PROTECTION & MANAGEMENT OF THE PROPERTY
This section of the nomination provides an outline of the legislative, regulatory, contractual, planning, institutional and/or traditional measures and management systems that are in place to protect and manage the Nominated Property.

All land within the Nominated Property is within the ownership of the State and under the management of the National Parks Board (NParks). A range of statutory conservation designations and development control planning measures are in place to protect the Nominated Property and its Buffer Zone. The Management Plan submitted with the nomination provides an overarching framework for the long-term sustainable management of the Nominated Property in the context of wider regeneration goals for Singapore.

5.b Protective Designation

Protective Designations within the Nominated Property

Areas, buildings and features of conservation value within the Nominated Property are protected by a range of statutory and non-statutory designations (see Figure 14). The protective designations that apply to the Nominated Property are listed in the Table 6. Copies of relevant legislative acts are provided in Appendix F.

5.a Ownership

All land within the Nominated Property is within the ownership of the Singapore Government. As illustrated on Figure 13, the majority of the State land within the property is leased to NParks (under a 99 year lease, in force between 1990 and 2089), a statutory board of the Ministry of National Development. The remainder of the property is allocated to the Ministry of National Development and managed by NParks.

Within the Buffer Zone, the State land immediately to the north and south-west of the Nominated Property is under the direct management of NParks as part of the Singapore Botanic Gardens. Beyond the Singapore Botanic Gardens’ boundary, the remainder of land within the Buffer Zone is under a mix of private and State ownership.
Proposed World Heritage Site Boundary
Singapore Botanic Gardens Boundary
Private Land
State Land
State Land leased to the National Parks Board (99 year lease 1990–2089)
State Land allocated to the Ministry of National Development and managed by the National Parks Board
State Land allocated to the National University of Singapore
State Land allocated to the Ministry of Education

FIGURE 13 OWNERSHIP

Nomination Document
Protection & Management of the Property
FIGURE 14  DESIGNATIONS
### TABLE 06  PROTECTIVE DESIGNATIONS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Extent/Date of Designation</th>
<th>Legislation under which status is provided</th>
</tr>
</thead>
</table>
| National Park    | Majority of the Nominated Property is within a **National Park** (designated 1990).                                                                                                                                                                                                 | The Parks and Trees Act (Cap. 216) makes provision for National Parks to be ‘...set aside for all or any of the following purposes:

(a) the propagation, protection and conservation of the trees, plants, animals and other organisms of Singapore, whether indigenous or otherwise;

(b) the study, research and preservation of objects and places of aesthetic, historical or scientific interest;

(c) the study, research and dissemination of knowledge in botany, horticulture, biotechnology, or natural and local history; and

(d) recreational and educational use by the public’. |
| Conservation Area| Entire Nominated Property is within the Singapore Botanic Gardens which was designated a **Conservation Area** in 2008.                                                                                                   | The Planning Act (Cap. 232) provides for ‘where in the opinion of the Minister any area is of special architectural, historic, traditional or aesthetic interest, the Minister may approve under Section 8 a proposal to amend the Master Plan to designate the area as a conservation area. A conservation area may comprise an area, a single building or a group of buildings’. |

**Conserved Buildings** within the Singapore Botanic Gardens Conservation Area:

- Houses 1–5 of the former Raffles College (designated 2008)
- Raffles Hall (designated 2006*)
- E.J.H. Corner House (designated 2008)
- Burkill Hall (designated 2008)
- Holttum Hall (designated 2008)
- Ridley Hall (designated 2008)
- House 6 (there is intent to designate House 6 as a Conserved Building in 2013)
- The Garage (there is intent to designate The Garage as a Conserved Building in 2013)

**Conserved Structures** within the Singapore Botanic Gardens Conservation Area:

- Bandstand (designated 2009)
- Swan Lake Gazebo (designated 2009)

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* Initially designated as part of another conservation area which was absorbed into the Singapore Botanic Gardens Conservation Area on the 23rd May 2008
<table>
<thead>
<tr>
<th>Designation</th>
<th>Extent/Date of Designation</th>
<th>Legislation under which status is provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Conservation</td>
<td>Entire Nominated Property is within a <strong>Tree Conservation Area</strong> (designated 1991).</td>
<td>The Parks and Trees (Preservation of Trees) Order (Cap. 216, 01).</td>
</tr>
<tr>
<td>Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature Area</td>
<td>The Rainforest area is a Nature Area (designated 2003).</td>
<td>A Nature Area is a non–statutory designation demarcated on the Parks and Waterbodies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plan, a development control plan issued by the Competent Authority under paragraph 2.5 of the Master Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Written Statement 2008 to elaborate on the planning intention for the area. Nature Areas are areas of high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>biodiversity.</td>
</tr>
<tr>
<td>Heritage Trees</td>
<td>34 Heritage Trees within the Nominated Property.</td>
<td>Heritage Trees are included on a non–statutory register by the NParks Heritage Tree Panel under the 2001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heritage Trees Scheme. Heritage Trees must meet certain criteria in respect of their size, age and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>quality. Heritage Trees within national parks, nature reserves, tree conservation areas, heritage road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>green buffers and other specified areas (as defined by the Parks and Trees Act) are protected under the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parks and Trees Act (Cap. 216).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Protective Designations within the Buffer Zone**

As shown on Figure 15, much of the land within the proposed Buffer Zone is designated as ‘Landed Housing Areas’ and ‘Good Class Bungalow Areas’ with guidelines on the height and building form of residential developments within such areas. Under these guidelines, the intention is that developments within the proposed Buffer Zone should generally maintain a low–rise/low density character. Developments in close proximity to the Botanic Gardens (within a c.1km radius of the Botanic Gardens’ Bandstand) are also subject to more stringent height controls under the Building Height Plan such that the visual amenity of the Botanic Gardens is protected.

5.c **Means of Implementing Protective Measures**

**The Land Use Planning System in Singapore**

Land use planning in Singapore is carried out by URA, the national land use planning and conservation authority, in conjunction with other government agencies. A long–term approach to land use planning has enabled Singapore to achieve a balance between development and conservation of natural and cultural heritage assets. The Singapore Concept Plan is the strategic land use plan that guides Singapore’s development over a 40 to 50 year period. This is supported by the Master Plan which is the statutory land use plan prepared under the Planning Act for guiding Singapore’s development in the medium term over a 10 to 15 year period. The Master Plan translates the broad long–term strategies of the Concept Plan into detailed plans to guide development, and sets out land use zoning and plot ratio/intensity policies for land in Singapore. Development control plans such as Landed Housing Area plans, Good Class Bungalow Area plans and Building Height Plans referred to above are published to provide further elaboration and guidance of the planning intention of the Master Plan.

**Singapore Master Plan**

The Singapore Master Plan may be amended as and when necessary to facilitate development. The amendments include rezoning of land use, adjustment in the plot ratio and designation of
3 Storey Mixed Land
Good Class Bungalow Area
2 Storey Mixed Landed,
2 Storey Bungalows and
2 Storey Semi-detached
Area within the vicinity of the Gardens where more stringent height controls are in place to protect the visual amenity of the Gardens (Building Height Plan)

Based upon the data available at www.ura.gov.sg/uramaps/. This information is based on the Master Plan 2008 as approved by the Minister for National Development on 27th November 2008.
© Singapore Government

FIGURE 15 BUILDING HEIGHT CONTROL
conservation areas. The amendments could be part of the regular Master Plan review, which is carried out at least once every five years, or on an ad hoc basis arising from a development application proposal to develop the land. Being a collaborative effort between agencies to ensure that plans meet immediate economic and social needs while maintaining a good quality living environment, inputs from technical agencies are typically sought before amendments are made to the Master Plan.

The statutory procedure for submission and approval of amendments to the Master Plan is provided in the Planning Act and its subsidiary legislation. Under the statutory procedure, any proposed amendment to the Master Plan is submitted to Minister for approval. Before Minister makes his decision, the proposed amendment is exhibited for public feedback for at least 2 weeks. During the exhibition period, objections and representations on the proposed amendment may be submitted to the Minister. If the proposed amendment is approved by the Minister, the Master Plan is amended with effect of the date of Minister’s approval.

Development Control System in Singapore

The principle legislation that regulates development of land and conservation in Singapore is the Planning Act. Under the Planning Act, any proposal to develop land or to carry out works in a conservation area (e.g. to erect a new building, to carry out additions or alteration to or change the use of an existing building) is required to obtain planning and/or conservation permission under the Act before the development or works are carried out. An effective regulatory system is thus in place, such that proposals for new developments, change of use or alterations to existing buildings of the Nominated Property or land within the Buffer Zone are subject to planning or conservation permission (unless otherwise exempted). This regulatory process allows URA to assess each proposal and to consciously guide developments in accordance with the intended outcomes.

Application of Land Use and Conservation Guidelines for the Nominated Property

The Nominated Property is zoned Park in the Master Plan 2008. The Park zone requires that the land be set aside for use as park or garden, for the enjoyment of the general public. The Nominated Property also falls within a gazetted Conservation Area. Hence, any proposal to carry out works within the Singapore Botanic Gardens (whether it’s development, change of use or conservation restoration works) will be required to obtain a conservation permission under the Planning Act.

The Conservation Guidelines (URA, 2011) provide the conservation principles, planning parameters and restoration guidelines for conserved shop house and bungalow building typologies, as well as planning parameters and envelope control guidelines for new buildings within Conservation Areas. It is an owner’s responsibility to upkeep a conserved building or structure. However, if the building is not in a state of good and serviceable repair or in a proper and clean condition, the Commissioner of Buildings may, by written notice, require the owner to carry out repair and maintenance works.

Master Plan and Development Control Guidelines for Properties within the Buffer Zone

The land within the proposed Buffer Zone is zoned in the Master Plan (2008) for a mix of uses such as Residential, Education and Open Space. Development within the Buffer Zone is assessed based on the Master Plan and also detailed development control plans and guidelines.

In areas designated as ‘Landed Housing Areas’ and ‘Good Class Bungalow Areas’, landed housing developments are subject to lower permissible building height of not more than 2-3 storey tall. For Good Class Bungalow Areas, there are also more stringent controls on site coverage, to reduce the extent of built-up areas such that the environment retains, as much as possible, an open and wooded character.
As for other non-landed residential and/or non-residential developments within the proposed Buffer Zone, these are generally zoned with a lower plot ratio of 1.4, the intention being to maintain a low rise/low density character congruent to the Nominated Property. To safeguard the visual amenity of the Nominated Property, the Building Height Plan also provides for more stringent height controls on developments within a c.1km radius of the Botanic Gardens’ Bandstand.

Given the protective heritage designations and controls that apply to the Nominated Property, proposals for new development or change that would harm its Outstanding Universal Value are not likely to be permitted.

**Application of Other Protective Measures**

**Works within National Parks**

The Parks and Trees Act and its subsidiary legislation (such as the Parks and Trees Regulations) set out a number of restricted activities in National Parks. A number of specific rules apply to the Singapore Botanic Gardens which are displayed on notices within the grounds of the site. The Act states that no works can be carried out in a National Park except by authorised individuals. Part III of the Act sets out:

- Restricted activities in terms of trees and plants in National Parks, including cutting and felling trees or digging or cultivating land within a National Park.
- Restricted activities in respect of animals in National Parks, including capturing, displacing or feeding any animal.
- Restricted activities in respect of boundary notices, including removing, damaging or replacing said notices.

The carrying out of restricted activities in a National Park requires approval from the Commissioner of Parks and Recreation (currently the deputy CEO of NParks). The Commissioner may request further information in relation to the application for approval and may grant or refuse an application at his discretion. The applicant must apply for a compliance certificate from the Commissioner on completion of the works.

Applications for permission to carry out works within a National Park must also be made to the Competent Authority under the Planning Act (Cap. 232). In determining an application, the Competent Authority will take into account any relevant guidelines relating to National Parks which may be issued by NParks as well as all applicable building guidelines, relating to building height and density, building use and form, urban design, plot size and any conservation guidance where applicable.

**Works Affecting Tree Conservation Areas**

Trees within a Tree Conservation Area are protected under the Parks and Trees Act/Order. It is a requirement of the Act that written permission for proposals to fell any mature tree (defined as any tree with a girth measurement greater than one meter, measured half a metre from the ground) is obtained from the Commissioner of Parks and Recreation. This applies to developers as well as owners of private properties (even if no development works are being undertaken).

**Works Affecting Heritage Trees**

Heritage Trees within the Nominated Property are protected under the Parks and Trees Act (Cap. 216). The health of Designated Heritage Trees is assessed at least once a year and each Heritage Tree is fitted with a lightning protector. An educational sign is erected in the vicinity of each Heritage Tree for educational purposes.

**Works Affecting Nature Areas**

While there are currently no statutory planning guidelines pertaining to Nature Areas, if development falls within or in the vicinity of a demarcated Nature Area, ecological studies may be required as advised by the Relevant Authority before any development proceeds.
5.d Existing Plans related to Municipality and Region in which the Proposed Property is Located

Existing adopted plans that relate directly or indirectly to the protection, management and/or presentation of the Nominated Property are listed in Table 7 and provided in Appendix G.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Summary Description</th>
<th>Agency Responsible</th>
<th>Date Adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore Concept Plan</td>
<td>The Concept Plan 2001 is the long-term vision for Singapore's physical development in the next 40 to 50 years. It is reviewed once every 10 years. The seven key thrusts of the Concept Plan 2001 are: new homes in familiar places; high-rise city living; choices for recreation; flexibility for businesses; developing a global business centre; building up an extensive rail network; and focusing on identity.</td>
<td>URA</td>
<td>2001 (review in progress)</td>
</tr>
<tr>
<td>Singapore Master Plan</td>
<td>The Master Plan is the statutory land use plan which guides Singapore’s development in the medium term over the next 10 to 15 years. It is reviewed every five years and translates the broad long-term strategies of the Concept Plan into detailed plans to guide development. The Master Plan shows the permissible land use and density for every parcel of land in Singapore.</td>
<td>URA</td>
<td>2008</td>
</tr>
<tr>
<td>Conservation Guidelines</td>
<td>This document provides the conservation principles, planning parameters and restoration guidelines for conserved shop house and bungalow building typologies, as well as planning parameters and envelope control guidelines for new buildings within conservation areas. Owners, architects and engineers intending to carry out restoration works or development within conservation areas are required to comply with the guidelines accordingly. Other building types, which do not conform to the standard shop house or bungalow typology are evaluated on a case by case basis in accordance with conservation principles. This document is to be read in conjunction with the Specific Facade Restoration Guidelines for the subject building.</td>
<td>URA</td>
<td>2011</td>
</tr>
</tbody>
</table>

5.e Property Management Plan and Other Management Systems

This section will be completed following discussions with Singapore Botanic Gardens and the development of the Management Plan.

A management plan has been developed to support the nomination document.
5.f  Sources and Levels of Finance

The Botanic Gardens’ current annual operating and staff budget amounts to $15 million. Prior to setting budgets for its various divisions each year, NParks asks Divisional Directors to prepare cases for any additional funding required, whether for maintenance or events. If needs arise during the course of the fiscal year, the Botanic Gardens can also request additional funds from NParks’ Central Pool fund. As regards to infrastructural maintenance, large items/projects are handled and funded through NParks’ Facilities Management and Parks Development teams, so do not figure in the Botanic Gardens’ annual budget.

NParks also receives a dedicated budget from the Singapore Government for capital maintenance of specifically the Singapore Botanic Gardens and Fort Canning Park, in view of these being leased to NParks (i.e. under NParks direct control). These funds are accumulated in the Sinking Fund and can only be used for the Botanic Gardens and Fort Canning.

The Botanic Gardens can also seek approval from NParks’ Board for funds to be released from NParks’ Reserves Fund, to support a variety of infrastructural developments and maintenance works for both new and old structures as well as events.

5.g  Sources of Expertise and Training in Conservation and Management Techniques

Varied horticultural/landscape and ecological training is locally provided by CUGE, a division of NParks. Other training is obtained by sending chosen candidates abroad on scholarships, whether to other botanic gardens or academic institutions (mainly universities). Staff exchanges also take place, for example with Longwood Gardens. A botanic garden management training course (for the Southeast Asian region), run by Botanic Gardens Conservation International (BGCI), was delivered at the Singapore Botanic Gardens in 2010 and attended by some of the Botanic Gardens’ staff.

Most skills and expertise needed in relation to the scientific research carried out at the Botanic Gardens are brought in with the appointed staff, these often being foreign recruits, since little training in the relevant areas of plant science (excluding molecular techniques) is available in Singapore.

5.h  Visitor Facilities and Infrastructure

This section provides an overview of all visitor facilities/infrastructure on offer at the Singapore Botanic Gardens, including those parts of the Botanic Gardens which fall outside of the boundary of the Nominated Property.

The Botanic Gardens is free to access, with the exception of the National Orchid Garden, and are the only botanic gardens in the world that is open between 5am and midnight every day of the year. The Botanic Gardens contains a range of visitor facilities/infrastructure including:

- Display gardens and landscaped areas such as the Sun Garden, National Orchid Gardens, Palm Valley and the Saracca Stream.
- An area of primary rainforest.
- A network of paths, providing access across the site.
- Visitor information points at the Nassim Gate, Green Pavilion and Jacob Ballas Children’s Garden points of entry.
- A Heritage Museum housed in Holttum Hall and exhibition centre in the CDL Green Gallery.
- A horticultural library (open Monday to Friday).
- Visual access to some of the laboratories and work undertaken there.
- Refreshment facilities (at the Botany Centre, Visitor Centre, Jacob Ballas Children’s Garden and near the Raffles Hall/Building). Restaurants are located close to the Orchid Plaza and in E.J.H. Corner House.
- Toilets, shelters, seating and bins evenly distributed across the sites.
- First aid points at the Botany Centre, Nassim Gate Visitor Centre and Jacob Ballas Children’s Garden.
- Some interpretation.
- Orientation panels and finger posts.
The linear distance between the northern and southern end of the Singapore Botanic Gardens (including the northern Buffer Zone) is approximately 2km. The Singapore Botanic Gardens as a whole (including areas which fall outside the boundary of the Nominated Property) can be accessed via 16 main entrances/gates. Four of these entrances are pedestrian and vehicular entrances (used for deliveries and VIP visits only). Access can also be gained into the Botanic Gardens from the Law Faculty of the National University of Singapore, the Botanic Gardens MRT station and exits from underground parking located below the Botany Centre. Cycling is prohibited in the Botanic Gardens, exceptions being tolerated for small children’s cycles. As shown in the Appendix H, there is ample provision of carparking in different locations around the site and this will be further increased when the Tyersall Learning Forest is opened (located within the Buffer Zone).

Coach drop–off points are located at the Nassim Gate Visitor Centre, Ginger Garden and Jacob Ballas Children’s Garden and coach parking at the visitor centre, Tyersall Avenue and Jacob Ballas Children’s Garden. There are dedicated taxi ranks close to the Botany Centre (Tanglin Gate) and Visitor Centre (Nassim Gate) and bus stops along Holland Road and Bukit Timah Road. Access by MRT is currently via the Botanic Gardens station (in the north–western end of the Botanic Gardens) which forms part of the Circle Line. A second station, adjacent to it, is under construction and which will form part of the Downtown Line (due to open in 2015). An MRT station along the Thomson Line, with an exit opposite the Tanglin Gate is also due to be constructed and opened in 2020. Parking lots close to the Ginger/National Orchid Gardens are due to be reconfigured and expanded as part of the Tyersall Learning Forest developments.

5.i Policies and Programmes Related to the Presentation and Promotion of the Property

An integrated communications plan is implemented annually to promote the Singapore Botanic Gardens to the local and international media. This includes organising of media briefings and media tours to promote the Botanic Gardens’ latest amenities, programmes or activities. This has resulted in extensive media coverage of the Botanic Gardens using a range of marketing channels such as the leading online, print and broadcast media in Singapore and overseas (e.g. Australia, China, France, Germany, Indonesia, Italy, Japan, Malaysia, UK and the USA).

The Botanic Gardens’ programmes and activities are also promoted on its website as well as in monthly electronic direct mail and quarterly newsletter articles that are sent out to over 80,000 subscribers of NParks. Interesting nuggets of information on the Botanic Gardens are also posted on popular social media platforms such as the Singapore Botanic Gardens’ Facebook page and NParks’ Facebook page and Twitter account.

5.j Staffing Levels and Expertise (professional, technical, maintenance)

This section will be refined following discussions with Singapore Botanic Gardens and the development of the Management Plan

The Singapore Botanic Gardens currently employs 123 full–time staff. The responsibility for the Botanic Gardens’ overall management lies with its Director who is assisted by a Deputy Director and three Assistant Directors, in charge of five Branches: Research and Conservation; Horticulture, Exhibitions and Events; Education, Development and Administration Support; Visitor Services, Security, and Operations; and Singapore Garden Festival.

The Botanic Gardens’ staff are supported by a strong and invaluable volunteer base and other staff within NParks.