the provision of education and information programmes for all ages and backgrounds.

Above all, The Friends are all avid enthusiasts of their favourite subjects – plants, gardens and landscapes!

The study has been funded by the *Central Scotland Green Network*.



The Central Scotland Green Network (CSGN) is changing the face of Central Scotland, by restoring and transforming the landscape of an area stretching from Ayrshire and Inverclyde in the west, to Fife and the Lothians in the east.

The Scottish Government's second National Planning Framework identifies the CSGN as a national priority, which will deliver:

"...a step change in environmental quality, woodland cover and recreational opportunities...[and] make Central Scotland a more attractive place to live in, do business and visit; help to absorb CO²; enhance biodiversity; and promote active travel and healthier life styles".

The CSGN is included in NPF2 as one of only 14 National Developments and is considered by Ministers to be an essential element of the strategy for Scotland's long term development.

Relevant to this study, it was CSGN (via The Forestry Commission) who contacted the Friends of Glasgow Botanic Gardens and asked for this project to be considered and taken forward by them, hence CSGN's study funding role. At the same time they indicated that, subject to the results of a formal application process, they may be able to support the project at a level of around £150,000.

This study and has also been supported and endorsed by a variety of organisations that include the following:



Glasgow City Council



National Tree Collections of Scotland



Monkey Puzzle Tree,
Glasgow Botanic Gardens

Scotland has some of the world's finest tree collections. Their diversity reflects the role many individual landowners have played over the centuries, collecting and planting specimen trees from around the globe. The best of Scotland's specimen tree collections have been brought together as the National Tree Collections of Scotland, to increase public awareness of and access to these collections and to help protect this aspect of our national heritage for future generations.

The National Tree Collections of Scotland initiative has been established by **Forestry Commission Scotland** and **Royal Botanic Garden Edinburgh**, with widespread support from a broad range of stakeholders. It is part of the UK's response to the UN International Year of Forests 2011, which includes a year-long programme of educational, community and recreational events in Scotland.

As the National Tree Collections of Scotland evolves, other sites will join, and ultimately it is envisaged that the initiative will operate independently of the original sponsoring bodies.

The study has been undertaken by a team led by Ross Associates.

They were assisted by:

John Finlay, Project Principal

Graham Addison, Quantity Surveyor

Sandy Andrew, Researcher and Visitor Surveys



1.0 Project Overview

Scotland has one of the most concentrated and diverse collections of specimen trees on the planet. The incredible diversity of these trees has transformed Scotland's landscape over several centuries and has created a landscape legacy that is unique.

While Scotland has pioneered tree cultivation for hundreds of years, it was during the 18th century that the whole concept of tree collections really boomed. This explosion was led by the rich landowners of the period, like the *Planting Dukes of Atholl*, who planted more than 20 million trees in the space of around 100 years.

The philanthropist and founding member of the National Trust for Scotland, Sir John Stirling Maxwell, was one such innovator. He initiated ground-breaking experiments in the planting of different species on moorland in Perthshire.

It was not only fashionable to create wondrous tree plantations and exotic groves, these landowners also introduced the concept of commercial tree planting of conifers to the world. They were, arguably, the founding fathers of today's Forestry Commission and these forward thinking landowners shaped how much of Scotland's landscape looks today.

During this planting fervour, there was huge pressure to discover newer and more exotic species. By the 19th century Scottish botanists were scouring the world for new species. Known collectively as the '*Plant Hunters*', these colourful characters explored the furthest corners of the world and brought back seeds from Australia and New Zealand, Japan, China, North America, the Himalayas, and the Andes. The Plant Hunters were true adventurers who also brought back intrepid tales of their experiences. The most famous Plant Hunters were Archibald Menzies, David Douglas, Thomas Drummond and John Jeffrey. They paved the way for many more and they collectively fed the landowners' hunger for new species.

Menzies is best known for bringing the 'monkey puzzle' tree to Scotland (he pocketed some unknown seeds that were in his food and the rest is history).

David Douglas, who is now immortalised by the *Douglas Fir* collected more than 240 species. One of the original Douglas Fir seeds he collected in 1826 is now a mature tree that can be seen at Scone Palace. He is also famous for introducing the Sitka Spruce that is the mainstay of the UK's commercial forestry sector.

The lasting result of all these hundred of years of tree collecting, planting and management is that Scotland is now home to several world class collections of trees. Many such collections are easily accessible from Glasgow. Plus Glasgow's Botanic Garden has its own collection of 'champion trees'. The result is a priceless and amazingly diverse legacy that is accessible to almost everyone.

Unfortunately, while Scotland has benefitted greatly from the efforts of both the planting landowners and the plant hunters in terms of its unique, rich and diverse arboreal legacy, few people know about it, and this legacy is neither widely nor effectively communicated. Glasgow's



Botanic Garden's own arboretum is a prime example. Partly as a result of its location, and partly due to the aforementioned lack of awareness, it is undervalued and 'missed' by visitors.

Nationally there is a 'black hole' in our cultural heritage resulting in tourism opportunities which are not being fully exploited and some very important tree collections which are under threat through lack of management and awareness.

The forthcoming Commonwealth Games are seen by The Friends of Glasgow Botanic Gardens as an opportunity to begin addressing this challenge.

As the City is historically linked with the pioneering 'Plant Hunters' it is felt that there is a Glasgow based opportunity to celebrate the connection, communicate the Scottish Tree Collections and Landscape stories to as wide an audience as possible, and to act as an **orientation hub** for some of the most important sites. And where better to locate such a hub than Glasgow's Botanic Garden? It will ensure that the information is accessible to hundreds of thousands of visitors every year. Dedicated web site pages for these sites will also increase exposure numbers still further.

Indeed, the project is seen as pioneer. It could become one of several gateway, or hub, projects throughout Scotland that will connect and orientate people with an important part of our nation's landscape heritage.

In summary, the project has the following key objectives:

- To highlight, promote, interpret and orientate people to Scotland's National Tree Collection Heritage.
- To tell the story of the pioneering individuals (from plant-hunters to planters) who played important roles in creating this unique landscape legacy.

Before translating these objectives into a tangible form, a study was undertaken to consult with users and to investigate and analyse the range of user profiles encountered. The study also explored the projects impact on the sensitive landscape within Glasgow Botanic Garden. Section 2 of this document summarises the first part of study's findings and conclusions.

1.1 Project Overview: Glasgow Botanic Gardens

Glasgow Botanic Gardens, situated in the West End of the city, lies beside the River Kelvin.

Thomas Hopkirk, a distinguished Glasgow botanist, was the founder of the Gardens and, with the support of a number of local dignitaries and the University of Glasgow, they were set up in 1817.

The Garden was originally laid out on an 8 acre site at Sandyford at the western end of Sauchiehall Street (at that time, on the edge of the city). Laying out the grounds was the work of Stewart Murray, the first curator. Three thousand plants were donated by Hopkirk as the nucleus of the collection. The Garden flourished to such an extent that in 1839 a new site, to the west of the city on the banks of the River Kelvin, was purchased to house the rapidly expanding collection. In 1842 the new Gardens – on their present site – were opened to members of the Royal Botanic Institution of Glasgow who owned and managed the Botanic Gardens. The public were admitted at weekends for

a small charge. In 1821 William Jackson Hooker, one of the most eminent botanists in the world at the time, was appointed to the Regius Chair of Botany at the University of Glasgow. During the twenty years the Gardens were under his guidance they went from strength to strength. In 1825 the collection numbered 12,000 individual plants. In 1841 Hooker was appointed Director of the Royal Botanic Gardens, Kew.

David Douglas was born at Scone near Perth. In 1820 he took up a post at Glasgow Botanic Gardens. Professor Hooker took a great liking to Douglas and the two men made a number of botanical trips together to the Scottish Highlands while Hooker was writing his book "Flora Scotica." It was on Hooker's recommendation that the Horticultural Society (not yet 'Royal') employed Douglas in 1823 as an explorer. He was sent to North America and in 1826 sent home seeds of *Pseudotsuga menziesii* – the Douglas Fir.

The garden also boasts a Victorian landmark building: The Kibble Palace. It was designed and built by John Kibble who has been described, among other things, as an engineer, astronomer and photographer. It was at his home at Coulport on the shores of Loch Long that Kibble erected his glass palace. The architects of what originally was known as 'The Kibble Crystal Art Palace,' were John Boucher and James Cousland.



In 1871 Kibble entered into negotiations to have the structure dismantled and moved by barge to Glasgow where it was to be reconstructed in the Botanic Gardens. In the garden it was much enlarged with the addition of the large circular dome, 150 ft in diameter, and the extension of the transepts to form an impressive front elevation. The new palace opened in 1873, its interior lit by 600 gas lamps which could be coloured for effect.

The two greatest British politicians of the Victorian era were installed as rectors of Glasgow University in the Kibble Palace. Benjamin Disraeli – Lord Beaconsfield – on 19th November 1873 and William Ewart Gladstone in December 1879.

The tree fern collection was planted in the 1880's and today forms a National Collection.



The Gardens currently cover an area of 19.6 hectares (42.2 acres) including a popular section of the Kelvin Walkway linking the City to the West Highland Way.

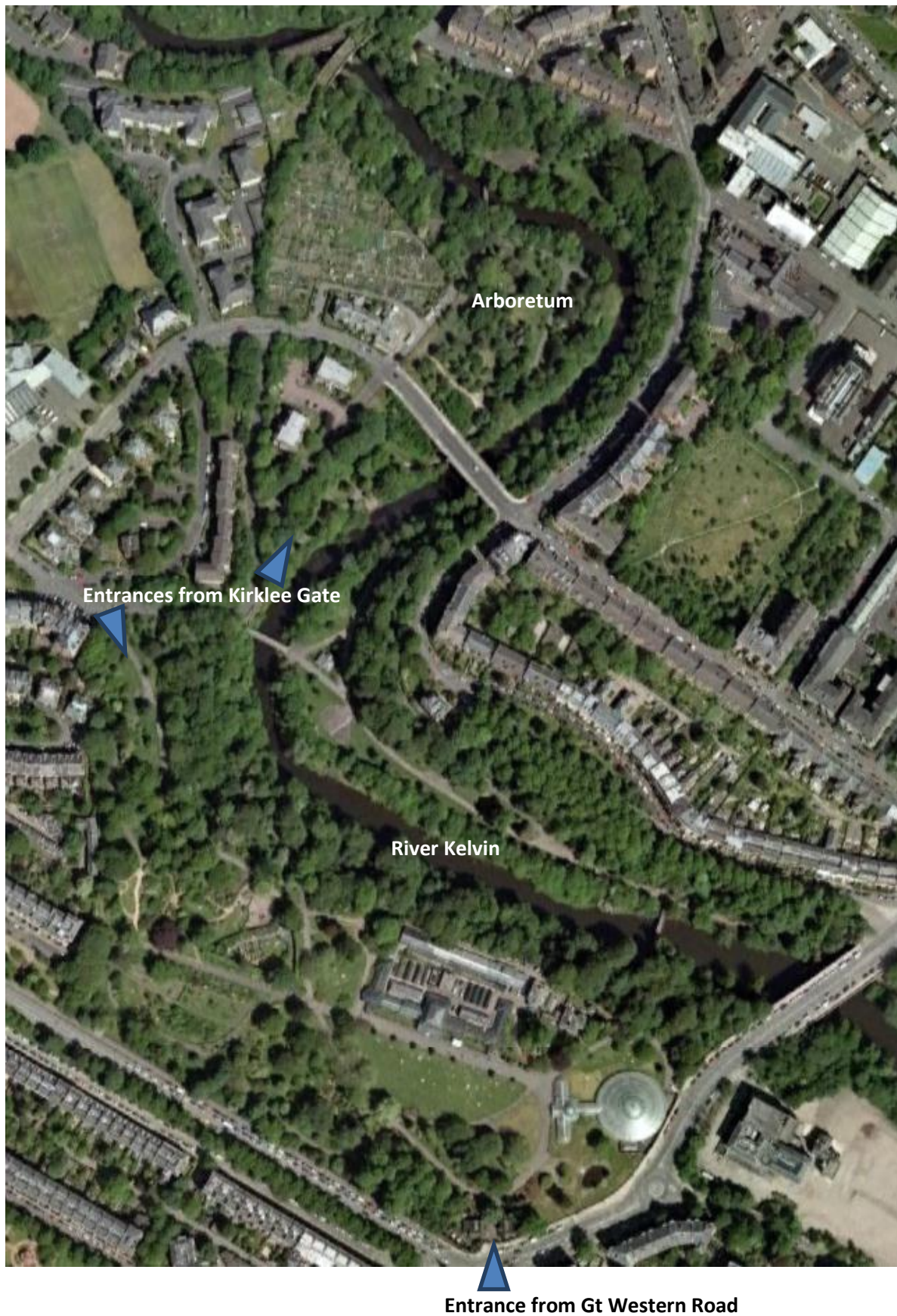
The arboretum, which opened in 1976, is now well established and displays natural groupings of tree species in a tranquil setting alongside the River Kelvin. Situated here is an area of plants introduced by David Douglas the famous plant collector.

The wooded walkways of the River Kelvin provide an ideal habitat for wildlife and are of conservation importance. Within the grounds the mature native and exotic trees furnish an impressive background for the plant collections that are grouped according to their cultural requirements.

The herb garden and herbaceous borders are particularly attractive in the spring and summer. The chronological beds, in which the plants are arranged in the order of their introduction to Britain, are a popular educational feature.



The large aerial photograph/map on the next page gives an overview of the gardens and the river.



2.0 Visitor Survey and Conclusions

At the commencement of the project, a generic visitor survey was undertaken. It was purposely not related to the concept of the Tree Hub, as further consultations were planned as product ideas began emerging. The survey's primary purpose was to gain a better understanding of why people came to the Gardens, what they do there, what they enjoy/dislike, what behavioural patterns exist and what could be done to improve their experience. This data was then to be used to help formulate and evolve the Tree Hub concept.

While Appendix 1 provides a detailed overview of the survey, the next bullet points summarise some of the more relevant findings and their associated conclusions (bold):

- Many users are just walking through. They use the diagonal path between the main entrance and the Kirklee Gate access, by the Arboretum, as a short-cut. **They are a potential audience and the location of the planned Tree Hub should recognise this.**
- Some users perceive the Garden as a park. Indeed they call it 'The Park' and it is, to many, a green leisure space. While this is refreshing, very user-friendly and ensures a broad mix of visitor profiles, **it does imply that there is scope for the botanical aspect of the gardens to be reinforced. This will also enhance synergy with the Tree Hub concept.**
- Irrespective of what visitors call it, there is a genuine and deep affection for the Botanic Gardens.
- In the same regard it became clear is that visitors would like to see more information about the plants. This request ranged from **more-informative plant labels to better in-garden interpretation.**
- Kibble Palace and the nearby Café are extremely popular. There is a degree of indifference towards the tropical houses. This is clearly as a result of the fact that the building cannot compete, architecturally, with the Kibble Palace. It also suggests that it may need some rejuvenation of its interior and/or interpretation. **This aspect could play a role in determining the siting of the Tree Hub.**
- The gardens attract a very wide range of social, demographic and age groups. **It will consequently be vital that the Tree Hub caters for all.**

(Detailed observation of how visitors used and accessed the garden was also part of the remit of this survey and the relevant findings are included in section 4.0)

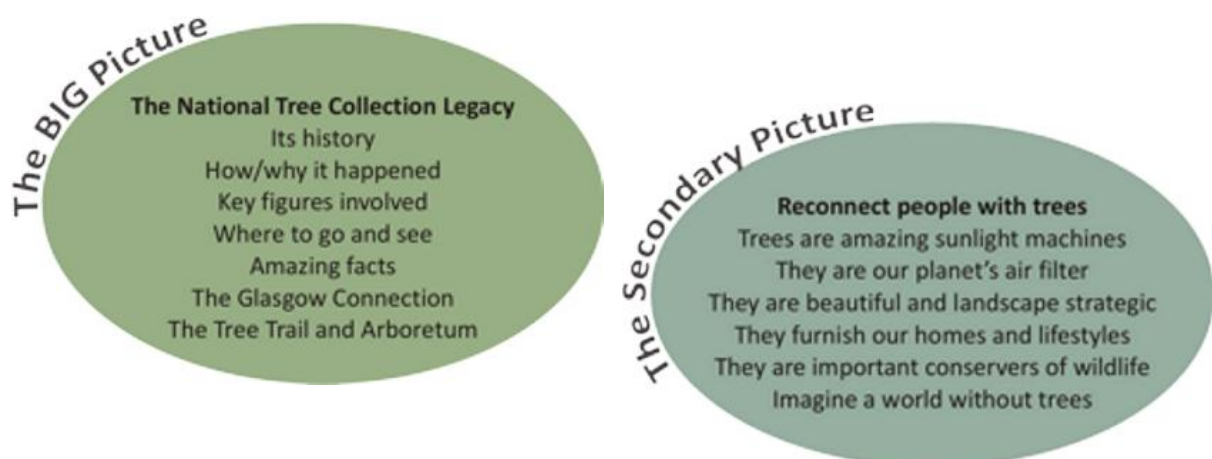
One important conclusion that can be drawn from the research are that visitors are keen to learn more about the plant collections and plants themselves, although this should not be at the expense of the simple enjoyment of the garden or to imply that the garden experience should be made 'stuffy'.

It also suggests that while the core project vision must focus on the important tree collections, there is the opportunity to widen the concept to include the objective of reconnecting people with all trees in memorable, intellectual and emotional ways. This will not dilute the original vision, but reinforce it.

Consequently there is a significant range of potential other communication objectives that are naturally derived from the above:

- To emphasise that Glasgow's Botanic Garden is an important tree collection in its own right.
- To reintroduce people to the wonder of trees and reinforce their importance to us and to life on earth. Irrespective of whether trees are nationally important specimens or not, they're not always fully appreciated or valued by everyone. This project consequently will use the wonder of the nation's important tree collections as a catalyst to reconnect people with all trees in both intellectual and emotional ways.
- To encourage people to see and understand trees in new ways and to discover their importance to our landscapes, our everyday lives and to all living creatures on our planet.
- To encourage a better understanding of our native trees and their indigenous importance to our landscape and culture.
- To create an iconic physical gateway, or hub, within the Gardens that, through interpretation and orientation, addresses these issues and contributes to the important built heritage within the complex.
- To use effective interpretation that reaches out to all social and age groups: *Access for All*.

These diagrams summarise such an expanded vision:



3.0 Potential for a Widened Vision

In the light of the visitor survey and its associated conclusions a revised vision for the Tree Hub could potentially include:

Within the Garden:

- Orientation
- Promoting wider awareness of Scotland's tree collection heritage and how they historically came to be created
- Improving awareness and use of Glasgow's own Arboretum. This should include a gateway orientation point close to the entrance to the Arboretum.
- Forming a gateway into a tree trail
- Introducing a new level of *Access For All* interpretation

Outwith the Garden:

- Orientation
- Promoting wider awareness of tree collections throughout the local, regional and national areas and encourage visits to them.

Within and Outwith the Garden:

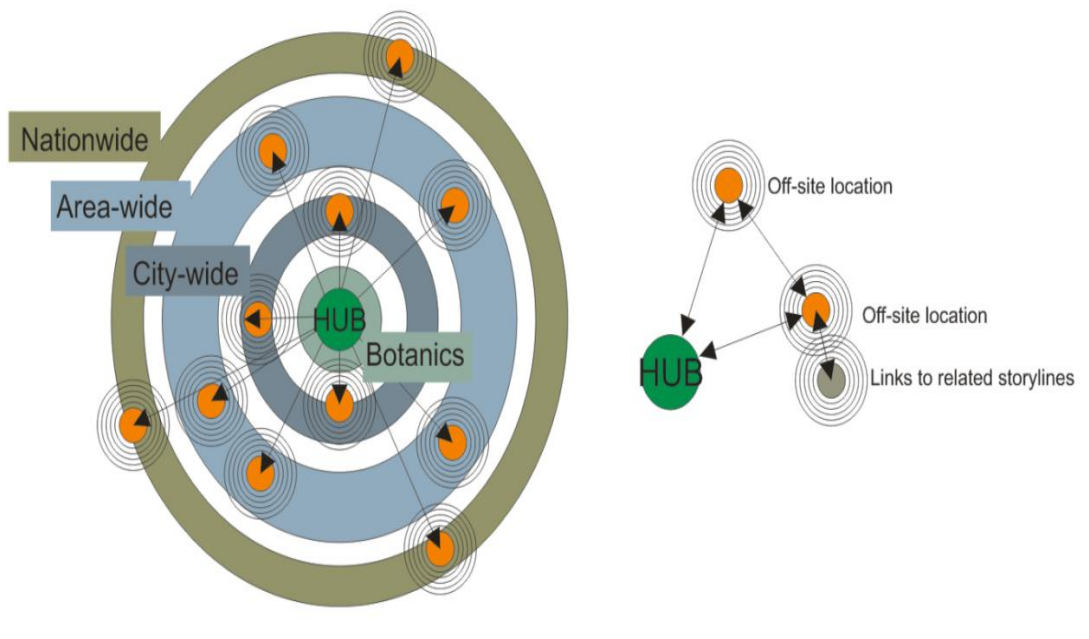
- Through interpretation, telling the historical story of the tree collections from plant hunters to landscape creators and Glasgow's connections.
- Bringing trees to life through links with the educational curriculum, expounding on the importance of trees to life on earth and revealing their amazing physiology.

Within the Garden

- Using the Hub to attract visitors to the lesser used areas of the gardens through its physical design and location.
- Creating an added landscape component that will benefit the entire garden experience.
- Introducing a degree of Botanical 'gravitas' while simultaneously making learning about trees fun, accessible and enjoyable.

- Respecting the existing and historically important structures and designed landscape. By implication, the Hub should not be a building solution; it should be a creative landscape installation.

The context of the hub, relative to its wider environment, is summarised by the diagram below.



Examples of nationally important sites that the hub will explain and orientate visitors to include:

Benmore Botanic Gardens
Dawyck Botanic Gardens
Scone Palace
Dunkeld Estate
Camperdown Park, Dundee
Drumlanrig Castle
Mount Stuart
Lael Forest Garden

While the above strategy is part of an intellectual analysis, of equal importance is the need for a physical landscape analysis that explores the siting of the Tree Hub and its potential impact, both good and bad, on the Botanic Garden. The next section 4.0 highlights these study conclusions.

4.0 Site Use Analysis

The noted visitor survey observations highlighted a number of important criteria. This diagram highlights them.

One of the most obvious issues is that the majority of visitors contain themselves with the area around the Kibble Palace, not far from the garden's primary entrance. As the diagram shows, there is a *glass wall* across the site. While this might suggest that the Tree Hub be located within this high-use zone, arguably the opposite is true. As long as the hub is visible and not too divorced from the core area, it could act as a 'magnet' that draws visitors out of the established use patterns and encourage wider exploration of the gardens. Add in a tree trail that can be centred on the hub and there is the potential for the hub to play an important role in diversifying visitor use patterns.



The same issue also affects visitor numbers to the Arboretum, which is perceived by many to be remote yet it is only a 4 minute walk from the edge of the core area. Again, the combination of strategically sited hub and a tree trail that embraces the Arboretum will help to rectify this perception and psychologically make the Arboretum more accessible.

The main garden walk (shown orange) is a key dispersal route and any hub must be located close to it. The same applies to the diagonal 'through route' (shown grey).

In conclusion:

- The Tree Hub can be a tool to expand the core area and attract a wider visitor audience and break down the 'glass wall'.
- Strategically, it must make the Arboretum part of the garden experience. It should be an Arboretum gateway.
- New visitor 'magnet' should be on the 'glass wall' or just beyond it and located adjacent to the primary circulation routes.

4.1 Site Visibility Analysis

If the proposed Tree Hub is to act as the described 'visitor magnet' it should be located in a position that is visible to the core areas and to those using the 'through route' (to encourage casual users to visit and/or come back) and the main 'spine' road.

It also must be an iconic, unusual and intriguing installation if it is to achieve this objective.

Conversely, it must not be too close to existing buildings so as to compromise their Architecture. Such separation will also ensure that the Tree Hub will draw visitors through the 'glass wall'. However, it should not be too far away so as to discourage access by disabled, infirm or young family users, particularly as the spine road becomes an incline beyond the core area.

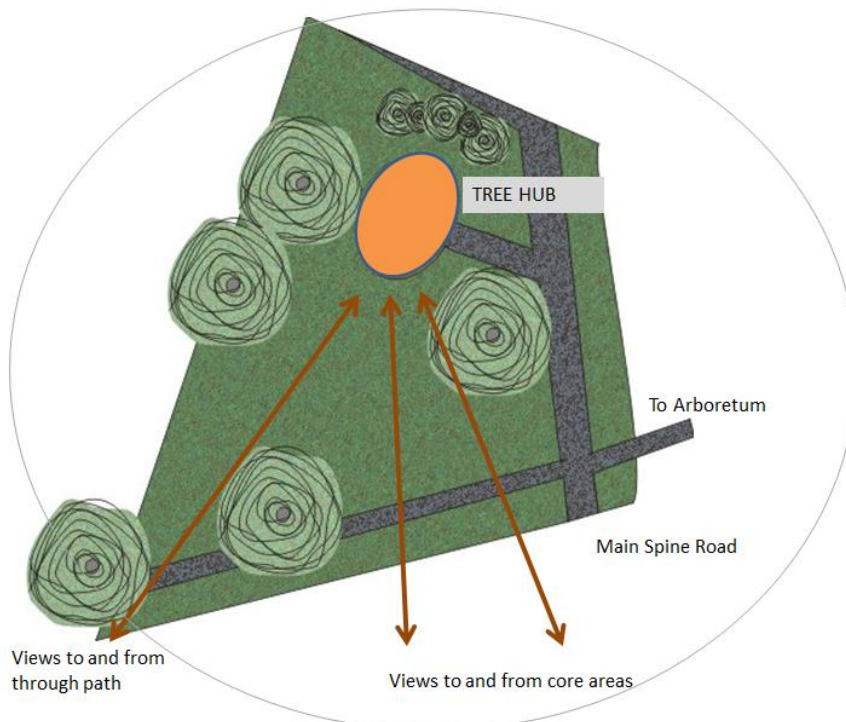
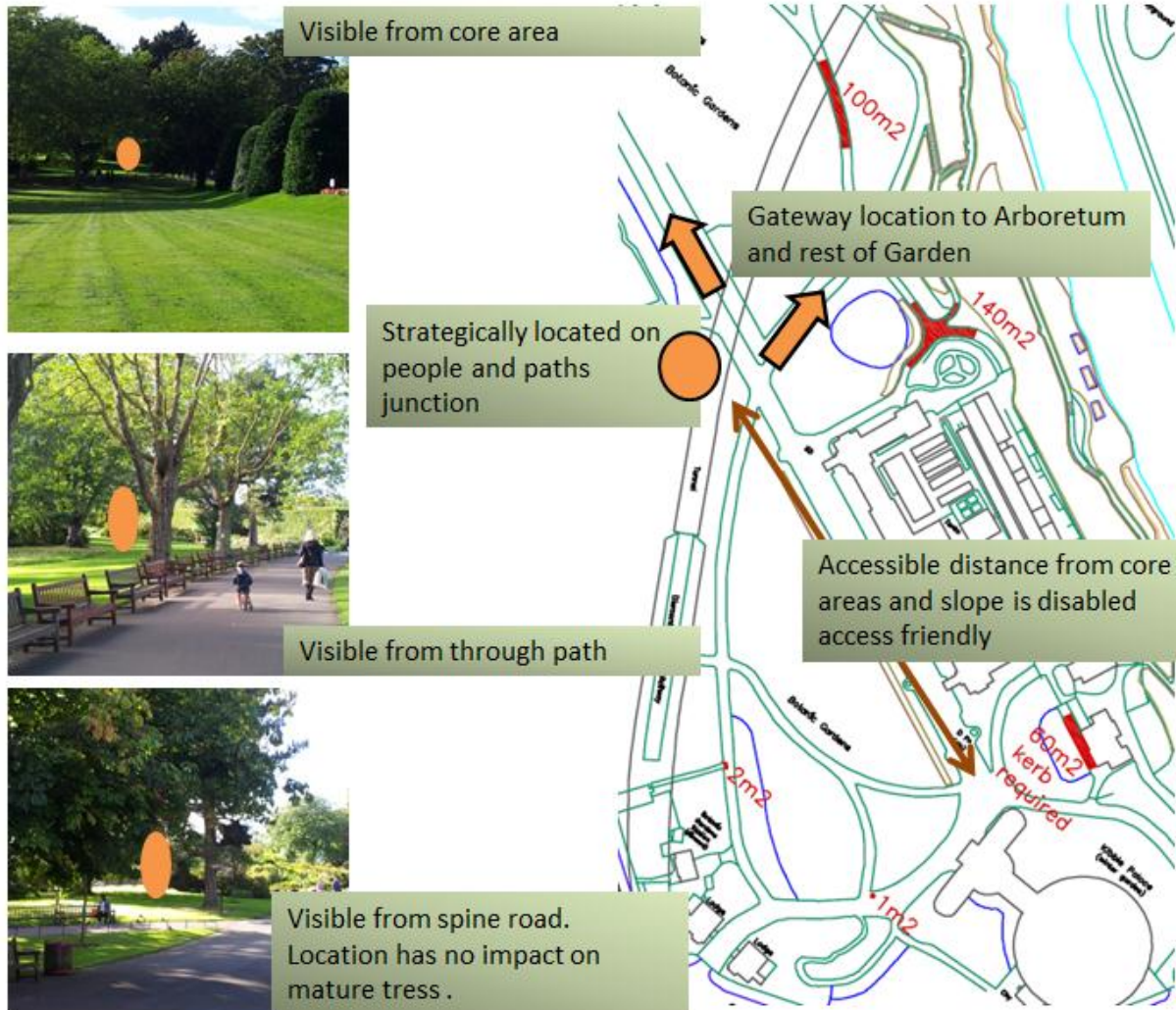
The diagram below highlights the junction of all of the described parameters that occurs in the area shown by the blue circle. Extensive evaluation of several other sites confirms that this is the only location that meets all of the defined criteria.



The diagrams on the next page illustrate the area in more detail.

The Tree Hub

Glasgow's Gateway to Scotland's Trees





The preceding diagram also highlights that there is potential to create a 'through-path' across the chosen site that will encourage access from several directions. The site also boasts its own specimen tree, creating a natural synergy between the hubs purpose and its location.

Further analysis of the site's physical characteristics reinforce that the form of any installation must be transparent and that a solid, building-derived, solution would be wholly inappropriate. By contrast, the scale of the existing trees will permit a solution to be created that has a high degree of presence and boldness in a 'transparent' context.

The site shape and disposition of trees is informal, even though the formal spine road runs alongside it. This suggests a part-relaxed, part-informal landscape approach to how the Tree Hub components can be laid out.

Section 5 highlights the design solutions that evolved from this analysis and its associated conclusions.

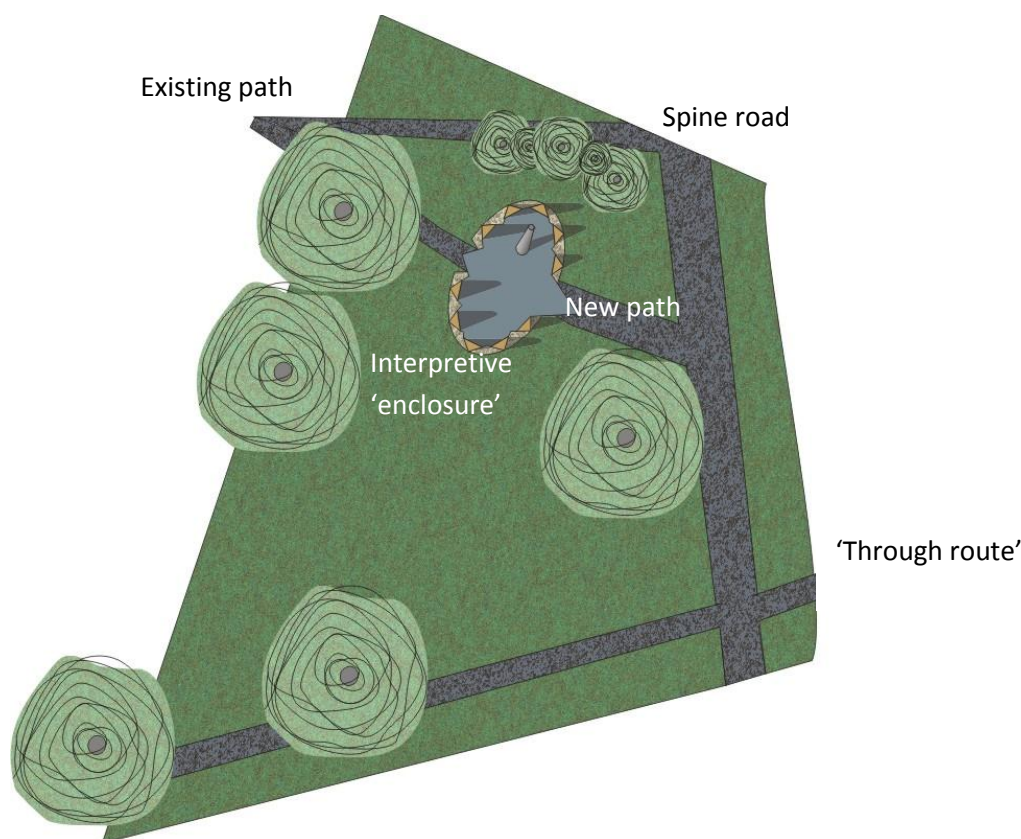
5.0 Tree Hub Design Proposals

A summarised overview of the site analysis and the project vision are listed below. They suggest that the installation and any associated components must be:

- Landscape sensitive, yet high profile, iconic and a visitor 'magnet' or attractor.
- Visible from all key approach and core areas.
- Transparent and not solid.
- Semi-formal in site layout.
- Utilise a *through-path* concept, rather than a *dead-end* path structure.
- Be Tree-inspired and a gateway to the rest of the garden's specimen trees and Arboretum.
- Be a National Tree Gateway.
- Contain quite extensive orientation and interpretation information in an 'access for all' package.
- Be DDA compliant in all respects.
- As it will be potentially be a venue for other events or school groups it should, ideally, have a roof of some sort.

Initial discussions with the Client group also suggested that 2 solutions be evolved. One should be an *optimum* solution that is designed without thought for budgets. The other should be a more fiscally pragmatic solution that could be viewed as a 'fall-back' option, should sufficient capital funds not be secured to address the optimal design. However, as a result of the public consultation exercise (which overwhelmingly supported the optimum solution) and after more discussions with the group it was concluded that in view of the National status of the gardens plus the needs for a truly iconic structure, a compromised solution was not felt to be appropriate.

The design that has been developed uses the site identified within the preceding section of this report. The proposed structure is set within the context of a semi-enclosure of space created by a ring of interpretive monoliths. Partly inspired by standing stones in their disposition, the monoliths are, however, iconographic interpretations of fir cones and symbolic forms that 'grow out of the earth'. This plan explains the concept.



The interpretive 'cone pods' solution addresses several issues. The first is that there is a large amount of interpretive and orientation information required, which will be in graphic panel form. Graphic panels are difficult to install in sensitive landscape settings as they can be very invasive, particularly as they generally need to be colourful and visually appealing. By arranging the pods like a circle of monoliths they can be orientated to face into the enclosure, thereby minimising the external impact of colourful graphic panels.

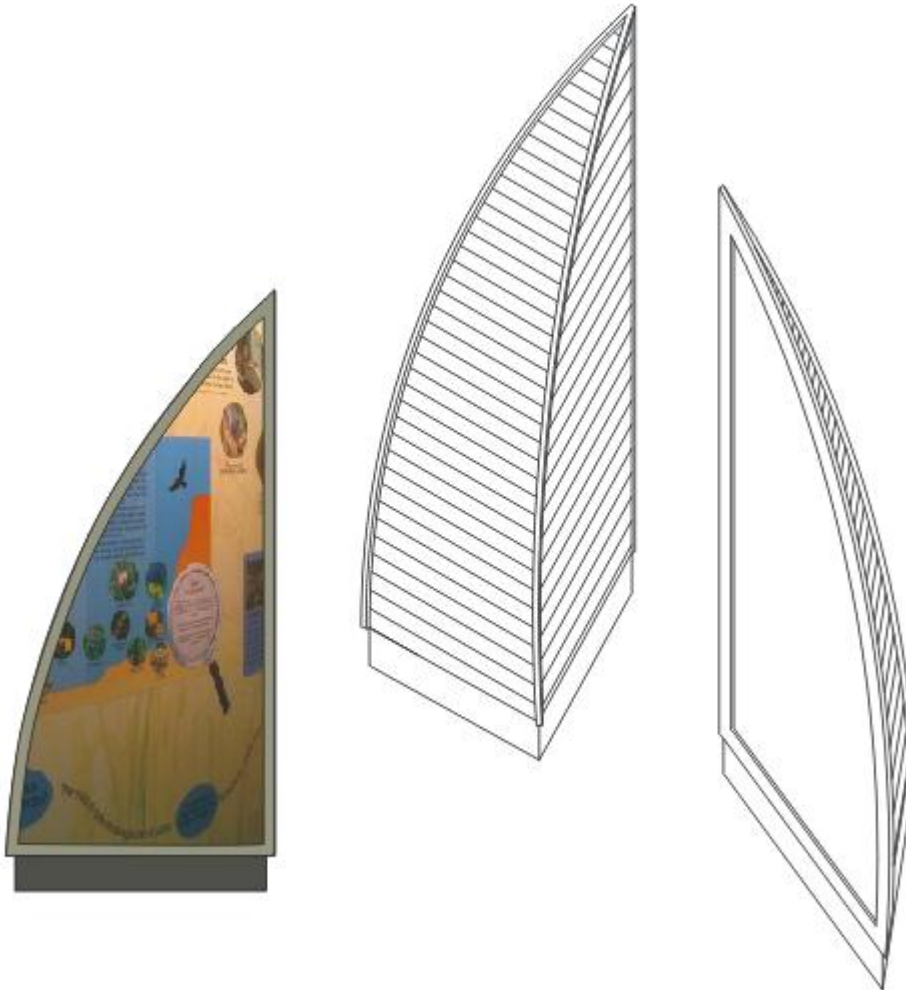
The second issue is that the solution gives a degree of informality, yet still retains a layout that is contained and manageable. While the arrangement will encourage visitors to explore and walk around the pods, at the same time they will be gently constrained by them and the inevitable erosion of the adjacent soft landscaping will be minimised.

The third reason for the pods concept is that each is potentially a 'sponsorable' item. Like all projects, the Tree Hub will need a range of grants and other funding to secure the necessary capital. A high profile and 'green' development in Glasgow's Botanic Gardens could be highly valued by a wide range of private sector sponsors. Such sponsors could be asked to pay for a single pod, giving them a very tangible item, branded with the sponsor's identity, in return. This concept is developed further in Section 8.1.

This next diagram shows how the grove of cone pods will look without the primary structure in place. It highlights that although the plan layout is structured, the built appearance will be less so, particularly when appropriate landscaping is undertaken to 'deformalise' the installation further.



This diagram illustrates in more detail the form of each pod.



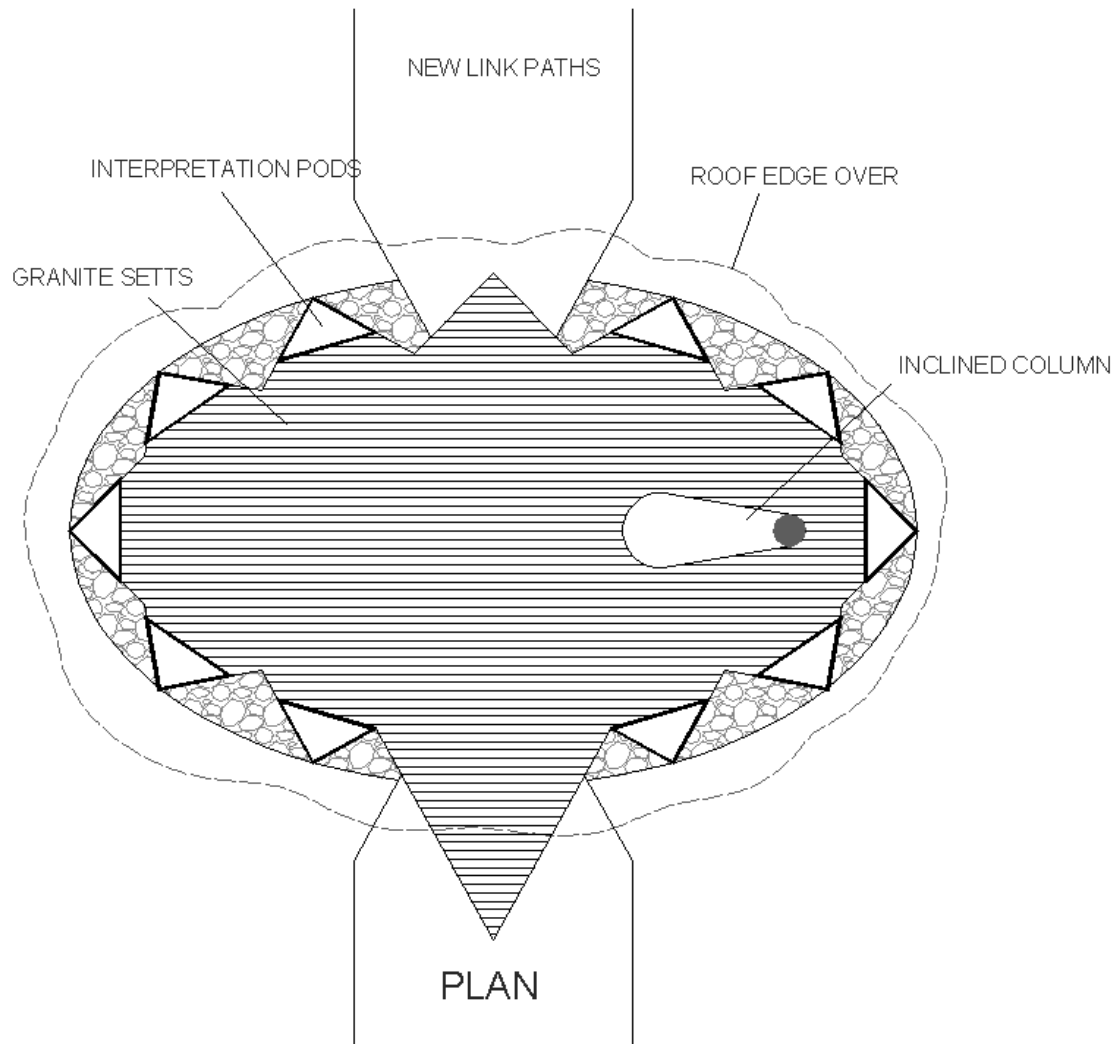
Triangular in plan, each vertical inner face will contain a large GRP encapsulated graphic panel (shown diagrammatically). The shaped and curved outer faces will be clad in unwrought larch boards fixed over timber formers. A solid base of polished concrete will lift each pod above the ground to protect them from garden maintenance work and visitors' feet. Each pod will be approximately 2.4m in height.

Below is the iconic design to cover the interpretive area. It is a tree-inspired-sculpture-pavilion-hybrid that would be made from raw aluminium.



The (roughly oval shaped) roof of the structure is a curved sheet of aluminium into which abstract glazed shapes are cut so that standing under it will be like looking up through a tree canopy and seeing the sky. The tree branches are actually lattice beams that will support the roof, and the inclined single column is, of course, the tree trunk. The solution is simultaneously iconic, dramatic and yet transparent enough to enable the existing landscape and trees to maintain their dominant presence. The apex of the roof will be some 6m high.





The drawing above shows the plan arrangement in detail. This plan also applies to Option 2, apart from the fact that the column is central to the space.

6.0 Testing the Concept and Tree Hub Design Proposals.

To test the project ideas that were being realised, a Public Consultation workshop day was held in the south wing of Kibble Palace. The Friends of the Glasgow Botanic Garden invited all the local community groups to the workshop and it was also open to general members of the public. While Appendix 2 contains full details of the workshop findings, the next section of text summarises the findings. Public consultations can often be very inconclusive, however in this instance there was an unprecedented level of clarity. The findings were very conclusive, and the support for the concept was very positive and enthusiastic, as was the reception to the designs and project's planned location.

At the core of the workshop was an exhibition that explained the background to the project, its concept, the design proposals, the interpretive storylines and the Tree Hub's national orientation function. Everyone who viewed the exhibition was individually spoken to and their feedback was recorded.



Around 70% of the workshop participants were positive about the project. Only 3% were against it and the rest had no opinion. Of those who were favourable towards the project, 78% preferred the *optimum* Option.

This exercise reinforced that the designs and concept were extremely well received and would be supported by a substantial majority of garden users and local people.

6.1 Further Consultations

As part of the Client team, representatives of Glasgow City Council Land and Environmental Services have attended meetings and are fully aware and supportive of the outcomes of this study. In addition, consultations have taken place with Council's Development and Regeneration Services (Planning).

Similarly, the Manager of Glasgow Botanic Garden and his colleague have been part of the Client group that has fully participated in the study's development.

7.0 Orientation and Interpretation Functions.

In terms of the Local and National orientation functions of the Tree Hub it is clear that, if to be successful, it will have to operate at several levels and use a variety of media.

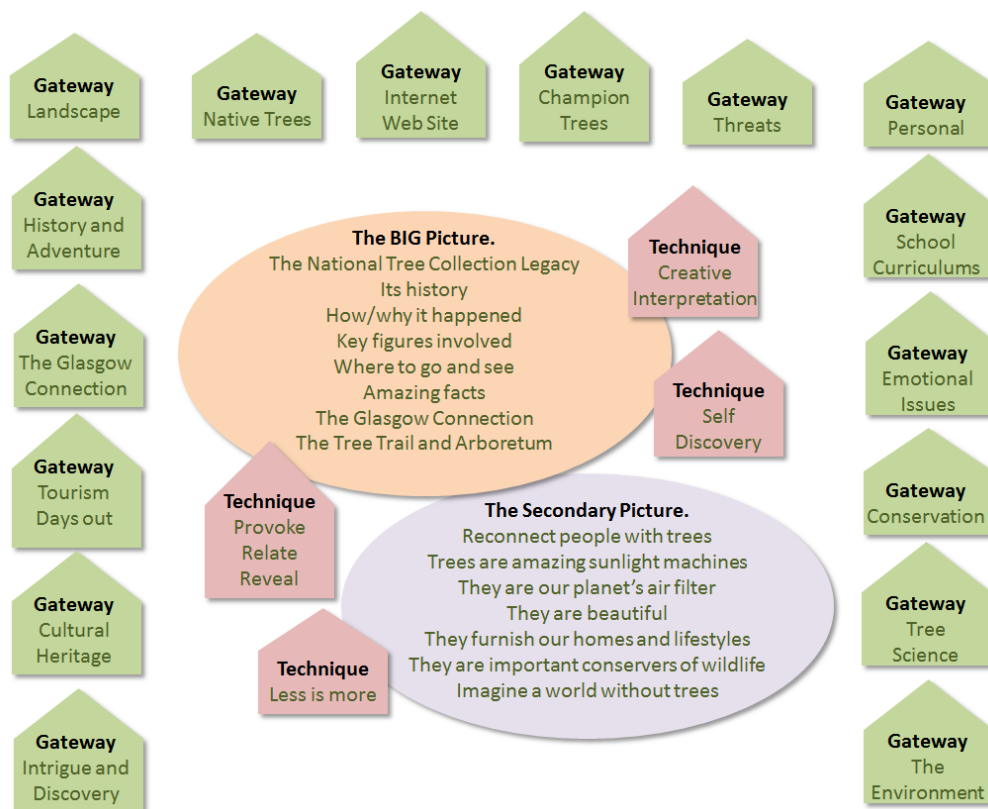
To recap slightly, the storylines of the previously described BIG PICTURE can be summarised as below:

- Scotland has one of the most diverse collections of specimen trees on the planet.
- Many of these tree collections are easily accessible from Glasgow, indeed Glasgow's own Botanical Gardens has its own Arboretum.
- Glasgow is historically linked with the pioneering, new world 'Plant Hunters' who collected the seeds that kick-started the Victorian tree planting bonanza, whose inheritance is so integral to Scotland's landscape today.
- At the heart of the old British Commonwealth, Glasgow University and its botanists had access to much of the world.
- The result is a priceless and amazingly diverse legacy that should be accessible to everyone.
- Few people know about this important legacy and it is not (yet) widely or effectively communicated.
- As a result there is a 'black hole' in our cultural heritage, with tourism opportunities not being fully exploited and some very important tree collections are under threat through lack of management.
- Glasgow Botanic Garden's own arboretum is a prime example. Partly as a result of its location, and partly due to the aforementioned lack of awareness, it is undervalued and 'missed' by visitors.
- The Commonwealth Games are seen by the National Tree Collections of Scotland initiative as an opportunity to begin addressing the challenge.
- Irrespective of whether trees are nationally important specimens or not, they're not always fully appreciated or valued by the wider community.
- The initiative should, consequently, not be about 'preaching to the converted'. It should be about making the wonder and awe of the tree collections and native trees valued, accessible and understood.
- There is a unique opportunity to further build into the initiative ways of generically reconnecting people with all trees in intellectual and emotional ways.
- In other words, the project should be trying to encourage people to see trees in new ways and to understand their importance to our everyday lives, as well as to life-on-earth.

In summary, the project has 5 key objectives:

1. To highlight, promote, interpret and orientate people about Scotland's National Tree Collection Heritage.
2. As part of the above, to reintroduce people to the wonder of trees.
3. To create a physical gateway, or hub, within the Gardens that, through interpretation and orientation addresses these issues.
4. To utilise effective communication that reaches out to all social and age groups: *Access for All*.
5. To achieve this accessibility, there needs to be a series of intellectual gateways, each of which appeals to different groups in different ways.

What are the Gateways? This diagram suggests how they may be formulated and combined with good interpretive and communication practices:



All of the above suggests communication components in the form of:

- A centralised installation at the Tree Hub that orientates and communicates. It can use a variety of techniques beyond creative graphic panels. For example, QR codes can be incorporated into the graphics so that visitors can *find out more* or *undertake virtual visits* to local and/or remote National Tree Collection sites. Sound stores can also be integrated into the displays using 'wind up' systems that require no power (they can also be wound in 2



directions and tell 2 different stories). Audio commentaries can range from evocative Poetry to further layers of information or, even, just the sound of wind in trees.

- A Glasgow Botanic Garden's *Tree Trail* that starts from the Tree Hub and takes visitors on a short interpreted walk through the garden's important tree collection. This trail should also be designed so that it can be encountered and 'dipped into' independently of the Tree Hub.
- An orientation leaflet that can be dispensed at the hub and taken away. It can be bi-functional, providing general information about the National Tree Collections initiative and key locations on one hand, and also providing specific orientation for the Tree Trail in the garden.
- An enhanced Glasgow Botanic Garden's website that incorporates a Tree Hub section which would include hyperlinks to the website of other stakeholders in the project.

In physical and visual terms, interpretation within the Tree Hub complex should be bold and strong; to ensure that it attracts the visitors and provokes interaction. From a landscape perspective the issue of bold interpretation has been accommodated by the inward facing format of the Tree Hub concept.

In more practical terms, the proposals within the Gardens have considered the most sustainable method of interpretation and concluded that there should be a limited use of "new technology" due to maintenance/management issues. However, the use of QR within the Hub and Tree Trail, provides an ideal opportunity to expand the NTCS information through a wider base of information, through the Friends of Glasgow Botanic Gardens own web site and beyond.

7.1 The Tree Trail

Venturing beyond the Tree Hub and into the Gardens (in the form of the interpreted Tree Trail) is equally landscape-challenging. Interpretation within gardens gives rise to many conflicts. The most notable challenge is designing installations that are *interpretation-effective and appealing yet not landscape invasive*. Fortunately, (and unfortunately!) there are lots of poor botanical interpretation examples that can learnt from. Most fall into similar bad practice traps:



Trying too hard. Awful colour. Inappropriate shape.



Too many words. Not DDA compliant. Stark white background is landscape invasive. QR is a plus.



Unsympathetic support and invasive white background rectangle is stark and visually jarring.

There are some better examples that can also teach good practice lessons:



Aside from the unsympathetic support this illustrates that dark colours are a better solution, in the same way that botanical labels are not overtly intrusive.

The lessons learned from an extensive review of botanical interpretation on a number of sites are quite simple:

- Avoid white or light colours. Black or very dark colours are best. Green should be avoided.
- Text should be minimal, legible and accessible.
- Panels on stalks (lollypops!) are 'hard', landscapes are 'soft'. They are also visually incongruous: trees are big, skimpy panel supports do them no justice.
- Camouflage is good, as long as it is not too well done!
- Do not try too hard with text/images. Retain some dignity. Use good 'Provoke, Relate, Reveal' interpretive practices.
- QR inclusion is good, but needs to be at an accessible height.
- Low level is landscape sensitive but not user friendly when eyesight impairment and other DDA issues are considered.
- A discovery related icon is a positive asset. It is more interactive and, as a result, the core message is more memorable.
- Installations must be very robust and vandal proof.
- The industry standard of rectangular panels on 2 legs is clumsy and too generic. Over-exposed visitors actively avoid them!

So how can a Tree or the Tree Trail be interpreted to a standard commensurate with the Tree Hub?

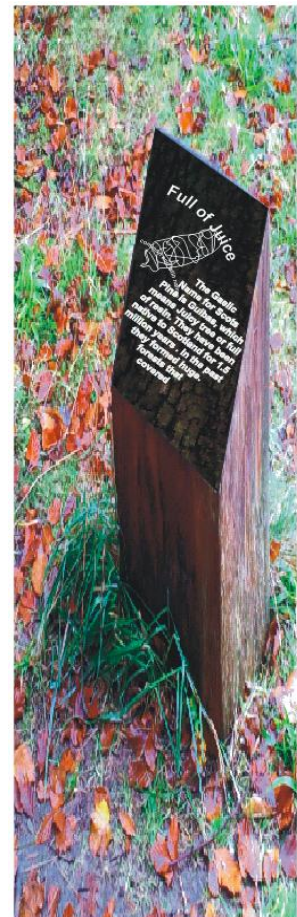
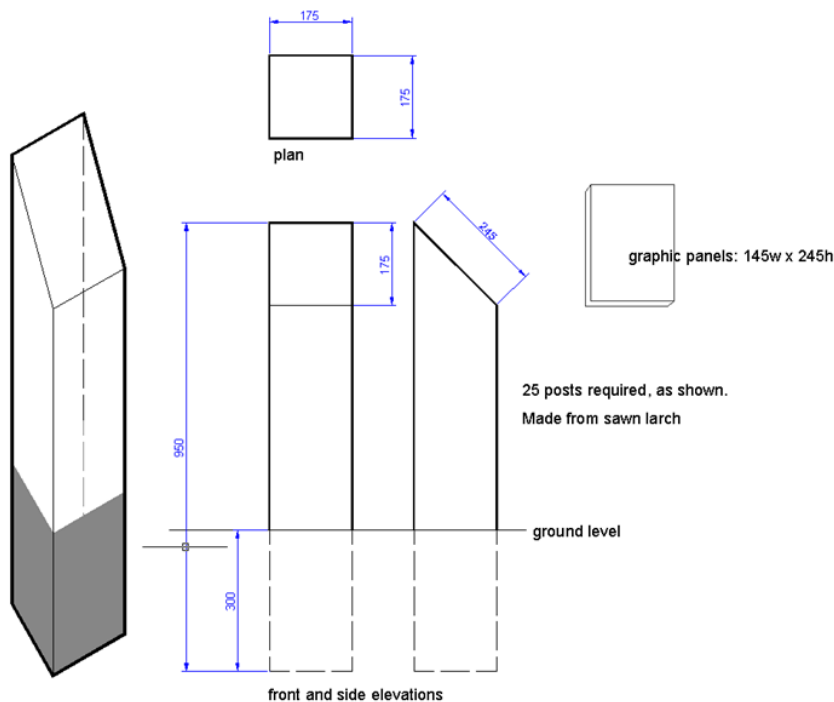


- It should be located in this orange triangle zone indicated on right, which is visually and tactilely accessible to adults and children alike, but not mounted on a tree as this would require unacceptable fixings and potentially undermine the interpretive message.

- It needs a visual connection with the tree itself. One solution is use the bark of the tree as a dark and textured background. This means each Tree Trail point is individually tailored to each tree.
- The panel support requires solidity and synergy with the tree it relates to. This suggests timber construction of a generous size.



- The support and the graphic panel should be holistically combined so that there is no 'lollypop' design anachronism. After much analysis and debate this simple solution was chosen. It is relatively inexpensive, adaptable and sympathetic. Plus it meets



all of the stated

access, visual and ergonomic criteria.

In terms of the Tree Trail itself, the diagram on the next page shows what has been developed in conjunction with the garden's team. The key is below.

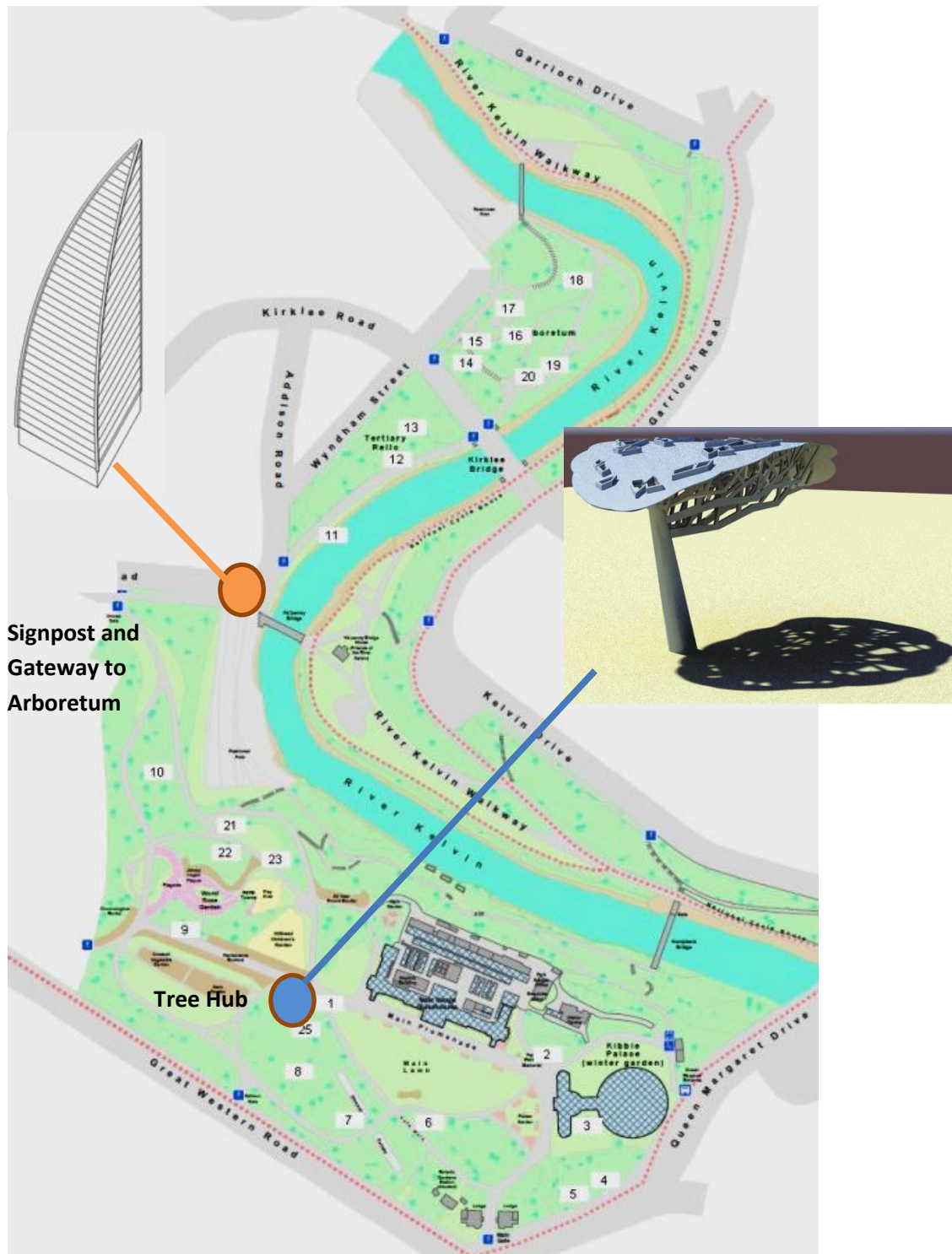
It comprises 25 trees that range from the exotic to native specimens, thereby linking directly with the Tree Hub's interpretive storylines. The storylines on each of the Tree Trail points will reinforce this synergy.

The orange dot defines an additional interpretive pod, separate from the main group, that would be sited at the entrance into the Arboretum to act as a signpost and orientation gateway.

The blue dot is a reminder of the Tree Hub location. This trail will apply to either of the Tree Hub options.

1. *Pinus nigra* var. *maritima* (Aiton) Melville (Syn. *Pinus nigra* subsp. *laricio* Maire) = Corsican Pine
2. *Toona sinensis* (Juss.) M.Roem. = Chinese Mahogany
3. *Kalopanax septemlobus* (Thunb.) Koidz. = Prickly Castor Oil Tree
4. *Ginkgo biloba* L. = Maidenhair Tree
5. *Taxodium distichum* (L.) Rich. = Bald Cypress
6. *Fraxinus excelsior* L. 'Pendula' = Weeping Ash
7. *Larix decidua* Mill. = European Larch
8. *Quercus robur* L. = English Oak
9. *Fagus sylvatica* L. 'Atropurpurea Group' = Copper Beach
10. *Quercus velutina* Lam. = Black Oak
11. *Sequoiadendron giganteum* (Lindl.) J.Buchholz = Wellingtonia
12. *Metasequoia glyptostroboides* Hu & W.C.Cheng = Dawn Redwood
13. *Liriodendron tulipifera* L. = Tulip Tree
14. *Tsuga heterophylla* (Raf.) Sarg. = Western Hemlock
15. *Betula alleghaniensis* Britton = Yellow Birch
16. *Pinus coulteri* D.Don = Coulter Pine
17. *Picea sitchensis* (Bong.) Carrière = Sitka Spruce
18. *Sorbus arranensis* Hedl. = Scottish Whitebeam
19. *Alnus japonica* (Thunb.) Steud. = Japanese Alder
20. *Acer griseum* (Franch.) Pax = Paperbark Maple
21. *Pinus sylvestris* L. = Scot's Pine

- 22. *Carpinus betulus* L. = European Hornbeam
- 23. *Abies pinsapo* subsp. *marocana* (Trab.) Emb. & Maire (check status) = Spanish Fir
- 24. *Araucaria araucana* (Molina) K.Koch = Monkey Puzzle
- 25. *Betula maximowicziana* Regel = Monarch Birch



8.0 Capital Costs

The following table highlights the capital costs associated with the project.

	£ (ex VAT)
Construction of enclosure/pods, foundations and hard landscaping	54,000
Canopy structure (manufacture and supply)	180,000
Erection of canopy structure	20,000
Tree Hub interpretation and banner/panel at garden entrance	17,500
Tree Trail (inc 25 posts and interpretation panels)	7,500
First Leaflet production run	6,000
Web site updating for QR and Tree Hub (sum)	5,000
Sub Total 1	290,000
Project Team Fees	43,200
Part time, pre contract Project Manager *	12,000
Statutory fees	3,500
Ground investigation and topographical survey	2,000
Sub Total 2	60,700
Contingency	20,000
TOTAL CAPITAL estimate	370,700

Notes on all of the preceding figures are as follows:

- Prices are current and make no allowance for inflation on the basis that construction industry tenders are low and extremely competitive during the current recession. In fact, tender prices have changed little over the last two years. Falling work output, softening materials prices and increased competition have led to a modest fall-back in tender prices in the second half of the year. BCIS expects tender prices to end the year 1.8% lower but increase 1.5% in 2013. A contingency sum is however included.
- It is assumed that ground conditions are normal. (Checks have been made and it has been established that the site of the Tree Hub does not conflict with a nearby underground tunnel).
- * The part time Project manager would only be employed until all funds are in place, after which the Design Team would take over the Project Management role.
- Wherever possible budget costs have been secured for major project elements to ensure that the quoted figures are as accurate as possible. However, the figures do remain as estimates.
- The figures exclude contributions in kind incurred by the Friends of Glasgow Botanic Gardens. The table below highlights what additional volunteer derived costs have been incurred to date and projects them to project completion.

Number of volunteer person days incurred on project from inception to end of 2012 (102 days charged at a rate of £150.00 per day)	£15,300
Estimated number of volunteer person days to be incurred on project from start of 2013 to project completion (200 days charged at a rate of £150.00 per day)	£30,000
Direct expenditure incurred to date (consultant's charges for assisting with application to secure grant funds for study)	£3,000
Total estimate over duration of project	£48,300

No VAT is applicable to above figures.

The application of these 'in kind' costs increases the *virtual* capital budgets to:

£419,000.

- No maintenance or revenue costs are included in the preceding figures as the project, if built, would be adopted by the wider garden maintenance programme. The table below illustrates what these figures are likely to be. The high year-1 figure reflects that there will be new planting and plant rearrangement undertaken. By year 5 it is anticipated that the expenditure will have annually stabilised.

	Year 1	Year 2	Year 3	Year 4	Year 5
Maintenance of Tree Hub and Tree Trail	£0	£750	£1500	£2000	£2000
Applicable garden maintenance	2000	500	750	950	950
Annual leaflet production run	0	6000	6000	6000	6000
Total	2000	7250	8250	8950	8950
Total over 5 years					35,400

(All figures are £ ex VAT)

Over 10 years (the expected lifespan of the interpretation) this represents a potential expenditure of around £70,000: a significant investment commitment to the project by Glasgow City Council. It may be that the burden of leaflet printing costs can be mitigated by sharing this annual overhead with the other project partners. This is explained more fully within the next section of the study.

8.1 Potential Funding Strategy

The strategy below is based on the best information available at the time of the preparing this report. Such information can be summarised as follows:

- Discussions have taken place with Central Scotland Green Network (CSGN) who funded this study, and they have indicated that, subject to a satisfactory application, they may be able to support the project at a funding contribution level of around £150,000. It is likely that this funding, if received, would extend over 2 financial years. This would not present programming problems and would still enable a 2014 project completion. A grant application is to be made in late January 2013 and a decision is expected in early March 2013.
- Once the outcome of the CSGN application is known, an early submission will be made to the Heritage Lottery Fund (HLF). There are 2 options to follow in this regard: either an application for funds of up to £100,000 or for a higher level of support above £100,000. The advantages of the lower funding route are that a decision can be secured in a relatively short period of time.
An application for higher funding levels will incur a much longer and more involved application process. However, it is possible that such an application could secure a grant of approximately 40% of the total capital costs.
- Creative Scotland are currently well funded and have a public artworks programme that would appear relevant to the Tree Hub's structure as it is in a high profile location, will be accessible by large numbers of people and is an art-education sculpture. It may be that Creative Scotland would also fund a performance to mark the opening of the Tree Hub. A preliminary approach has been made to Creative Scotland and their response is awaited.
- Glasgow City Council has indicated that while they are very supportive of the project they would be unlikely to have sufficient funds to make a significant contribution to the project. Consequently seed funding of around £10,000 has been provisionally earmarked as a possible Council contribution. Such a contribution is seen as enabling funding and could, for example, address the project's environmental features or the 'up front' overheads of a project manager.
Importantly, Glasgow City Council has offered to review different options on how the project can be delivered for various types of VAT exception work/procedures. This will remove the burden of VAT from the Friends of Glasgow Botanic Gardens, who are not VAT registered.

- It is possible that Scottish Natural Heritage could support part of the interpretation, particularly those components that deal with indigenous trees, the science of trees and promoting behavioural changes in how people relate to trees. However the likely amount is small and £7500, or less, is probably a maximum ceiling. If SNH do adopt a supporting role, they will only support project components that will not be addressed by CSGN.
- The National Tree Collections Scotland (NTCS) programme, while still in its relative infancy and consequently unable to provide significant capital support, will benefit considerably through the marketing and orientation functions of the project. It therefore seems appropriate that NTCS meets the costs of all, or a substantial part of, the first leaflet production run. It could also be argued that they should make a commitment to meeting a share of the on-going annual print costs for the leaflet.
- There is a broad range of other grant giving organisations that could support this project. The scope is quite large and while it is not anticipated that each fund will be able to deliver significant levels of grant aid, collectively (and from previous experiences) they should be
- It is inevitable that this project will require private sector sponsorship, which is one of the design reasons behind the interpretive pods. The argument for attracting sponsors is quite compelling:
 - There are 10 pods and each will expose its sponsor to around 0.4 million visitors every year.
 - Any sponsorship is tax deductible and comes with the kudos of being associated with the Botanic Gardens and an environmental initiative of national importance.
 - Add in the fact that it could be promised that sponsors will be able to retain their pods for 10 years and an initial sponsorship figure of £7,000 (or more) per pod works out at only £700 per annum when viewed over the long term. The graphic panels that have been costed will come with a 10 year guarantee (excluding vandalism).
 - Sponsors would also benefit from the project launch, on-going publicity and a wider *National Tree Collections of Scotland* programme that will expand and secure a much higher profile in years to come. Once engaged, they may be encouraged to support the programme further.

On the basis of the above it is believed that, with the right marketing and promotion, a figure of up to £100,000 could be achieved through such sponsorship. This is a substantial part of the project's cost estimate. However, pursuing this funding route will be very demanding for the Friends of Glasgow Botanic Gardens as they have limited resources. Consequently this option is regarded as funding of last resort.

Using information available at the time of writing the following tables lay out a possible finding strategy for both options. These figures will change and evolve as the project develops beyond this study stage and will need a review once the forthcoming application to CSGN has been deliberated upon and a preliminary response has been received from Creative Scotland.

	year 1	year 2	Totals
CSGN	100000	45000	145000
HLF	65000	10000	75000
GCC	10000	0	10000
Creative Scotland	27000	8000	35000
NTCS	4000	2000	6000
Grant giving organisations and Charitable Trusts	22000	7700	29700
Sponsorship	70000		70000
FGBG in kind	36000	12300	48300
	334000	85000	419,000

9.0 Programme and Next Steps

The planned opening for the project is to coincide with the Commonwealth Games of 2014. This suggests an early summer of 2014 completion, in order that the project will secure a 'full season' in its first year. The same programme supports the possibility that capital may be offered by funding organisations over 2 financial years.

The programme below illustrates how this may be able to be achieved. It is clearly dependant on securing all funds by late July 2013, which is a demanding task. It enables the design and contract programmes to be undertaken in some 10 or 11 months. This period could be reduced, but not by much (potentially a maximum of 2 months), should the fundraising programme demand more time

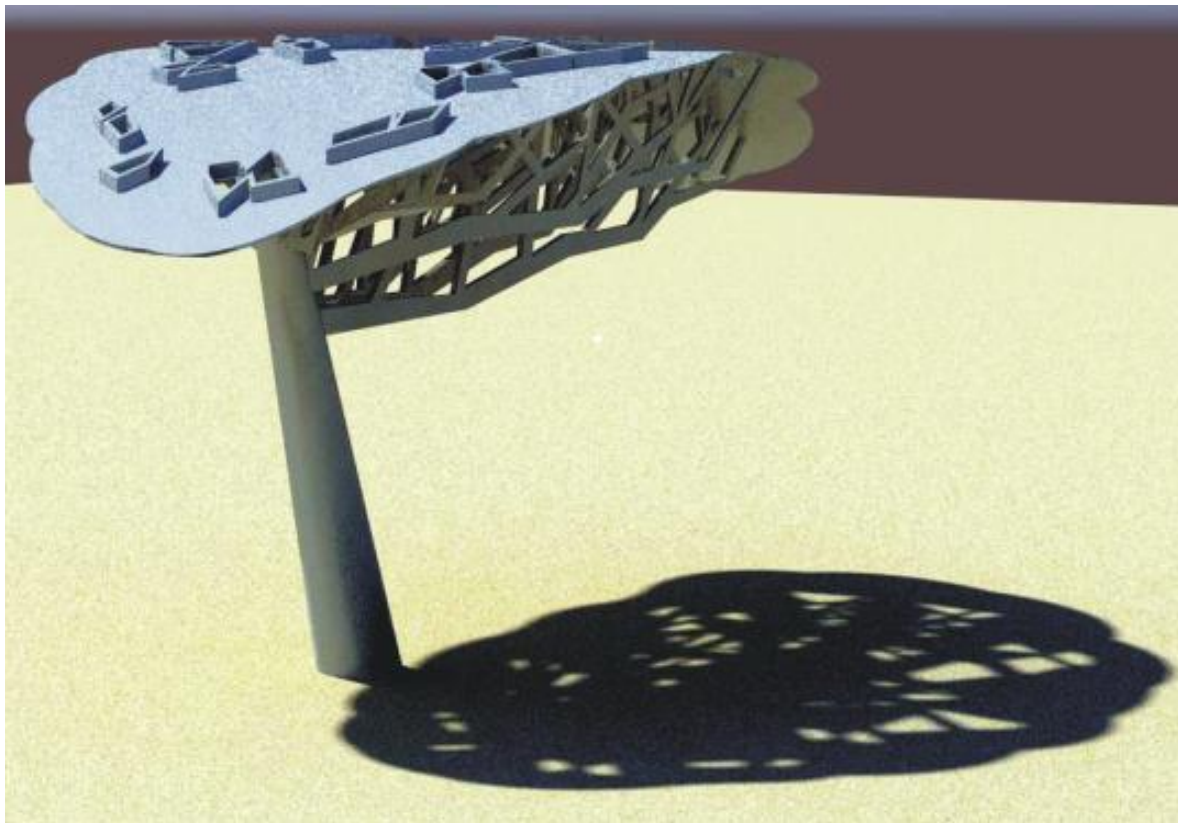
	Year '13													Year '14											
ACTIVITY	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A					
Adopt Study																									
Prepare Funding applications																									
Funding procurement period																									
All funds in place																									
Appoint design team																									
Develop detail designs																									
Cost Plan																									
Statutory Submissions																									
Prepare Contract Tender information																									
Tendering for structure																									
Tender checking and Approvals																									
Appoint Contractor																									
Structure prefabrication																									
Tendering for infrastructure																									
Tender checking and Approvals																									
Appoint Contractor																									
Site works																									
Tendering for interpretation																									
Tender checking and Approvals																									
Appoint Contractor																									
Site works																									
Opening																									

9.1 Next Steps

In terms of the required next steps, it is clear that FGBG and their project partners must collectively agree to adopt the findings of this project study, although it should be understood that studies such as this are not 'written in stone' and that all successful projects require a flexible and adaptable approach to the next stages of the project in terms of funding, product, capital costs and programme. In other words, the Client group must be constantly and holistically appraising and adapting the entire project to changing circumstances until all capital funds are in place. Indeed, even then, the design of the project will be similarly refined as the detail of the project is re-evaluated and developed.

Ross Associates are happy to continue to revise and update this study over the forthcoming months as part of the current study fee arrangement. In the same vein, advice is always free.

Final Report
January 2013



Appendix 1

Visitor Survey Report September 2012

Over 400 surveys were taken over a two-day period.

Note: There is an awareness that a visitor survey, such as the one carried out here, does not always produce accurate results. Occasionally information given by certain visitors can be misleading, incorrect or vague. Although we amassed specific data here, it was very useful just to spend a day or two within the grounds of the botanic gardens to simply observe peoples' behaviour and if they wanted to engage in chat, listen to what they had to say.

As the gardens are used by so many people who are simply passing through we tried to focus our surveys mostly on visitors, young and old, who were actively interested in the gardens – young families on a day out, couples meeting friends and family for lunch, tourists and visitors generally seen to be relaxing and enjoying the surroundings.

The gardens also attract many people with different kinds of disabilities. However, some of these visitors preferred not to take part in our survey although it was clear to see how they used and enjoyed the surroundings. Those that did take part highlighted the importance of the gardens to people of all age groups and abilities.

1st Survey:

Thursday 13th September 9.45am until 4.30pm

Weather – Dull, damp and chilly

Activities taking place within the grounds included:

A local art exhibition inside the Kibble Palace

A school trip researching for science project

Students research for a photography project

Visitors to the gardens on this weekday consisted mostly of mothers with small children, local / older generation out for a walk, dog walkers, joggers and people visiting the cafe. As it was rather chilly people's attention span for looking at any particular area within the garden seemed limited.



Surveys were taken mostly outside the Kibble Palace, catching the main entrance and Queen Margaret entrance. As so many people appeared to be passing through only, visitor activity was also monitored at the Kirklee Gate.

In the space of one hour (from 10am to 11am) 50 people were recorded as using the gardens purely as a short cut from the Kirklee Gate to the main gate or to the Queen Margaret entrance, either on their way to work or to university. Few had time to take part in our survey although some did admit that they preferred taking this route as it was quiet and preferable to other local routes.

Café staff had scattered some survey sheets around the café during the course of the day although visitors were reluctant to complete these.

2nd Survey:

Saturday 15th September 9.45am until 4.30pm

Weather - Warm and sunny

Local activities:

Doors Open Day and a local book fair

Ground staff set up a survey station directly outside the Kibble Palace. This created some interest, with visitors wanting to complete their own survey sheets. Surveys were also taken at the base of the path up to the café where visitors seemed happy to answer questions.

A far wider selection of visitors were interviewed on Saturday, consisting of parents with children, people on a day out, foreign tourists, visiting parents of university students, bus tours stopping off for a visit, local walking groups and generally people out enjoying the sun.

General observations and some comments from visitors:

There is a deep affection of the gardens especially by the older generation of local people. They were keen to tell us their stories and their years of association with the grounds. This would make for an interesting oral history project.

It was made clear that better interpretation is needed for all user groups. A particular request was for better signage and labelling, especially on plants and trees, and not just in Latin! Parents of young children felt strongly for the need for more educational elements within the gardens.

The area to the left of Café Walk appears under-used except by people passing through down towards to small gate off Great Western Road. A focal point here would draw visitors up towards the herb garden and beyond, as we observed little visitor activity in this area during the course of the day.

The café is very popular and a great resource, with a steady stream of visitors throughout the day. The same applies to the Kibble Palace but the tropical houses off the main drive seemed under-



utilised with few people appearing to venture inside. It is possible that this area might benefit from some additional interpretation, drawing visitors in and making them more aware of their importance.

A couple of visitors were interested in the history of the dismantled railway and would like to see this reflected in some of the information written about the gardens.

Green leisure space versus botanic gardens!

Glasgow Botanic Gardens is seen by many as a park and not as a botanic garden - young families enjoying picnics on the grass, playing games and generally taking time out to relax. Whilst the presence of the botanic garden needs to be reinforced, the importance of retaining the green leisure space should be preserved.

Survey Statistics

VISITOR SURVEY - The Friends of the Botanic Gardens - September 13th 2012.		13th
1. Where is your normal place of residence?		Total
This region		24
Other Scotland		19
England		9
Other UK		0
France		0
Germany		2
Other Europe (state which country)		1
Rest of World (state which country)		8
2. Approximately how far did you travel to get here today?		
1 - 2 miles		28
3 - 5 miles		5
6 - 9 miles		4
10 - 14 miles		1
15 - 19 miles		0
20 - 29 miles		0
30+ miles		6
Don't know		0
3. Which of the following best describes your situation today?		
On a short trip (of less than 3 hours) from home		25
On a day out (for more than 3 hours) from home		3
On holiday away from home in the area		3
Visiting friends and relatives on holiday in the area		3
Passing through the area to/from my holiday destination		8
Other (specify)		3
4. How long have you spent or do you intend to spend here today?		
Up to 15 minutes		19
Over 15 minutes - 30 minutes		9
Over 30 minutes		5
1 - 2 hours		7
2 - 3 hours		4
3 - 4 hours		0
4 - 5 hours		44
Don't know		0
5. Why did you decide to visit today?		

Never been before	1
Return visit	2
Visiting the café	2
Site seeing	5
A regular activity	2
Interested in nature	1
Education	2
Walking the dog	2
Just something to do	2
Nice day	2
Out for a walk	1
Relaxing	1
Meeting friends & relatives	4
Passing through	15
6. How often do you usually visit this site?	
Most days	19
About once a week	6
At least once a month	3
Once every 2 or 3 months	2
2 or 3 times a year	2
Less frequently	2
This is your first visit ever	9
7. Including yourself, how many people were with you during your visit here today?	
i) Total number of people in group	83
ii) Total number of adults in group (aged 16 or over)	60
iii) Total number of children in group (aged under 16)	21
8. Do you ever visit this site during the winter months, October - March?	
Yes	26
No	1
If YES, how often, on average, do you visit during the winter months?	
Every day	9
More than once a week but not daily	9
Once a week	3
2 or 3 times a month	1
Once a month	0
Less often than once a month	
9. Which of the following is your main reason for visiting this site today?	
Been before and wanted to come back	0
Came here as part of organised trip	1
Educational reasons	1

Enjoy visiting places like this	6
Just passing	17
Particularly interested in nature at this site	0
Recommended by friends/relatives	1
Recommended by someone else	1
Somewhere to walk dog	3
Somewhere to take children	3
Somewhere to take friends	2
To get some fresh air	2
Café	3
None of these	1
Never been before	1
Other (specify)	4
10. To help us analyse the questionnaires, could you answer the following questions	
Male	15
Female	28
Under 16	1
16 - 24	14
25 - 34	7
35 - 44	7
45 - 54	3
55 - 64	5
65 +	6
Your postcode	
Date	

VISITOR SURVEY - The Friends of the Botanic Gardens - September 15th 2012		15th
1. Where is your normal place of residence?		Total
This region		147
Other Scotland		25
England		20
Other UK		10
France		3
Germany		3
Other Europe (state which country)		7
Rest of World (state which country)		18
2. Approximately how far did you travel to get here today?		
1 - 2 miles		119
3 - 5 miles		51
6 - 9 miles		12
10 - 14 miles		12
15 - 19 miles		4
20 - 29 miles		7
30+ miles		26
Don't know		1
3. Which of the following best describes your situation today?		
On a short trip (of less than 3 hours) from home		122
On a day out (for more than 3 hours) from home		46
On holiday away from home in the area		22
Visiting friends and relatives on holiday in the area		10
Passing through the area to/from my holiday destination		10
Other (specify)		23
4. How long have you spent or do you intend to spend here today?		
Up to 15 minutes		26
Over 15 minutes - 30 minutes		32
Over 30 minutes		57
1 - 2 hours		94
2 - 3 hours		18
3 - 4 hours		2
4 - 5 hours		1
Don't know		3
5. Why did you decide to visit today?		
Never been before		11
Return visit		18

Visiting the café	16
Site seeing	19
A regular activity	7
Interested in nature	24
Education	7
Walking the dog	2
Just something to do	2
Nice day	7
Out for a walk	22
Relaxing	10
Meeting friends & relatives	18
Passing through	27
6. How often do you usually visit this site?	
Most days	40
About once a week	40
At least once a month	37
Once every 2 or 3 months	9
2 or 3 times a year	24
Less frequently	20
This is your first visit ever	66
7. Including yourself, how many people were with you during your visit here today?	
i) Total number of people in group	551
ii) Total number of adults in group (aged 16 or over)	480
iii) Total number of children in group (aged under 16)	63
8. Do you ever visit this site during the winter months, October - March?	
Yes	141
No	5
If YES, how often, on average, do you visit during the winter months?	
Every day	14
More than once a week but not daily	32
Once a week	22
2 or 3 times a month	14
Once a month	16
Less often than once a month	44
9. Which of the following is your main reason for visiting this site today?	
Been before and wanted to come back	40
Came here as part of organised trip	1
Educational reasons	3
Enjoy visiting places like this	74
Just passing	32

Particularly interested in nature at this site	22
Recommended by friends/relatives	3
Recommended by someone else	0
Somewhere to walk dog	2
Somewhere to take children	22
Somewhere to take friends	5
To get some fresh air	23
Café	14
None of these	3
Never been before	2
Other (specify)	10
10. To help us analyse the questionnaires, could you answer the following questions	
Male	91
Female	145
Under 16	1
16 - 24	35
25 - 34	36
35 - 44	36
45 - 54	41
55 - 64	36
65 +	48
Your postcode	
Date	

Appendix 2

Community Consultation exercise November 2012

80 people were consulted:

- 60 who came into the exhibition, looked at it properly and talked extensively with the survey group.
- 20 who were approached outside (with A4 print-outs) but who did not come into exhibition/workshop.

Glasgow Botanic Gardens: Public workshop day results								Comments
Male	Female	Optn 1	Optn 2	None	Yes	No	No comment	
2		2			1			One man a botanist. Want more labels in the garden.
	2	2			1			Not that interested in the concept . Liked option 1.
	1			1		1		1 lady. Did not want anything in gardens. She said she would email Friends and complain.
1		1						Liked option 1 but wondered why not made from wood. Reasoning explained and he agreed.
2				2			2	Not interested. Just scanned and left.
1				1	1			Very interested in story of the tree legacy. Indifferent to structure proposals.
	1	1			1			1 enthusiastic lady. Designer. 1bthen 1a in preference order.
1		1			1			Another enthusiastic man. Loved option 1a then 1b. Thought that tree trail is essential for gardens.
1	1	1			1			Couple. Very interested.
1	1	1			1			Couple. Option 1 or nothing.
1	1	1			1			Couple. Not sureprobably option 1....
	1			1			1	1 lady. Uninterested.
1		1			1			Extremely interested. 'Do it well or not at all'. 'Option 1 is fantastic'.
1				1			1	Non committal, although he read everything at length.
1				1			1	1 man and children. Not interested. 'Will it generate jobs?' was only question

1	1	1			2		Couple. Definitely option 1
1	1	1			2		Couple. Liked option 1.
1				1	1		Gentleman from Glasgow Tree Lovers Soc. Lots of synergy..... But no preference
1		1			1		Must be option 1
	2	2			2		2 ladies. Wished the project well. Option 1
	1			1	2		Couple. Great idea.
	1			1	1		Liked project. Suggested we get a project champion involved, which is a good idea. No option preference.
	1	1			1		Liked option 1
2		1		1	1	1	2 council rangers. 1 very cynical (complete waste of money), other very positive.
1		1			1		Loves gardens. Positive. Definitely option 1.
1		1			1		Poet, Gerry Loose. Option 1. Very positive.
	1			1		1	Not interested.
	1	1			1		Read every word. Very, very positive. Option 1.
	1			1		1	More interested in other issues such as flooding. Worried about font sizes.
1	1			1		2	Couple. In and out in 30 seconds.
1			1		1		Liked option 2 as it looked more natural.
1		1			1		Tree enthusiast. Liked project a lot. Preferred option 1, but not definite.
	1			1	1		Idea good, but unable to visualise or comprehend the structures images.
1	1	1			2		Young couple. Really up for it. Definitely options 1. Events at launch.
	1	1			1		Liked Option 1. Initiative is excellent.
1	1	2			2		1 couple. Both liked option 1.
1	1	2			2		1 couple. Liked option 1.
	1			1	1		1 passionate, slightly crazy, lady. Prefers option 2.
1		1			1		Option 1 please.
1		1			1		11 year old boy. 1 please.
1				1	1		Older teenager. Option 2.
1	1			2		2	Middle aged couple, American tourists. Not interested but chatty.....
1	1	2			2		Young couple. We prefer 1.

1		1			1			Community group representative. Positive about project and liked option 1.
33	27	33	3	17	42	2	11	TOTALS

The above table can be summarised as below:

Total number of people consulted	60	100.0%
Number who liked option 1	33	55%
Number who liked option 2	3	5%
Number who had no preference	17	28%
Number who supported project	42	70%
Number who did not support project	2	3%
Number who were indifferent	17	28%

(all figures are rounded)

Examples of the most 'opinionated-opinions' given by people who were talked to outside the Kibble Palace:

Why spend money when people are unemployed?
 Children will run around structure and hurt themselves.
 Anything has got to be better than burger van by entrance.
 Use for events....evening lighting and theatrical performances.
 Yes, environmental education is important.
 Tactile interpretation required. I like that.
 I have a tree app on my phone. Promote it as part of exhibition.
 Do not see need for project.
 Gardens are under-utilised. Great idea.
 Must be landscape sensitive.
 Sculptures are expensive and useless