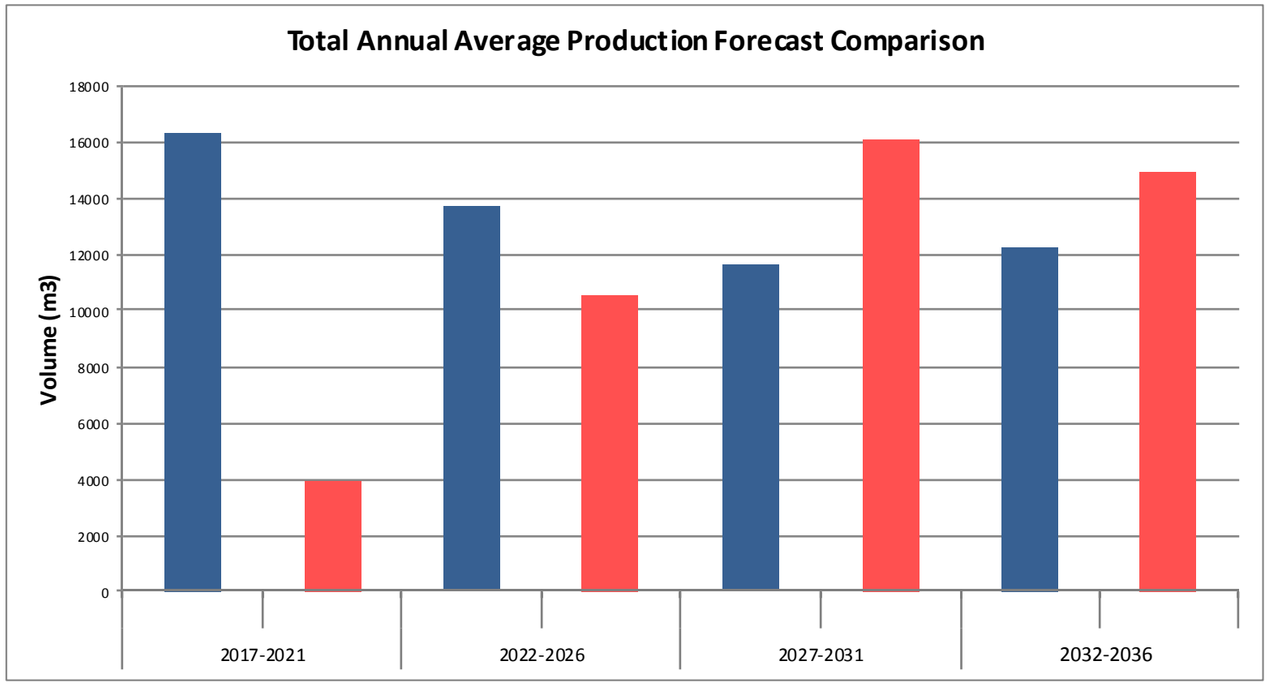
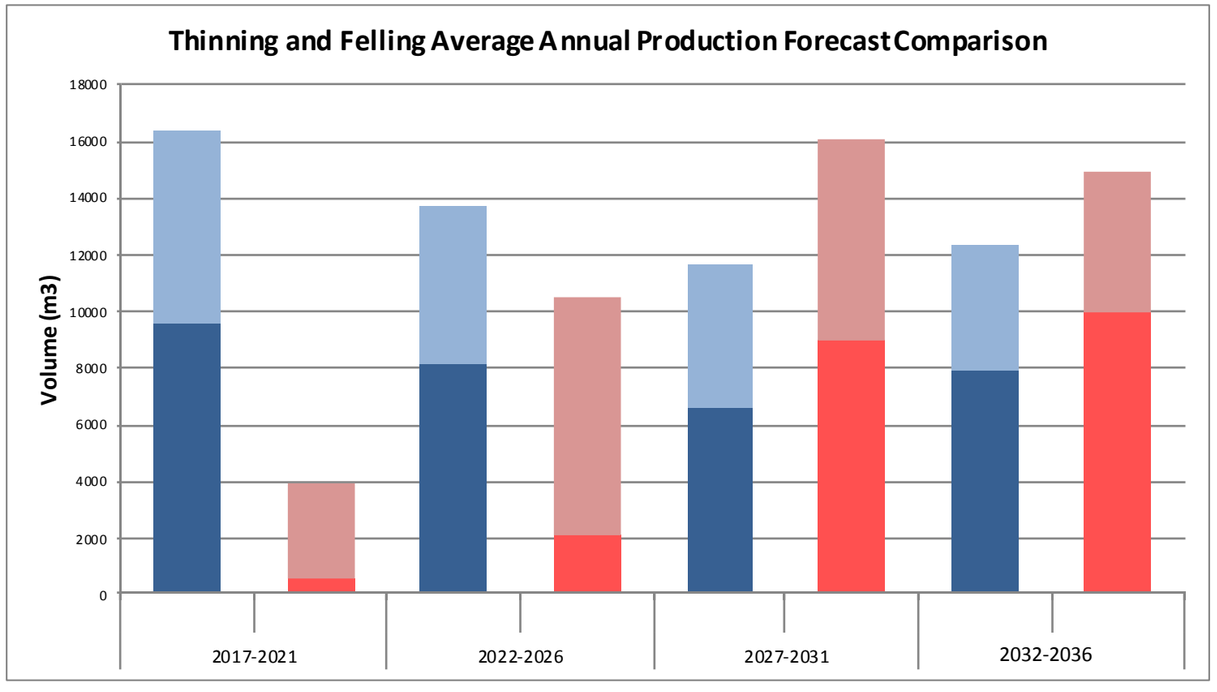
APPENDIX 2: Management considerations

Option Testing

Option 1 – Current Forest Plan (Master)	Option 2 – Proposed Forest Plan (Scenario)
The continued production of sustainable and marketable woodland products.	
The programme of planned clearfelling is unsustainable, ecologically or economically given the significant clearance of windblow in recent years. The postponement of a number programmed felling has led to a backlog in production for the coming five years.	The proposals look to balance out clearfell production and delay felling following recent high volume extract following windblow clearance. It is acknowledged that this leads to a 'flashier' production graph. The drop in clearfell volume production is balance by greater volume realised through thinning.
The conservation, maintenance and enhancement of cultural and heritage assets.	
The Plan makes little acknowledgement of the cultural landscape and therefore fails to adequately address its importance within FC strategy and more widely within sustainable forest management.	The Plan makes acknowledgment of the area's rich cultural heritage and landscape. Proactive proposals to enhance the physical setting of certain designate features will enhance the accessibility and significance of these features.
The provision and maintenance of recreation facilities. - Support the development of increased recreation provision. - Improve stand resilience around recreation infrastructure.	
The plans and proposals acknowledge and make allowance for recreation in the Plan area. The methods for achieving this are not stipulated or measurable.	The Plan clearly outlines a strategy which integrate land management with recreation delivery to meet the Haldon Forest Park Business Plan. The zoning and programming of operations mean that recreation benefits from the forest management practice.
The delivery of well-designed proposals that comply with landscape design principles in keeping with the local landscape character.	
The proposals acknowledge the importance of delivery of well-designed coupes and management but are, in places, unachievable following considerable windblow. Where possible coupe shapes and sequencing have been retained with adjustments made in light of changes in woodland structure.	The Plan makes acknowledgement and provision for the forests contribution to the local landscape character. Coupes are designed in a way to enhance the local character both from a short and long-distance, Steps have been taken to improve the approach to the Forest Park as well as using corridors to improve internal landscape views.
The protection and enhancement of woodland and open habitats and their associated species. - The creation and maintenance of permanent and transient open habitats. - The restoration and management of the Site of Special Scientific Interest.	
The proposals acknowledge the importance and value of the woodlands for habitats and their associated species. In particular raptor, nightjar and butterfly species. The Plan fails to utilise opportunities and corridors to maximise the benefits of the forest for ecology,	The Plan uses an evidence base to produce a Plan which encompasses SSSI and forest management. It demonstrates how problems are being addressed and identities opportunities for habitats to be enhanced which can be monitored into the future.





Fell 2018 - 2021

Fell 2022 - 2026

Fell 2027 - 2028

Coupe Prescriptions

	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
Powderham	**81683**	3.37	p.54 ROK p.63 DF P.54 CP	Coupe is dissected by two large wayleaves with the busy A379 to the east. These constraints make these crops complex to manage. Clearfelling and restocking will allow issues to be addressed and the management consolidated.	**81683a**	3.37	60% Broadleaf 40% Ev. Conifer	Felling should look to deliver broadleaf component through coppice regrowth, with conifer planting sympathetic to this. The site is suitable for a number of species being nutrient rich, well drained and south facing. Allow areas to close to wayleaves remain unstocked to a allow scrubbing up with broadleaf species. Consider ....
	81773	8.08	p.55 JL p.55 ROK	Crop has reached maturity and yield has dropped off. The susceptibility and threat of infection from *Phytophthora ramorum* in the woodland with larch chestnut and larch components mean action is required to mitigate the impact of future possible compulsory felling. Broadleaf understorey of hazel, beech and sweet chestnut is has established, this should be coppiced.	**81773a**	8.08	100% Ev. Conifer	Felling should look to deliver broadleaf component through coppice regrowth, with conifer planting sympathetic to this. The site is suitable for a number of species being nutrient rich, well drained and south facing. Consider Douglas fir, Walnut, Coast redwood and Leyland cypress.
Black Forest	**81922**	3.69	p.12 SC	Crop has reached maturity as large single stemmed quality logs. Holly is well established in the understorey. There are some minor signs of dieback in the crowns and the stand needs an injection in structural diversity to stimulate growth.	**81922a**	3.69	100% Broadleaf	Felling should look to develop coppice regrowth with possible supplementary planting with broadleaf species if regeneration does not reach 2,500stems/ha by year 10 or if holly colonises rapid.
Webberton	**81667**	2.67	p.62 DF p.62 CP	CP is suffering considerably for Dothistroma needle blight. Both crops are under thinned, exposed a wind vulnerable. Safety concern with minor roads immediate adjacent on east and west boundary of the crops. Further thinning will exacerbate issues.	**81667a**	2.67	100% Ev. Conifer	Site is rich and well drained with higher reaches of the site less fertile or well drained. Minor convexities across the site add to the site complexity. A number of historic features (i.e. hedge banks/sunken lanes) are throughout the coupe. Consider Weymouth pine, Noble fir and Scots pine.
Mamhead	**81932**	0.64	p. 68 DF	Crop is stable and well thinned but surrounding the culturally significant Mamhead Obelisk. This operation is aimed at improving the views to and from this built feature to enhance the Mamhead Registered Park and Garden designation.	**81932**	0.64	100% Open	Area will remain unstocked and maintained through motor-manual cutting and weeding on rotation which may mean that the scrub develops upto 2m in height at times.
Ideford	**81827**	2.99	p.55 CP p.55 SP p.70 WH	Pine crops are suffering considerably from Dothistroma needle blight with yield significantly debilitated. Small Western hemlock to the south of the road is seeding profusely into the heathland area creating a management issue. The mature crop is of good timber and is ready for market.	**81827a**	2.99	100% Lowland heathland	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality means that species choice is limited. Heathland assemblages are evident under the canopy and area will be restored to lowland heathland.
Great Plantation	**81978**	7.21	p.62 SP p.62 CP P.62 WH p.62 JL p.63 NS	Site is very wet in places causing mortality in the JL and NS. This is becoming a safety and visual issue to the adjacent A342. CP and LP to the north of the coupe is in decline and sporadically blowing. Felling should look to retain stable broadleaves where possible, but coppice the hedge adjacent to the public road to minimise risk.	**81978a**	7.21	70% Ev. Conifer 30% Broadleaf	Replanting should focus along the drier westerly parts of the coupe. Ample space should be provided to widen corridors. Restocking in the extreme wet parts should focus around willow and birch regeneration and enrichment with suitable broadleaves, (i.e. alder and aspen) elsewhere consider Macedonian pine, Sitka spruce, Western red cedar or Pedunculate oak.
	81765	2.52	p.64 CP	Crop is suffering from Dothistroma needle blight and having been heavily thinned has a significant broadleaved understorey developing. This operation is required in the near future to ensure damage to the understorey is minimised and the management of the felling should be done with this in mind.	**81765a**	2.52	60% Broadleaf 40% Ev. Conifer	Utilising any established broadleaf understorey the site should be planted with a high broadleaf component. This will be to reflect the richer site and higher proportion of broadleaves in the local vicinity. Consider Pedunculate oak, Serbian spruce or Wild cherry.
	81797	8.59	p.62 CP	Crop is suffering from Dothistroma needle blight in the crown, but increment samples suggest yield is still sufficient. Crop is a single contiguous block which makes a stable and visually appropriate coupe.	**81797a**	8.59	60% Ev. Conifer 40% Broadleaf	The opportunity to underplant with Hornbeam and/or Pedunculate oak whilst the pine overstorey is still providing shelter and shade should be explored further. If suitable underplanting throughout should be feasible, otherwise restock with a diverse range of conifer and broadleaf species. Ample space should be provided to widen corridors. Consider Western red cedar, Lawson cypress, Serbian spruce, Hornbeam or Pedunculate oak.
	81640	5.2	p.67 SP p.68 DF	Crop is underthinned and yield is tailing off. Felling should look to reinvigorate and kickstart the productive capacity of the north area of the woodland.	**81640a**	5.2	100% Ev. Conifer	Site is heath-like with a high Calluna component, it is very moist in places with medium nutrient availability. Ample space should be provided to widen corridors. Consider Western red cedar, Lawson cypress, Serbian spruce or Douglas fir.

Fell 2018 - 2021
Fell 2022 - 2026
Fell 2027 - 2028

Coupe Prescriptions

	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Justification within SSSI	Restock	Area (ha)	Restock Proportion	Rationale/Prescription	Justification within SSSI
Spicers	**81915**	1.99	p.78 SS	Crops are experiencing sporadic windblow given the poor rooting conditions and crop reaching terminal height. Exposed areas are to be felled to complement to surrounding open heathland and recreation routes.	**Unit 106** **The underthinned and unstable condition of these crops mean that current and future raptor habitat potential is minimal.**	**81915a**	1.30	100% Ev. Conifer	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality means that species choice is limited. Planting will provide a screen to the Forest Park from the road. Consider Scots and Monterey pine and rowan.	**Unit 106** **These plantings will deliver structural diversity within the heathland suitable habitat for a number of species into the future.**
						81915b	0.69	100% Lowland Heathland	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality. Heathland assemblages are evident under the canopy and area will be restored to lowland heathland.	**Unit 106** **The creation of open habitat will create connectivity between Tower Wood and Spicers heathland whilst building on the newly created area at Bullers Hill.**
	81833	2.14	p.78 SS p.78 JL	Crop has been underthinned having only been racked and matrix thinned once. The stand is whippy, thin and wind vulnerable, close to two popular recreation routes.	**Unit 110** **The underthinned and unstable condition of these crops mean that current and future raptor habitat potential is minimal.**	**81833a**	2.14	100% Lowland Heathland	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality means that species choice is limited. Heathland assemblages are evident under the canopy and area will be restored to lowland heathland.	**Unit 110** **The creation of additional heathland habitat will contribute to heathland which surrounds it.**
	81924	0.79	p.78 SS	Crop has been underthinned having only been racked and matrix thinned once. The stand is whippy, thin and wind vulnerable, close to two popular recreation routes.	**Unit 110** **The underthinned and unstable condition of these crops mean that current and future raptor habitat potential is minimal.**	**81924a**	0.79	100% Lowland Heathland	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality means that species choice is limited. Heathland assemblages are evident under the canopy and area will be restored to lowland heathland.	**Unit 110** **The creation of additional heathland habitat will contribute to heathland which surrounds it.**
	81334	1.17	p.72 WH	W hemlock fir is of adequate form and could be thinned again however it is seeding profusely into adjacent heathland and other crops.	**Unit 110** **The unstable condition of these crops mean that current and future raptor habitat potential is minimal.**	**81334a**	1.17	100% Lowland Heathland	Site has a very high stone component and flint cap which limits rooting and the relatively dry and poor soil quality means that species choice is limited. Heathland assemblages are evident on the edges of the canopy and the area will be restored to lowland heathland.	**Unit 110** **The creation of additional heathland habitat will contribute to heathland which surrounds it.**
Kiddens	**81652**	6.34	p.67 DF p.66 SS	Crop has experienced significant blow both on the edge and within the stand. Surrounding crops has been removed following catastrophic windthrow. Vulnerability of the crop due to exposure means that if retained further significant windthrow is anticipated.	**Unit 104** **The current condition and future prospects of the crop, due to windthrow mean that whilst the area has an established history as a raptor nesting area, these trees will offer limited future habitat potential.**	**81652a**	6.34	90% Ev. Conifer 10% Open	Site is medium to poor in nutrient availability with moist to wet moisture regimes. Wetter areas are towards the south of the coupe along flush and boundary fence. Rooting depth is a concern on higher slopes so tap/heart rooting species should be favoured. Consider Western hemlock, Silver fir, Serbian spruce and aspen.	**Unit 104** **These plantings will deliver stable conifer crops suitable raptor habitat for the future.**
	80001	0.67	p.91 DF	Regeneration of mixture of conifer and broadleaf is threatening the inttergirty of the mains powerline and will become an increasing hazard	**Unit 101** **The underthinned and unstable condition of these crops mean that current and future raptor habitat potential is minimal.**	**80001a**	0.67	100% Ev. Conifer	Site will be allowed to naturally regenerate as woodland into the future with minimal investment,	**Unit 101** **The creation of additional scrub habitat will provide temporary habitat for lepidoptera in the area.**

Fell 2018 - 2021
Fell 2022 - 2026
Fell 2027 - 2028

Coupe Prescriptions

	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Justification within SSSI	Restock	Area (ha)	Restock Proportion	Rationale/Prescription	Justification within SSSI
Freers	**81659**	5.57	p.59 GF p.59 DF p.59 WH	The coupe has sporadically windblown throughout with particular loss of cover towards the valley bottom in the drawn up Grand fir. Vulnerability of the crop due to exposure means that if retained further significant windthrow is anticipated.	**Unit 109** **The current condition of the majority of crop provides limited areas of raptor habitat. Areas that do hold suitable habitat on the forest edge to the north, have been retained.**	**81659a**	5.57	100% Ev. Conifer	The coupe has deep, medium to rich soils which are moist. Areas to the east of the track should be planted at wider spacing to allow greater broadleaf regeneration and create integration with neighbouring old broadleaf woodland. Consider Lawson cypress, Grand fir and Coast redwood.	**Unit 109** **These plantings will deliver stable conifer crops suitable raptor habitat for the future.**
	81839	11.35	p.58 CP p.58 DF	The pine crop has catastrophically wind blown, most significantly towards the east of the coupe. Rhododendron has become established throughout and the site is difficult to access The standing crop is heavily infected with Dothistroma and is unlikely to recover. Wholesale removal and replanting is the only appropriate course of action, with the felling of the more stable crop to the north west appropriate to address the significant issues of the site and provide a robust forest management intervention.	**Unit 109** **The current condition and future prospects of the crop, due to windthrow mean that these trees will offer limited future habitat potential. The retention of stable p.59 DF to the north will mitigate the impact of any loss in raptor habitat.**	**81839a**	11.35	100% Ev. Conifer	Whilst the site does have a high stone component the soils are moist in places with a poor nutrient regime. Soils get richer and deeper further down the slope. The site sits with its own small basin, is fairly secluded but visible for the M5 and A38. Consider Western hemlock, Douglas and Silver fir and Sitka spruce.	**Unit 109** **These plantings will deliver stable conifer crops suitable raptor habitat for the future.**
	81754	2.54	p.78 WH	W hemlock fir is of adequate form and could be thinned again however it is seeding profusely into adjacent heathland and other crops.	**Unit 109** **The current crop is seeding profusely into adjacent areas of heathland leading to a loss in condition.**	**81754a**	2.54	100% Wooded Heath	The site will not be restocked to create open habitat and broadleaf wooded heathland. Regeneration will be removed at the age of first thinning of adjacent coupe with allowance for retention of a few stable will be made to enhance diffuse edge.	**Unit 109** **The creation of additional heathland habitat will contribute to heathland which surrounds it.**
Harcombe	**81670**	5.02	p.28 SP p.75 WH	Pine crops are of poor form and minor increment. W. hemlock is of adequate form and could be thinned again however it is seeding extensively into adjacent heathland and other crops.	**Unit 114 & 117** **These crops provide raptor habitat but are adversely affecting Unfavourable—Recovery Condition Unit. Felling of invasive seed source will improve heathland condition.**	**81670a**	5.02	100% Lowland Heathland	Site is varied with significant historical cultivation. Flint cap and substrate is prevalent, limiting rooting. Heathland assemblages are evident under the canopy and area will be restored to lowland heathland.	**Unit 114 & 117** **The creation of additional heathland habitat will contribute to heathland which surrounds it.**

Utilities

Legend

- Drain
- Watercourses
- Water Supply Point
- Water Pipeline
- Open Water
- Reservoirs
- Quarries
- Dams
- Bridges
- Class A/B Roads
- Class C Roads
- Legal access/Unclassified
- Powerline Overhead
- Powerline Underground
- Gas Pipeline
- Telephone Line Underground
- Telephone Line Overhead
- A Roads

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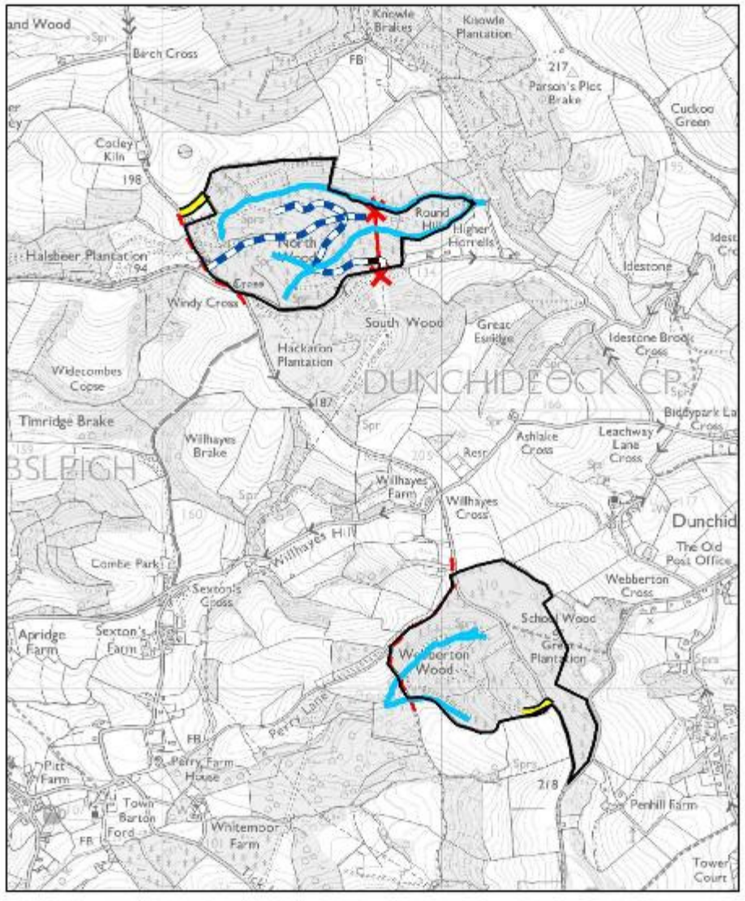
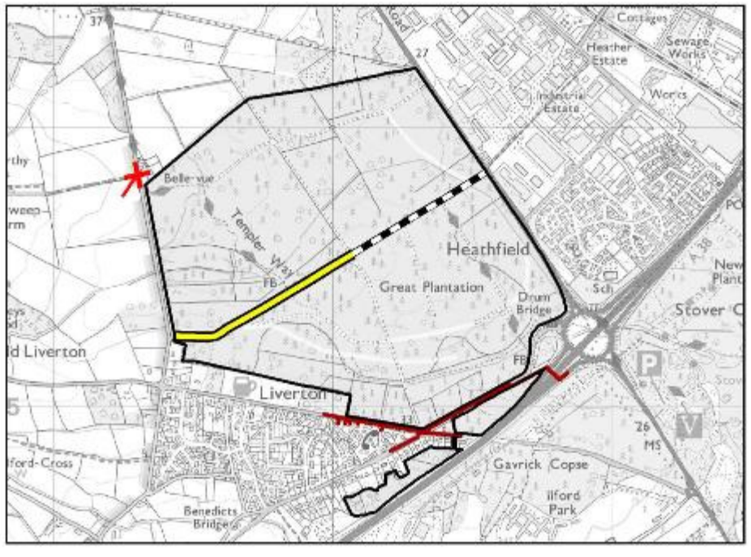
0 0.125 0.25 0.5 0.75 1 Miles

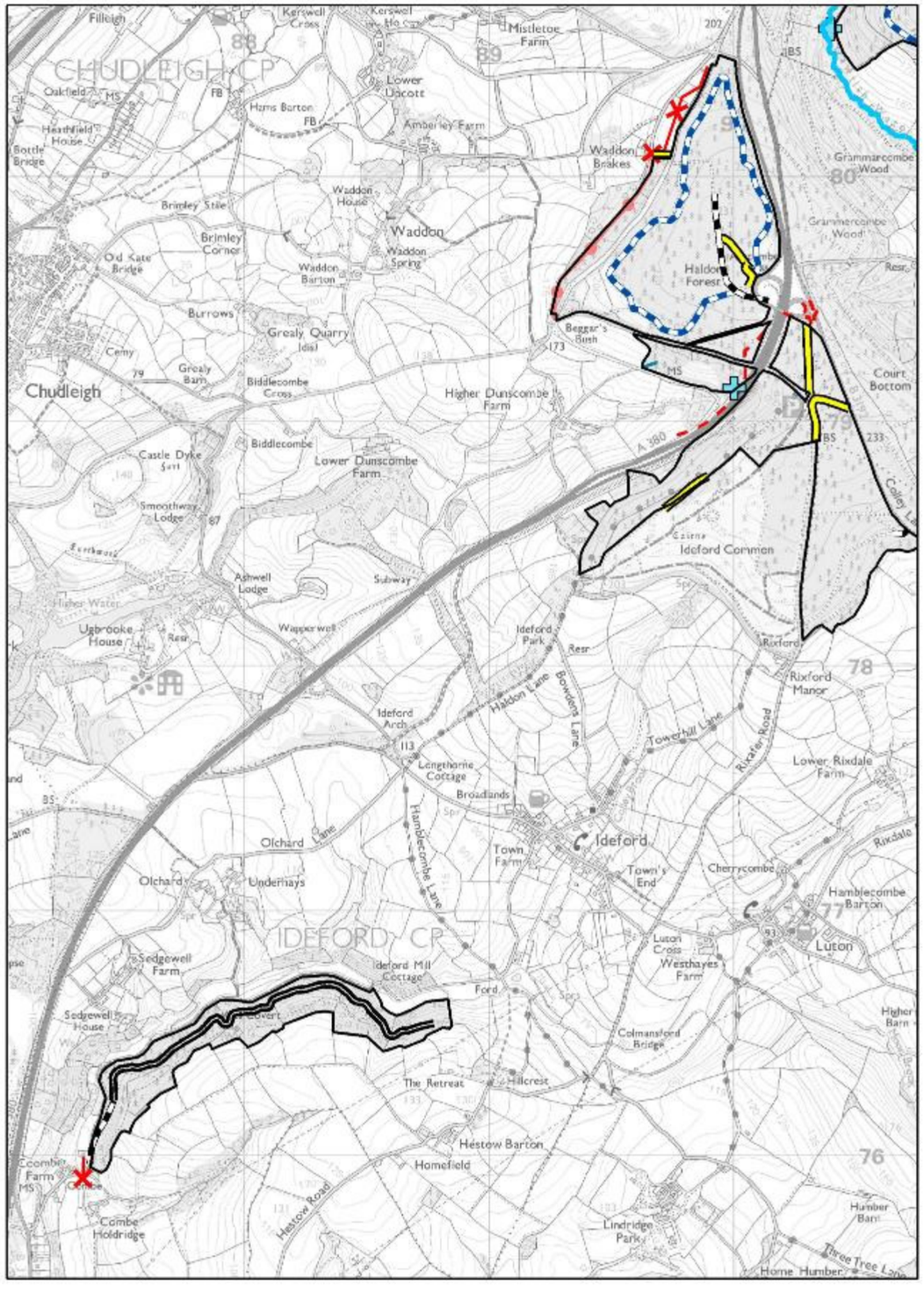
Utilities

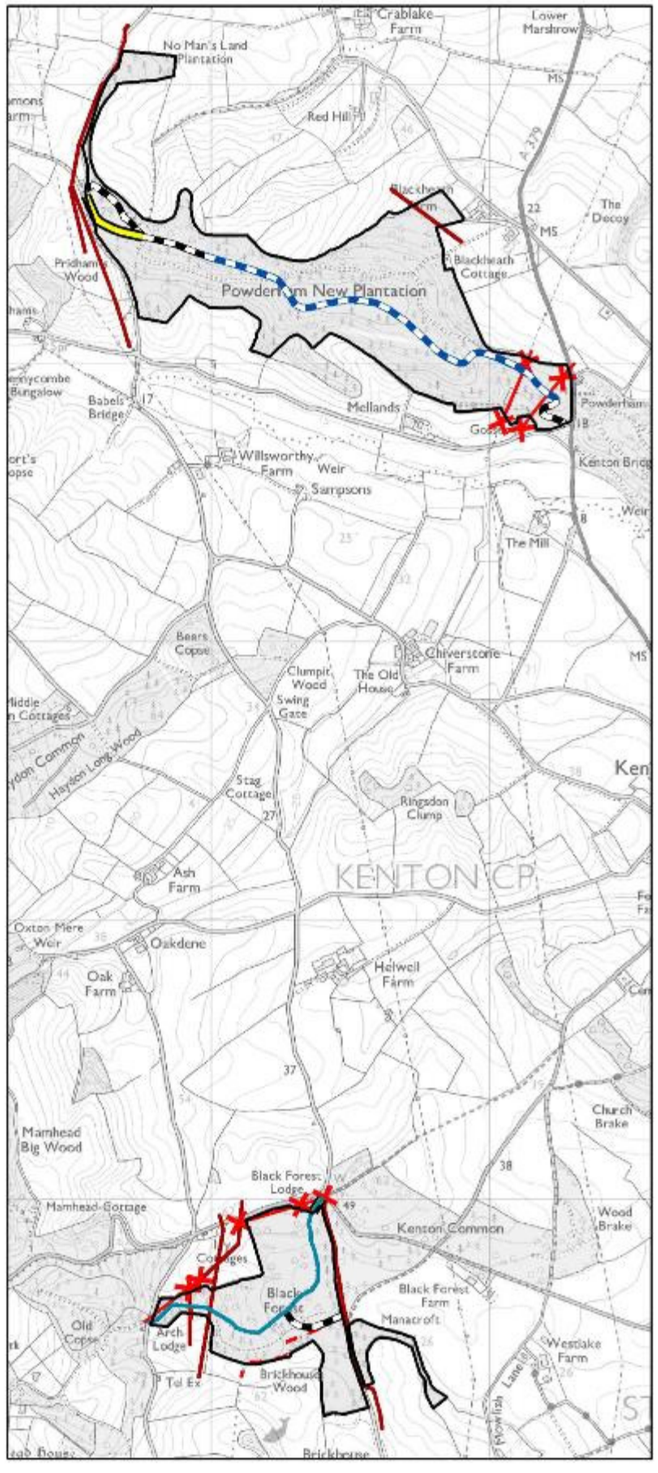
Legend

Drain
Watercourses
Water Supply Point
Water Pipeline
Open Water
Reservoirs
Quarries
Dams
Bridges
Class A/B Roads
Class C Roads
Legal access/Unclassified
Powerline Overhead
Powerline Underground
Gas Pipeline
Telephone Line Underground
Telephone Line Overhead
A Roads









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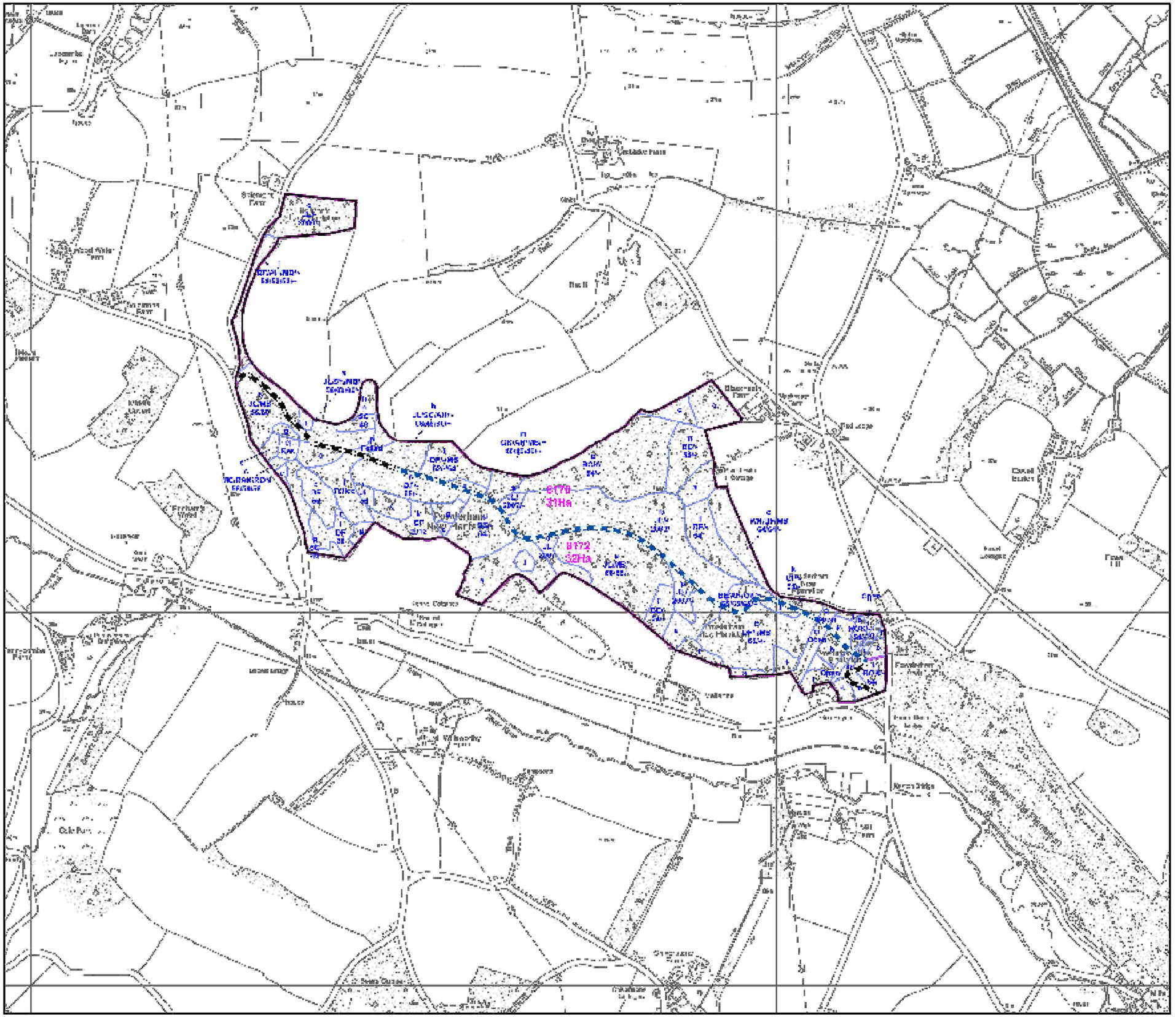
Powderham



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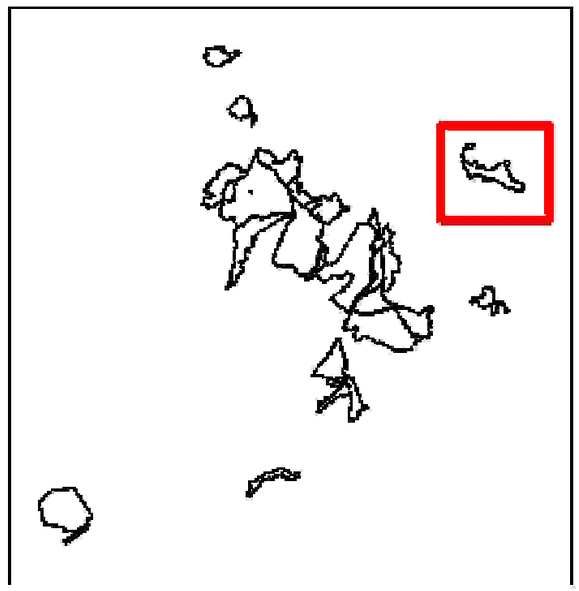

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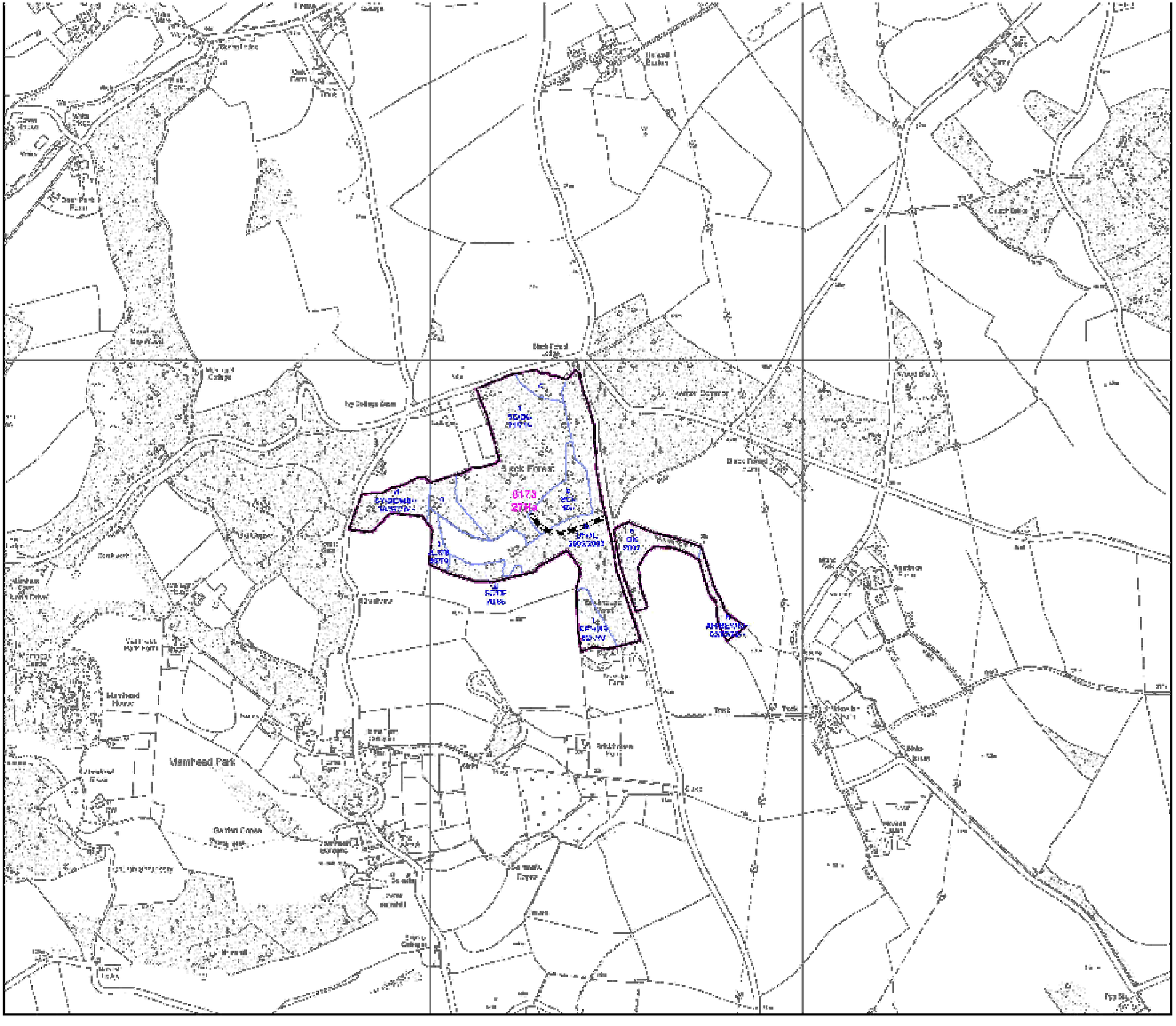

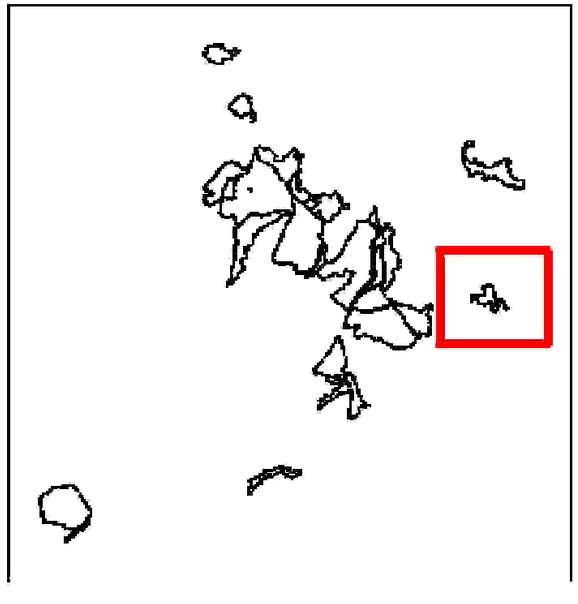

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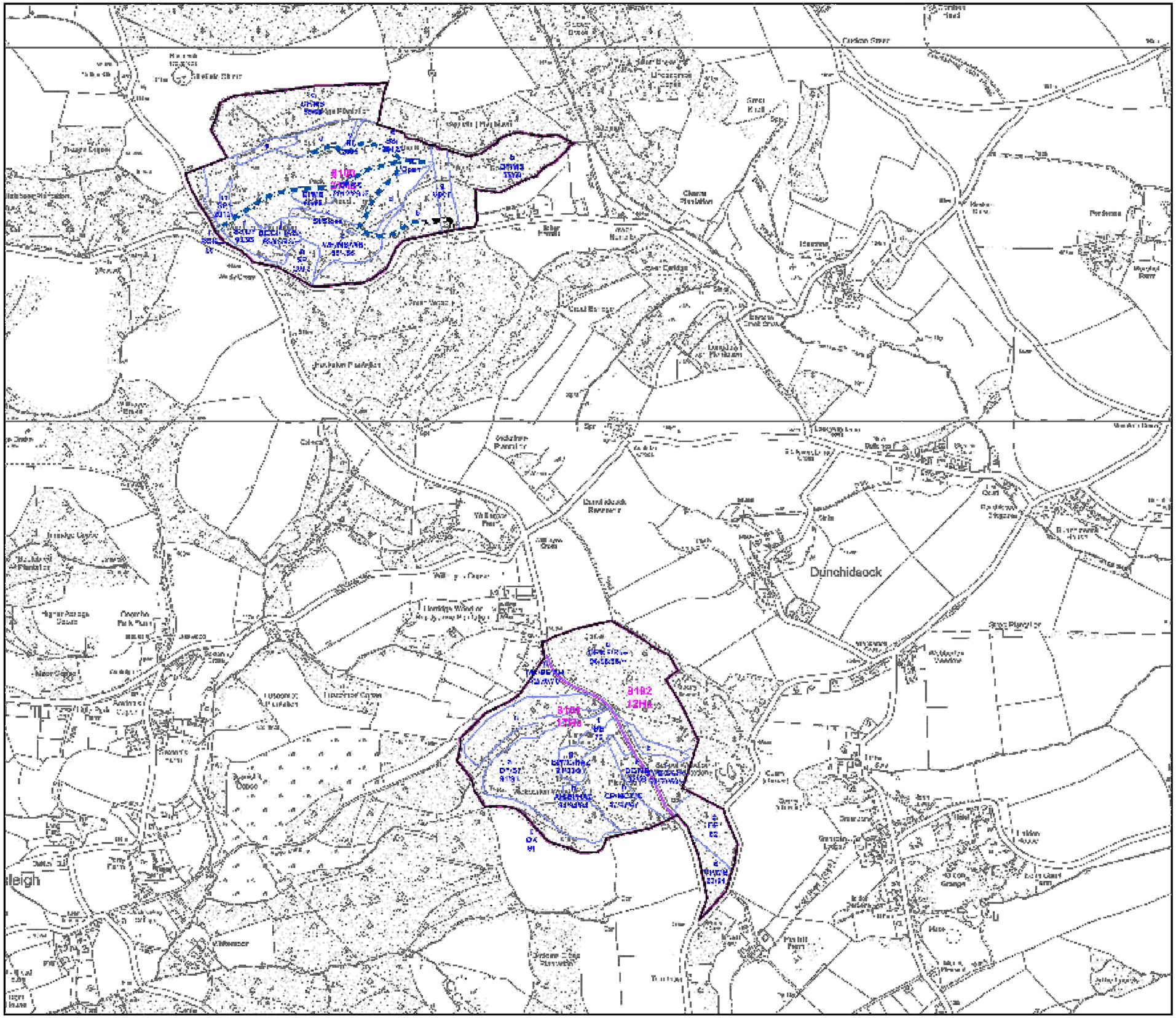
North Wood & Webberton



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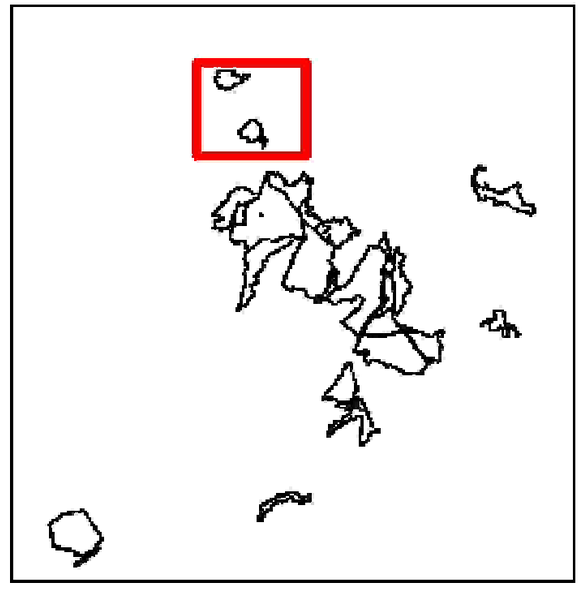

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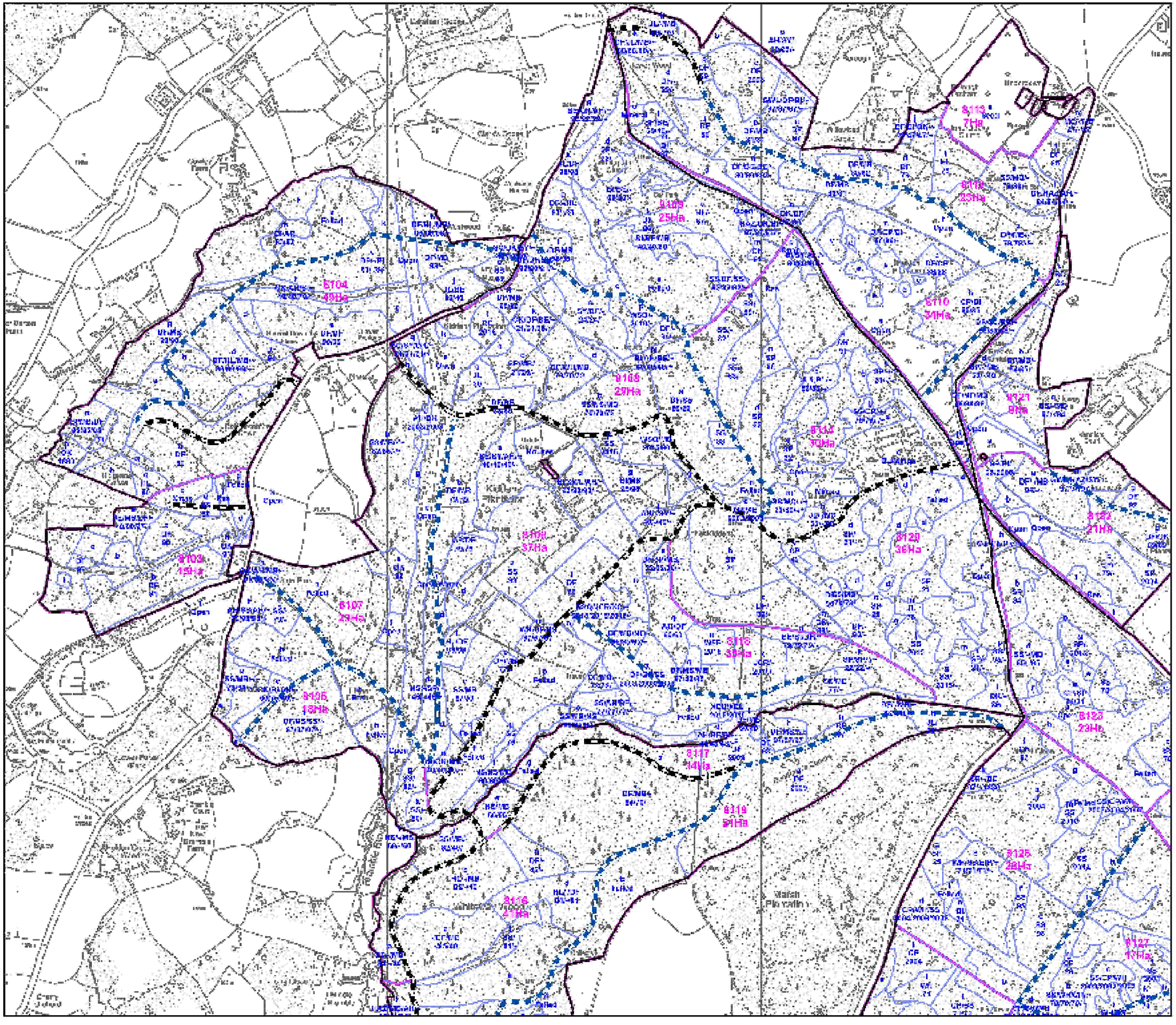
Main Block North



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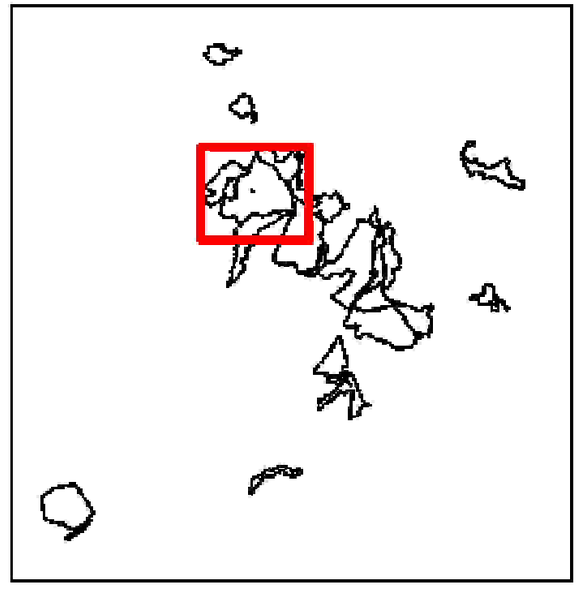

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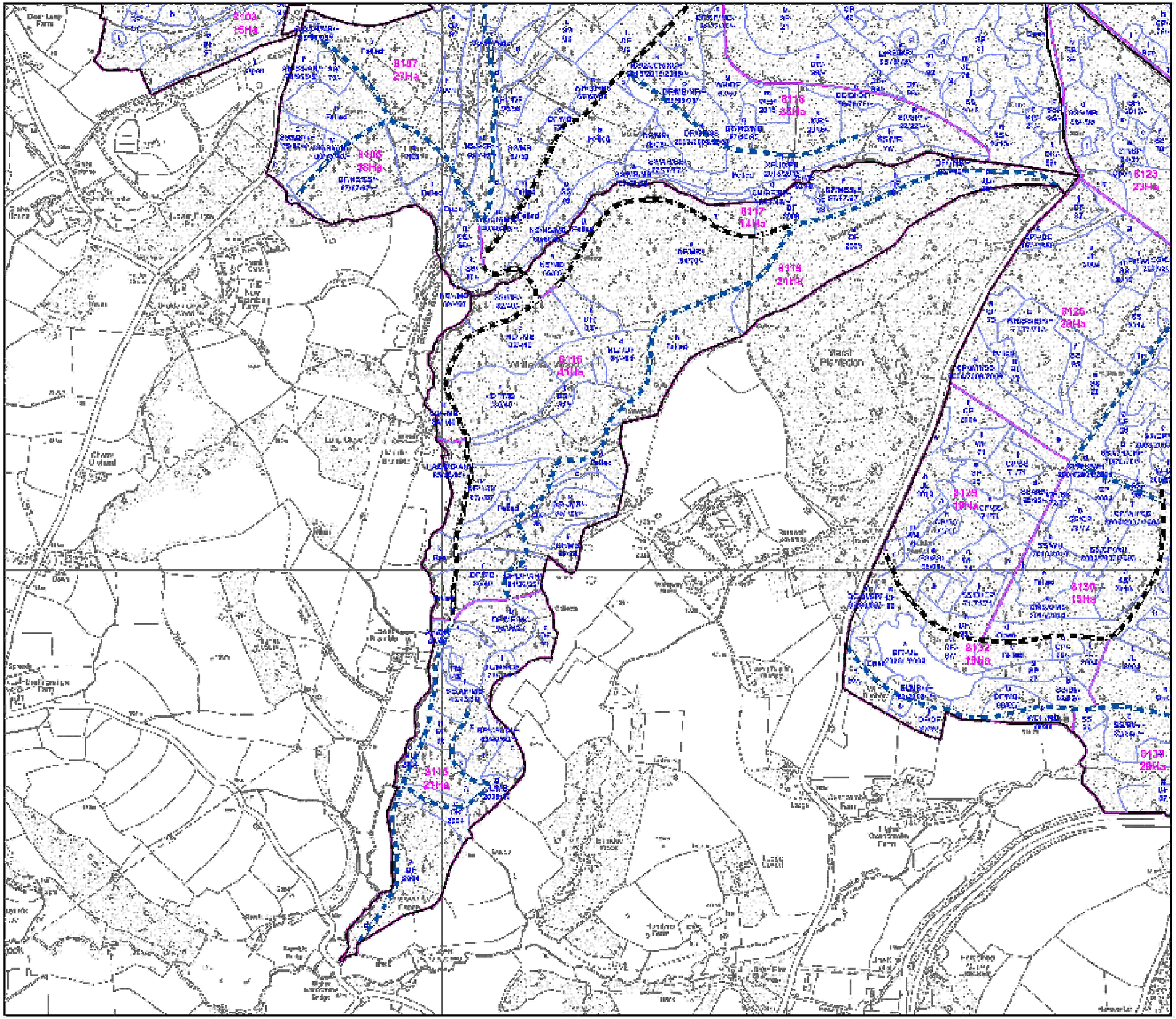

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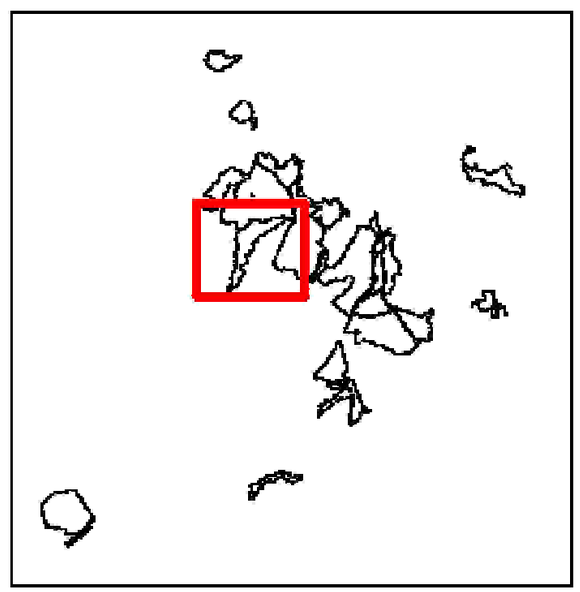

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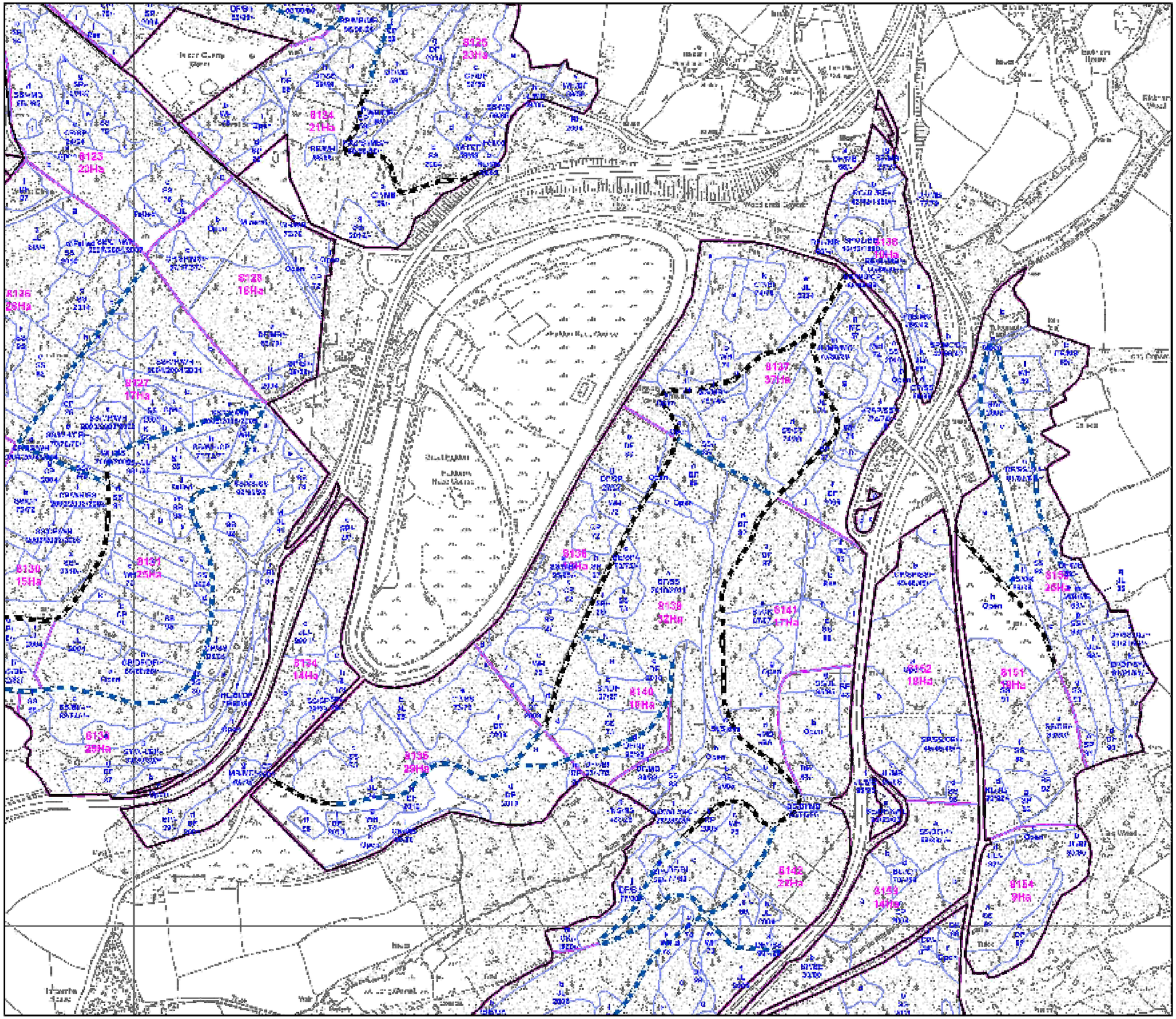

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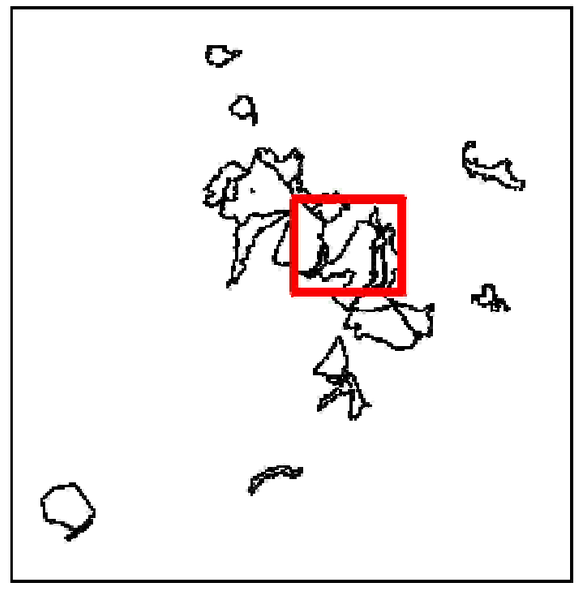

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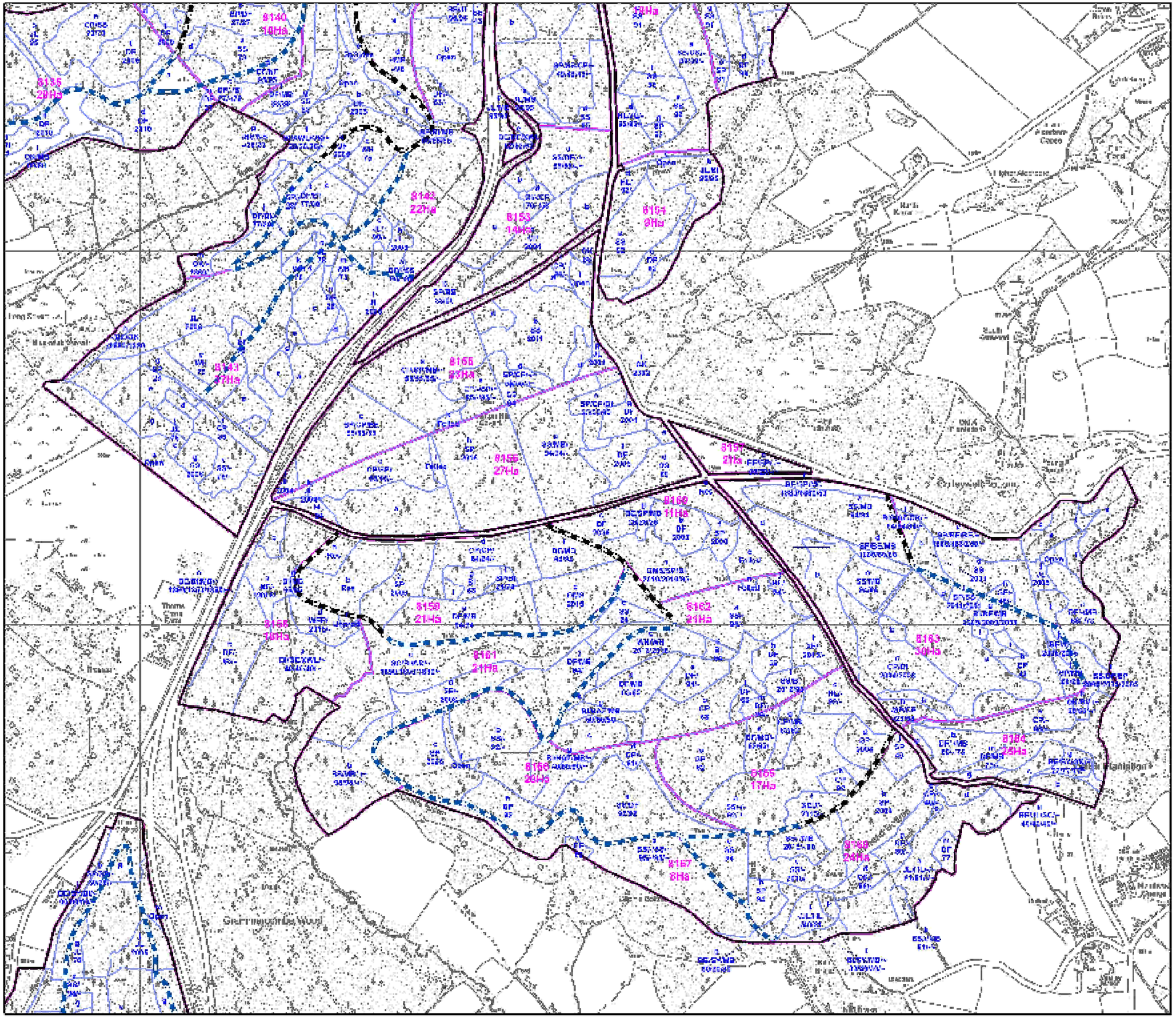

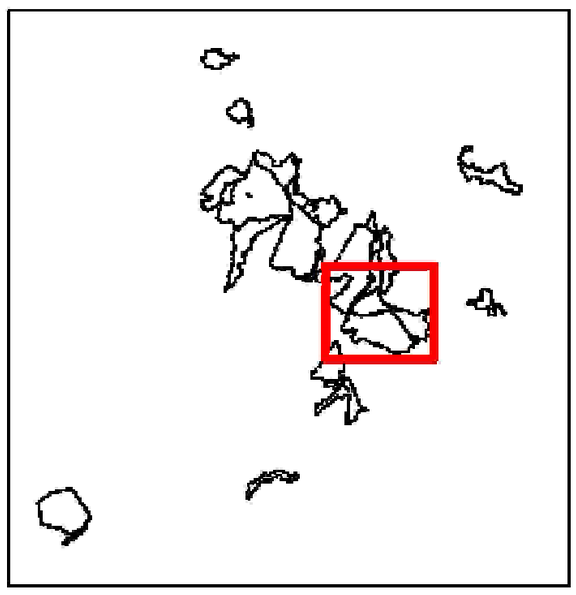

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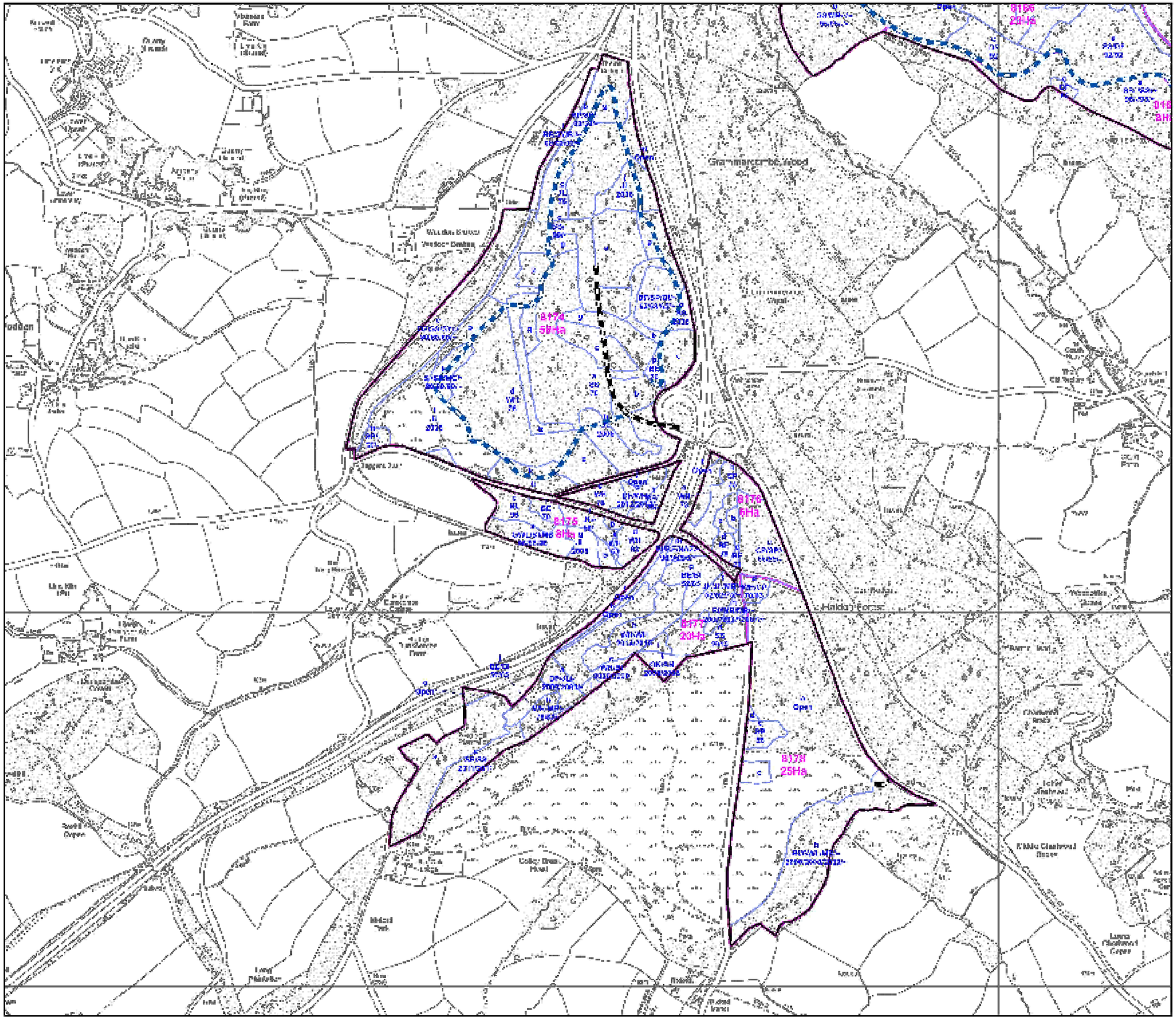
Ideford



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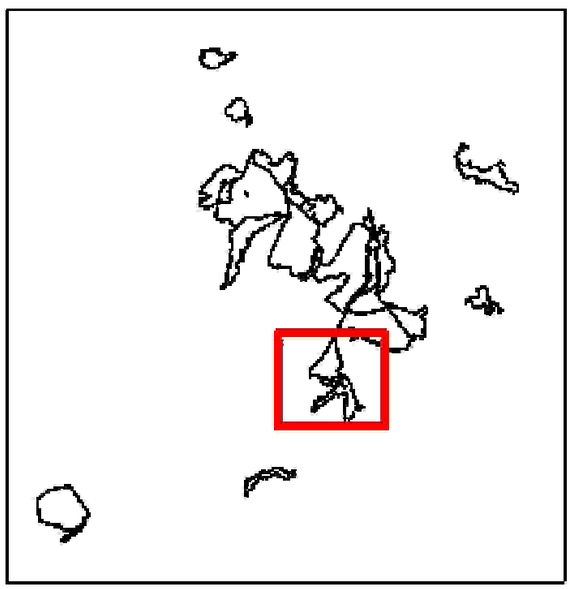

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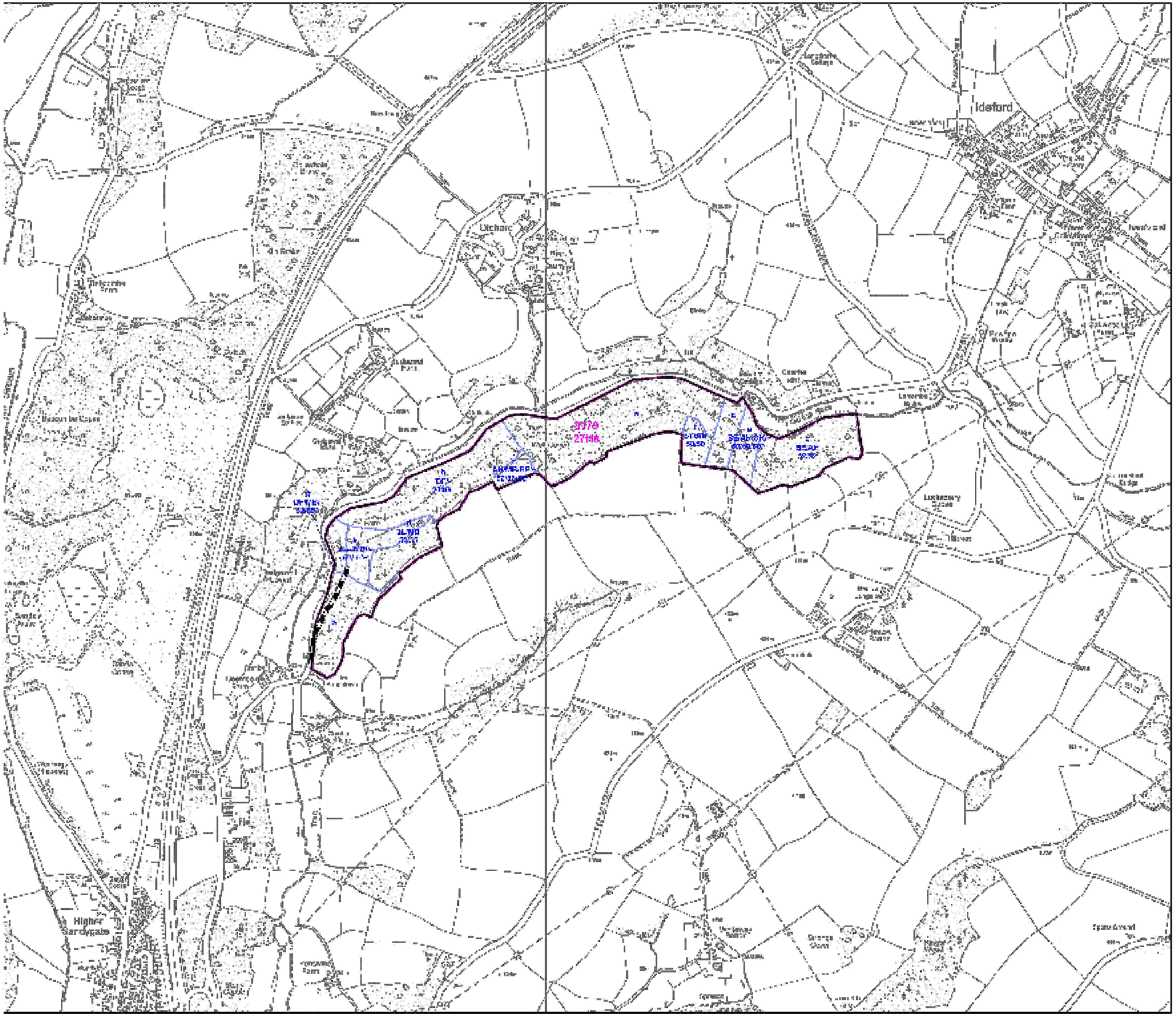

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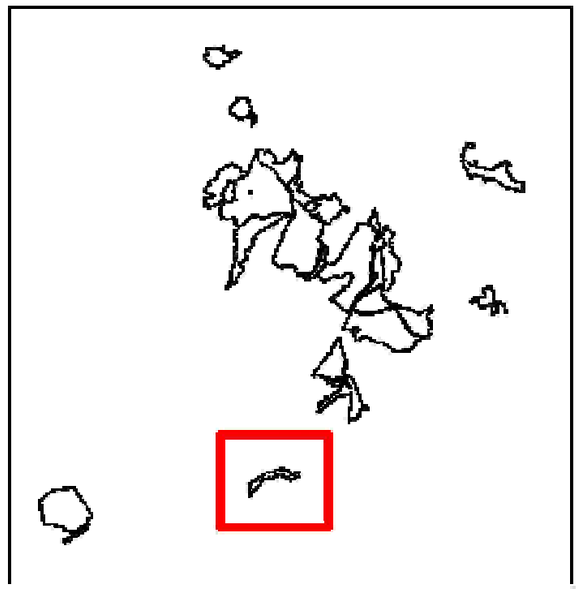

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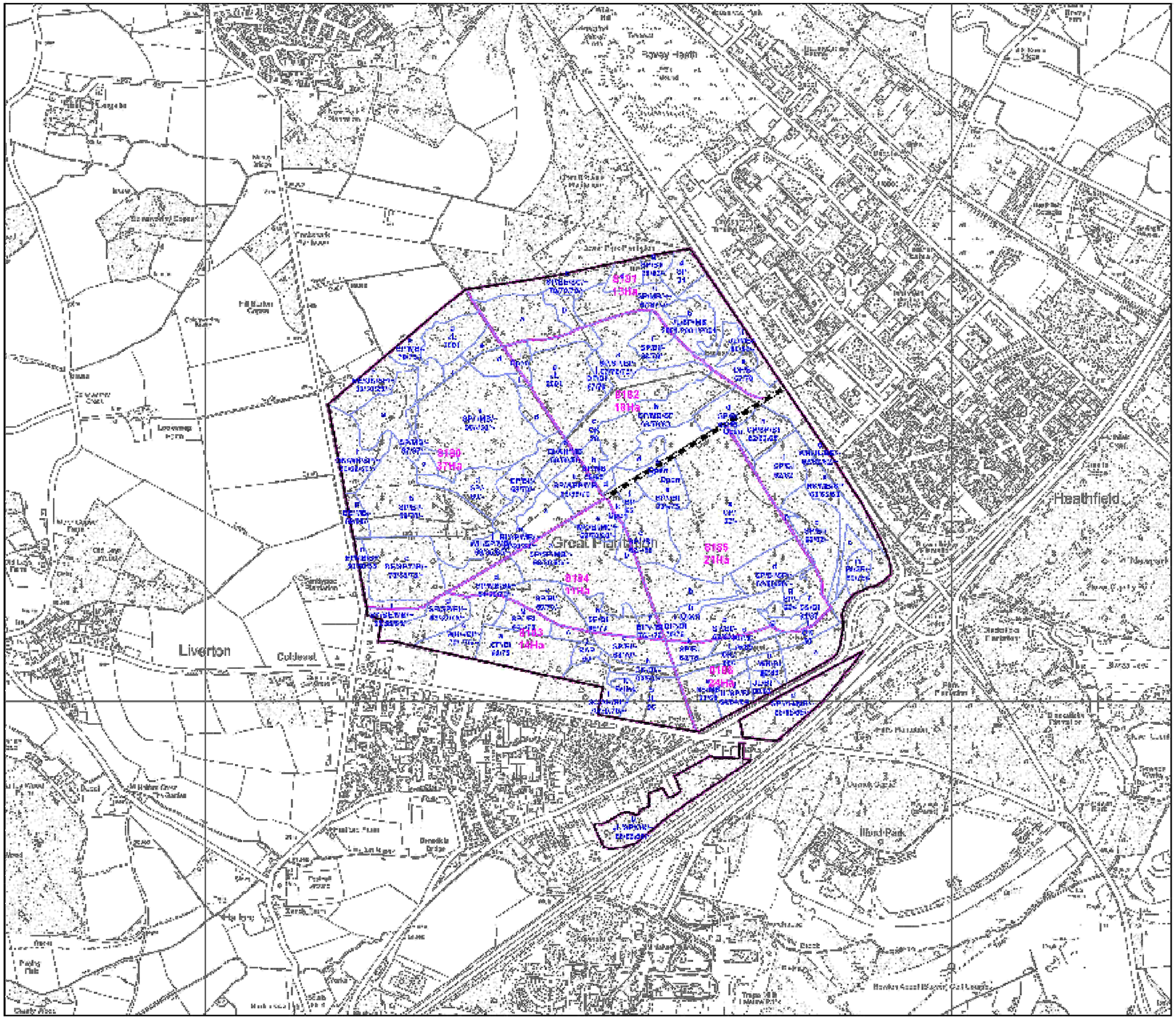
Great Plantation



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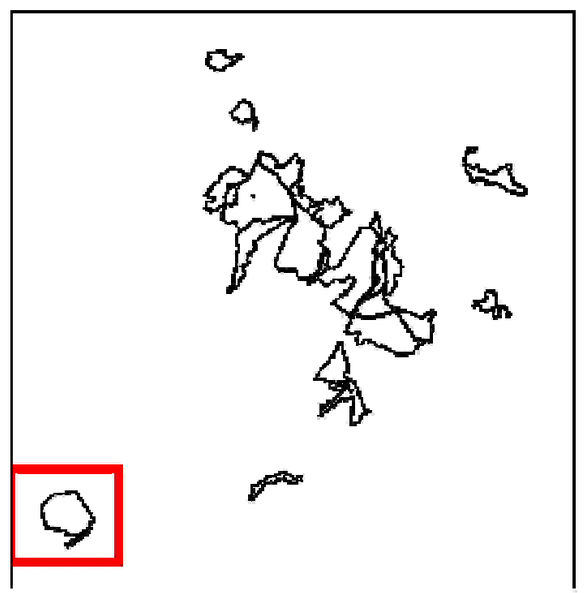
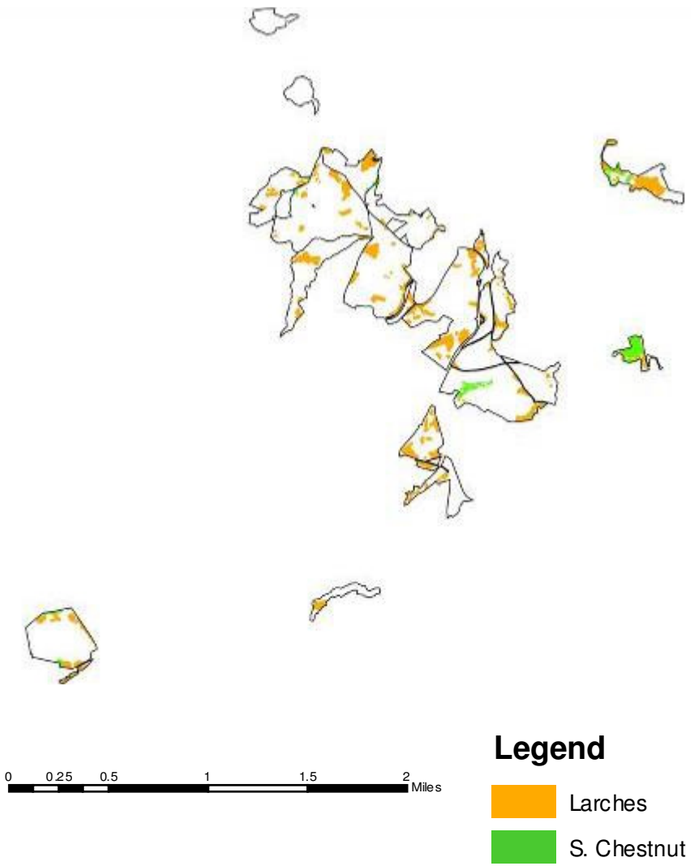


Pests & Diseases

Phytophthora ramorum (PR)

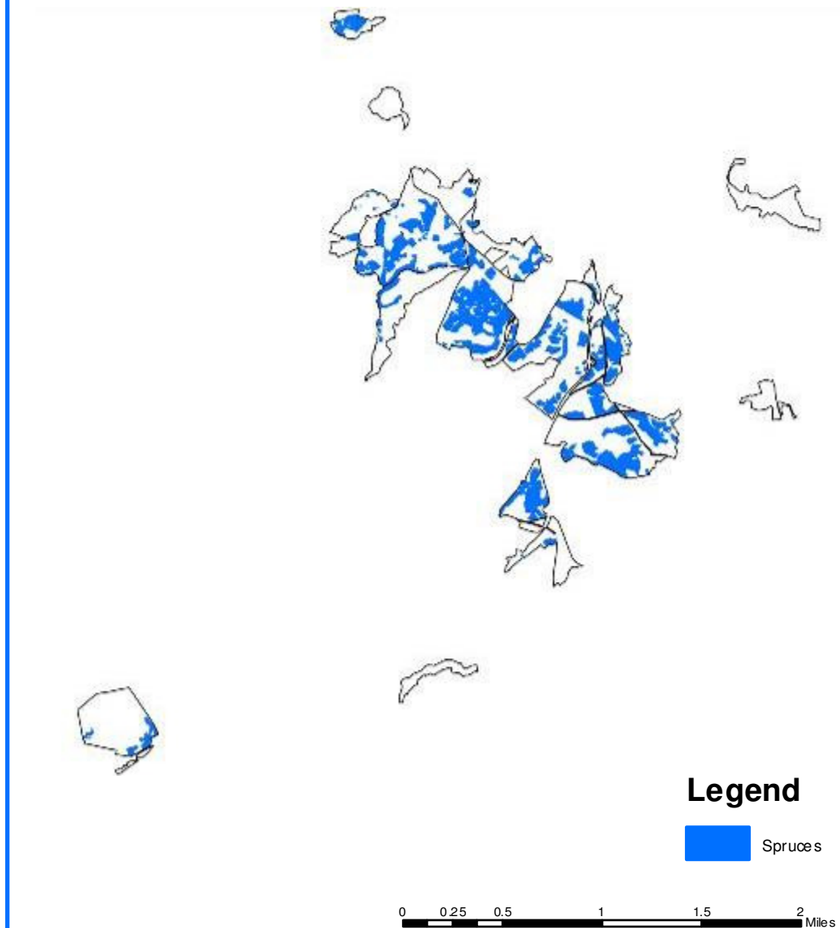
P. ramorum was first found in the UK in 2002 and until 2009 in the woodland environment had largely been associated with rhododendron species acting as a host from which spores are produced. In August 2009 P. ramorum was found on a small number of dead and dying Japanese Larch in South West England, causing particular concern since some affected trees were not close to infected rhododendron and showing a significant change in the dynamics of the disease than experienced previously. Following this testing in Devon and west Somerset confirmed the presence of PR in mature Japanese larch as well as species in its under-storey, including sweet chestnut, beech, birch, oak, Douglas fir and Western hemlock. PR is a notifiable disease dealt with by felling the infected area under a statutory plant health notice (SPHN) issued through FERA and the Forestry Commission. PR was found in North Wood a number of years ago and was felled through an SPHN. However the amount of susceptible larch and Sweet chestnut in the Plan area remains high. Steps will be taken to target the removal of these species where appropriate.



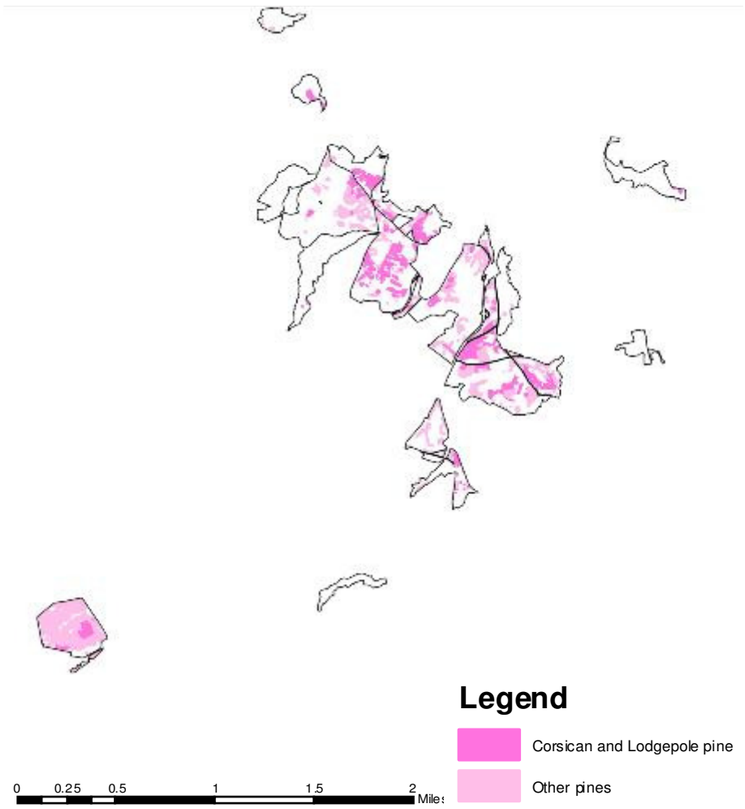
Dendochtronus micans

Also known as great spruce bark beetle, this pest is found throughout continental Europe and increasingly in west England, Wales and southern Scotland. It damages spruce trees by tunnelling into the bark of living trees to lay its eggs under the bark. The spread of *D micans* across west England has been unrelenting having developed a stronghold in north Devon and continues to move ever south and east wards, usually assisted by the wind. The beetle is particularly drawn to the smell of resin and thus fresh cut or broken timber. It prefers moist, warm and therefore unthinned stands of all types of spruce, but particularly Norway and Oriental although its ultimate destructive capability on Sitka is greater. The spread of *D micans* can be controlled by the release of *Rhizophagus grandis,* a natural predator in its native range.

The Plan area is at significant risk of infection from *Dendochtronus micans* not least because of the high proportion of spruce. Therefore steps need to be taken to diversify these crops where site conditions allow. Minimising stress of the spruce through good planting and species choice as well as regular thinning can limit the susceptibility of the spread.



Dothistroma Needle Blight (DBN)



Often referred to as Red Band Needle Blight (RBN) and can reduce growth rates by between 70 and 90%. Effects of RBN are managed through thinning the wood more heavily than you would normally to introduce higher levels of air flow through the remaining crop. A large proportion of the Haldon Plan area is pine, namely Scots and Corsican pine. In places this pine, particularly Corsican (and the small components of Lodgepole pine are suffering from Dothistroma. Steps will be taken to target the removal of these species where appropriate or use them as an over-storey aide to create the right conditions for underplanting.