Appendix A8.4: Agriculture, Forestry and Sporting Land Pre- and Post-Mitigation Impacts

1.1.1 This appendix supports Chapter 8 (People and Communities - Community and Private Assets). Table 1 and Table 2 provide the assessment of potential and residual impacts on agriculture and forestry land interests, respectively. The loss of land in this appendix is based on the Draft Compulsory Purchase Order (CPO) which is reported within the Draft Orders to the nearest metre squared.

1.1.2 For further information regarding mitigation items, see section 8.5: Mitigation within Chapter 8 (People and Communities - Community and Private Assets).

Table 1: Potential impacts and mitigation for agricultural fields and woodland parcels

Land interest			Land-take				Potential Impacts
	Field Plot	Field Area (ha)	Land Type	m^2	ha	%	
Atholl Estate (The Bruar Trust) (Ref. A)	A/1W	6.61	Woodland	-	-	-	No loss of woodland however potential creation of new brown edge gap within coupe. Potential changes to Wind Damage Risk Status (WDRS) for stem breakage and overturning, refer to Appendix A8.3 (Forestry Survey) for further detail.
	A/2W	6.26	Woodland	11674	1.17	19	Loss of young deciduous woodland (predominantly silver birch) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.02ha of woodland within land-take boundary.
	A/3	5.29	LCA 5.2	22245	2.22	42	Loss of boundary features, one gated access and disruption to field drainage system.
			LCA 6.2	4750	0.48	9	
	A/4	2.08	LCA 5.2	3048	0.30	14	Loss of boundary features, one gated access and disruption to field drainage system.
	A/5W	1.59	Woodland	15399	1.54	97	Loss of the majority of mixed woodland (deciduous species including mature oak and beech and early mature coniferous species including Douglas fir). No new brown edge gap created. Disruption to drainage. Potential to retain 0.84ha of woodland within land-take boundary.
	A/6W	2.67	Woodland	26717	2.67	100	Loss of entire mixed woodland coupe comprising of Douglas fir and some deciduous species. Potential to retain 0.94ha of woodland within land-take boundary.
	A/7W	13.21	Woodland	-	-	-	No loss of woodland however potential exposure of new brown edge gap at mature larch plantation due to loss of adjacent woodland (A/6W). Potential change to WDRS for overturning, refer to Appendix A8.3 (Forestry Survey) for further detail.
	A/8W	0.96	Woodland	8619	0.86	89	Loss of young shrubby woodland including bird cherry, alder, goat willow and silver birch. No brown edge gap created. Disruption to drainage. Potential to retain 0.40ha of woodland within land-take boundary.
	A/9	3.66	LCA 5.2	18	<0.01	<1	Loss of boundary features and disruption to field drainage system.
			LCA 5.3	69	<0.01	<1	
	A/10	1.30	LCA 5.3	2753	0.28	21	Loss of boundary features and disruption to field drainage system.
	A/11W	2.69	Woodland	5402	0.54	20	Loss of mixed woodland (predominantly mature Norway spruce plantation with some sycamore clusters) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.01ha of woodland within land-take boundary.

Land interest			Land-take				Potential Impacts
	Field Plot	Field Area (ha)	Land Type	m^2	ha	%	
	A/12W	2.46	Woodland	24486	2.45	100	Loss of entire parcel (previously felled woodland with some sporadic stems and shrub). Potential to retain 2.03ha of felled woodland parcel within land-take boundary.
	A/13	1.29	LCA 3.2	2850	0.29	22	Loss of boundary features and disruption to field drainage system.
			LCA 5.3	39	<0.01	<1	
	A/14	1.42	LCA 3.2	6261	0.63	44	Loss of boundary features, one gated access and disruption to field drainage system.
			LCA 5.2	7930	0.79	56	
	A/15	0.56	LCA 3.2	2308	0.23	41	Loss of boundary features, one gated access and disruption to field drainage system.
			LCA 5.2	964	0.10	18	
			LCA 5.3	608	0.06	11	
	A/16W	4.09	Woodland	2285	0.23	6	Loss of early mature coniferous woodland (predominantly Norway spruce) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.01ha of woodland within land-take boundary.
	A/17W	1.15	Woodland	1882	0.19	17	Loss of early mature mixed woodland (Norway spruce and sycamore) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage.
	A/18W	6.86	Woodland	30118	3.01	43	Loss of mature mixed woodland (groups of predominantly deciduous species including oak and silver birch and groups of predominantly coniferous species including Douglas fir and Norway spruce) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.87ha of woodland within land-take boundary.
	A/19W	11.25	Woodland	2481	0.25	2	Loss of mature coniferous woodland (Scots pine, Norway spruce, European larch and some deciduous species) and potential creation of new brown edge gap within coupe. Potential changes to Wind Damage Risk Status (WDRS) for stem breakage and overturning, refer to Appendix A8.3 (Forestry Survey) for further detail. Potential to retain 0.03ha of woodland within land-take boundary.
	A/20W	8.16	Woodland	709	0.07	1	Loss of mature woodland (predominantly coniferous species including Norway spruce, Scots pine and European larch) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Potential to retain 0.01ha of woodland within land-take boundary.
	A/21W	1.39	Woodland	4092	0.41	29	Loss of early mature coniferous plantation (Sitka spruce, Scots pine, Norway spruce and some sycamore) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.02ha of woodland within land-take boundary.
	A/22W	0.81	Woodland	4806	0.48	60	Loss of woodland comprising of predominantly deciduous species including silver birch, sycamore and goat willow. No new brown edge gap created. Potential to retain 0.25ha of woodland within land-take boundary.
	A/23W	0.93	Woodland	9284	0.93	100	Loss of entire woodland coupe comprising of Scots pine, Norway spruce, oak and sycamore. Potential to retain 0.15ha of woodland within land-take boundary.
	A/24	2.24	LCA 5.3	22429	2.24	100	Loss of entire field.
	A/25W	0.19	Woodland	1866	0.19	100	Loss of entire copper beech and sycamore woodland. Potential to retain 0.09ha of woodland within land-take boundary.

Land interest			Land-take				Potential Impacts
	Field Plot	Field Area (ha)	Land Type	m^2	ha	%	
	A/26W	1.23	Woodland	2024	0.20	16	Loss of early mature coniferous woodland (predominantly Sitka spruce, western hemlock, Norway spruce and Douglas fir) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.05ha of woodland within land-take boundary.
	A/27W	18.67	Woodland	12762	1.28	9	Loss of early mature plantation (predominantly Sitka spruce and Norway spruce with deciduous clusters) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage. Potential to retain 0.96ha of woodland within land-take boundary.
Rotmell Farm (Ref. B)	B/1W	2.67	Woodland	23508	2.35	88	Loss of previously felled woodland with sapling oak replantation and natural birch regeneration. No new brown edge gap created.
	B/2W	0.79	Woodland	941	0.09	12	Loss of coniferous woodland (predominantly Douglas fir with some deciduous species) and potential creation of new brown edge gap within coupe. No change to WDRS (Low). Disruption to drainage.
	B/3	8.98	LCA 5.3	2116	0.21	2	Loss of boundary features and disruption to field drainage system.
Mains of Airleywight Farm (Ref. C)	C/1	15.47	LCA 3.1	2794	0.28	2	Loss of boundary features and disruption to field drainage system.
	C/2	4.84	LCA 3.1	884	0.09	2	Loss of boundary features and disruption to field drainage system.
	C/3	1.77	LCA 3.1	43	<0.01	<1	Loss of boundary features and disruption to field drainage system.
Dalguise Fishings (Ref. D)	D/1W	0.99	Woodland	212	0.02	2	Loss of early mature riparian strip comprising of silver birch, sycamore, goat willow and alder. No new brown edge gap created.
Dowally, Guay and Haugh of Tulliemet: RA Laird (Ref. E)	E/1	0.48	LCA 5.2	2246	0.22	47	Loss of boundary features and disruption to field drainage system.
	E/2	1.45	LCA 5.2	3656	0.37	25	Loss of boundary features and disruption to field drainage system. Potential for return of 0.10ha to agricultural use within land-take boundary.
	E/3	14.54	LCA 5.2	22417	2.24	15	Loss of boundary features and disruption to field drainage system. Potential for return of 1.43ha to agricultural use within land-take boundary.
	E/4	0.57	LCA 5.2	5675	0.57	100	Loss of entire field.
	E/5	6.24	LCA 5.2	62419	6.24	100	Loss of entire field. Potential for return of 3.68ha to agricultural use within land-take boundary.
	E/6	9.60	LCA 5.2	4780	0.48	5	Field severed into two areas. Loss of boundary features and disruption to field drainage system. Potential for return of 0.18ha to agricultural use within land-take boundary.
	E/7W	0.41	Woodland	4123	0.41	100	Loss of entire woodland comprising predominantly of western hemlock.
	E/8	3.12	LCA 5.3	8937	0.89	29	Loss of boundary features, one gated access and disruption to field drainage system.
	E/9	8.48	LCA 5.2	1739	0.17	2	Field severed into two areas. Loss of boundary features and disruption to field drainage system. Potential for return of 0.09ha to agricultural use within land-take boundary.
	E/10	8.00	LCA 5.2	2261	0.23	3	Field severed into two areas. Loss of boundary features and disruption to field drainage system. Potential for return of 0.08ha to agricultural use within land-take boundary.
	E/11	6.94	LCA 5.2	67764	6.78	98	Loss of entire field. Potential for return of 3.33ha to agricultural use within land-take boundary.

Land interest			Land-take				Potential Impacts
	Field Plot	Field Area (ha)	Land Type	m^2	ha	%	
			LCA 5.3	1661	0.17	2	
	E/12	0.29	LCA 5.2	2888	0.29	100	Loss of entire field.
	E/13	0.30	LCA 5.2	1563	0.16	51	Loss of boundary features and disruption to field drainage system.
	E/14	0.81	LCA 5.2	240	0.02	2	Loss of boundary features and disruption to field drainage system.
			LCA 6.1	2239	0.22	27	
	E/15	1.65	LCA 3.1	9197	0.92	56	Loss of boundary features and disruption to field drainage system.
			LCA 6.3	1816	0.18	11	
	E/16W	2.35	Woodland	23468	2.35	100	Loss of entire deciduous riparian woodland comprising of beech, lime, elm, alder, sycamore and bird cherry. Potential to return 1.99ha to woodland within land-take boundary.
	E/17	5.88	LCA 3.1	4058	0.41	7	Loss of boundary features and disruption to field drainage system.
			LCA 6.3	435	0.04	1	
	E/18	3.52	LCA 3.1	8864	0.89	24	Loss of boundary features, loss of one gated access and disruption to field drainage system. Potential for return of 0.32ha to agricultural use within land-take boundary.
	E/19W	0.37	Woodland	3674	0.37	100	Loss of entire woodland coupe. Potential to return 0.13ha of previous woodland to agriculture within land-take boundary.
	E/20	7.16	LCA 3.1	14409	1.44	20	Loss of boundary features and disruption to field drainage system. Potential for return of 0.80ha to agricultural use within land-take boundary.
	E/21	4.01	LCA 3.1	165	0.02	<1	Loss of boundary features and disruption to field drainage system. Potential for return of 0.01ha to agricultural use within land-take boundary.
	E/22	7.40	LCA 3.1	13088	1.31	18	Field severed into two areas. Loss of boundary features and disruption to field drainage system. Potential for return of 0.89ha to agricultural use within land-take boundary.
			LCA 3.2	4509	0.45	6	
	E/23	7.81	LCA 3.1	1698	0.17	2	Field severed into two areas. Loss of boundary features and disruption to field drainage system. Potential for return of 0.19ha to agricultural use within land-take boundary.
			LCA 3.2	179	0.02	<1	
	E/24W	2.41	Woodland	3013	0.30	13	Loss of mixed aged deciduous woodland comprising of alder, ash, elm, bird cherry, hawthorn and silver birch. No new brown edge gap created, Disruption to drainage.
	E/25	8.50	LCA 3.2	1497	0.15	1	Loss of boundary features and disruption to field drainage system.
			LCA 5.3	641	0.06	<1	
	E/26	0.69	LCA 3.2	689	0.07	1	Field severed into two areas. Loss of boundary features and disruption to field drainage system.
	E/27	5.49	LCA 3.2	1143	0.11	1	Loss of boundary features and disruption to field drainage system.

Table 2: Potential significance of impact on agricultural, forestry and sporting interests

Land Interest			Land-take				Summary				
	No. land parcels	Total farmed area (ha)	Land Type	m^2	ha	%	Sensitivity	Magnitude	Significance	Proposed mitigation and comment on likely future viability	Residual significance
Atholl Estate (The Bruar Trust) (Ref. A)	27	18,000	LCA 3.2	11419	1.14	<1	medium	low	Slight	Summary of Atholl Estate (The Bruar Trust) **Mitigation Items: SMC-CP1, SMC-CP2, SMC-CP3, SMC-CP4, SMC-CP5, SMC-CP6, SMC-CP7, SMC-CP8, SMC-CP9, SMC-CP10, SMC-CP11, SMC-CP12, SMC-CP13, SMC-CP14, SMC-CP15, P03-CP17, P03-CP18, P03-CP19, P03-CP20 and P03-CP21** The farm business would have land-take of less than 1% of the total farmed area. Of the land-take from Atholl Estate (The Bruar Trust), 0.40ha would be subject to servitude rights and this land would continue to be available for agricultural use. Potential to retain 6.67ha of woodland. Impacts on boundary features, access and field drainage can be mitigated. It is assessed that the impact of the proposed scheme on the likely future viability of the farm would not be significant.	Slight
			LCA 5.2	34205	3.42	<1					
			LCA 5.3	25898	2.59	<1					
			LCA 6.2	4750	0.48	<1					
			Woodland	164608	16.46	<1					
			Other land	21141	2.11	<1					
			Total	**262020**	**26.20**	**<1**					
Rotmell Farm (Ref. B)	3	3,500	LCA 5.3	2116	0.21	<1	high	low	Slight/ Moderate	Summary of Rotmell Farm **Mitigation Items: SMC-CP1, SMC-CP2, SMC-CP3, SMC-CP4, SMC-CP5, SMC-CP6, SMC-CP7, SMC-CP8, SMC-CP9, SMC-CP10, SMC-CP11, SMC-CP12, SMC-CP13, SMC-CP14, SMC-CP15, P03-CP17, P03-CP18, P03-CP19, P03-CP20 and P03-CP21** The farm business would have land-take of less than 1% of the total farmed area. Impacts on boundary features, access and field drainage can be mitigated. It is assessed that the impact of the proposed scheme on the likely future viability of the farm would not be significant.	Slight/ Moderate
			Woodland	24449	2.44	<1					
			Total	**26566**	**2.66**	**<1**					

Land Interest			Land-take				Summary				
	No. land parcels	Total farmed area (ha)	Land Type	m^2	ha	%	Sensitivity	Magnitude	Significance	Proposed mitigation and comment on likely future viability	Residual significance
Mains of Airleywight Farm (Ref. C)	3	283	LCA 3.1	3721	0.37	<1	medium	low	Slight	Summary of Mains of Airleywight Farm **Mitigation Items: SMC-CP1, SMC-CP2, SMC-CP3, SMC-CP4, SMC-CP5, SMC-CP6, SMC-CP7, SMC-CP8, SMC-CP9, SMC-CP10, SMC-CP11, SMC-CP12, SMC-CP13, SMC-CP14, SMC-CP15, P03-CP17, P03-CP18, P03-CP19, P03-CP20 and P03-CP21** The farm business would have land-take of less than 1% of the total farmed area. Of the land-take from Mains of Airleywight Farm, 0.15ha would be subject to servitude rights and this land would continue to be available for agricultural use. Potential for return of 0.24ha to agriculture through return of land required for flood storage area. Impacts on boundary features, access and field drainage can be mitigated. It is assessed that the impact of the proposed scheme on the likely future viability of the farm would not be significant.	Slight
			Total	3721	0.37	**<1**					
Dalguise Fishings (Ref. D)	1	16	Woodland	212	0.02	<1	high	low	Slight/ Moderate	Summary of Dalguise Fishings **Mitigation Items: SMC-CP1, SMC-CP2, SMC-CP3, SMC-CP4, SMC-CP5, SMC-CP6, SMC-CP7, SMC-CP8, SMC-CP9, SMC-CP10, SMC-CP12, SMC-CP15, P03-CP17 and P03-CP18** The woodland would have land-take of less than 1% of the total land plot area. Of the land-take from Dalguise Fishings, 0.02ha would be subject to servitude rights and this land would continue to be available for sporting use. Impacts on boundary features, access and drainage can be mitigated. It is assessed that the impact of the proposed scheme on the woodland would not be significant.	Slight/ Moderate
			Other land	246	0.02	<1					
			Total	**458**	**0.05**	**<1**					

Land Interest			Land-take				Summary				
	No. land parcels	Total farmed area (ha)	Land Type	m^2	ha	%	Sensitivity	Magnitude	Significance	Proposed mitigation and comment on likely future viability	Residual significance
Dowally, Guay and Haugh of Tulliemet: RA Laird (Ref. E)	27	342	LCA 3.1	51479	5.15	2	medium	high	**Substantial**	Summary of Dowally, Guay and Haugh of Tulliemet: RA Laird **Mitigation Items: SMC-CP1, SMC-CP2, SMC-CP3, SMC-CP4, SMC-CP5, SMC-CP6, SMC-CP7, SMC-CP8, SMC-CP9, SMC-CP10, SMC-CP11, SMC-CP12, SMC-CP13, SMC-CP14, SMC-CP15, P03-CP17, P03-CP18, P03-CP19, P03-CP20 and P03-CP21** The farm business would have land-take of less than 9% of the total farmed area. Of the land-take from Dowally, Guay and Haugh of Tulliemet: RA Laird, 3.59ha would be subject to servitude rights and this land would continue to be available for agricultural use. Potential for return of 2.05ha to agriculture through return of land required for construction and 10.82ha of compensatory flood storage. Impacts on boundary features, access and drainage can be mitigated. It is assessed that the impact of the proposed scheme on the woodland would not be significant.	**Substantial**
			LCA 3.2	8017	0.80	<1					
			LCA 5.2	177648	17.76	5					
			LCA 5.3	11239	1.12	<1					
			LCA 6.1	2239	0.22	<1					
			LCA 6.3	2251	0.23	<1					
			Woodland	34278	3.42	1					
			Other land	27959	2.80	1					
			Total	**315114**	**31.51**	**9**					