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NATURAL ENGLAND

CASE STUDY: NATURAL ENGLAND - SCRUB CLEARANCE

Cutting down and removal of silver birch from peat bunding located on Doncaster New Humberhead Peatlands to control potential risk of fire spreading to underground Peat areas.

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MANAGEMENT PLAN | SURVEY | TREATMENT | REMOVAL | TRAINING RESOURCES

SITE BACKGROUND

Large areas of Hatfield Moors have been intensively surface milled for peat since the 60s. This ceased in September 2004 and since has been profiled and managed to allow the key peat forming plants such as sphagnum mosses and cotton grasses to re-establish across the old, milled areas. The vast workings have been split into smaller compartments as part of the management for ease of work, each having a peat wall (bund) as the distinction between adjacent compartments.

THE PROBLEM

After the fire on Hatfield Moors, part of the Humberhead Peatlands Natural England deemed it would be beneficial to remove the silver birch scrub, followed by treatment with herbicide and careful placing of arisings to remove additional fire risk moving forward and to make access on foot along the cell bunds easier. If left to grow the trees would cut off access completely, and cause environmental issues, so it was best to carry out this project whilst the trees were juvenile.

THE BRIEF

On successfully being awarded this contract, we worked with Natural England to clear the designated areas of Silver Birch from the peat bunding, the arisings would be moved to wet areas and the remaining stumps were to be killed off to eliminate future growth.

OUR CHALLENGES

This was a winter project, in a remote location with limited access and no facilities. Natural England provided a plan of the areas containing the bunds, and we undertook an initial site visit to assess the extent of the problem. It was determined that the trees needed to be timely removed before any severe weather set in. Access to the bunds in both sections was drivable but via a 4x4 for daily access and would be required for the mobile welfare unit.

CONSIDERATIONS:

1. Location

Access to site was the main concern - with a speed limit on site of 10MPH we had to keep driving off any hard core roads to a minimum to ensure the tracks were not damaged for foot access. Due to the nature of the site all precautions had to be taken to eliminate any possible spillage of herbicide use and minimal or no damage to the surrounding patches of heather. As the Silver Birch are the pioneer species on this site, if a fire were to occur it would naturally sweep through the heather but when it reached the Birch the fire would slow causing the fire to go underground, and the peat reserves are the fuel. Removing these trees would allow fire to sweep across and burn itself out.

2. Health & Safety

- Remoteness of site
- Weather conditions
- Risk of falling into water or cells and hypothermia from cold and wet
- Spills of herbicide
- Two workers to be on site at all times/no lone working

OUR SOLUTION

A site visit and walk around the cell bunds was conducted along with the lead contact for these works from Natural England. This was necessary due to the complexities of the site and to carry out a risk assessment. The old peat extraction bunds formed footways spanning 1 metre wide. We devised a 4 step plan to complete the project:

1. Cut Silver Birch to ground level.
2. Larger birch to be cut into smaller sections.
3. Throw arisings into the wet bund areas.
4. Paint neat Glyphosate including dye onto each stump face.

Cutting a woody invasive plant at the base of the stem instantly severs the connection between the photosynthesizing parts of the plant and the roots. However, cutting does not damage the below ground plant parts, and most woody invasive plants store enough energy below ground to regrow.

A cut-stump treatment (also sometimes referred to as cut-surface treatment) is a woody invasive plant control method that combines physical removal of the above-ground portions of the target plants with chemical control of the roots.

We cut down (as level with ground as is possible on bunds) any scrub growing on bunds and up to 3 meters off each side. Any living specimens were treated with Glyphosate that contains a blue dye to help identify them. The arisings were removed to a cell that was either wet or obviously going to become wet through winter to avoid arisings becoming a fire source later. Herbicide was applied to any remaining stumps, ensuring all areas of the stump were covered and enough dye was used to make it visible for a long period of time.

THE OUTCOME

This image shows the bunds after all works had been completed. Removal of the trees gives clear access across the site, and the methods we used ensures minimal environmental impact.