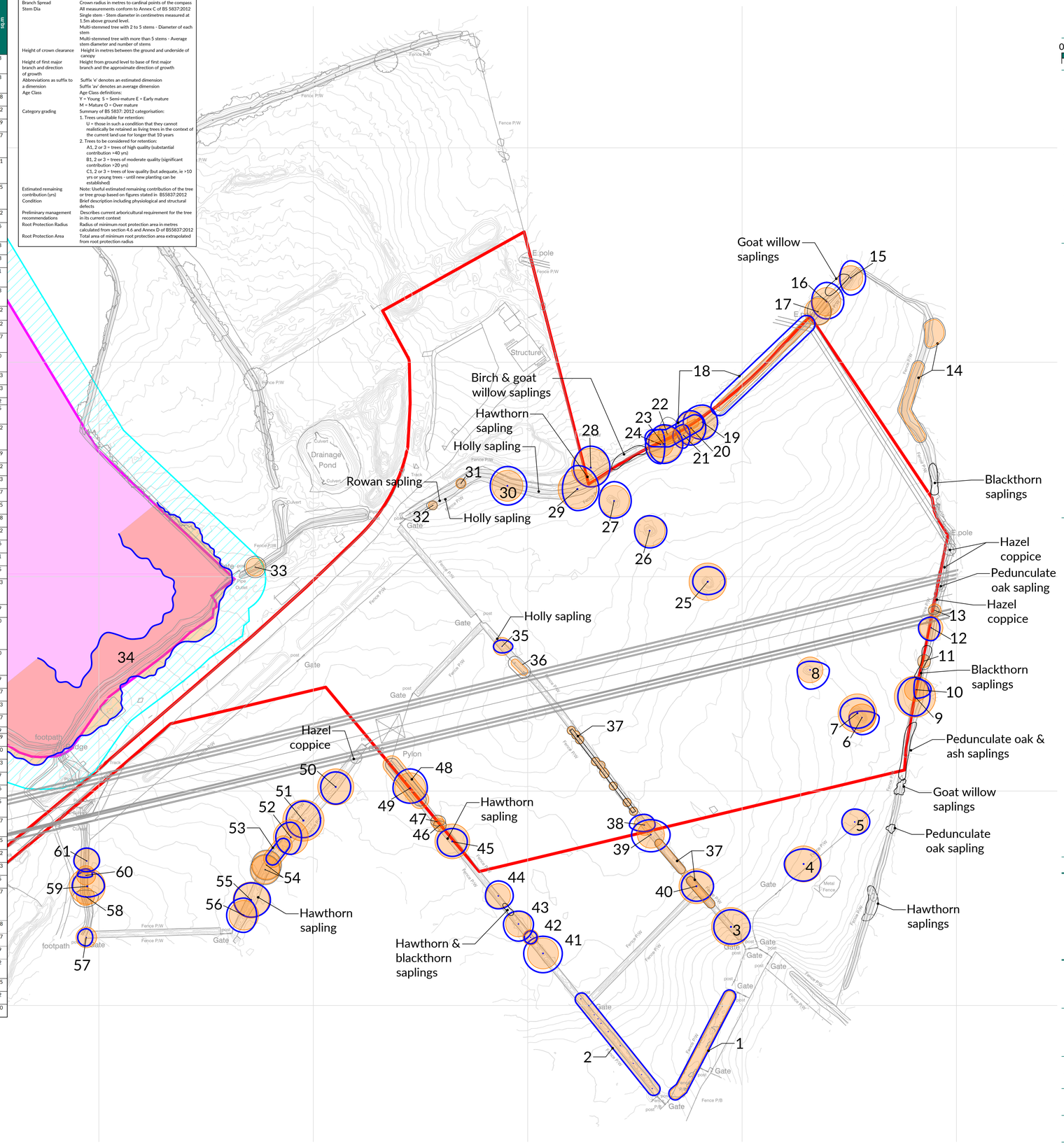
Schedule of trees at proposed Swansea BESS, adjacent to Swansea Greener Grid Park, Swansea

Tree No.	Species	Ht (m)	Branch Spread (m) N	E	S	W	Stem diameters (cm) Single Stem	2-5 stems Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	More than 5 stems Mean dia	No. stems	Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Preliminary management recommendations	Root protection radius (m)	Root protection area sq.m
1	Hawthorn hedge	7av	3av				20av							0	-	E	B2	>20	Established section of hedgerow between fields. Predominantly hawthorn with some hazel and holly.		2.40	18
2	Group of mixed broadleaves	7av	3av				25av							0	-	Y	B2	>20	Linear collection of trees between fields. Species include hawthorn, sycamore and holly.		3.00	28
3	Pedunculate oak	17	8	9	8	8	74							3	3E	E	B2	>20	Larger component of hedge line.		8.88	248
4	Pedunculate oak	15	7	8	8	9	70							2	2N	S	B1	>20	Stands close to fence line. Some broken branches within crown.		8.40	222
5	Pedunculate oak	13	6	7	6	6	49							3	3S	S	B1	>20	Established tree growing close to fence line.		5.88	109
6	Pedunculate oak	14	3	8	8	6	53							4	4S	S	B2	>20	One of a close growing pair of trees on raised mound. Some hollowing at base. Crown compromised due to neighbouring tree.		6.36	127
7	Pedunculate oak	15	7	8	7	8	76							2	2N	S	B2	>20	One of a pair of close growing trees on raised bank. Some decay at base. Crown development compromised due to neighbouring tree.		9.12	261
8	Pedunculate oak	15	4	9	9	6		51	57					2	2S	S	B2	>20	Established tree growing on raised bank. Some damage to buttress roots. Twin stemmed from circa 1m above ground level.		9.18	265
9	Pedunculate oak	16	9	7	9	8	79							3	3N	S	B2	>20	Stands along fence line at edge of site.		9.48	282
10	Pedunculate oak	14	5	7	4	1	46							2	2E	S	B2	>20	Stands along fence line at edge of site. Development compromised by adjoining larger tree.		5.52	96
11	Pedunculate oak	9	3	3	4	3	25e							2	2N	Y	C1	>10	Small tree growing along fence line. Main stem smothered in ivy.		3.00	28
12	Pedunculate oak	11	5	4	6	6	44							2	2S	Y	B2	>20	Established tree growing along fence line.		5.28	88
13	Pedunculate oak	5	2	2	2	3	26							2	2S	Y	C1	>10	Small tree growing alone fence line. Under power lines so will be controlled in dimensions.		3.12	31
14	Group of mixed broadleaves	8av	3av				20av							0	-	Y	C2	>10	Group of small trees along fence line. Species include holly, goat willow, pedunculate oak, silver birch and rowan.		2.40	18
15	Silver birch	15	8	7	8	5		47	45					1.2	1.2E	S	B2	>20	Contributing to hedge line between fields. Partial smothering of ivy on main stem.		7.81	192
16	Pedunculate oak	15	9	8	8	7	56							2	2SW	S	B2	>20	Stands in field just south of fence line.		6.72	142
17	Goat willow	10	7	6	6	5							20	7	2	2N	S	C2	>10	Multi stemmed form and growing toward base of ditch. One stem has partially failed.		6.35	127
18	Group of mixed broadleaves	9av	4av				15av								0	-	S	B2	>20	Linear collection of trees growing along ditch line. Species include goat willow, silver birch, crab apple.		1.80	10
19	Pedunculate oak	12	8	7	8	9	60e							2	2W	S	B2	>20	Larger component of hedge line. Main stem smothered in ivy.		7.20	163
20	Pedunculate oak	14	8	7	8	7	60e							2	2E	S	B2	>20	Growing along ditch line. Main stem and much of crown smothered in ivy.		7.20	163
21	Silver birch	15	5	3	6	5	40e							2	2S	S	B2	>20	Established tree growing along hedge line.		4.80	72
22	Goat willow	10	8	6	6	4							12	10	0	-	Y	C2	>10	Established tree growing along ditch line. Some stems have collapsed. Coppicing would promote low level regeneration.		4.55	65
23	Pedunculate oak	16	9	9	9	7	70e								2	2S	E	B2	>20	Established tree growing along ditch line. Main stem and crown covered in ivy. Growing in close competition with neighbouring tree.		8.40	222
24	Pedunculate oak	16	7	2	9	7	49								2	2W	E	B2	>20	Growing in close competition with neighbouring tree.		5.88	109
25	Pedunculate oak	17	7	8	6	7		73	65						3	3E	E	B2	>20	Established tree growing on raised bank. Some hollowing at base.		11.73	432
26	Pedunculate oak	14	7	8	8	7	60								2	2E	E	B2	>20	Established tree growing on mound within field.		7.20	163
27	Pedunculate oak	17	9	8	8	7	59								3	3W	E	B2	>20	Established tree growing on mound within field		7.08	157
28	Pedunculate oak	13	10	9	9	8	75e								2	2S	E	B2	>20	Established tree growing in field to north of application site.		9.00	255
29	Pedunculate oak	17	11	10	10	7	74								2	2E	E	B2	>20	Established tree growing on raised bank adjoining ditch. Broad spreading form.		8.88	248
30	Pedunculate oak	16	9	9	9	8		61	31						4	4S	E	B1	>20	Twin stemmed tree growing on bank adjoining ditch.		8.21	212
31	Silver birch	9	2	2	2	2	19								1.2	1.2N	Y	C1	>10	Small tree growing on bank adjoining ditch.		2.28	16
32	Silver birch	8	2	2	2	3		17	13						1	1S	Y	C1	>10	Small tree growing on bank adjoining ditch.		2.57	21
33	Group of silver birch	12av	5av				35av								0	-	Y	C2	>10	Cluster of small trees along fence line.		4.20	55
34	Mixed broadleaf woodland	15av	7av				60av								0	-	S	B2	>20	Established block of woodland outside northern boundary of site. Predominantly pedunculate oak. Understorey of holly and hazel.		7.20	163
35	Pedunculate oak	10	3	5	3	4	36								2	2N	Y	B2	>20	Established tree growing on raised bank.		4.32	59
36	Group of mixed broadleaves	7av	3av				15av								0	-	Y	C2	>10	Collection of small trees on raised bank. Species include hawthorn, holly and sycamore. Located close to overhead wires that might need to be cut back to control height.		1.80	10
37	Mixed broadleaf hedgerow	6av	2av				15av								0	-	S	C2	>10	Remnants of former hedgerow growing on bank. Predominantly hawthorn, pedunculate oak and holly with some blackthorn.		1.80	10
38	Pedunculate oak	13	5	5	3	7	39								4	4W	S	B2	>20	Forms part of hedgerow. Smothered in ivy.		4.68	69
39	Pedunculate oak	17	7	9	8	9	53								4	4S	S	B2	>20	Larger component of hedge line.		6.36	127
40	Pedunculate oak	14	7	8	7	7	67								5	5N	E	B2	>20	Established tree growing in hedge line. Some hollowing between buttresses.		8.04	203
41	Pedunculate oak	15	8	9	9	9	59								5	5S	S	B2	>20	Standing on bank between fields.		7.08	157
42	Holly	10	3	3	3	3							12	6	1	1S	S	B2	>20	Standing on bank between fields.		3.53	39
43	Pedunculate oak	13	6	7	8	7	49								2	2S	S	B2	>20	Standing on bank between fields.		5.88	109
44	Pedunculate oak	12	7	7	6	6	47								2	2E	S	B2	>20	Standing on bank between fields.		5.64	100
45	Sycamore	16	6	7	7	7	67								3	3E	S	B2	>20	Stands on bank between fields. Broad spreading form.		8.04	203
46	Hawthorn hedge	5	2	3	3	3							10	6	0	-	S	C2	>10	Small tree growing on bank.		2.94	27
47	Pedunculate oak	5	3	4	2	3	24								1	1N	Y	C1	>10	Small tree growing on bank.		2.88	26
48	Group of holly	10av	3av				35av								0	-	S	C2	>10	Linear collection of stems growing on bank. Most stems lacking vitality. Includes occasional hawthorn.		4.20	55
49	Pedunculate oak	16	9	8	7	8	59e								5	5W	S	B2	>20	Larger tree growing on bank between fields. Main stem and much of crown smothered in ivy.		7.08	157
50	Pedunculate oak	15	7	7	8	7	69								2	2N	S	B2	>20	Established tree growing on bank between fields.		8.28	215
51	Pedunculate oak	17	9	8	8	8	79								4	4N	E	B2	>20	Larger tree growing on bank between fields. Broad spreading form.		9.48	282
52	Pedunculate oak	16	7	5	8	7	67								5	5N	S	B2	>20	Established tree growing on bank between fields.		8.04	203
53	Group of holly	9av	3av				35av								0	-	S	B2	>20	Collection of trees growing on bank. Some lacking vitality.		4.20	55
54	Pair of ash	15av	7av				55av								2	2N	S	C2	>10	Pair of close growing trees growing on bank. Some decay at base. Appear to have been previously managed as hedgerow and then allowed to out grow. Showing early signs of Ash Dieback.		6.60	137
55	Pedunculate oak	17	8	9	8	8	71								4	4W	E	B2	>20	Established tree growing on bank between fields.		8.52	228
56	Pedunculate oak	17	8	6	8	8	57								5	5W	E	B2	>20	Established tree growing on bank between fields.		6.84	147
57	Pedunculate oak	13	4	3	4	4	39								2	2N	Y	B2	>20	One of a line of trees along fence line between fields.		4.68	69
58	Ash	14	3	6	5	6	34								5	5W	S	C2	>10	Forms part of a line of trees along fence line. Showing advanced Ash Dieback. Unsuited to long term retention.		4.08	52
59	Pedunculate oak	17	7	8	5	7	69								2	2S	S	B2	>20	Forms part of a line of trees along fence line between fields.		8.28	215
60	Pedunculate oak	12	3	3	1	4	37								2	2N	S	B2	>20	Forms part of a line of trees along fence line between fields.		4.44	62
61	Pedunculate oak	13	6	6	5	6	47								2	2E	S	B2	>20	Forms part of a line of trees along fence line between fields.		5.64	100

KEY TO TREE SCHEDULE

Column Heading	Explanation
Tree No.	Unique number corresponding with number on plan
Species	English names
Ht (m)	Height in metres
Branch Spread	Crown radius in metres to cardinal points of the compass
Stem Dia	All measurements conform to Annex C of BS 5837:2012 Single stem - Stem diameter in centimetres measured at 1.5m above ground level. Multi-stemmed tree with 2 to 5 stems - Diameter of each stem Multi-stemmed tree with more than 5 stems - Average stem diameter and number of stems
Height of crown clearance	Height in metres between the ground and underside of canopy
Height of first major branch and direction of growth	Height from ground level to base of first major branch and the approximate direction of growth
Abbreviations as suffix to a dimension	Suffix 'e' denotes an estimated dimension Suffix 'av' denotes an average dimension
Age Class	Age Class definitions: Y = Young S = Semi-mature E = Early mature M = Mature O = Over mature
Category grading	Summary of BS 5837: 2012 categorisation: 1. Trees unsuitable for retention: U = those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer that 10 years 2. Trees to be considered for retention: A1, 2 or 3 = trees of high quality (substantial contribution >40 yrs) B1, 2 or 3 = trees of moderate quality (significant contribution >20 yrs) C1, 2 or 3 = trees of low quality (but adequate, ie >10 yrs or young trees - until new planting can be established)
Estimated remaining contribution (yrs)	Note: Useful estimated remaining contribution of the tree or tree group based on figures stated in BS5837:2012
Condition	Brief description including physiological and structural defects
Preliminary management recommendations	Describes current arboricultural requirement for the tree in its current context
Root Protection Radius	Radius of minimum root protection area in metres calculated from section 4.6 and Annex D of BS5837:2012
Root Protection Area	Total area of minimum root protection area extrapolated from root protection radius



NORTH

0 25m 50m 100m

NOTES

1. **This tree survey information has been prepared for planning purposes only. Additional detail will be needed for foundation design.**
2. The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
3. Scale for planning purposes only.
4. All dimensions to be checked on site.
5. The copyright of this document resides with Keen Consultants unless assigned in writing by the company.
6. Details shown on this drawing are devised with reference to *BS5837:2012:Trees in relation to design, demolition and construction - Recommendations.*
7. Check if Tree Preservation Order or Conservation Area protection applies to trees before undertaking tree works.
8. Ancient Woodland based on Natural Resources Wales Interactive Map Viewer.
9. Topographical survey based on AIMS drawing number Sp12/DWD/HIV/002.
10. Where trees were not identified on the topographical survey they have been plotted by eye.

KEY

1. Trees to be considered for retention:
   (Coloured line indicates extent of canopy)
   - Tree Category A 1,2 or 3 - Trees of high quality
   - Tree Category B 1,2 or 3 - Trees of moderate quality
   - Tree Category C 1,2 or 3 - Trees of low quality
2. Trees unsuitable for retention:
   (Coloured line indicates extent of canopy)
   - Tree Category U - Trees that cannot realistically be retained due to their condition
3. Protection Areas:
   - Root Protection Area (RPA) (where RPAs overlap the shading will appear darker)
   - 15m buffer to Ancient Woodland
4. Tree/Hedge numbering:
   - 8 Tree number - refer to schedule for information
5. Designations:
   - Ancient Woodland

Rev	Description	Date
A	Ancient woodland and buffer to ancient woodland added. Latest red line boundary added.	12.02.25
0	Preliminary issue	23.01.25

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Client
STATKRAFT

Project
SWANSEA BESS, ADJACENT TO SWANSEA GREENER GRID PARK, SWANSEA

Title
TREE CONSTRAINTS PLAN

Date	Scale
JANUARY 2025	1:1000@A1
Drawn by MJE	Checked by JTK

Drawing Number
2403-KC-XX-YTREE-TCP01RevA