

# STORMONT ESTATE

## Woodland Management Plan

May 2016



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# 1 Introduction

This woodland management plan was commissioned in April 2016 and its objective is to provide a framework to achieve the long term sustainable management of the woodlands within Stormont Estate and meet all statutory and legal responsibilities.

## 2 Background information

### 2.1 Location

The estate is located in East Belfast in County Down, and lies north of the Upper Newtownards Road just under four miles from Belfast city centre in the townlands of Ballymiscaw, Ballycloghan, Kileen (Holywood) and Kileen (Dundonald).

It extends in total to some 165 hectares, of which approximately 69 hectares are under woodland or tree cover (42%). The grid reference for the estate centred at Parliament Buildings is J402752 and at that point it is approximately 90 metres above sea level.

### 2.2 Description of the woodlands in the landscape

Most of the estate lies on a southwest facing slope on the periphery of the East Belfast suburbs, with the village of Dundonald to its east and the Craigantlet Hills to its north.

It is within two of the Northern Ireland Environment Agency's Landscape Character Areas, **No. 21 - Belfast and Lagan Valley** and **No. 22 - Down Drumlins and Holywood Hills**.

There are minor references as follows:

21 - Belfast and Lagan Valley

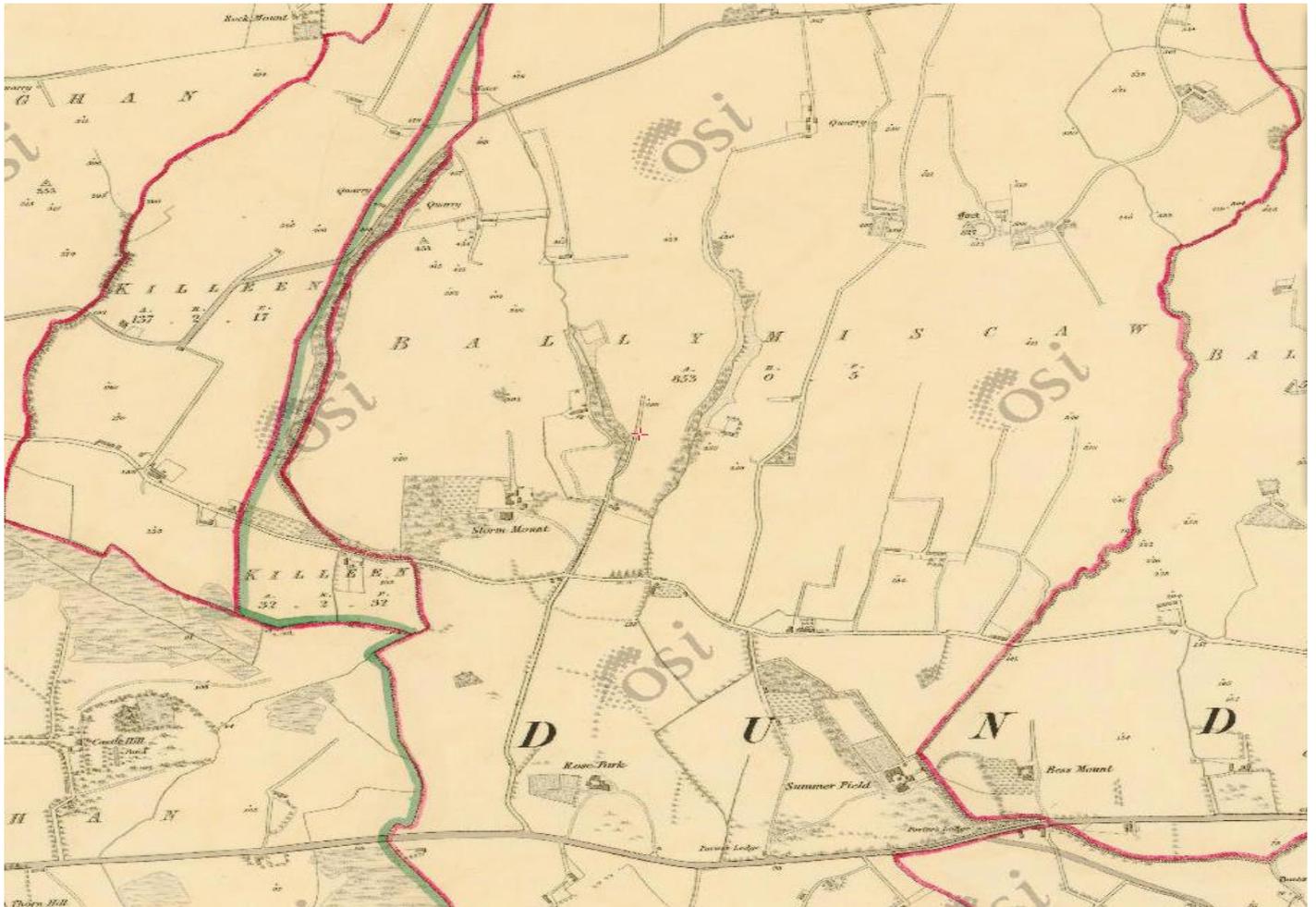
**“Former estate parklands are a key influence between built up areas, often forming a recreational resource for the urban population.”**

22 - Down Drumlins and Holywood Hills

**“Several historic parks and gardens, including Hillsborough Castle, Gill Hall, Larchfield, Montalto House, Saintfield House, Rowallane, Rademon, Stormont Castle, Cultra Manor and Clandeboye. These each have woodlands classified as long-established woodlands.”**

The reference to long-established woodlands is important. The map below shows the estate and surrounding district as it was in the early 1830s and although there have been major changes in its landscape character since then, it is still possible to identify some of the remnants of the woodlands shown on this map, particularly around Stormont Castle, Spender's Glen in the townland of Killen and the two streams either side of the large open space on the upper east side of the estate in the townland of Ballymiscaw.

## 1830s map showing woodland around Stormont Castle and the surrounding area



The topography of the estate itself is mainly flat at its south end with a gradual slope up to Parliament Buildings and then quite steep up to its northern boundary. There are significant areas of woodlands located on the estate's east side and the double rows of red twigged lime trees on both sides of the Prince of Wales Avenue are a very significant and important landscape feature.

Also, the large areas of woodlands in the estate's north end, above and on either side of Parliament Buildings provide an important backdrop to this imposing building and are very visible from a distance.

### 2.3 Brief summary of History of Management

The original land was purchased by the Government in 1921 for the sum of £20,344.00. This initial area comprised Stormont Castle and 235 acres of land, of which about 100 acres were woodland. To construct the Processional Avenue, and to prevent development along the Upper Newtownards Road, it became necessary to acquire more land in 1929. Further land was purchased in the 1950s and 1960s.

Planting of the Lime Avenue and the new woodland areas either side of it was completed by early 1932. There were problems with the drainage and establishment of the new woodlands in low

lying areas (compartments 5 & 13) and these were eventually planted with tree species more suited to wet conditions (e.g. willow, alder, poplar)

There was some felling of old woodland areas during and after the Second World War, and these were largely replaced with commercial conifer species.

There is little record of any major planting and establishment of woodland areas in the 50s, 60s and 70s and it may have been the case that the emphasis during that period was on maintenance of the woodland and tree resource, as well as other estate priorities.

There was a major drive to establish new mixed broadleaved woodland areas in the mid-1980s through to the early 90s.

From then on with the greater demand for woodland recreation, there was increasing emphasis placed on tree safety in areas of public access and the need to carry out appropriate remedial arboricultural work within the accessible and well used parts of the estate, especially on the old mature and over mature trees.

### **3 Woodland Information**

#### **3.1 Woodland resource characteristics**

The woodlands were visited in April and May 2016 and information on sites, species composition and general condition of the woodlands collected. The current compartmentation system has been adopted for this report to facilitate continuity of management. This includes the original compartments 1 to 44 which is the main block of the estate but excludes compartment 40 which is subject to a land dispute and compartments 45 to 50 which is the eastern offshoot of ground occupied by Veterinary Services within DARD.

The Compartment Map identifies the compartments with their boundaries shown as a solid green line.

The following compartment schedules provide site and woodland descriptions and should be read in conjunction with the Compartment Map.

| Cpt. No. | Estimated woodland/tree cover area | Site Description   | Woodland/tree cover description   |
|----------|------------------------------------|--|---|
| 1        | 2.21                               | Southwest corner of estate, mainly flat with a slight rise to the metal fence boundary, old bomb crater at south end, well used paths and high amenity usage.          | A mature mixed broadleaved woodland of mainly beech, sycamore, oak and cherry at the top end. There is an understory of beech, sycamore, Norway maple, holly and occasional hazel, some up to 2 metres high with fairly sparse ground vegetation of ivy, briar and wood anemone.  |
| 2        | 0.83                               | An oblong island woodland fringed with daffodils on its east side, flat with a path winding north-south, lots of walkers, mounds of leaf litter and peat in NE side.   | Mixed broadleaved canopy of beech, sycamore, lime, oak, and cherry, a few Amelancier on east edge. Some of the upper canopy trees have acute forking and poor form. A mix of underplanting and regeneration including beech, holly, sycamore and Norway maple, thick in places.   |
| 3        | 1.03                               | Mainly east facing, more undulating with steep areas and small hills, dry and much sandier soil on top. Paths running through north to south, much used by the public. | Mainly conifer in the north end with a stand of original planting (early 1930s) Monterey pine alongside much smaller and younger Scots pine, merging into beech and sycamore to the south and a few white flowering cherries on its east boundary. Quite prolific sycamore and maple regeneration in places, along with the occasional hemlock.   |
| 4        | 1.39                               | Continuing undulating and hilly with an intensive network of paths throughout and a number of access points along the east boundary.                                   | There are two distinct broadleaved strata within this compartment. Firstly, the more mature mix of beech, sycamore, oak and lime with white flowering cherries and other exotics on its east boundary. Below this canopy there is quite extensive regen of sycamore and maple. Secondly the much younger (late 1980s – early 1990s) broadleaved mix of oak, ash, alder, cherry and others on the east side next to the mown grass area. |

| Cpt. No. | Estimated woodland/tree cover area | Site Description   | Woodland/tree cover description  |
|----------|------------------------------------|--|--|
| 5        | 3.01                               | A much wetter valley area especially on its west side, with open drains and a major drainage channel with footbridges and an adjacent path running east-west to the estate boundary. A busy amenity area with paths throughout, but also of high biodiversity value. | North of the drainage channel is mainly Scots pine of only average quality, with Serbian spruce scattered throughout and a pocket of sycamore on its north boundary. South side is mixed broadleaves including sycamore, beech, lime and ash with some quite good oak and amenity woodland edge planting close to the Processional Avenue lime.  |
| 6        | 2.17                               | Flat at its south end, rising quite steeply in places to the buildings and Massey Avenue entrance at the top. Higher ground south facing with more paths throughout. The east side shows evidence in places of once being long established woodland.                 | There is a significant stand of overstocked Scots pine at its north end, up to 24 metres high in places, with a band of mature Red oak on its east side along with other smaller mixed broadleaves, planted primarily for landscaping. At the south end is a very tall stand of poplar (estimated to be 50+ years old), in uniform rows and up to 29 metres in height. It has been underplanted unsuccessfully, probably due to poor drainage and insufficient light reaching the woodland floor. The boundary row of poplar and occasional Red oak has been recently removed. |
| 7        | 1.12                               | This is essentially a parkland amenity area with scattered tree cover, shrub beds and mown grass below the Massey Avenue entrance to the estate. It has a west facing aspect and is very much in the public eye  | As well as the Avenue limes, there are individual yew, flowering cherries, a group of five large Californian redwoods and other large broadleaved trees including ash and maples.  |
| 8        | 6.0                                | The Lime Avenue, south facing with two rows of mature trees either side.   | A double row of red twigged limes – <i>Tilia platyphyllos</i> 'Rubra' either side of the Processional Avenue, originally planted 1932, 61 metres wide at the entrance and 76 metres wide at the top. Some of the trees in the hollow opposite Compartment 13 are of less height and vigour, perhaps due to the higher water table here.  |

| Cpt. No. | Estimated woodland/tree cover area | Site Description  | Woodland/tree cover description  |
|----------|------------------------------------|---|--|
| 9        | 1.70                               | <p>Busy area with high public usage. East side next the car park with a raised path to the play area, low lying wet woodland with heavy undergrowth. West side is mixed mature broadleaves on higher ground with access to/from the main entrance and avenue.</p>                               | <p>East side contains alder, birch, willow and white poplar with ash and occasional ash. Appears slow growing and stems are generally thin with sparse foliage. There is heavy briar growth underneath with sparse regeneration. Mature broadleaves on the west side include beech, lime sweet and horse chestnut with ash and sycamore as an understory. There are thick pockets of Norway maple regeneration in places as well as beech, sycamore and elder. Some well developed areas of bluebells where there is sufficient light reaching the woodland floor.</p> |
| 10       | 0.76                               | <p>A flat island woodland with a connecting path through and around it and younger plantings around its fringes. High public usage.</p>   | <p>Mixed broadleaves with a dense canopy of beech, lime, oak, sycamore with a few ash as an understory. The main species are very tall and drawn up with heights up to 28 metres. Norway maple regeneration dominates in quite dense pockets with sycamore and elder, ground vegetation is made up of ivy, briar, cow parsley and some bluebell.</p>   |
| 11       | 0.14                               | <p>This is a thin woodland strip of high wildlife value connecting compartment 9 to compartment 13 and separating the sporting pitches on the east side from the recreation facilities on the west.</p>   | <p>There is a well-established hawthorn hedge on its west side with birch, ash and oak through and above it. Behind is a mix of smaller tree species including hazel, whitebeam, rowan and field maple with lots of ivy growing up them. There is occasional elder regeneration coming through with ivy, briar and nettle predominating as ground vegetation.</p>  |
| 12       | 1.30                               | <p>An island hillock quite prominent within the surrounding area, with a series of connecting paths through and around it. Appears well used given its location and it has the feel of an enclosed wood with the exterior trees clad in thick ivy and branches almost down to ground level.</p> | <p>Mainly well stocked Scots pine with a mix of larger, older Austrian and Monterey pine on its west fringe. There is a scattering of smaller understory trees, mainly sycamore and occasional hemlock. The overhead canopy is quite dense, but where it opens to let light in, there is a profusion of vegetation, including regenerating sycamore, Norway maple, holly and elder.</p>  |

| Cpt. No. | Estimated woodland/tree cover area | Site Description   | Woodland/tree cover description   |
|----------|------------------------------------|--|---|
| 13       | 3.95                               | A wet woodland habitat providing suitable habitat for wetland birds and amphibians. It is low lying with numerous drains and pools and much of the surrounding higher ground drains into it. There are paths surrounding it and a boardwalk through it.  | Mainly wet woodland species including willow, alder, birch, large poplar, ash, sycamore and also Serbian spruce. The tree canopy is very open and scattered which allows willow, elder, ash and sycamore to regenerate. Invasive dogwood appears to be flourishing in places. Ground vegetation including ivy and fern is well developed  |
| 14       | 0.44                               | This is a long thin strip of young trees connecting compartment 13 to compartments 9 & 15 and acts as a wildlife corridor and provides separation in a very flat area of the estate used mainly for sporting purposes.   | The north end includes areas of ash and oak with occasional horse chestnut along and between paths, while the connecting strip itself contains a wide range of the smaller tree species including thorn, hazel, apple, rowan, various cherries and whitebeam as well as ash and alder.  |
| 15       | 0.46                               | A long connecting woodland strip along the south estate boundary with the main road and a path through it. There are three distinct components: firstly, a row of mature and younger specimen trees over grass along a metal fence, then a hedge and lastly young (p1987) mixed broadleaved trees. | The larger roadside trees include species such as lime, horse chestnut and oak, and the hedge is mainly hawthorn with holly. The woodland strip has ash, poplar, birch, alder and rowan with hazel, field maple and rowan.  |
| 16       | 1.0                                | A number of small blocks around the tennis court, car parks, pitches and estate building connected by a thin strip of young woodland adjacent to an access road.   | A wide range of woodland types, ranging from long established woodland with oak and chestnut south of the tennis court and around the estate building: oak, Monterey cypress, Lawson cypress and tall poplar on the east side of the tennis court: a young well stocked stand of oak and beech north of the tennis court, 18-20 metres high with some regeneration of beech, hawthorn and birch and much younger oak, alder, ash on the wetter ground close to the estate boundary. |

| <b>Cpt. No.</b> | <b>Estimated woodland/tree cover area</b> | <b>Site Description</b>  | <b>Woodland/tree cover description</b>  |
|-----------------|---|--|---|
| 17              | 1.10                                      | Two interconnected woodland blocks, one adjacent to the front car park of Dundonald House with open mown grass areas and individual specimen trees and a much wetter low lying block along the closed access road  | The north end has long established mixed broadleaved woodland with some over mature beech, much smaller birch and maple and an understory including holly and some beech on its western side. The south end has wet woodland species including alder and willow with a sycamore and ash understory as well as the occasional oak and beech.                                 |
| 18              | 0.54                                      | A long single row of trees over a mown grass strip along the Upper Newtownards Road and Stoney Road which provides an important screening effect to Dundonald House.   | The trees vary in size and species, including maples, cherries, ash, lime and oak and are spaced at a range of distances, generally from 7 – 15 metres. Some of the trees are shading the adjacent street lights.   |
| 19              | 0.75                                      | An enclosed triangular shaped hillock at the junction of the Upper Newtownards and Stoney roads with mown grass areas and amenity planting at the south end. No apparent public usage within the woodland and there is evidence of badgers in its east side. | The major component is Scots pine, with ash, birch and beech in intimate mixture, an understory of elder, holly and beech, and briar vegetation. The western corner appears to be a remnant of long established woodland with a few oak, sycamore, beech and horse chestnut. There are a number of trees overhanging the long single storey building on its northeast side. |
| 20              | 0.47                                      | A square area bounded on all sides by busy access roads and pavements with a number of interconnecting buildings in its centre, well maintained grass areas and amenity plantings.   | The north end has some large mature mixed broadleaves including horse chestnut, sycamore and elm, with an understory of ash and maple. The remainder of tree cover is primarily amenity and ornamental plantings around the buildings including maples, cherries, Lawson cypress and lime   |
| 21              | 0.20                                      | A well maintained open area east of the tennis court and surrounded by car parking on two sides, a footpath, mown grass areas and a number of open grown trees scattered throughout.   | Open grown trees include Lawson cypress and groups of birch and a few oak with a beech hedging on three sides. Primarily an amenity area.   |

| <b>Cpt. No.</b> | <b>Estimated woodland/tree cover area</b> | <b>Site Description</b>  | <b>Woodland/tree cover description</b>   |
|-----------------|---|--|--|
| 22              | 0.86                                      | This compartment has a number of thin strips of woodland separating buildings and sports areas, with a low lying wet area on its west side adjacent to compartment 13 and a well-used path bisecting it.   | Tall poplars (50+ years) and Leyland cypress with a recently planted small area of oak alongside the path and willow, sycamore, ash and elder regeneration. A belt of beech and other broadleaves separates the offices from the sports area and there are a few old remaining broadleaves in its centre.  |
| 23              | 0.36                                      | This small woodland lies between the industrial buildings and the Stoney Road boundary and in close proximity to car parking at its south end.   | Mainly mature and over-mature mixed broadleaved, appears to be remnants of long established woodland with oak, beech, sycamore and a variety of smaller species including ash, birch, alder and rowan. There is a wide variety of ground vegetation dominated by ivy and briar with some laurel.   |
| 24              | 0.06                                      | A small south facing slope between Castle Buildings and the main link road. There has been recent tree and clearing work completed on it.  | Large mature Sweet chestnut with much smaller beech and birch on its west side, and on its east side a pocket of smaller Sweet chestnut with thin crowns. Remaining ground vegetation consists of snowberry, briar and ivy with occasional elder and holly emerging.   |
| 25              | 0.31                                      | A small area of woodland, with quite a steep embankment on its north side, fringed with mown grass areas and surrounded by buildings, car parks and paths.   | Mainly Italian alder on its east side, planted 1980-81, with younger oak up to 10 metres in height and mixed broadleaved species including ash, field maple and beech. The Italian alder is very tall, up to 25 metres and dominates the woodland. Ground vegetation is mainly briar and ivy.  |
| 26              | 1.59                                      | Set on a hill east and south of Castle Buildings, with fairly steep ground in places and patches of heavy undergrowth. Some of the boundary has a high security fence marking it. The south end is mainly open ground with a scattering of broadleaved trees and some cypresses. | The majority of the compartment is young mixed broadleaved woodland, planted in 1990, consisting of oak, ash, horse chestnut, apple, yew and others, all planted at a spacing of 1.5 metres square in tree shelters, along with a range of shrub species including hazel, holly, elder, dogwood and guelder rose. There is a smaller area of mixed broadleaves planted post 2002 to the east of the 1990 plantings |

| Cpt. No. | Estimated woodland/tree cover area | Site Description  | Woodland/tree cover description   |
|----------|------------------------------------|---|---|
| 27       | 0.59                               | Mainly parkland with individual specimen trees scattered in a central maintained grass area with security fencing and paths on its perimeter and a low lying area of young broadleaves at the south end.                                      | There is a row of cypress, some with broken tops and alongside, another row of very tall poplar (over 32 metres) on its west boundary. In the south end, a triangle of young oak (less than 20 years old), grown from seed sourced from within the Stormont estate is growing well.   |
| 28       | 1.70                               | Extends from the entrance to Stormont House south downhill to compartment 27, there is a carpark on its east side and security fencing around its perimeter and a triangle of young broadleaves at its south end.                             | A core of mainly old, long established woodland with many old mature broadleaved trees including oak, beech, lime, sycamore and cherry as well as yew and pine. The young broadleaves are of the same 1990 planting as compartment 26 and are doing well. Dense laurel understorey  |
| 29       | 1.05                               | A southeast facing slope below Stormont Castle with open grass areas and a circular path around it. It has a mix of old mature broadleaves, young mixed broadleaves and open parkland.  | The more mature trees include beech, oak and chestnut as well as younger semi-mature trees including cherry and birch. The more recent plantings of young mixed broadleaves are in the west side of the compartment and include oak, horse chestnut and ash with smaller hazel, apple and holly.  |
| 30       | 1.02                               | A very interesting area of woodland with very large over-mature original estate specimen trees, and a much younger pure stand of beech with a carpet of bluebells. There are also six of the 1953 "Coronation oaks" along the main link road. | The original estate trees include a very large oak, perhaps the largest in the estate, a horse chestnut in the lower middle end and some limes. The pure beech stand is of good quality, up to 28 metres in height and appears overstocked with sparse regeneration of hazel, holly and elder. There is also a corner of young mixed broadleaved planting (1990) in the west side |

| Cpt. No. | Estimated woodland/tree cover area | Site Description  | Woodland/tree cover description  |
|----------|------------------------------------|---|--|
| 31       | 2.16                               | This area has high visual impact, fronting onto the link road with specimen trees in mown grass areas with colourful rhododendron and other shrubs in the background. The woodland behind is a mix of old mature trees, a pure broadleaf stand and at the lower end young mixed broadleaves. There is also evidence of ingress of laurel within this compartment. | There are five "Coronation Oaks", a number of fine Atlas cedars and other younger specimen trees at the front. The mature woodland holds oak, beech and lime with smaller ash and birch. There is a good stand of very tall (up to 25 metres) semi-mature beech with some quality stems. It appears overstocked, with a covering of bluebells along with briar, fern and ivy. The young broadleaved crop of ash, oak, hazel, yew and other species has a heavy growth of briar and ivy underneath. |
| 32       | 0.57                               | Small woodland at the entrance to Stormont Castle, southeast aspect facing out onto the link road comprising mostly old mature broadleaves with younger trees on the west side.   | Upper canopy of large horse chestnut, beech, evergreen holm oak and sycamore with an understory of sycamore, beech and elder. There is also laurel in places which is likely to spread, especially if the canopy is opened.  |
| 33       | 0.69                               | Extending from the Carson's Statue roundabout down to behind Stormont House, south facing and incorporating part of the Stormont House grounds, it is a mix of young mature, mature and over mature trees and ornamental plantings with daffodils and bluebells.  | Large over mature beech, good oak and sycamore with some very heavy undergrowth of laurel in the low lying northwest side, and young sycamore around the edges. Young broadleaved plantings and an avenue running east-west with eight yew trees spaced regularly along its edges on both sides.   |
| 34       | 1.25                               | Large spread out triangle with car parking in the centre alongside an industrial yard and above grass areas, with large mature woodland at the west side and a pocket of tall conifer adjacent to the link road on the east side.   | The mature broadleaves include good oak with sycamore, horse chestnut, birch and ash underneath, as well as under-planted broadleaves in tree shelters and significant growth of laurel which is inhibiting natural regeneration of trees. On the west side, there is a triangle of mature Western Hemlock which fronts onto the link road, of a similar size and age to that in compartment 44. It is overstocked with very little if anything growing underneath it.                             |

| Cpt. No. | Estimated woodland/tree cover area | Site Description   | Woodland/tree cover description   |
|----------|------------------------------------|--|---|
| 35       | 0.60                               | Just above the Massy Avenue entrance, this amenity area is very popular, with ornamental beds, paths, lawns, sculptures and seating areas. The trees are placed both singly and in groups, with wide low spreading crowns.   | Tree cover is made up of various cedar species, flowering cherries and younger ornamental birch.  |
| 36       | 1.50                               | At its south and east side, a continuation of the amenity resource with ornamental tree and shrub planting, wide lawns, paths and the famous "Reconciliation" sculpture. This merges into mature conifer along the path and from the footbridge up, into mainly mature and over mature broadleaves. The ravine sides are prone to erosion and slippage during periods of heavy rain. | Above the ornamental trees and along the path, the conifers are mainly Douglas fir and Monterey cypress, and from the footbridge up, old long established woodland of mainly over mature beech with an understory of oak, ash, larch and sycamore. There is regeneration of sycamore, beech and holly and hazel and ground vegetation comprising bluebell, ivy, fern and cow parsley.   |
| 37       | 0.02                               | This is a south facing triangular area below parliament Buildings which is mainly mown grass within a network of roads and two rows of conifers  | There are two rows of yew, all of varying size and alongside them a row of Lawson cypress. Evidently in poor health.  |
| 38       | 2.85                               | South facing sloping ground with young maturing mixed broadleaved woodland with well used paths and seating throughout, and a number of mature trees growing along the boundary with compartment 36  | Planted in 1986 at a spacing of 1.5 metres, with primary species of Italian alder, oak, cherry and ash, with a number of smaller species including hazel, holly, dogwood, apple and yew. The Italian alder is very dominant (up to 20 metres tall with girths up to 45 centimetres), while some of the oak is of good form and vigour (15 metres tall and with girths up to 25 centimetres). Ground vegetation comprises mainly ivy, briar with seasonal cow parsley. There are also groups of pure hazel planted along the paths, which are now of considerable size and spread. |

| Cpt. No. | Estimated woodland/tree cover area | Site Description  | Woodland/tree cover description  |
|----------|------------------------------------|---|--|
| 39       | 2.94                               | South facing, it extends from Spender's Glen eastwards to a large water tank and stream on its east side. It has a disused path running through east - west and has a mix of large broadleaves with conifers scattered throughout.  | Larger more mature broadleaves, including oak, beech, chestnut and ash in the north and west ends, scattered conifers include Scots pine and larch with occasional spruce and Grand fir. Some of the conifer have blown over. Natural regeneration of ash, sycamore, beech and Norway maple is ongoing with the usual ivy and briar throughout. There are a few areas of young beech which appear overstocked.   |
| 40       | 1.07                               | Subject to land dispute and therefore not included.   |  |
| 41       | 4.69                               | This compartment is a backdrop behind and around Parliament Buildings and is therefore an important landscape feature of the estate. It has two distinct strata, a predominantly conifer background with a security fence hidden within it, and a much younger mixed broadleaved woodland at the front. | The conifer stratum is mainly Scots pine and larch with sycamore and Norway maple as well as some areas of beech. There are some quite extensive pockets of Norway maple regeneration throughout this woodland. The young broadleaved stratum was planted in 1987 and includes oak, alder and ash with hazel, holly, cherries, yew and rowan.  |
| 42       | 5.06                               | This area in the northeast corner of the estate extends between the east side of a stream ravine and the east estate boundary and above the top of the large open area. It is quite steep and inaccessible in places and there are again two distinct woodland strata.                                  | The narrow area up its east side is old long established woodland with mixed over mature broadleaved species including oak, ash, elm and sycamore. There is some regeneration showing where the canopy allows light in. Above the open area, conifers predominate, especially Scots pine and Japanese larch along with Grand fir and some spruce. Again, there is sporadic windblow among the conifers, allowing further opportunity for regeneration. |

| Cpt. No. | Estimated woodland/tree cover area | Site Description  | Woodland/tree cover description   |
|----------|------------------------------------|---|---|
| 43       | 4.23                               | A U shaped compartment wedged between two streams with the open area at its centre. There is a disused path up its east side. The west side is predominantly conifer. At its southwest point where the stream comes close to the road there is quite severe erosion of the banks and many of the conifer trees have slid down into the stream itself. | The west side has a high proportion of Western hemlock and Norway spruce with some Grand fir and mature broadleaves mixed through them. There is a band of pure conifer at the lower end between the stream and the access road to the allotments. East of this is mainly a broadleaf mix with areas of laurel infestation with briar and ivy throughout. Along the east side old broadleaves tend to dominate, especially down the stream sides. Further up there are pockets of conifer including hemlock, larch and Grand fir. |
| 44       | 2.98                               | A diverse area, centred around Parliament Buildings visitors' carpark, with a mix of ornamental trees, old mature conifer and broadleaved trees around Lord Craigavon's Tomb, young mixed broadleaved trees and a pure conifer crop between the link road and the stream.   | Both the pure beech and young mixed broadleaved plantings are doing well and have some good stems. The conifer stand is mainly Western hemlock and Norway spruce and is very tall and overstocked with little if any ground vegetation. It has windblow and erosion throughout and appears unstable.  |

## 4 Long term vision, management objectives and strategy

### 4.1 Long term vision

The long term vision for the woodlands at Stormont Estate is:

**“To manage the woodlands sustainably to secure their long term future and enhance their landscape, biodiversity and recreational use.”**

### 4.2 Management Objectives

There are three management objectives:

1. To secure the long term future of the woodlands as an important visual feature within the local **landscape**, mainly through a planned programme of maintenance and regeneration of the existing tree cover.
2. To safeguard and enhance the **biodiversity** value of the woodlands and associated habitats by encouraging and assisting the regeneration of native broadleaved tree species.
3. To improve **recreation** access to and through the woodlands for walkers on permissive pathways, while controlling unauthorised access as and when required.

### 4.3 Strategy

The long term vision identifies the three most important elements in the management of these woodlands, i.e. landscape, biodiversity and recreation.

The management objectives arising from this vision are more prescriptive and form the basis for the work programme over the coming years. However, there is potential for these objectives to conflict with each other, and there is a need to have in place a strategy that establishes priority in a particular woodland compartment.

The following table sets out the priority given to each objective for each compartment. The compartments are listed vertically and the management objectives horizontally.

# Priority of the Three Management Objectives by Compartment

| Compartment Number | Management Objectives |                 |               |
|--------------------|-----------------------|-----------------|---------------|
|                    | 1. Landscape          | 2. Biodiversity | 3. Recreation |
| 1                  | 2                     | 3               | 1             |
| 2                  | 2                     | 3               | 1             |
| 3                  | 2                     | 3               | 1             |
| 4                  | 2                     | 3               | 1             |
| 5                  | 3                     | 1               | 2             |
| 6                  | 2                     | 3               | 1             |
| 7                  | 2                     | 3               | 1             |
| 8                  | 1                     | 3               | 2             |
| 9                  | 3                     | 2               | 1             |
| 10                 | 2                     | 3               | 1             |
| 11                 | 2                     | 1               | 3             |
| 12                 | 1                     | 3               | 2             |
| 13                 | 2                     | 1               | 3             |
| 14                 | 1                     | 2               | 3             |
| 15                 | 1                     | 3               | 2             |
| 16                 | 2                     | 3               | 1             |
| 17                 | 1                     | 2               | 3             |
| 18                 | 1                     | 3               | 2             |
| 19                 | 1                     | 2               | 3             |
| 20                 | 1                     | 3               | 2             |
| 21                 | 1                     | 3               | 2             |
| 22                 | 2                     | 3               | 1             |
| 23                 | 2                     | 1               | 3             |
| 24                 | 1                     | 3               | 2             |
| 25                 | 1                     | 2               | 3             |
| 26                 | 2                     | 1               | 3             |
| 27                 | 2                     | 3               | 1             |
| 28                 | 1                     | 2               | 3             |
| 29                 | 1                     | 2               | 3             |
| 30                 | 1                     | 2               | 3             |
| 31                 | 1                     | 2               | 3             |
| 32                 | 1                     | 2               | 3             |
| 33                 | 1                     | 2               | 3             |
| 34                 | 1                     | 2               | 3             |
| 35                 | 2                     | 3               | 1             |
| 36                 | 3                     | 2               | 1             |
| 37                 | 1                     | 3               | 2             |
| 38                 | 3                     | 2               | 1             |
| 39                 | 1                     | 2               | 3             |
| 41                 | 1                     | 2               | 3             |
| 42                 | 1                     | 2               | 3             |
| 43                 | 1                     | 2               | 3             |
| 44                 | 1                     | 2               | 3             |

## 5 Management prescriptions/operations

### 5.1 Silvicultural systems

The recommended silvicultural system which will best meet the management objectives for these woodlands involves firstly creating openings within the upper canopy of the existing woodlands in a planned sequence, to allow sufficient light to reach the woodland floor so that natural regeneration of favoured primarily native broadleaves tree species is encouraged or enrichment planting takes place. Either way, a new generation of trees is produced in small groups within the existing woodland without the need for extensive and unsightly clearfelling of woodland areas.

Secondly, and only where appropriate, selective thinning of existing woodland is carried out to maximise the full potential of each stand. Less desirable trees are gradually removed at agreed intervals to eventually produce a woodland with a more open upper canopy and less trees with sufficient space and light reaching the woodland floor to regenerate or plant a new generation of trees amongst them.

In all of this there is a presumption of favouring native tree species, both when considering the existing woodland and when deciding what should be encouraged to regenerate naturally or be planted by hand.

There are small areas of existing pure conifer, poplar and Italian alder woodland that will be gradually cleared and replaced with native broadleaves tree species.

### 5.2 Protection and maintenance

As stated earlier, there may be potential problems with rabbits and grey squirrels in these woodlands. New plantings and natural regeneration may require protection against rabbits, usually in the form of tree shelters. If the grey squirrel population presents a threat to existing woodland, there may be a need to control this through trapping, which requires careful planning, consultation and execution.

Monitoring for diseases such as Ash dieback and *Phytophthora ramorum*, as yet not present in these woodlands will be required on an ongoing basis and it is important that staff have at least some awareness of what to look for and how to report any symptoms of apparent ill health in trees.

Species such as poplar, Norway maple and sycamore which are present in the existing woodland may have to be treated after felling with herbicide to discourage re-growth and allow other native tree species to flourish.

## 6 Consultation

In the context of woodland management, consultation means seeking the views of local people, relevant organisations or anyone who has an interest in these woodlands. Consultation with all relevant parties is recommended especially where there is likely to be change as a result of a policy decision or a change in the woodland itself (e.g. felling and restructuring).

Setting up the mechanisms for consultation can be laborious and time consuming, but without it, there is a much greater risk of objections to the changes, adverse publicity and long term mistrust.

## 7 Monitoring plan summary

The three management objectives are:

4. To secure the long term future of the woodlands as an important visual feature within the local **landscape**, mainly through a planned programme of maintenance and regeneration of the existing tree cover.
5. To safeguard and enhance the **biodiversity** value of the woodlands and associated habitats by encouraging and assisting the regeneration of native broadleaved tree species.
6. To improve **recreation** access to and through the woodlands for walkers on permissive pathways, while controlling unauthorised access as and when required.

The plan below summarises the monitoring required to verify that each management objective is being achieved.

| Objective       | Indicator   | Method of assessment                                   | Monitoring period   | By whom           | How will information be used   |
|-----------------|---|--|---|-------------------|--|
| 1. Landscape    | Retention of woodland cover within the estate   | Visual from strategic viewpoints                       | After any felling or thinning work                            | Estate management | Assessment will indicate the need to revise/ alter future felling / thinning to ensure continuous cover                              |
| 2. Biodiversity | Successful regeneration of newly established areas  | Visual & individual surveys of newly established areas | Immediately after planting and annually                       | Estate management | If regeneration is not successful, plans will be revised (e.g. different species, additional ground preparation, larger coupe areas) |
| 3. Recreation   | Feedback from both internal "at work" users and external users (e.g. members of the public) | Formal and Informal discussions with users             | Immediately after improvements and during peak visiting times | Estate management | Both positive and negative feedback will be used to shape future policy re. maintaining and improving facilities                     |

## 8 Work programmes

The following work programmes outline the proposed / planned operations in the estate woodlands over the next fifteen years and are closely linked to the long term vision and objectives. The short term work programme firstly sets out the detail over the first five years while the long term programme identifies in broader detail, woodland operations for the remainder of the fifteen-year period.

## Work programme for Year 1 to 5 inclusive (2016 – 2020)

| Cpt No.     | Woodland Species                                  | Work Activity  | Year |   |   |   |   |
|-------------|---|--|------|---|---|---|---|
|             |   |  | 1    | 2 | 3 | 4 | 5 |
| 1 & 2       | Mature mixed broadleaves                          | Reduce upper canopy by about 10%, through the removal of dead, dying, diseased and poorly formed trees as well as any inferior trees in competition with dominants to allow them to develop their crowns and encourage natural regeneration. Target stocking density to be determined by a competent Forester  | X    | X |   |   |   |
| 1 & 2       | Natural regeneration of Norway maple and sycamore | Where there are dense pockets of maple regeneration in competition with native species, always favour the naturally regenerated native trees. Where there is only naturally regenerated Norway maple and sycamore, thin and respace to leave well formed, single stemmed trees at a spacing of two metres square, where this regeneration is less than 2.0m tall; increasing to not more than 4.0m centres where regeneration is greater than 6.0m tall. |      |   |   | X |   |
| 1 & 2       | New native broadleaves                            | Carry out enrichment planting of native broadleaves in groups using tree shelters where there is sufficient light reaching the woodland floor and natural regeneration has not been successful.  |      |   |   |   | X |
| 4           | Young mixed broadleaves                           | Carry out an initial thinning (cleaning) exercise to improve the quality of the stand, removing poorly formed and weak or suppressed trees and providing more upper crown space for the superior trees. Remove about 30% of existing stems.  |      |   |   | X |   |
| 5           | Scots pine  | Repair and maintain drains to maximise flow and lower water table  | X    | X |   | X |   |
| 5 & 6       | Scots pine  | Carry out an intermediate thinning to reduce stocking density to the recommended level as specified in the forest management tables and improve stand quality.   |      | X |   |   |   |
| 6 & 27      | Poplar  | Fell and remove all produce from the site, prepare the ground to maximise the success of the restocking operation, and restock with native broadleaves suitable for a low lying site where biodiversity is the primary management objective.   |      |   |   | X | X |
| 27          | Pure "Stormont oak" stand                         | Carry out an initial thinning (cleaning) exercise to improve the quality of the stand, removing poorly formed (multi stemmed) and weak or suppressed trees; providing more upper crown space for the superior trees to flourish. This will improve their long term potential as a seed source for future restocking within the estate and elsewhere. Remove about 30% of existing stems.   | X    |   |   |   |   |
| 30, 31 & 44 | Pure beech stands                                 | Carry out an intermediate thinning to reduce stocking density to the level specified in the forest management tables, to improve stand quality and allow more light to reach the woodland floor and encourage bluebells and other ground flora. Remove beech in direct competition with Coronation Oaks  |      |   | X |   |   |
| 38          | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand, removing poorly formed and weak or suppressed trees. Remove the exotic Italian alders. Begin the process of improving the long term potential of the hazel groups by coppicing them. Remove about 30% of existing stems.   | X    |   |   |   |   |
| 43 & 44     | Western hemlock & Norway spruce                   | Fell and remove all produce from the site, prepare the ground to maximise the success of the restocking operation, and restock with native broadleaves, planting hazel and holly on the upper slopes on both sides of the ravine to stabilise them and minimise further erosion.   |      |   | X | X |   |

## Outline long-term work programme from Year 6 – 15 (2021 – 2031)

| Cpt No.         | Woodland Species                                  | Work Activity   | Year |       |
|-----------------|---|---|------|-------|
|                 |   |   | 6-10 | 11-15 |
| 3, 4 & 5        | Mature mixed broadleaves & Scots pine             | Open up the upper canopy, manage the natural regeneration and, where unsuccessful, carry out enrichment planting using suitable native tree species.                    | X    |       |
| 4               | Young mixed broadleaves                           | Continue thinning this stand on a five-year cycle to improve its quality.   | X    | X     |
| 9 & 10          | Mature mixed broadleaves                          | Open up the upper canopy, manage the natural regeneration and where unsuccessful, carry out enrichment planting using suitable native tree species.                     |      | X     |
| 9               | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand.   |      | X     |
| 12              | Scots pine  | Open up the upper canopy, manage the natural regeneration and where unsuccessful, carry out enrichment planting using suitable native tree species.                     | X    |       |
| 14,15 & 16      | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand.   |      | X     |
| 16              | Oak/Beech Triangle                                | Carry out an intermediate thinning to improve stand quality   |      | X     |
| 19              | Scots pine  | Open up the upper canopy, manage the natural regeneration and where unsuccessful, carry out enrichment planting using suitable native tree species.                     |      | X     |
| 22              | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand, repeat after 5 years.   | X    | X     |
| 22              | Leyland Cypress                                   | Fell, prepare ground and restock with native broadleaves.   |      | X     |
| 17 & 25         | Italian alder                                     | Fell, prepare ground and restock with native broadleaves.   |      | X     |
| 26,28,29, 30,31 | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand, and repeat after 5 years.   | X    | X     |
| 27              | Pure "Stormont oak" stand                         | Continue thinning this stand on a five-year cycle to improve its quality.   | X    | X     |
| 22 & 27         | Rows of Cypress                                   | Fell, prepare ground and restock with native broadleaves.   | X    |       |
| 30,31,44        | Pure beech stands                                 | Continue thinning these stands on a five-year cycle to improve their quality.   | X    | X     |
| 34              | Western hemlock                                   | Fell, prepare ground and restock with native broadleaves.   | X    |       |
| 38              | Young mixed broadleaves                           | Continue thinning this stand on a five-year cycle to improve its quality.   | X    | X     |
| 39,41           | Mixed broadleaves/conifer                         | Open up the upper canopy, clear any windblow, manage the natural regeneration and where unsuccessful, carry out enrichment planting using suitable native tree species. | X    | X     |
| 41,44           | Young mixed broadleaves                           | Carry out an initial thinning exercise to improve the quality of the stand, repeat after 5 years.   | X    | X     |
| 42              | Mixed conifer / broadleaves at top of compartment | Open up the upper canopy, clear any windblow, manage the natural regeneration and where unsuccessful, carry out enrichment planting using suitable native tree species. |      | X     |

## 9 Costing Operations

From a purely economic perspective, the obvious alternative option is to leave these woodlands to simply grow on for years to come without any active management and only incur cost on a reactive basis as and when they begin to disintegrate and fall down (either through normal decay or catastrophic wind damage). At first glance this “do nothing” approach certainly appears attractive.

However, the potential long term cost of such an option, in economic terms as well as the loss of landscape and biodiversity benefits is likely to be much greater than actively managing the woodlands in a planned and strategic manner that secures their long term future in a sustainable manner.

There is also a general presumption that public bodies and large landowners will manage with their woodland assets according to current national best practice and more importantly, be in a position to prove this when challenged.

Lastly, there is the potential adverse publicity and public reaction arising out of any incident where trees within the woodlands cause damage to property, or worse still, result in injury.

Finally, there is the obvious question of what the annual operational cost is likely to be, and looking at the first five-year period, it is estimated that the average annual direct cost is likely to be of the order of £6000 - £8000.

Note: this estimate excludes expenditure on routine and reactive arboricultural works on the estate.