

Castlewaller Inventory and Management Plan 2020 - 2029

Introduction

This inventory and management plan follows on from inventories and plans produced for the periods 2005-2009 and 2010-2014. For the period 2014-2019 there has been no formal plan due to uncertainty regarding the development of the Castlewaller Wind Farm and the potential influence of this on the forestry enterprise. The most recent General Felling Licence for Castlewaller (GFL10685) expired in August 2016. This inventory and plan has been prepared to facilitate ongoing forest management at Castlewaller and also to accompany a new felling licence application. Under new felling licence legislation, a 10 year licence can now be obtained and therefore this plan has been produced for the period 2020-2029.

This document presents:

- Notes relating to the inventory with a summary of results;
- The inventory and 2020-2029 plan itself on a sub-compartment by sub-compartment basis;
- Notes accompanying the management plan
- A cash flow forecast
- Maps associated with the forest inventory and plan

Inventory Notes and Summary

The total property area at Castlewaller is 500 hectares of which 432 hectares is actually planted with coniferous forestry, the remainder being made up of turbarry areas, riparian areas, an unplanted field, mature broadleaved woodland and the main forest road that serves the property. Of the coniferous forest area, as per previous inventories, there is a mix of poorly grown / failed areas, marginal areas where growth is slow and good areas where growth has been relatively strong. The good areas have all received thinning.

Figure 1 presents an analysis of Yield Class which is a productivity index used in forestry. General Yield Class is assessed using Top Height and Age curves for different species and these curves are published for Yield Classes of up to 24 m³ / ha. / year. The category "check" refers to crops in "heather check" and not currently displaying any incremental growth. The category "other" refers to un-forested areas.

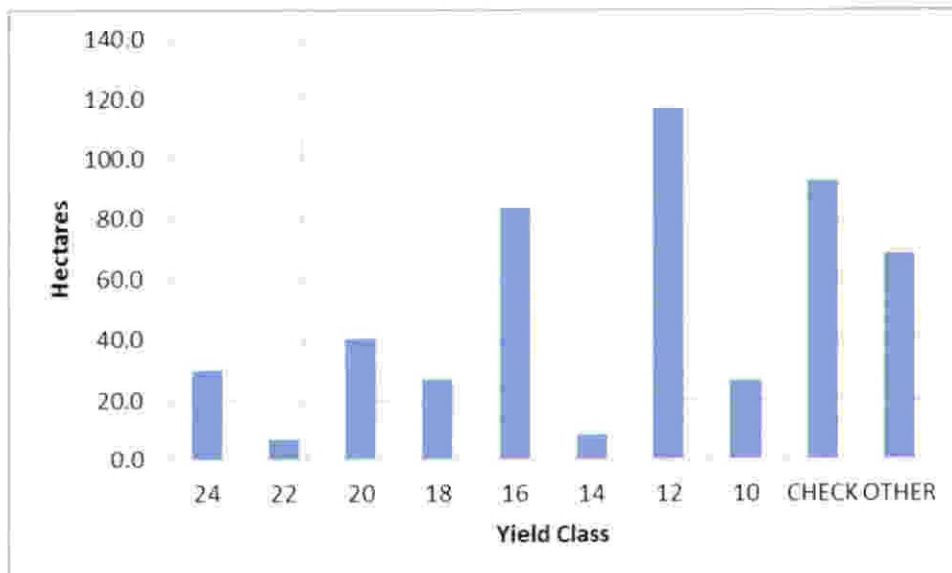


Figure 1: Yield Classes – Castlewaller

Management Plan Notes

Specific actions on a sub-compartment by sub-compartment basis are set out in the management plan. For the most part, the areas of poor or marginal growth are to be left for the planning period. Virtually all management interventions during the planning period are in the productive areas (Yield Class 20+). These interventions involve either further thinnings or final felling and restocking. A series of windblow events starting with Storm Darwin in February 2014 and continuing on to Storm Ophelia in October 2017 have meant that many of these forest areas are now unstable and not suitable for longer rotations. In this regard, two felling years have been assigned based on the stage of development of stands and their stability status. These years are 2020 and 2024. In summary, the planned harvests are as follows:

- It is planned to carry out a further 58.7 hectares of thinning in 2020.
- It is planned to clear and subsequently replant 13.7 hectares in 2020
- It is planned to clear and subsequently replant a further 17.9 hectares in 2024.

In addition to the sub-compartment specific management prescriptions, there are a number of general issues which concern the Castlewaller property as a whole and which must be discussed in that context. These issues are as follows:

Deer Management

Deer management at Castlewaller is currently sublet and annual returns are received by the forest manager and recorded. Deer densities in the area are generally high and there is a constant requirement to reduce densities. Improved access following thinning operations also improves hunting access. However, the reality of large tracks of unthinned, thicket type forestry results in very difficult hunting conditions. While deer damage is currently quite limited on the commercial stands of trees, this could become a much more serious issue when small nursery trees are replanted following felling events. Deer letting at Castlewaller currently yields €500 / annum.

Road Maintenance

The Castlewaller road is an essential piece of infrastructure without which management would be impossible. The road should be maintained annually to keep it relatively weed free and to keep water from running along or across it. Roadside drains will also require occasional maintenance in this regard, particularly following harvesting operations. In addition, when harvesting is taking place, roadside trees should be removed to allow greater road aeration. Harvesting and other tracked machinery should be kept off the forest road except in exceptional circumstances involving crossing for example. A provision is made in the cash-flow forecast for €2,500 after each harvest operation for road maintenance.

Felling Licence

A new 10 year Felling Licence is required and should be applied for immediately on acceptance of this plan.

Rhododendron

There are scattered arrivals of *rhododendron ponticum* throughout Castlewaller and in particular on western and lower areas adjacent to old woodland. This is a highly invasive species which colonises acid soils, in particular areas over Old Red Sandstone parent material, and can dominate forest areas over time. It is imperative that a close eye be kept on this species to ensure that it does not take a firm hold at Castlewaller and thus present problems for the next generation. Any opportunity to uproot plants (road works, harvesting, drain repair etc.) should be taken.

CASTLEWALLER PROPERTY

Comp.	Sub-Comp.	Area	% Productive	Productive Area	Elevation	P Year	Age	1st Sps	2nd Sps	Other Sps	DBH	Top Height	YC	Stocking	BA	Mean Vol	Vol/Ha.	Total Vol.
1	1	1.95	85	1.66	900	1989	31	SS	WRC	-	15.6	14.5	16	967	18	0.14	135	225
1	2	18.49	65	12.02	1000	1989	31	SS	LP	-	10.9	7.9	8	1500	14	0.034	51	613
1	3	1.36	85	1.15	950	1989	31	SS	-	-	16	14	16	1987	40	0.113	225	259
2	1	8.46	60	5.08	1050	1989	31	SS	LP	-	-	7	8	2350	-	-	-	-
3	1	8.23	40	3.29	1000	1989	31	SS	LP	-	14	12.5	14	2250	35	0.091	205	674
3	2	2.97	80	2.38	1000	1989	31	SS	-	-	15	11.8	12	1950	34	0.091	177	422
3	3	12.01	50	6.01	1000	1989	31	SS	WRC	-	17	17	20	1583	36	0.14	222	1331
4	1	8.66	55	4.76	850	1989	31	SS	WRC	-	22.6	18	20	1350	54	0.33	446	2122
4	2	2.34	0	0.00	950	1989	31	SS	-	-	-	-	CHK	-	-	-	-	-
5	1	12.32	85	10.47	800	1989	31	SS	WRC	-	21.8	17	20	900	34	0.26	234	2450
6	1	4.19	70	2.94	875	1989	31	SS	WRC	-	17	16	18	2175	49	0.14	305	894
6	2	2.18	0	0.00	950	1989	31	SS	LP	-	-	-	CHK	-	-	-	-	-
6	3	2.77	80	2.21	925	1989	31	SS	WRC	-	16	14	16	2300	46	0.11	253	560
6	4	4.51	0	0.00	850	1989	31	SS	-	-	-	-	CHK	-	-	-	-	-
7	1	0.88	80	0.71	925	1989	31	SS	WRC	-	19.2	15	16	1700	49	0.21	357	252
8	1	1.96	50	0.98	1000	1989	31	SS	WRC	-	18.5	16.5	18	1700	46	0.23	391	382
8	2	9.87	40	3.95	900	1989	31	SS	LP	JL	19	13	16	2100	60	0.18	378	1492
9	1	11.09	40	4.44	700	1989	31	SS	-	Bi	20	15.5	16	1650	52	0.22	363	1610
10	1	9.91	50	4.96	825	1989	31	SS	LP	-	17	15	16	2050	47	0.16	328	1625
11	1	15.26	60	9.16	850	1989	31	SS	-	JL	12	11.5	12	1325	15	0.05	66	607
12	1	3.94	75	2.96	700	1989	31	SS	WRC	-	25	20	24	900	44	0.45	405	1198
13	1	3.00	80	2.40	675	1989	31	SS	WRC	-	26	21	24	875	46	0.51	446	1071
14	1	4.26	85	3.62	650	1989	31	SS	WRC	LP	25	20	24	693	34	0.45	312	1130
15	1	2.51	70	1.76	700	1989	31	SS	WRC	-	20	19	22	1367	43	0.27	369	648
15	2	0.68	0	0.00	700	1989	31	SS	-	-	-	-	CHK	-	-	-	-	-
15	3	1.00	55	0.55	700	1989	31	SS	WRC	-	24	18	20	900	41	0.39	351	193
16	1	11.23	45	5.05	800	1991	29	SS	LP	-	12	7	12	2050	23	0.039	80	404
16	2	0.90	50	0.45	800	1991	29	SS	-	-	15	12	16	2300	41	0.08	184	83
17	1	6.78	80	5.42	900	1990	30	SS	LP	-	13	12	12	2050	27	0.06	123	667
17	2	3.11	0	0.00	875	1990	30	SS	LP	-	-	-	CHK	-	-	-	-	-
17	3	7.42	50	3.71	850	1990	30	SS	LP	-	-	7	12	1950	-	-	-	-
17	4	3.92	0	0.00	850	1990	30	SS	LP	-	-	-	CHK	-	-	-	-	-
18	1	4.19	85	3.56	900	1990	30	SS	LP	-	22	18	22	1325	50	0.3	398	1414
18	2	10.49	70	7.34	900	1990	30	SS	LP	-	19	16.5	24	1350	38	0.21	284	2082
19	1	9.93	40	3.97	950	1990	30	SS	LP	-	-	-	CHK	2050	-	-	-	-
20	1	2.45	85	2.08	950	1990	30	SS	WRC	-	19	17	20	1245	35	0.22	274	569
20	2	3.61	65	2.34	900	1990	30	SS	WRC	-	10	8	8	1550	12	0.02	31	73
20	3	1.12	85	0.95	825	1990	30	SS	WRC	-	21	20	24	1275	44	0.32	408	388
21	1	11.80	75	8.85	900	1990	30	SS	-	-	16	16	16	1683	34	0.13	219	1936
21	2	4.23	80	3.39	900	1990	30	SS	-	-	22	18	20	850	32	0.3	255	864
22	1	1.64	85	1.39	900	1990	30	SS	WRC	LP	18	15	18	1325	34	0.16	212	295
22	2	14.57	45	6.56	900	1990	30	SS	WRC	LP	16	14	16	1925	39	0.2	385	2524

