BIRSE COMMUNITY TRUST

BALFOUR FOREST

FOREST PLAN

2011 – 2030

Abbreviated Version for Management Purposes using extracts from the full plan

Birse Community Trust
The Old School
Finzean
Banchory
AB31 6NY

Scottish Charity Number SC28220 Company Number SC188799

1 INTRODUCTION

1.1 Name of Woodlands

This Forest Management Plan covers Balfour Forest (241 ha).

1.2 Legal Details

Balfour Forest is owned by Birse Community Trust (BCT), which purchased the property from Scottish Ministers in May 2010. BCT is a company limited by guarantee (SC188799) with charitable status (SC28220) that exists to promote the common good of the inhabitants of Birse parish and deliver wider public benefits.

1.3 Date of Plan Production

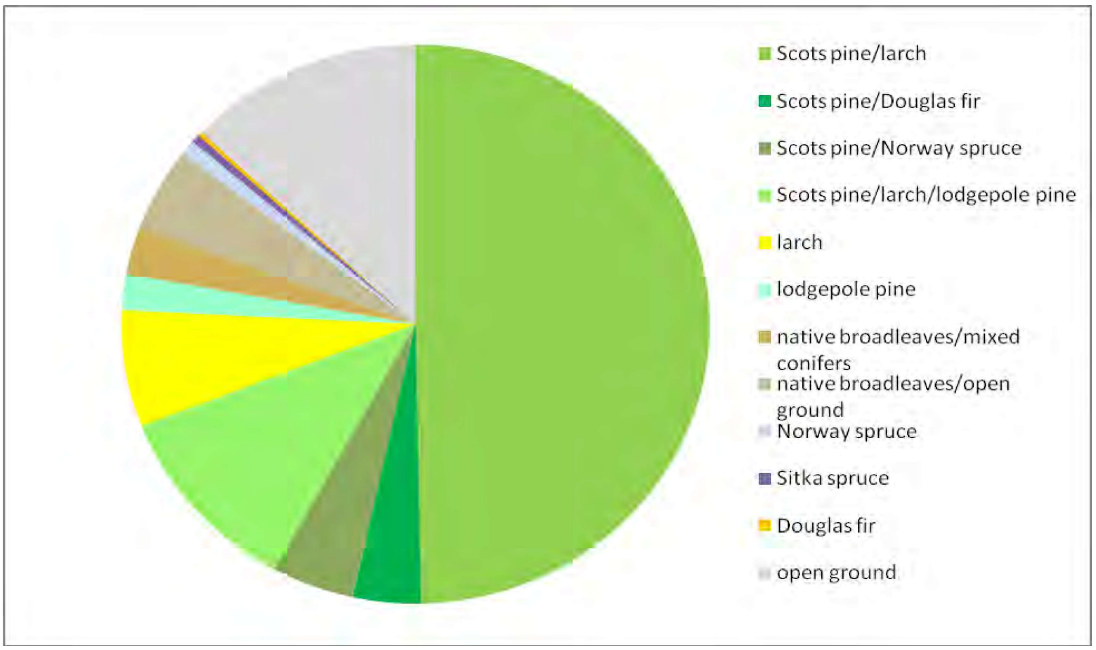
BCT has produced this Plan with the assistance of Irvine Ross of the Ross Partnership. The Plan was adopted by BCT's Trustees on 12 December 2011

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Area by Species

Species	Area (ha)	% of Area
Douglas Fir	0.56	0.23%
European Larch	3.74	1.55%
Hybrid Larch	6.17	2.56%
Japanese larch	6.26	2.60%
Lodgepole pine	4.98	2.07%
Scots pine	166.17	69.07%
Norway spruce	2.09	0.87%
Sitka spruce	1.16	0.48%
Mixed Broadleaves/Open Ground	11.68	4.86%
Established Mixed Natural Regeneration	6.52	2.71%
Open Ground	31.16	12.95%
Other land (road)	0.08	0.03%
Total Area	**240.57**	**100.0%**



4 AIMS AND OBJECTIVES

4.1 Management Aims

Birse Community Trust (BCT) manages Balfour Forest (241 ha) on behalf of the local community with two other forests: Slewdrum Forest (169 ha) and the Forest of Birse Commonty Pinewoods (525 ha)(Map 1). These community forests involve nearly 1000 ha of woodland and continue the historic local tradition of three common good forests in Birse parish.

BCT's overall aim for these forests is to ensure that they are conserved and managed to a high standard as native forests that benefit both the local community and the wider public.

With Balfour Forest, BCT's overall aim is to manage and develop the Forest as a native pinewood that has varied habitats and high amenity, while also producing a sustainable supply of timber that contributes financially to other activities carried out by BCT on behalf of the local community.

4.2 Management Objectives

1. To fulfil all BCT's legal and contractual obligations related to Balfour Forest.
2. To comply with the UK Forestry Standard and the UK Woodland Assurance Standard in all forestry planning and operations related to Balfour Forest.
3. To produce a sustainable supply of good quality commercial timber and other forest produce from Balfour Forest.
4. To improve Balfour Forest by diversifying the structure of the woodland and increasing the extent of native species.
5. To conserve and enhance the natural and cultural heritage interest of Balfour Forest.
6. To maintain and improve the network of footpaths and the visual amenity within Balfour Forest.
7. To encourage interest and involvement by members of the local community in Balfour Forest and its management.
8. To protect Balfour Forest from wildfires, safeguard its watercourses and minimise the use of any synthetic chemicals on site.
9. To monitor regularly and improve as necessary, BCT's management of Balfour Forest to achieve these objectives.

5 PRESCRIPTIONS

BCT's management objectives for Balfour Forest involve all compartments of the Forest. The prescriptions to implement each objective are set out below. A summary of the BCT's overall plans for the Forest is given on Map 5.

5.1 Legal Commitments

Objective 1 - To fulfil all BCT's contractual and other legal obligations related to Balfour Forest.

BCT will ensure that its activities as the owner and manager of Balfour Forest, conform to current laws and statutory regulations. BCT will fulfil the obligations under any contract between BCT and FC Scotland over this Management Plan and under any Scottish Rural Development Programme contracts that might be entered into as part of the implementation of the Plan.

5.2 Forestry Standards

Objective 2 - To comply with the UK Forestry Standard and the UK Woodland Assurance Standard in all forestry planning and operations related to Balfour Forest.

BCT will ensure that all aspects of its forestry planning, management and operations conform to the UK Forestry Standard and the Woodland Assurance Standard. BCT will apply for Forest Stewardship Certification during the first year of this Plan.

5.3 Felling Programme

Objective 3 - To produce a sustainable supply of good quality commercial timber and other forest produce from Balfour Forest.

Stands of commercial timber cover 191 ha or 79% of Balfour Forest. The stands were all planted in 1963-65 and consist very largely of Scots pine dominated stands (87%), with stands of larch (8%) and a small extent (5%) of other non-native conifer species. The Scots pine is considered to be mainly growing at Yield Class 6-8, but within the range 4-10, while the larch is largely similar.

The long term aims of BCT's felling programme are:

- Firstly, to thin the existing stands in the Forest on a regular basis to produce quality commercial timber;
- Secondly, to reduce the proportion of non-native conifers intermixed with the Scots pine during the thinning operations;

- Thirdly, to fell mainly areas of non-native conifers as the start of the process of diversifying the age structure of the Forest;
- Fourthly, to group fell some stands of pine and larch in due course as part of the ongoing process of re-structuring the Forest.

Thinning

The thinning of the stands in Balfour Forest started in the 1990s. However, some stands were only thinned for the first time in 2010/11, when BCT thinned all the existing accessible stands. Further selective thinning will be carried out at intervals of 5-7 years depending on the yield class of the stands and existing pattern of thinning.

The areas scheduled for thinning in the period 2011 - 2030 are shown on Map 8 and the full thinning schedule is included in Annex 2.

The thinning intensity in stands will be kept as near as practicable to Marginal Intensity (i.e. the increment or growth since the last thinning) until the latter stages of their rotation. This will be monitored by measuring sample plots in the stands shortly after thinning has been completed. Thinning intensity within stands will be varied during operations to benefit wildlife habitat.

As the thinning cycles progress, larch and other non-native conifers will be selectively reduced where they are in a mixture as scattered trees or small clumps with the Scots pine. For stands which are scheduled for selective felling and natural regeneration, thinning intensity will be increased towards the end of the rotation to encourage crown development and stability of the individual seed trees that will be retained after the seeding felling.

Felling

At present, nearly 80% of the Forest area consists of even aged stands of 50 years old conifers and over 20% is open ground with very limited regeneration. Over the next 15 20 years, BCT plans to continue thinning the existing conifers and to start diversifying the age structure of the Forest by establishing some stands of native woodland within the parts of the open ground.

In the first 10-15 years, only very limited clear felling of any stands is anticipated. This will involve felling the isolated stand of Sitka spruce in Compartment 6 (Baudylace). This covers less than 1 ha and is increasingly vulnerable to windblow. It will be felled with parts of the stands at the north end of the compartment where wind damage is continuing to develop. The small pocket of Sitka spruce in Compartment 1e which is also beginning to blow will also be cleared.

Thereafter, from 2026 onwards, BCT will start to fell other areas as part of an on-going process to diversify the age structure of the stands in Balfour Forest. At present, 95% of the stands are Scots pine and larch and felling in these areas will use the uniform shelterwood system. Both the species and the site are well suited to this approach, which involves

successive thinning and then a felling that leaves seed trees to re-stock the stand by natural regeneration.

Clear felling will be used in 2026-30 to reduce the small percentage of non-native conifers other than larch, as BCT does not want those to naturally regenerate in Balfour as a native forest. This felling will include any small clumps of spruce not already cleared during thinning. The non-native stands to be felled are in compartments 1, 4 and 7, which are the three compartments in the Forest that have virtually no open ground at present)(Map 7). The stands will include the lodgepole pine in Compartment 4 (Creagantoll), the spruce in Compartment 1 (Kittling Wood) and areas of spruce in Compartment 7 (Lower Allansack).

BCT plans to fell up to 15 ha or 6% of the Forest area during 2026-30. In addition to the non-native stands above, the felling will include parts of the pure larch stands in Compartment 1 (Kittling Wood). These stands will be felled using the shelterwood system. They have been thinned recently and will be thinned again before the felling to seed trees in 2026-30. The stands are relatively well grown due to their location on the generally more fertile lower slopes and are also relatively sheltered for starting to develop the use of the shelterwood system of felling.

These initial fellings and future shelterwood fellings in the pine / larch stands will diversify the age structure of the stands in the Forest. This re-structuring will involve felling some stands before or after their period of Maximum Mean Annual Increment (80 years for Yield Class 6 Scots pine). BCT will follow the UK Forestry Standard SN4 and UK Certification Standard Section 3, in spreading the felling and re-stocking over time and across the Forest. BCT plans to establish a succession of widely distributed different age classes that will create an increasingly small scale and diverse habitat structure of pine birch woodland. This will include a mosaic of open areas, younger stands, more mature stands and areas where the trees are left as long term retentions.

At this stage, the stands for felling in 2026-30 are provisional because of the possible influence of windblow or other factors in the Forest over the next 15 years. Table 8 provides the Tolerance Schedule for the planned felling programme.

Visual Impact

The visual impact of the proposed felling will be hardly noticeable from any viewpoint. The initial small clear felling of less than 1 ha in Compartment 6 is on the edge of a much larger existing open area. The other small clear fellings in 2026-30 will all be screened by the surrounding trees. With the coupes to be selective felled using the uniform shelterwood system, the seed trees will be left standing after the first seeding felling. This will mean that the visual impact from any distance will be negligible. The young trees of the next rotation will be fully established before the overstorey is finally removed, so that continuity of forest cover is maintained.

5.4 Forest Cover

Objective 4 - To improve Balfour Forest by diversifying the structure of the woodland and increasing the extent of native species.

Open Ground

BCT's aim is to have around 10% of the Forest's area or 24 ha as open ground at any time. This will consist of a few larger areas and a network of smaller glades and clearings spread throughout the woodlands. The three main areas of open space will be Bogranda and alongside the Allansack Burn and the Baudylace Burn tributary. These three permanent corridors of open areas radiate out from the middle of the Forest. Many of the other smaller areas making up the rest of the 10%, will be more temporary clearings and evolve as the woodland areas are re-structured to create more diverse habitat. Some of the smaller areas will be created by the removal of the small groups of non-native conifers that are scattered in the Forest. These have usually been planted in patches of wetter ground that will be retained as open spaces.

At present, 191.1 ha of Balfour Forest is existing woodland and a further 6.5 ha is established natural regeneration. The remaining 42.9 ha is currently open ground in four relatively large areas, following felling by the Forestry Commission in 2000-2007. A small amount of recent native broadleaved planting has taken place in three of them. These broadleaves are very scattered in wider areas of long term open space along the upper Allacksack Burn, around Bogranda and the top of the Brown Hill. BCT may plant a few more individual native broadleaves to enhance species diversity in these areas, but otherwise there will be no planting in these open areas and naturally regenerating non-native conifers will be cut down before they become fully established trees.

Planting

The largest area of open ground at present is on the western slopes of the Forest in Compartment 6 around the Baudylace tributary. This area covers 15.8 ha and has varied site conditions with the Baudylace tributary, another small burn and a mosaic of dry and wetter ground. BCT plans to greatly enhance the site by creating a diverse area of native woodland with 20% open space, 40% native broadleaves and 40% native pine. This planting in 2011-20 will be linked to clear felling and re-stocking the adjoining isolated stand of spruce (<1 ha) and areas of windblow damage in the same compartment. During 2011-20, BCT also plans to plant an area of native pinewood in the open ground south of the forest road. This will cover 4.3 ha and consist of 10% open space, 20% native broadleaves and 70% Scots pine.

These areas of native woodland will be established without any site cultivation and with the Scots pine planted at 3,000 per ha and the native broadleaves at 2,400 per ha. Only small seeded species of native broadleaves (such as birch, rowan, gean, alder and willow) will be used in these and other planting within the Forest meantime, while there continues to be a risk of grey squirrels in the area. There are considered to be no grey squirrels in Birse parish at present, but they occur nearby to the north of the River Dee. Avoiding the use of large

seeded species, such as oak, will reduce the risk of encouraging grey squirrels into the Forest in future.

These schemes will both start to establish some future stands of Scots pine and help increase the proportion of broadleaves in the Forest from a very low percentage at present, towards BCT's target of 10%.

In 2026-30, BCT plans to plant a further 5 ha of native woodland at the edge of the large area of open ground on the east side of compartment 2 (Brown Hill). Once all three planting schemes are established, there will still be 10% open ground in the Forest.

Re-stocking

In the first 10-15 years of this plan, the only clear felling is the removal of the stand of spruce at the south end of Compartment 6 (Baudylace), the wind damaged area at the north end of the Compartment and Compartment 1e. These areas will be re-planted with Scots pine and native broadleaves at the same time as BCT is planting the area of native woodland on the extensive open ground in Compartment 6. With the stand of spruce, effective ways of dealing with the dense mat brash after felling will be investigated and cultivation by rotary spot cultivation considered if necessary

The areas to be felled in 2026-30 will be re-stocked by natural regeneration. The Lodgepole pine to be cleared in Compartment 4 is on hard, rocky ground near the summit of Creagantoll and these areas are expected to regenerate from the surrounding pine and larch. The stands to be felled in Compartments 1 and 7 will be re-stocked by natural regeneration from retained seed trees and adjoining pine and larch stands (see Felling above). Where natural regeneration fails to provide an adequate stocking density within a period of 10 years, gap filling by notch planting will be carried out. Any natural regeneration of undesired non-native conifers that may occur will be weeded out and any thickets of other regeneration will be thinned to arrive at the intended balance of species in each stand.

The schedule of planting, felling and re-stocking is in Table 7 and on Maps 8, 9, 10 & 11. The full schedule of thinning, felling and restocking is in Annex 2.

Table 7
Schedule of Planting, Felling and Restocking 2011 -2020

	Period		Crop to be felled			Species to be Planted		
Cpt No	**2011-2015**	**2016-2020**	**Species**	**P Year**	**Area**	**Planting**	**Natural Regeneration**	**Other Land**
1e		Clear fell	SS	1965	0.55	SP/NBL		
6c		Clear fell	SS	1964	0.61	SP/NBL		
5c		Proposed Planting*				4.27ha SP/NBL		
6b		Proposed Planting*				15.79 ha SP/NBL		

** planting on land that has been open ground since before BCT became owner in 2010, following felling by the previous owner in 2000-2007.*

Protection of Planting and Natural Regeneration

BCT plans to carry out the scheduled planting and natural regeneration in Balfour Forest without the use of deer fencing. It is considered that the deer population using the Forest can be reduced to and maintained at a sufficiently low level to allow natural regeneration and planted pine and larch to become established in a reasonable timescale. This will be achieved by effective culling within the Forest and cooperation with neighbouring estates to control the overall size of the red deer population in the local area (see Deer Management Plan in Annex 3). The broadleaves to be planted will be protected in individual tree shelters. However, with the relatively large area of native woodland to be created in Compartment 6 (Baudylace) and the high proportion of broadleaves involved, it may be appropriate to consider temporary fencing.

Experience has shown that spraying against pine weevil is always necessary on re-stock sites after clear felling. Only approved insecticides will be applied. Drench guns applying a metered dosage to each plant will be the default method of application. Knapsack sprayers may be used when necessary.

Weeding and beating up will be carried out as necessary until the trees are established. Weeding by hand cutting is BCT's strongly preferred option. However in some limited circumstances on more fertile sites, this may not provide adequate control. As a last option, herbicide applications of glyphosate will be used if it is judged necessary.

BCT plans to create an environment where there is increasing natural regeneration of birch and other native broadleaves throughout the Forest. However, it is recognised that there will also be a need to control the natural regeneration of non-native conifers other than larch, by swiping and cutting.

Table 8 Tolerance Table

	Adjustment to felling period*	Adjustment to coupe boundaries**	Timing of Restocking	Changes to species	Changes to road lines	Designed open space ***
FC Approval normally not required	Fell date can be moved within 5 year period. Where separation or other constraints are met	1.0 ha or 10% of coupe area – whichever is less	Up to 2 planting seasons after felling			Location of temporary open space eg deer glades if still within overall Open Space design Increase by 0.5 ha or 5% of area, whichever is less
Approval by exchange of letters and map		1.0 ha to 5 ha or 10% of coupe area – whichever is less		Change within species group eg evergreen conifers or broadleaves	Additional felling of trees not agreed in plan Departures of > 60m in either direction from centre line of road	Increase of 0.5 ha to 2 ha or 10% - whichever is less Any reduction in open space
Approval by formal plan amendment may be required	• Felling delayed into second or later 5 year period • Advance felling into current or 2nd 5 year period	> 5 ha or 10% of coupe area	Over 2 planting seasons after felling	Change from specified native species Change between species group	As above, depending on sensitivity	More than 2 ha or 10% Any reduction in open space in sensitive areas Colonisation of open areas agreed as critical

*Felling sequence will not compromise UKFS eg. adjacency. At mid term review detail of felling progress and impact will be reviewed against UKFS
** Where windblow occurs, FCS will be informed of extent prior to clearance and consulted on clearance of any standing trees
*** Tolerances subject to an overriding maximum of 20% open ground

5.5 Natural and Cultural Heritage

Objective 5 - To conserve and enhance the natural and cultural heritage interest of Balfour Forest.

The planned diversification of the structure of the woodland and the increased extent of native broadleaves will both benefit the natural heritage interest of Balfour Forest. Other measures will include the following:

Open Space

A minimum of 10% of the Forest area will be retained as open space at any time. This will consist of a mixture of a few larger open areas and a network of smaller open glades. These will include especially areas along the Burn of Allansack and the Baudylace tributary, as well as around Bogranda and other wetter areas (see 5.4).

Biodiversity Area

The area known as Bogranda consists principally of wet land with dry knolls. There is Scots pine on most of the knolls, while the wet land is largely open except some recently planted native broadleaves around the edge and some Norway spruce from the 1960s at the lower edge of the wet land. Bogranda is the most diverse area of habitat in the Forest and will be managed principally for biodiversity. The stands involved are:

Cpt No	**Area (ha)**	**Habitat Type**
3b	0.8	islands of Scots pine on dry knolls surrounded by wet land
3c	5.86	scattered native broadleaves and wet land
Total Area	**6.66**	

Long Term Retentions

Some selected areas of the woodland will be retained beyond their normal commercial rotation as part of developing a more diverse habitat for wildlife. Some of these areas, amounting to at least 1% of the woodland area, will be left to continue as long term retentions. Such areas will include the few self-sown mature Scots pine in the Forest that are near the summit of Creagandummie and also the area of Norway spruce in Bogranda. All the individual trees within the Forest that pre-date the 1960s planting will be also retained, unless any ever need to be felled on safety grounds. These trees include the oak, birch and pine along the western boundary of the Forest and a few scattered individual pine trees on the western slopes.

Cpt No	Area (ha)	Habitat Type
5	0.8	Mature Scots pine
3d	1.62	Norway spruce and open wet ground
Total Area	**2.42**	

BCT plans to identify the further areas of Scots pine to be additional long term retentions in due course. This is not being done at this stage because there will only be very limited felling during the first 10 year period of this Plan. A range of unforeseen events could occur during that period, while BCT will also have an improved knowledge of the Forest after its first 10 years. Therefore, the particular locations of these further long term retentions will be considered at the 10 year review of the Plan.

Deadwood

Standing and fallen dead timber will be retained as an important habitat for invertebrates and the birds and animals that prey on them. Standing dead trees which are close to roads and footpaths and may be hazardous to the visiting public, will be felled if necessary in the interest of safety.

Capercaillie

A resident population of Capercaillie still survives some 3km to the south of Balfour Forest and they also occur some 2km to the east. While Capercaillie are not known to be present in the Forest, the large extent of Scots pine and larch woodland would provide suitable breeding and wintering habitat. BCT will maintain and enhance the Forest's potential as Capercaillie habitat.

The most common ground vegetation type under the stands of pine and larch is the dwarf shrub layer comprising heather, blaeberry and cowberry and in many places blaeberry is the dominant component. This provides ideal foraging habitat for young broods of chicks. Regular selective thinning at the correct intensity will encourage the blaeberry/cowberry vegetation to remain dominant and suppress the heather component of the ground vegetation. Thinning intensity will be varied to provide a variety of habitat and some areas of denser woodland to provide shelter. Timber harvesting in potential nesting areas will avoid the breeding period April – September.

Windblown trees will usually be left lying on site and provide shelter to the young birds and cover from predators, except where the trees need to be removed as they are blocking paths or extraction routes. Areas of wet land also provide valuable foraging habitat, especially in dry summers. Drains dug at the time when the woodland was planted will be inspected and consideration given to blocking some to increase the area of wet land.

Cultural Heritage

There are no recorded archaeological or other historical sites within Balfour Forest, other than the two historic tracks, the internal drystane dyke and one small grouse butt. However, any sites that are found will be safeguarded.

In addition to the internal dyke, parts of the boundaries of the Forest are defined by drystane march dykes. All these are in generally good condition, with the dyke on the southern Creagandummie boundary of particular note for its size and style. BCT will look for opportunities to carry out some repairs to these dykes.

BCT will continue to research and compile information about the history of the area now known as Balfour Forest and its surrounds. This information will be made available locally through BCT's publications and BCT's Birse Parish Archive.

5.6 Access and Amenity

Objective 6 - To maintain and improve the network of footpaths and the standard of visual amenity within Balfour Forest

Balfour Forest is traversed by the Coffin or Church Road (2.1 km) and the Foggage Road (1.7 km)(Map 5). The Coffin Road is regularly used by walkers and the Foggage Road to a less extent. Both tracks will be regularly inspected so that they are kept clear of windblown trees. The surface of the Coffin Road will be maintained in its current or better condition. The condition of the Foggage Road will be improved along a number of lengths, particularly where it crosses the wet land on either side of the Burn of Allansack, to make the route more accessible to a wider range of walkers.

Both the historic tracks link to the forest road in Balfour Forest. However, there are limited opportunities to make circular walks without returning by the same route. Therefore, to improve this situation, BCT proposes to create two new lengths of informal footpath. One will be 1,375 metres long to link the far end of the forest road via Brown Hill to the Foggage road where it pass through the Forest's internal dyke.

The second will be 1,750 metres long and broadly follow traditional routes along the western boundary of the Forest from near the public road entrance and up the western slopes to the junction of the Coffin Road, Foggage Road and modern forest road. There is also scope for a short spur from the path down to the western gate in the Forest boundary dyke, beside the Baudylace tributary. BCT will liaise closely with Scottish Natural Heritage, the Aberdeenshire Council Access Officer and others over the potential need to close the lower length of this western path seasonally, due to a schedule one bird species nesting relatively nearby. The use of the forest road provides a ready alternative route for walkers to reach the same end points.

BCT will also maintain close liaison with the Council Access Officer on all forestry operations that might affect path users and arrange for temporary diversions, if necessary, while any

hazardous operations are taking place. Adequate signage will be put in place and maintain during the period of such operations. The recent thinning of the Forest by BCT has increased informal walking opportunities through the woodlands generally by opening them up more.

BCT will ensure that adequate remedial works are carried out after thinning and felling operations to maintain the amenity of the Forest. Small scale improvements to the appearance of the site will also be undertaken. These will be around the five entrances to the Forest and some other prominent sites within the Forest. BCT plans to erect its normal form of boundary sign at the four entrances without one at present, otherwise BCT will follow its wider policy of generally having minimum signage.

5.7 Community Involvement

Objective 7 - To encourage interest and involvement by members of the local community in Balfour Forest and its management.

The community in Birse parish is directly involved in Balfour Forest, as it is owned and managed by the members of the community through BCT and its five local elected Trustees. BCT is accountable to its membership and engages with the members of the community in a number of different ways, given the range of properties and other projects managed by BCT on behalf of the community.

BCT will maintain a particularly close relationship over Balfour Forest with its membership in the Birse Area, as the Forest is prominently located in that part of Birse parish. BCT will liaise fully over the management of the Forest with both the Birse Area Community Association and Birse and Ballogie Community Council that also represent local residents that part of the parish.

BCT will encourage local residents to visit the Forest for interest, enjoyment and exercise. BCT will also involve local residents in meetings, consultations and other events about the Forest's management, while also employing local contractors wherever appropriate to carry out the work required in the Forest.

5.8 Protection Measures

Objective 8 - *To protect Balfour Forest from wildfires, safeguard its watercourses and minimise the use of any synthetic chemicals on site.*

<u>Fire Protection</u>

A detailed contingency plan developed for the site has been agreed with Grampian Fire Services and neighbouring land owners. This will be fully implemented and reviewed annually. Full liaison will be maintained with the South Grampian Wildfire Group. A copy of BCT's fire plan is available for inspection at the BCT offices.

Safeguarding Watercourses

All felling and restocking operations will follow the prescriptions contained in the current edition of the Forest & Water Guidelines. In particular care will be taken to prevent any silt, fuel oils, chemicals or other contaminants entering tributaries leading to the River Dee. Main harvesting extraction routes will be selected to avoid areas of wet ground and timber loading points will be sited well away from watercourse. Conifer brushwood will not be left on ground immediately adjacent to the main watercourses.

Use of Pesticides and other Chemicals.

In accordance with UKWAS standard 5.2.3, it is BCT's policy to utilise strategies that will keep the use of synthetic chemicals to a minimum and reduce the usage of such chemicals where it is practicable and economic to do so. The following general guidance will be followed:

Weed Control: Hand weeding by cutting will be the default option for weed control in young plantation and regeneration areas. Chemical control will be considered in the following circumstances.

- Where dense broom and whins would require repeated cutting over several years, the use of Timbrel herbicide may be the only economic option.
- Where trees are protected by individual tree shelters and the surrounding vegetation is vigorous grasses and herbs, cutting cannot prevent moisture stress in the young trees. Application of Roundup will be considered.

Fungicides: There will be no routine application of urea or any other approved fungicide to cut stumps during tree harvesting operations. The impact on the subsequent rotations of Heterobascidion annosum is within acceptable limits where Scots pine is restocked on the type of acid soils commonly found in Balfour Forest. Application of Urea will only be considered where soil Ph is higher than normal and the standing crop shows signs of but rot and discolouration caused by fungal infection.

Insecticides: In normal circumstances there will be no use of insecticides in Balfour Forest. The use of pre-treated planting stock will be avoided.

Rabbit control: The preferred methods for rabbit control, if ever necessary, are shooting, including lamping and ferreting. The use of chemicals for gassing rabbit burrows will not be undertaken.

Unforeseen Circumstances: In the event of any unforeseen occurrence, for example an outbreak of foot and mouth disease, the necessary use of any synthetic chemical will be considered taking into account existing guidelines and any emergency guidelines that may be issued by relevant authorities at the time. The policy will be to consider alternative strategies that might be applied and to limit the use of any synthetic chemicals to the practicable minimum.

Policy Review: The policy on the use of chemicals will be reviewed annually following the guidelines in the Practice Guide *Reducing Pesticide use in Forestry* published by the Forestry Commission and following the core decision key attached to this addendum. Strategies to reduce the use of chemicals will include:

- Changes in silvicultural practice
- The use of biological controls
- The use of alternative techniques
- The use of chemicals with lower biological impact
- The use of non-residual chemicals

5.9 Monitoring

Objective 9 - To monitor regularly and improve as necessary, BCT's management of Balfour Forest to achieve these objectives

BCT will establish and maintain systems to monitor its management of Balfour Forest, so that it has the necessary information to inform its management decisions. This will include particular attention to deer numbers and any significant damage to natural regeneration and planted trees.

BCT plans to carry out survey work to improve the exist levels of information on the plants, invertebrates and other wildlife species in Balfour Forest.

6 PLAN REVIEW

BCT will review this Plan by 31 December 2021.

Annex 1

Balfour Forest Compartment Schedule

Balfour Forest Compartment Schedule

Cpt No	Sub	Species	P Year	Y/C	Area (ha)	
1						
	a	SP/JL/DF	1965	8	14.67	
	b	SP/JL/NS	1965	8	10.12	
	c	NBL/MC	2006		0.08	
	d	JL	1965		1.76	
	e	SS	1965		0.55	
	f	DF	1965		0.56	
	g	NS	1965		0.46	
						28.20
2						
	a	SP	1964	6	25.20	
	a	SP	1964	6	2.04	
	b	NBL/OG	2009		4.13	
	c	OG			5.10	
	c	OG			1.19	
	e	HL	1964		1.07	
						38.72
3						
	a	SP/JL	1965	6	4.01	
	b	SP/NS	1965	4	0.27	
	b	SP/NS	1965		0.34	
	b	SP/NS	1965		0.05	
	b	SP/NS	1965		0.17	
	c	NBL/OG	2008		5.87	
	d	NBL/OG	2009		0.20	
	e	OG			0.84	
	f	NS	1965		1.63	
						13.37

Cpt No	Sub	Species	P Year	Y/C	Area (ha)	
4						
	a	SP/JL	1964	6	6.45	
	b	SP/JL	1964	6	13.87	
	c	JL	1964	6	2.22	
	c	JL	1964	6	2.29	
	d	LP	1964	6	2.90	
	d	LP	1964	6	1.44	
	d	LP	1964	6	0.64	
						29.80
5						
	a	SP/HL	1963	6	3.84	
	a	SP/HL/LP	1963	6	14.11	
	b	SP/HL/LP	1963	6	12.55	
	c	OG			4.27	
	d	HL	1963	6	2.69	
	d	HL	1963	6	0.33	
	d	HL	1963	6	2.08	
						39.87
6						
	a	SP/EL	1964	8	6.92	
	a	SP/EL	1964	8	7.44	
	a	SP/EL	1964	6	7.23	
	b	OG			15.80	
	c	SS	1964	8	0.61	
	d	EL	1964	8	3.74	
						41.73
7						
	a	SP/DF	1964	8	0.38	
	a	SP/DF	1964	8	8.64	
	b	NBL/MC	2002		3.01	
	c	OG			1.09	
						13.11

Cpt No	Sub	Species	P Year	Y/C	Area (ha)	
8						
	a	SP	1964		19.77	
	a	SP	1964		8.02	
	a	SP	1964	6	0.10	
	b	NBL/MC	2006		0.78	
	b	NBL/MC	2006		2.65	
	c	OG			2.96	
	d	NBL/OG	2006		1.48	
						35.76
Grand Total						**240.57**

Annex 2

Balfour Forest Production Forecast 2011 –20

Balfour Forest Forest Plan

Production Forecast 2011 - 2020

Coupe Data						Stand Data						Restructuring Areas by Successor Crop Types (ha)						
	Period 1		Period 2															
Coupe Reference	Fell/thin Period	Intervention Type	Fell/thin Period	Intervention Type	Planned Felling Year	Species	Planting Year	General Yield Class	WHC	Thinned Before	Net Area (ha)	Sitka Spruce	Other conifer	Mixed Broadleaves	Native Broadleaves	Caledonian Scots Pine	Natural Regeneration	Other Land
1			2016-2020	Thin	2017	SP	1965	8		y	27.57							
1e			2016-2020	Fell	2017	SS	1965	12		y	0.55					0.55		
2			2016-2020	Thin	2017	SP	1964	8		y	28.32							
3a			2016-2020	Thin	2017	SP	1965	6		y	4.01							
4			2016-2020	Thin	2017	SP	1964	6		y	29.80							
5			2016-2020	Thin	2017	SP	1963	6		y	35.60							
6			2016-2020	Thin	2017	SP	1964	6		y	25.32							
6c			2016-2020	Fell	2017	SS	1964	12		y	0.61					0.61		
7			2016-2020	Thin	2017	SP	1964	6		y	9.01							
8			2016-2020	Thin	2017	SP	1964	8		y	29.37							

Annex 3

Balfour Forest Deer Management Plan 2011-20

BALFOUR FOREST

FOREST PLAN

Deer Management Plan 2011 - 2020

1. Context

Birse Community Trust (BCT) acquired Balfour Forest in May 2010. The Forest covers 241 ha of Birse parish on Deeside. Red deer and roe deer occur in the Forest.

Most of the Forest (191 ha or 79%) consists of even aged stands of Scots pine and larch planted in the 1960s. The remaining land (50 ha or 21%) is open ground with some recent natural regeneration and young planted native broadleaves in tree cells.

Maps of the Forest and a detailed description of it are given in the Forest Management Plan (FMP) of which this Deer Management Plan (DMP) forms a part.

This DMP should also be read in conjunction with the Birse Parish Deer Management Plan 2009-14 (Annex 4). Balfour Forest is Deer Management Unit (DMU) 3 in the Plan.

BCT is also responsible for deer management in a further two of the 13 DMUs in the Parish Plan – (7) Slewdrum Forest (169 ha) and (12) Forest of Birse North Hill (521 ha).

BCT has endorsed the Parish DMP with the other parties responsible for deer management in Birse parish. The Plan continues to be actively implemented through local discussions and cooperation both within the parish and within the wider context of the Kincardine & Birse Deer Management Group (K&B DMG).

The Parish DMP 2009-14 followed the local DMP for 2004-09 and BCT expects it to be followed by a further 5 year plan that will cover to the end of this Balfour Forest DMP, given the continuing strength of local cooperation.

2. Management Objectives

Within the context of the terms of the Birse Parish DMP, the two main objectives of BCT's deer management in Balfour Forest are:

Firstly, to manage the numbers of deer in Balfour Forest so that naturally regenerating native tree species and planted Scots pine can be successfully established without deer fences and without significant levels of serious damage to the trees by deer.

Secondly, to ensure that the management of deer in Balfour Forest helps minimise any significant serious damage by deer on neighbouring lands.

3. RED DEER

(A) Background

3.1 Numbers

The red deer that use Balfour Forest are part of a population that lives in the wider area around the Forest. The deer move between different parts of this area, often in large groups (30+). A hundred or more have been reported on occasions in the fields at Newmill and the overall population in the area is estimated by local stalkers to be perhaps up to 200.

Many factors potentially affect the movement of this very mobile population of deer. These include food (eg. time of year, field crops), weather (eg. shelter, wind direction) and human disturbance (eg. stalking, timber harvesting). Thus, at any time, it is hard to predict how many red deer might be in Balfour Forest. However, sometimes they are present in large numbers (50-100+).

3.2 Damage

Red deer are considered the overwhelming factor in the limited extent of natural regeneration that has become established to date in the existing areas of open ground within Balfour Forest.

The impact of the red deer grazing on the natural regeneration is conspicuous on the ground. Roe deer contribute. However, in part of the Forest where red deer occur more seldom, the regeneration has become established successfully. There are no livestock in the Forest, while rabbits or hares are rare.

This population of red deer is also causing serious damage on lands around Balfour Forest, including in the nearby agricultural fields. This situation in the general Balfour / Newmill area is identified in the Parish DMP (page 9) as a key red deer management issue to address locally.

All the land owners affected by this deer population are committed to reducing its size. There have been on-going local discussions involving the Deer Commission for Scotland, now Scottish Natural Heritage (SNH), about how this might realistically be achieved.

3.3 Previous Culls

Culling is carried out in the Forest to try to control the serious damage by red deer. The cull figures for the last 6 years are shown in the table below. The average cull over the last six years has been 8 deer a year.

Red	**Balfour Forest**			
	Stags	*Hinds*	*Calf*	*Total*
2004-05	6	1	0	7
2005-06	6	5	3	14
2006-07	2	2	2	6
2007-08	1	3	0	4
2008-09	3	0	0	3
2009-10	3	8	1	12
2010-11	2	8	2	12
Target 2011-12	*5*	*10*	*0*	*15*

(B) Future

3.4 Target Culls

Now that BCT is the owner of Balfour Forest, BCT plans to increase the frequency of visits by stalkers to the Forest to try to cull red deer there. BCT's recent thinning of the Forest will help improve culling opportunities, particularly in areas like the Creagantoll compartment which has now been thinned for the first time.

BCT will also carry out a number of site works to assist culling. These will include, for example, felling individual windblown trees that obscure lines of sight along rides and dyke sides in some key places, repairs to key gaps in the Creagandummie march dyke to help channel deer movements and improving quad bike access in parts of the Forest.

BCT will also seek out of season authorisations from SNH while serious damage is being caused by red deer in the Forest and consider applying for night shooting authorisation, if SNH consider this appropriate within the context of reducing the size of the red deer population marauding around the general Balfour / Newmill area.

Against the current background, BCT's annual target is therefore to cull as many red deer in Balfour Forest annually as is reasonably practical. At present, the target is set at 15 or more a year, recognising that the mobile nature of the population markedly affects the opportunities for culling in the Forest.

3.5 Local Contract

BCT contracts the neighbouring Ballogie Estate to carry out the deer control in Balfour Forest, as well as in its other forests. BCT has a well established relationship with the Estate over deer control and anticipates this arrangement continuing throughout the implementation of this DMP.

The Ballogie Estate stalkers operating in the Forest are well qualified (e.g. DMQ level 2) and experienced. The Estate handles the carcases through its own larder facilities and also acts as BCT's agent in applying for authorisations from SNH.

As Ballogie Estate stalkers are responsible for deer control over a significant amount of the land around Balfour Forest, this greatly assists their knowledge of when groups of the red deer population that moves around the area might be in the Forest.

3.6 Local Cooperation

BCT's neighbours around Balfour Forest are committed to reducing the deer population in the area. However, it is agreed that the combined culling effort to date has not reduced the population and considered that it may also not have kept pace with annual recruitment to the population.

BCT, other local land owners and SNH are currently discussing ways to increase the annual cull through further increased effort and cooperative action. In addition, other strategies have also been considered. Plans are already being developed to create a deer catcher (or enclosure) on Newmill beside Balfour Forest, as a potentially very suitable location for a catcher.

The deer catcher offers the prospect in the reasonably near future of reducing the deer population in the area to a more manageable level in an effective and humane way. There is the possibility of creating a second deer catcher in the area to work with the first one, if that proves successful.

3.7 Monitoring

BCT will continue to participate actively in the local discussions about reducing the local red deer population and support initiatives by other parties as part of achieving that. BCT will monitor the extent of progress being made with the overall population, while increasing its own cull in Balfour Forest as part of that.

BCT will also monitor the use being made of Balfour Forest by red deer, together with the natural regeneration in the Forest and levels of serious damage by deer to it.

4. ROE DEER

(A) Background

4.1 Numbers

Roe deer are resident in Balfour Forest and on the adjoining lands, which are also largely Scots pine woodland and not separated from the Forest by any deer fencing.

Balfour Forest is considered a site that would naturally grow native pine and is therefore not particularly fertile. However, the Forest is a relatively favourable habitat for roe deer with its varied topography and mix of woodland and open spaces. The quality of the environment for roe will also improve over time as BCT implements its FMP.

There is no count or other systematic information about the number or density of roe deer that might generally be in Balfour Forest. These deer are also part of the population in the adjoining woodlands, with fields below and moorland above. It might be assumed from figures in the literature for some perspective, that there could be a density of around 10 roe per 100 ha in this overall environment.

4.2 Damage

Observation shows that roe deer are undoubtedly having an impact on the natural regeneration of birch and other native broadleaves in the Forest. However, in the Lower Allansack compartment where red deer occur less frequently, roe deer have not prevented successful natural regeneration.

4.3 Previous Culls

The roe deer in the Forest are managed by an annual cull. The table below shows the annual culls in the Forest since 2004-05.

Roe	**Balfour Forest**			
	Bucks	*Does*	*Kids*	*Total*
2004-05	1	4	1	6
2005-06	4	0	1	5
2006-07	5	1	1	7
2007-08	1	4	2	7
2008-09	0	1	0	1
2009-10	1	2	0	3
2010-11	0	2	1	3
Target 2011-12	*3*	*7*	*0*	*10*

The average cull recorded in the table is 4-5 roe a year. This is considered well below the natural recruitment rate for the number of roe that might be in the Forest. The current Birse DMP also shows that in the last two years of the previous DMP, 2007-08 and 2008-09, only one roe deer was culled in the two DMUs (1 and 4) that largely surround Balfour Forest.

The Parish DMP also included the local commitment to increase roe culls as part of the new plan. This was evidenced, for example, by a cull of 18 roe in DMUs 1 and 4 during the first year of the Plan.

(B) Future

4.4 Target Culls

In contrast to trying to cull the red deer that come and go through the Forest, culling the roe deer is more directly related to effort. BCT plans to implement an annual cull of 10 roe per year in the Forest, with the main emphasis on does.

BCT considers 10 roe a year to be reasonable target to achieve at this stage, against the average of 4-5 over the last six years. The target will be reviewed annually in terms of culling effort and observations of roe and roe damage in the Forest.

BCT will also promote reasonable levels of roe culling on neighbouring lands in line with the Birse Parish DMP, to help make its own cull more effective by reducing recruitment into the Forest from those lands.

4.5 Site Improvements

BCT's recent thinning in Balfour Forest and the other site improvements for red deer control identified in 3 (A) above, will also help facilitate the culling of roe deer.

4.6 Local Contract

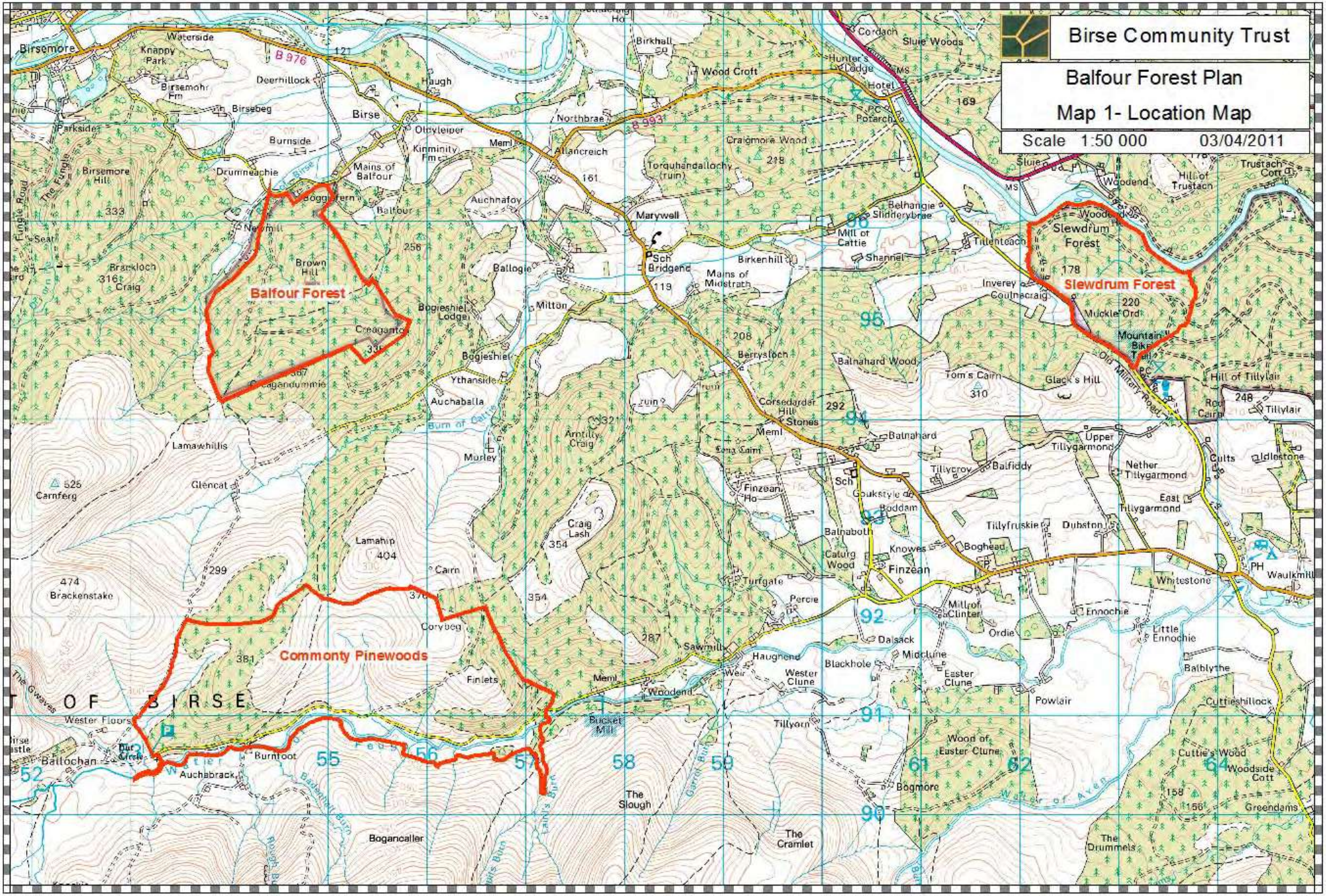
BCT's contractual arrangements for the carrying out of its annual roe cull in Balfour Forest will be the same as identified above (3.5) for red deer control.

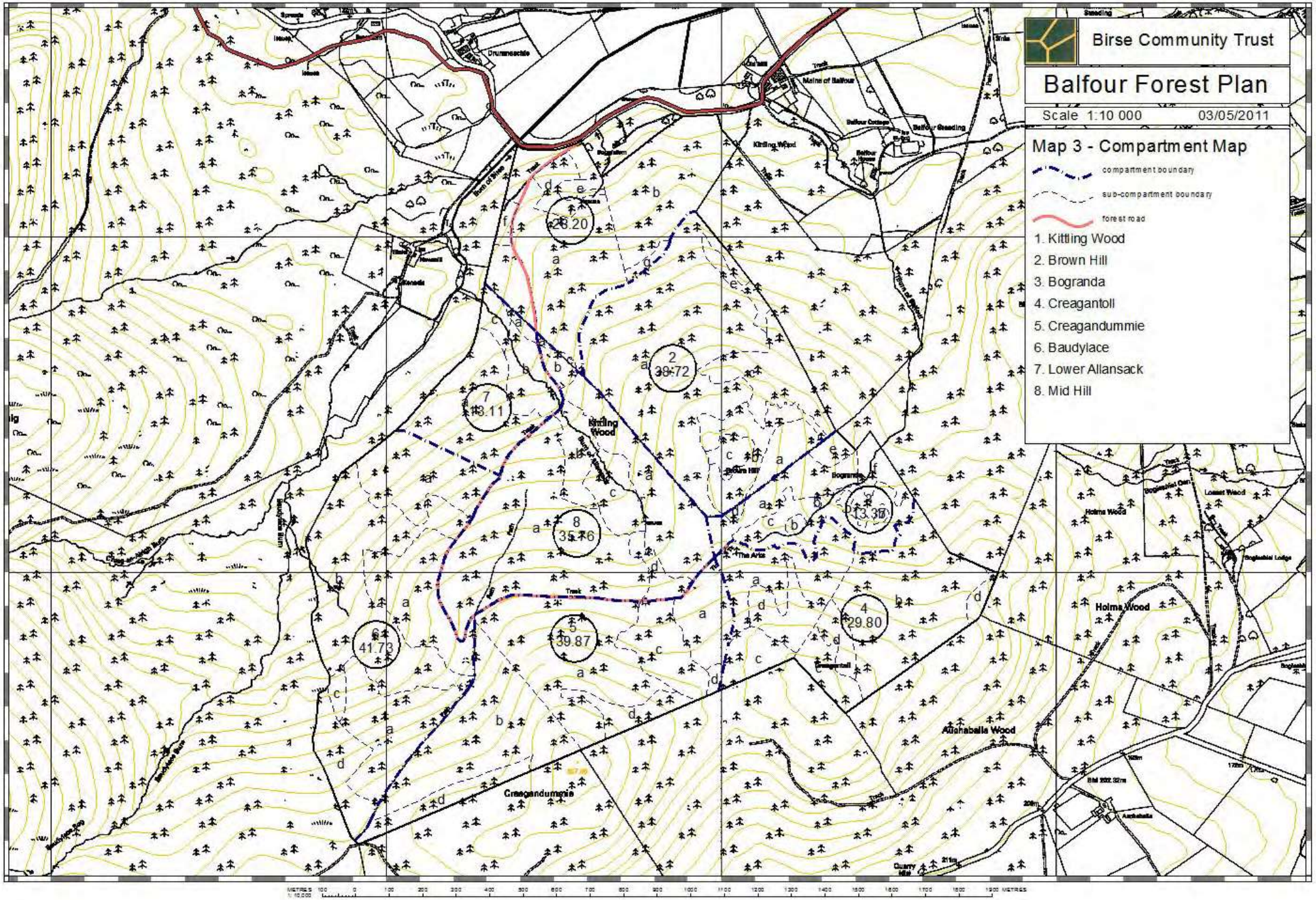
4.7 Monitoring

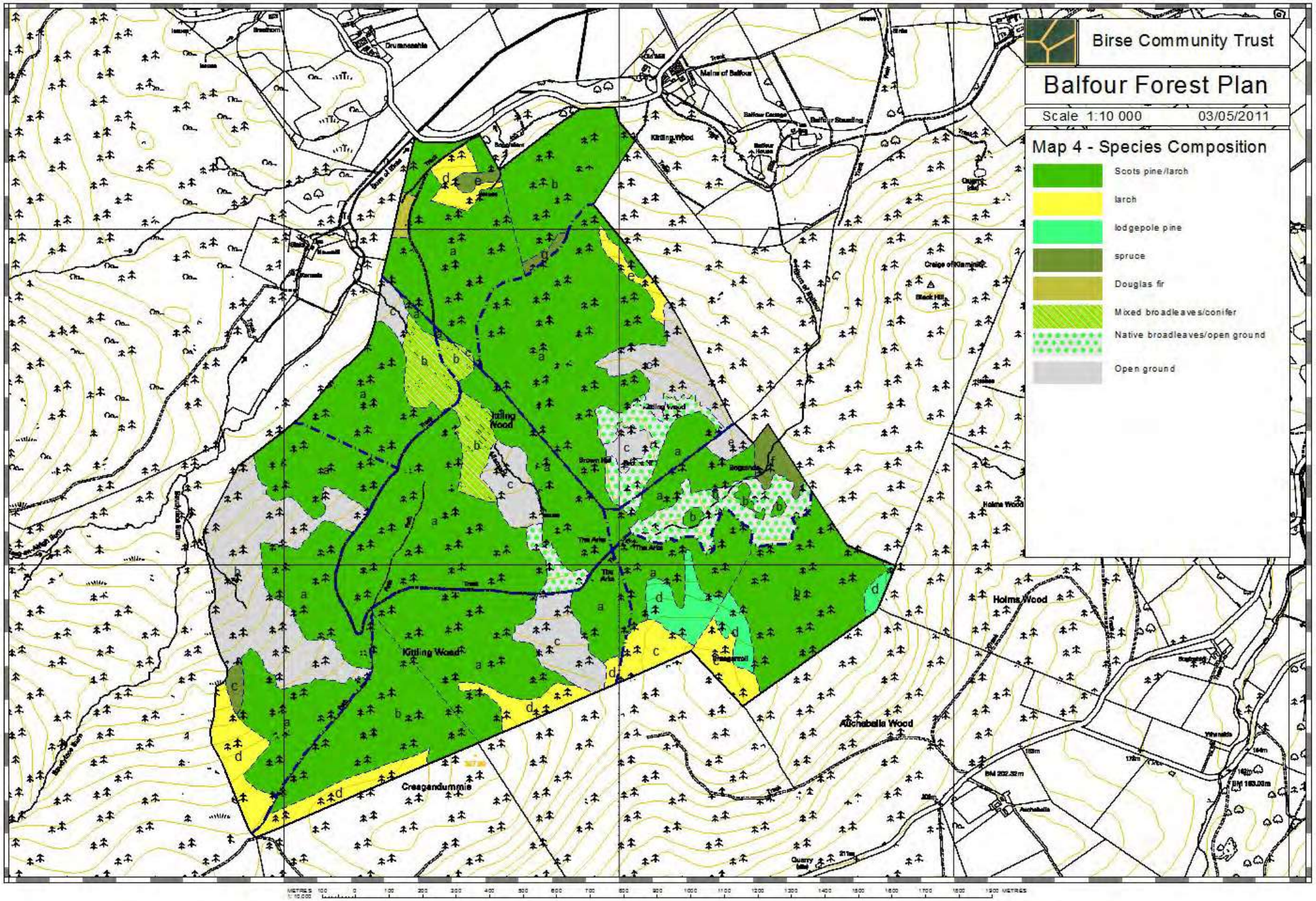
BCT will learn more about the roe population in Balfour Forest from the increased culling effort and observation. BCT plans to develop a more systematic approach over time to determining the level and distribution of its roe cull in the Forest.

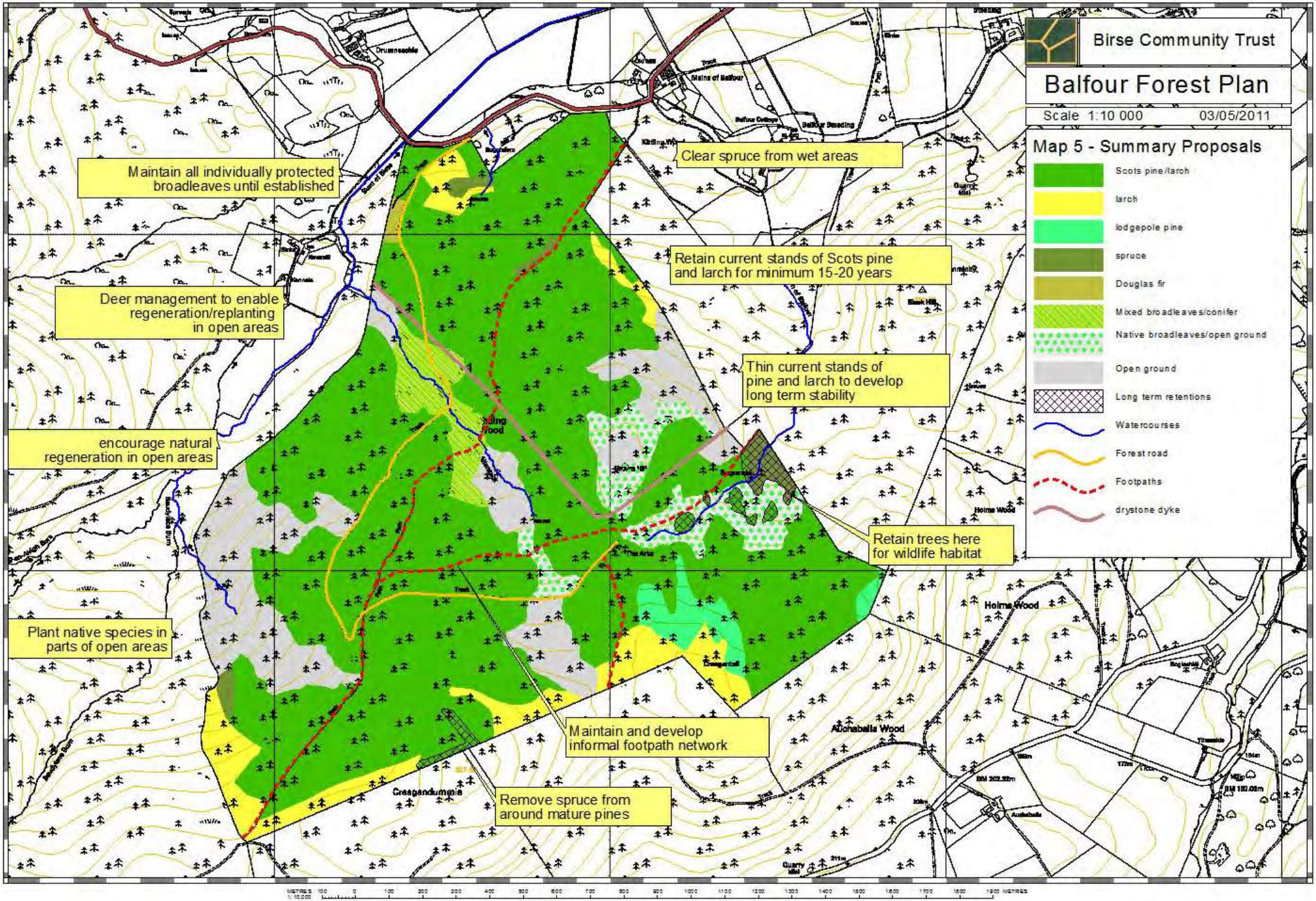
5. DMP Review

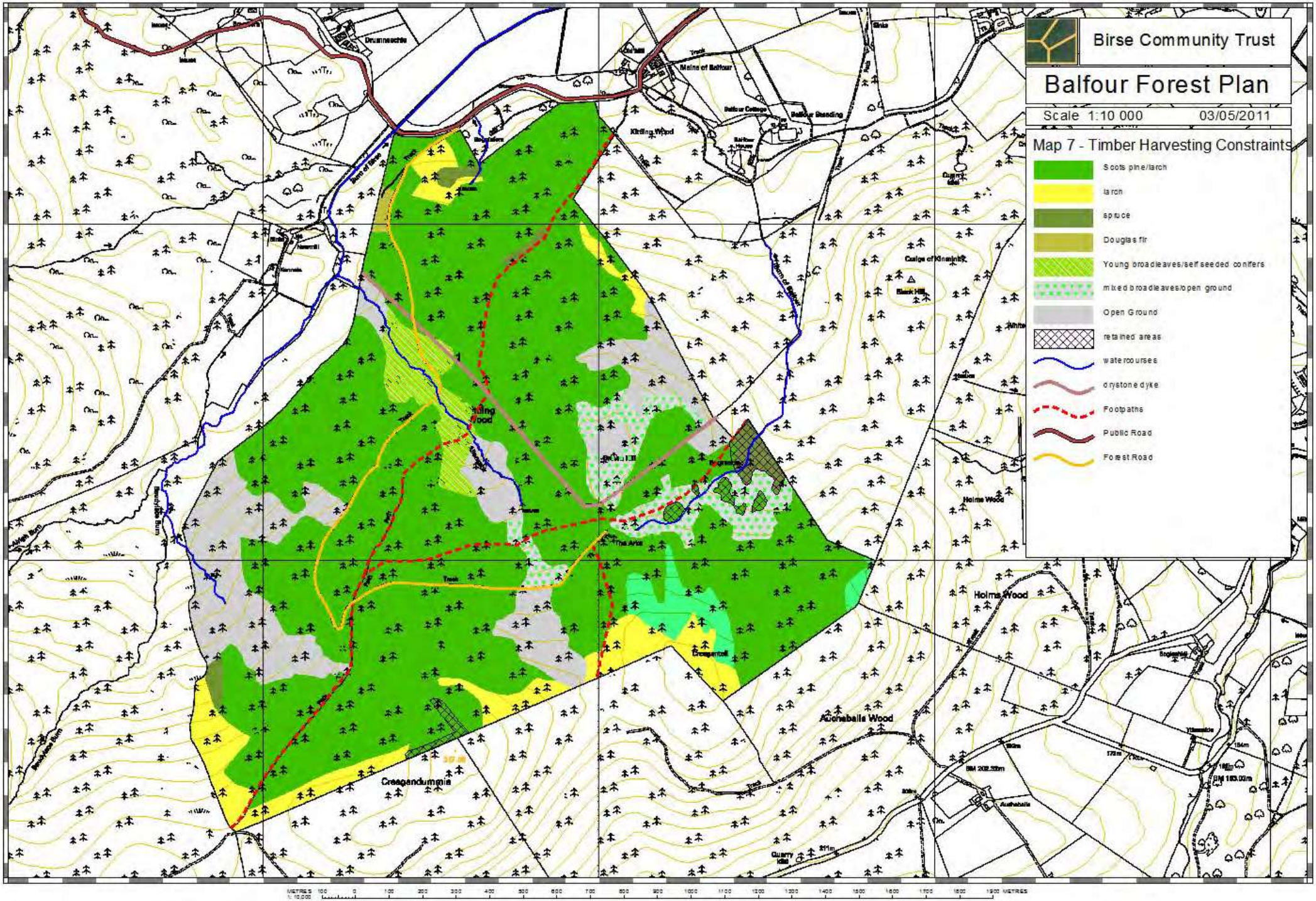
BCT will review its cull levels and future cull targets annually. BCT will review its DMP for the Forest in 2015, following the review of the Parish DMP 2009-14, and at five yearly intervals after that.

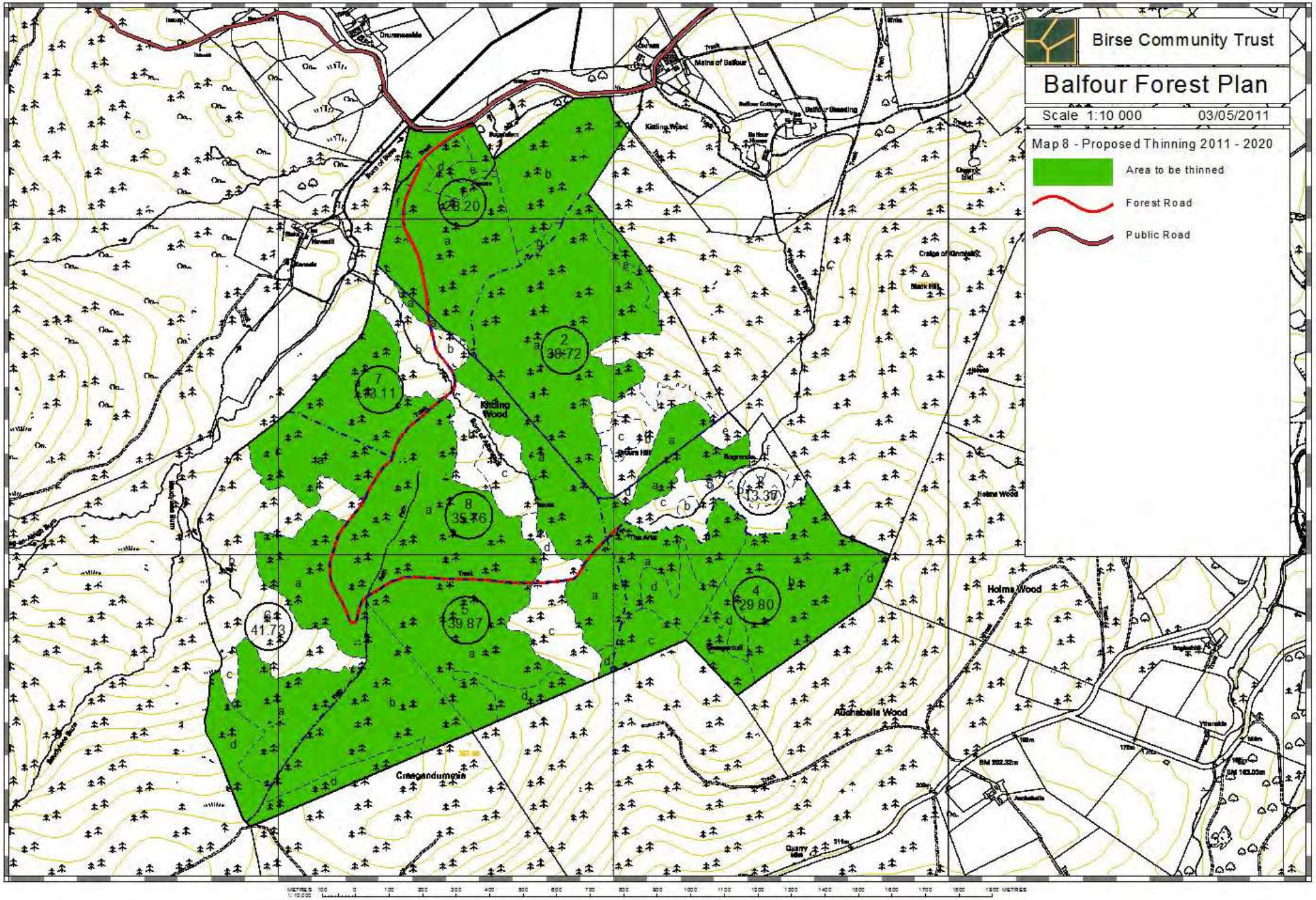

Birse Community Trust
Balfour Forest Plan
Map 1- Location Map
Scale 1:50 000
03/04/2011
Balfour Forest
Slewdrum Forest
Commonty Pinewoods
Birsemore
Waterside
Knappy Park
Deerhillock
Haugh
Birse
Birsebeg
Parkside
Burnside
Drumneachie
Mains of Balfour
Auchnafoy
Marywell
Mill of Cattie
Shannel
Birkenhill
Mains of Midstrath
Mitton
Bogieshiel Lodge
Bogieshiel
Ythanside
Auchaballa
Berrystoch
Balnahard Wood
Tom's Cairn
Glack's Hill
Corsedarder Hill
Stones
Balnahard
Upper Tillygarmond
Nether Tillygarmond
East Tillygarmond
Tillycroy
Balfiddy
Finzean
Finzean Ho
Boddam
Tillyfruskie
Duhston
Knowes
Boghead
Caturg Wood
Turfgate
Percie
Mill of Clinter
Ordie
Ennochie
Little Ennochie
Whitestone
Waulkmill
Dalsack
Haughend
Midcline
Blackhole
Wester Clune
Easter Clune
Powlair
Balblythe
Cuttieshillock
Wood of Easter Clune
Tillyorn
Bucket Mill
Sawmill
Woodend
Finlets
Corrybeg
Lamahip
Craig Lash
Craig
Lamawhillis
Glencat
Carnferg
Brackenstake
Wester Floors
Burnfoot
Auchabrack
Ballochan
The Slough
Bogancaller
The Cramlet
Bogmore
Cuttie's Wood
Woodside Cott
Greendams
The Drummels
Water of Ayen
Burn of Cattie
Garrol Burn
Lairs Burn
Ballochtil Burn
Rough Burn
Allancreich
Torquhandallochy (ruin)
Craigmore Wood
Northbrae
Birkhall
Wood Croft
Hunter's Lodge Hotel
Sluie Woods
Sluie
Woodend
Hill of Trustach
Trustach Cott
Bethangie
Slidderybrae
Tillentoach
Inverey
Coulnacraig
Muckle Ord
Mountain Bike Trail
Old Military Road
Hill of Tillylair
Tillylair
Cults
Idlestone
Waulkmill
PH
Woodend
Birsemore Hill
Brown Hill
Craig
Creagantoy
Creagandummie
Ballogie
Mains of Balfour
Auchnafoy
Newmill
Boggiefern
Otty Leiper
Kinminity Fm
Meml
Birsemohr Fm
Parkside
Seat
The Fingle
Fingle Road
Burn of Birse
Burn of Cattie
Arntilly Craig
Morley
Sch Bridgend
Sch
Ruin
Cairn
Memorial
Weir
Pt
Hotel
PC Potarch
MS
Wood
Forest
Mountain Bike Trail
Old Military Road
Water of Ayen
Burn of Cattie
Garrol Burn
Lairs Burn
Ballochtil Burn
Rough Burn
The Gwaves
Burn of Feus
Water of Ayen
Hill of Tillylair
Tillylair
Roy Cairn
Cairn
Memorial
Sch

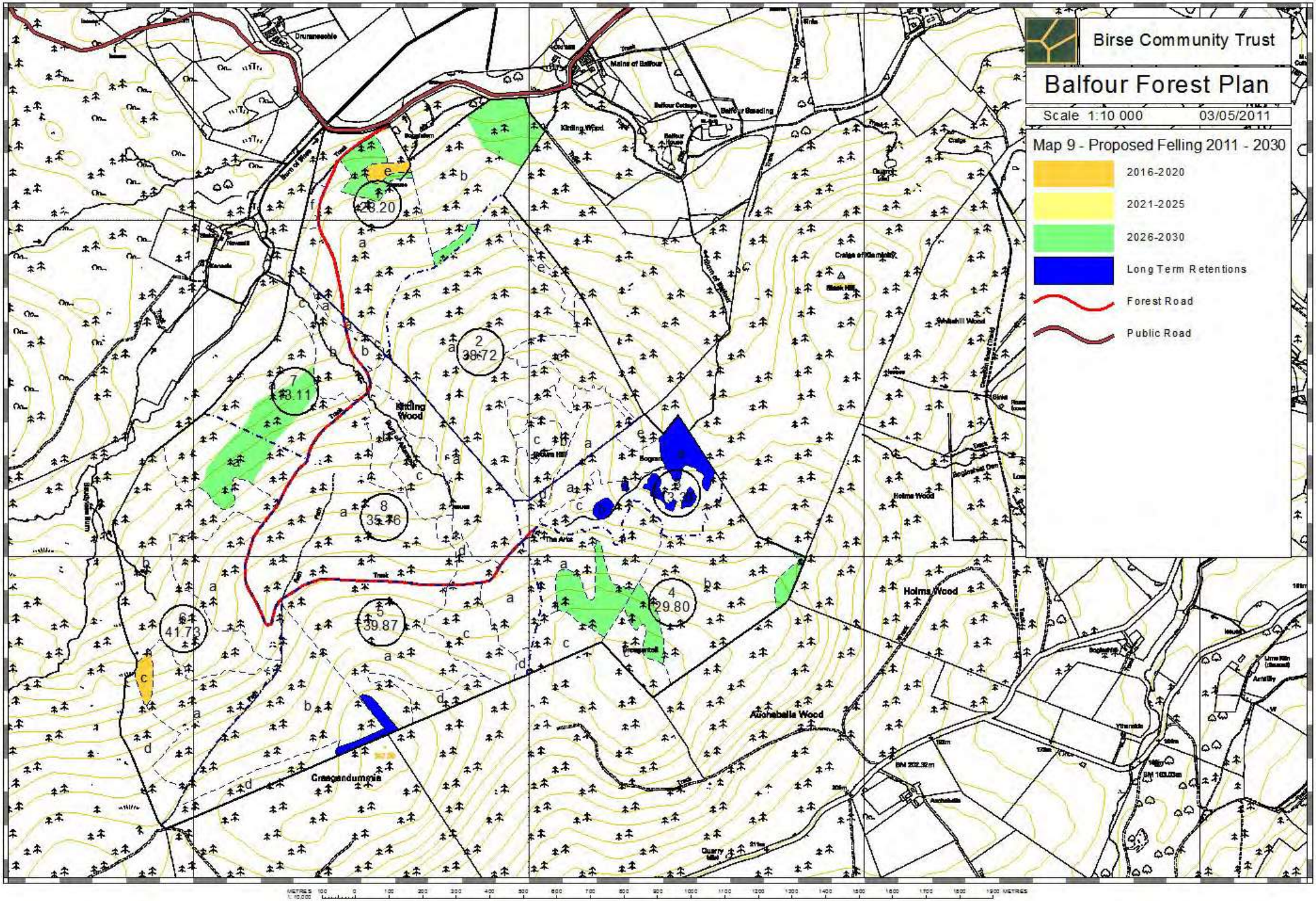

Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 3 - Compartment Map
compartment boundary
sub-compartment boundary
forest road
1. Kittling Wood
2. Brown Hill
3. Bogranda
4. Creagantoll
5. Creagandummie
6. Baudylace
7. Lower Allansack
8. Mid Hill
Kittling Wood
Holms Wood
Allshaballs Wood
Creagandummie
Baudylace
Bogranda
Brown Hill
Creagantoll
Lower Allansack
Mid Hill
28.20
39.72
13.11
35.76
13.35
29.80
39.87
41.73
METRES

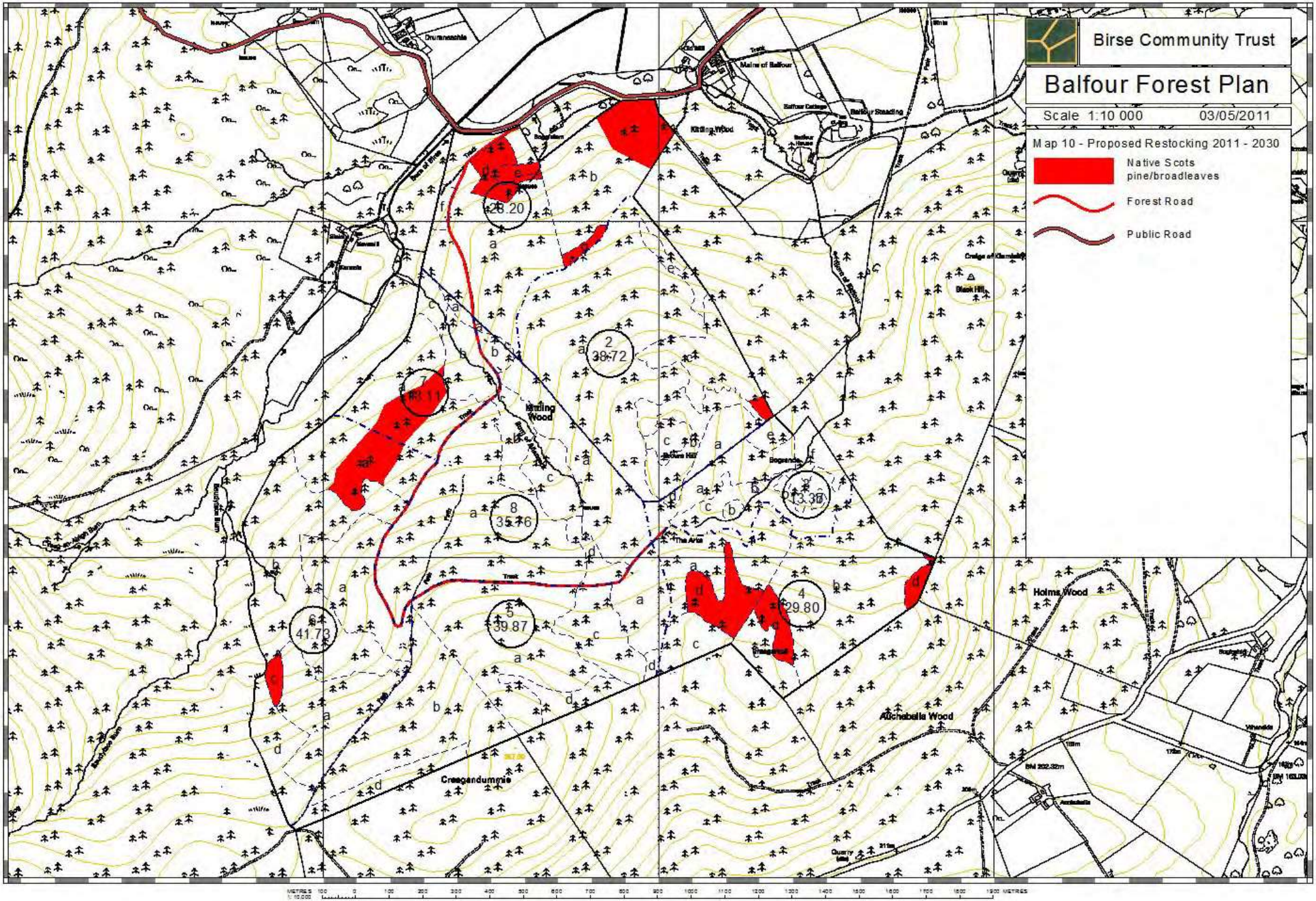

Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 4 - Species Composition
Scots pine/larch
larch
lodgepole pine
spruce
Douglas fir
Mixed broadleaves/conifer
Native broadleaves/open ground
Open ground
Kitling Wood
Creagandummie
Aichabella Wood
Holms Wood
Drumnaseilie
Mains of Balfour
Balfour House
Balfour Steading
Brown Hill
Rogarsha
Creigs of Kiamond
Black Hill
Quarry
METRES

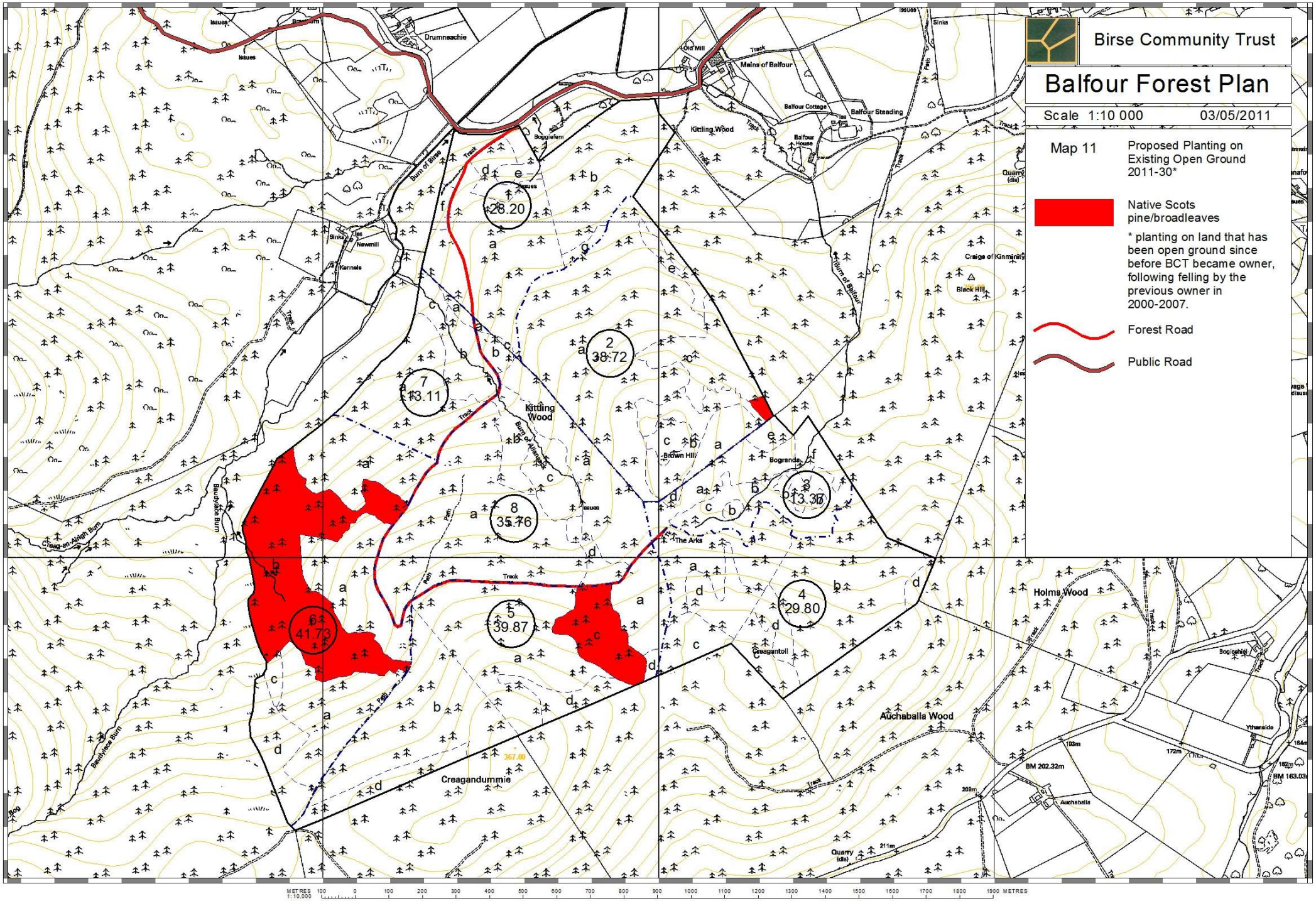

Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 5 - Summary Proposals
Scots pine/larch
larch
lodgepole pine
spruce
Douglas fir
Mixed broadleaves/conifer
Native broadleaves/open ground
Open ground
Long term retentions
Watercourses
Forest road
Footpaths
drystone dyke
Maintain all individually protected broadleaves until established
Clear spruce from wet areas
Retain current stands of Scots pine and larch for minimum 15-20 years
Deer management to enable regeneration/replanting in open areas
Thin current stands of pine and larch to develop long term stability
encourage natural regeneration in open areas
Retain trees here for wildlife habitat
Plant native species in parts of open areas
Maintain and develop informal footpath network
Remove spruce from around mature pines
Holme Wood
Auchaballa Wood
Creagandumenie
Drumnaschie
Mains of Balfour
Balfour Cottages
Balfour Steading
Kirkton Hill
Black Hill
Quarry
Bridge of Dun
Burn of Balfour
Burn of Auchaballa
Burn of Creagandumenie
Trees
Track
Quarry
Metres


Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 7 - Timber Harvesting Constraints
Scots pine/larch
larch
spruce
Douglas fir
Young broadleaves/self seeded conifers
mixed broadleaves/open ground
Open Ground
retained areas
watercourses
drystone dyke
Footpaths
Public Road
Forest Road
Drumnaschie
Mains of Balfour
Balfour Cottage
Balfour Steading
Kirding Wood
Burn of Birse
Cairn of Birse
Holme Wood
Auchaballs Wood
Creagendummie
Quarry Hill
METRES


Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 8 - Proposed Thinning 2011 - 2020
Area to be thinned
Forest Road
Public Road
Kirkling Wood
Holms Wood
Auchaballs Wood
Creagandumgoie
Mains of Balfour
Balfour Steading
Kirkling Wood
Quarry
2
38.72
4
29.80
5
39.87
6
41.73
7
8
35.76
13.37


Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 9 - Proposed Felling 2011 - 2030
2016-2020
2021-2025
2026-2030
Long Term Retentions
Forest Road
Public Road
Drumneeshie
Mains of Balfour
Balfour Cottage
Balfour Steading
Kirding Wood
Holms Wood
Auchrabella Wood
Craegandumpie
Quarry
28.20
2
38.72
7
43.11
8
35.76
4
29.80
5
39.87
6
41.73


Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 10 - Proposed Restocking 2011 - 2030
Native Scots pine/broadleaves
Forest Road
Public Road
Kirkling Wood
Holms Wood
Auchabella Wood
Creagandunnie
Mains of Balfour
Balfour Steading
Balfour Cottages
Balfour House
Black Hill
Bogendale
The Aries
Drumnasshie
28.20
2
38.72
7
12.11
8
35.76
13.36
4
29.80
5
39.87
6
41.73


Birse Community Trust
Balfour Forest Plan
Scale 1:10 000
03/05/2011
Map 11
Proposed Planting on Existing Open Ground 2011-30*
Native Scots pine/broadleaves
* planting on land that has been open ground since before BCT became owner, following felling by the previous owner in 2000-2007.
Forest Road
Public Road
28.20
38.72
13.11
35.76
13.36
29.80
39.87
41.73
Kittling Wood
Brown Hill
Bogrande
Holms Wood
Auchaballa Wood
Creagandummie
Mains of Balfour
Balfour Cottage
Balfour Steading
Drumneachie
Newmill
Black Hill
Craige of Kinmunity
Burn of Birse
Burn of Balfour
Burn of Allanshaw
Baudylace Burn
Craig-an-Airigh Burn
Creagantoll
The Arks
BM 202.32m
BM 163.03m
METRES 1:10,000