

BIOMASS SOURCING IN ESTONIA MAY VIOLATE UK SUSTAINABILITY STANDARDS FOR BIOMASS

**CUT CARBON
NOT FORESTS**



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Photo credit: Karl Adami

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EXECUTIVE SUMMARY

The **UK is the world's largest importer of timber for biomass energy**. Because the vast majority of this timber – in the form of wood pellets – is imported from other countries, the **UK relies on sustainability standards to ensure that its biomass helps reduce carbon emissions** and avoids harming forests. However, new evidence suggests that biomass imported into the UK energy market from Estonia may actually **violate these legally binding sustainability criteria** by employing destructive logging practices in Estonia's sensitive ecosystems, which are home to hundreds of imperilled species. This logging is even occurring in areas of Estonia protected under Estonian law and as part of Europe's Natura 2000 reserve system. This **raises serious doubts about the UK's sustainability standards** and demands that the **UK government take swift and decisive action to ensure** its heavy reliance on biomass – and its billions in subsidies to the biomass industry – **are not harming global biodiversity and our climate**.

INTRODUCTION

Demand for wood pellets to generate biomass energy is growing significantly and is contributing to increased levels of logging in the United States, Canada, Estonia, Latvia, and elsewhere. The UK is the world's largest consumer of imported wood pellets, as well as Europe's biggest subsidiser of biomass electricity. It spends over £1 billion per year to subsidise large biomass-burning power stations like Drax, which operates the world's largest coal-to-biomass converted power plant and generates roughly eight percent of the UK's electricity supply, primarily from burning wood.¹

To allay concerns that the biomass industry is harming forests, the UK government – like several other governments – has introduced sustainability requirements and frameworks for wood used as fuel for large-scale biomass energy production. If at least 70 percent of the trees logged for biomass meets these requirements, it is deemed “sustainable” and therefore eligible for government subsidies. The remaining 30 percent is not required to meet sustainability standards; it need only pass a basic risk assessment related to the legality of its harvesting.

In 2021, Drax burned over 200,000 tonnes of wood pellets imported from Estonia, as reported by the company.² Evidence now suggests that logging for biomass in Estonian forests could violate the UK's sustainability criteria for biomass sourcing. Recent reports and independent media have investigated biomass sourcing in Estonia by analysing particular logging likely to have

provided wood for the production of wood pellets.³ These investigations have uncovered that logging for biomass in Estonia includes destructive practices, such as:

- logging in protected areas (including those protected under Estonian law and those designated as Natura 2000 reserves);⁴
- damage to watersheds around rivers and streams;⁵
- damage to carbon-rich peat soils;⁶
- logging in ways that harm biodiversity (including clearcutting and other types of harmful logging in habitat for species protected under EU and/or Estonian law due to their imperilled status);⁷ and
- logging culturally significant trees.⁸

As explained in more detail below, UK sustainability standards should prohibit these practices. Although biomass imported from Estonia continues to be certified as compliant, these findings raise troubling questions about likely violations of these standards. Accordingly, the UK Government (including the Department for Environment, Food & Rural Affairs or “DEFRA”) should immediately open an investigation into biomass imported from Estonia into the UK energy market.

1 EMBER. 2020. *The Burning Question: Should the UK end tax breaks on burning wood for power?*, <https://ember-climate.org/insights/research/the-burning-question/>.

2 Drax Annual Report 2021, https://www.drax.com/wp-content/uploads/2022/03/Drax_AR2021_2022-03-07-final_.pdf.

3 See, e.g., van der Wal, Sanne. July 2021. *Wood pellet damage How Dutch government subsidies for Estonian biomass aggravate the biodiversity and climate crisis*. SOMO, <https://www.somo.nl/wp-content/uploads/2021/07/Wood-pellet-damage.pdf>; Thomson, Alex. July 5, 2021. *Fears biomass revolution could be fuelling habitat loss*. Channel 4 News, <https://www.channel4.com/news/fears-biomass-green-revolution-could-be-fuelling-habitat-loss>; Kuepper, Barbara. June 2021. *Dutch Wood Pellet Imports: Is Dutch biomass burning contributing to forest loss in Baltic states?* Profundo Research & Advice, <https://www.greenpeace.org/static/planet4-netherlands-stateless/2021/06/7c0ec271-wood-pellets-nl-210603-final.pdf>; Estonian Fund for Nature & Eswatch. 2021. *How well are protected forests of high conservation value cared for? Changes in logging pressures and restrictions of protected forest habitats within the Natura 2000 network in Estonia*, <https://media.voog.com/0000/0037/1265/files/Natura-logging-Estonia-2021.pdf>; Estonian Fund for Nature. Dec. 2020. *Hidden inside a wood pellet: Intensive logging impacts in Estonian and Latvian forests*, https://media.voog.com/0000/0037/1265/files/Biomass_report_ENG%20_2020.pdf. For the logging sites analysed, public records and/or responses to requests for information demonstrated that these sites were either owned by or supplied wood to Graanul Invest.

4 See, e.g., van der Wal (2021), *supra* note 3; Estonian Fund for Nature (2020), *supra* note 3; Estonian Fund for Nature & Eswatch (2021), *supra* note 3. Fortunately, Estonia's Environmental Board recently moved to suspend logging in the country's Natura 2000 reserves for 28 months. However, this is temporary. Fern. Feb. 14, 2022. *Estonia's Environmental Board Takes Positive Action to Halt Forest Destruction*, fern.org/publications-insight/estonias-environmental-board-takes-positive-action-to-halt-forest-destruction-2469/.

5 van der Wal (2021), *supra* note 3.

6 Id.

7 Id.; Estonian Fund for Nature & Eswatch (2021), *supra* note 3; Thomson (2021), *supra* note 3; Estonian Fund for Nature (2020), *supra* note 3.

8 van der Wal (2021), *supra* note 3 at 28-33.

GRAANUL INVEST

Many of the damaging logging practices that occur in Estonia take place on land that supplies, or is owned by, Estonia's biggest wood pellet company – Graanul Invest.⁹ Graanul Invest manufactures wood pellets that are exported to power stations primarily in the UK, Denmark, and the Netherlands.¹⁰

Estonian wood pellets from Graanul Invest enter the UK biomass supply chain through imports to Drax – the UK's largest power station. In fact, Graanul Invest is Drax's

main partner in Estonia, having supplied between 2-11% of Drax's woody biomass imports between 2014 and 2018.¹¹ Since 2018, Drax has continued to import wood pellets from Estonia, with over half of such imports coming from whole, standing trees – a category of biomass scientists have concluded is particularly high-carbon.¹² In 2021, whole trees accounted for 59 percent of Drax's imports from Estonia.¹³



Photo credit: Karl Adami

⁹ Hereinafter, the term "Graanul Invest" will also connote Graanul Invest's subsidiaries, including Valga Puu, Karo Mets and Roger Puu.

¹⁰ Graanul Invest website, <https://graanulinvest.com/biomass/#product-info>.

¹¹ Indufor. *Catchment Area Analysis in Estonia: Final Report*, <https://www.drax.com/wp-content/uploads/2020/03/8515-Drax-Catchment-Area-Analysis-Estonia-FINAL-REPORT-v3.pdf>.

¹² Drax Group Annual Report and Accounts 2021 at table on p. 46, https://www.drax.com/wp-content/uploads/2022/03/Drax_AR2021_2022-03-07.final_.pdf.

¹³ Id.

THE UNITED KINGDOM'S LEGALLY BINDING SUSTAINABILITY CRITERIA FOR BIOMASS

The UK requires biomass generators receiving public subsidies to meet a set of sustainability criteria for woody biomass.¹⁴ These criteria were enacted as part of the Renewables Obligation Order, a law that sets forth (among other things) criteria related to the sourcing of raw material (wood) to produce biomass pellets.¹⁵

The sustainability criteria require that at least 70 percent of all woody biomass be made from a sustainable source—the remaining 30 percent need only be legally obtained according to the laws of the source country.¹⁶ Woody biomass is considered “sustainably sourced” if it meets a set of additional criteria, including (but not limited to) the following:

- Harm to ecosystems is minimised, in particular by (among other things):
 - Protecting water, soil, and biodiversity
- Health and vitality of ecosystem is maintained
- Biodiversity is maintained – in particular by:
 - Implementing safeguards to protect rare, threatened, and endangered species;
 - Conserving key ecosystems in their natural state; and
 - Protecting features and species of outstanding and exceptional value
- Those responsible for the management of the area have regard to (among other things):
 - Legal, customary and traditional rights of tenure and land use.

30%

of all woody biomass does not even need to be certified as sustainable

Biomass generators can demonstrate compliance with the sustainability criteria in one of two ways:

- Certification by certain Environmental Quality Assurance schemes; or
- A collection of bespoke evidence demonstrating compliance.¹⁷



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¹⁴ Note that the RO criteria include a set of criteria related to greenhouse gas emissions and land criteria. This document discusses the land criteria specifically. However, it should be noted that despite claims from the industry, the GHG criteria under the RO do not prevent significant impacts to the climate from burning woody biomass. This is because the GHG criteria do not consider the large amount of carbon dioxide emitted when the biomass is burned—emissions that exceed those of burning coal per megawatt hour of energy produced.

¹⁵ The Renewables Obligation Order 2015, <https://www.legislation.gov.uk/uksi/2015/1947/contents/made>.

¹⁶ Department of Energy & Climate Change. Dec. 22, 2014. Woodfuel Advice Note, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/390145/141222_Woodfuel_Advice_Note_-_Guidance_final.pdf.

¹⁷ Ofgem. April 24, 2018. Renewables Obligation: Sustainability Criteria, <https://www.ofgem.gov.uk/publications/renewables-obligation-sustainability-criteria>.

Generally, biomass generators receiving subsidies demonstrate compliance through an accepted certification scheme, such as Forestry Stewardship Council (FSC), Programme for the Endorsement of Forest Certification, and Sustainable Biomass Program (SBP).

Graanul Invest uses SBP to certify all its wood pellet production plants and Drax relies on SBP certificates to demonstrate the sustainability of the pellets it receives from Estonia. According to Drax's 2020 Annual Report, 98 percent of all the wood it sourced was certified by SBP.¹⁸ However, from its inception, SBP has been dominated by biomass companies and built using an approach that has resulted in increased carbon emissions, loss of natural forests, and harm to local communities.¹⁹ Worse, this process relies on self-policing, and fails to require adequate independent audits and/or verification, including site visits. Even more rigorous certification schemes, such as

FSC, have certified clearcuts of mature and biodiverse forests in Estonia that ultimately supplied wood to Drax as “sustainable”—clear proof of their ineffectiveness.²⁰ Additionally, *none* of the sustainable forestry certifications programs—even the most rigorous programs—include a carbon accounting mechanism and thus cannot be treated as providing evidence that biomass harvested for energy production is carbon-beneficial.



¹⁸ Drax Group Annual Report and Accounts 2021, https://www.drax.com/wp-content/uploads/2022/03/Drax_AR2021_2022-03-07.final_.pdf; Biomass Magazine. 2017. Graanul seeking SBP certification on all 4 Estonian pellet plants, <http://biomassmagazine.com/articles/14107/graanul-seeking-sbp-certification-on-all-4-estonian-pellet-plants>.

¹⁹ NRDC & Dogwood Alliance. June 2017. *The Sustainable Biomass Program: Smokescreen for Forest Destruction and Corporate Non-Accountability*, <https://www.nrdc.org/sites/default/files/sustainable-biomass-program-partnership-project-ip.pdf>; Cut Carbon Not Forests. 2021. *Parliamentary Briefing: UK Biomass Sustainability Criteria Fail to Protect Forests and Biodiversity*, https://www.cutcarbonnotforests.org/wp-content/uploads/2021/07/CCNF_Parliamentary-Briefing-on-Biomass-Sustainability-Criteria-202107.pdf.

²⁰ See id.; Thomson, *supra* note 3.

FORESTRY PRACTICES IN ESTONIA MAY VIOLATE UK SUSTAINABILITY CRITERIA

Recent evidence has uncovered damaging logging practices for biomass in Estonia and raised serious questions about whether Estonian biomass entering the UK supply chain violates the UK's legally binding sustainability criteria.



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A. BIOMASS SOURCING IN ESTONIA DOES NOT MAINTAIN BIODIVERSITY BY PROTECTING IMPERILLED SPECIES, CONSERVING KEY ECOSYSTEMS, OR PROTECTING FEATURES AND SPECIES OF EXCEPTIONAL VALUE

Sourcing for biomass in Estonia is further threatening imperilled species and “species of outstanding or exceptional value”—not protecting them as the law requires. Indeed, the Estonian Fund for Nature found 184 cases of logging on land owned by Graanul Invest in forests that are home to protected species.²¹ These protected species include birds listed on Annex I of the EU Birds Directive, which indicates Europe’s most imperilled bird species,²² and the Estonian Red List, which includes the country’s most at-risk species.²³ Graanul Invest has routinely employed destructive logging practices – including clearcutting – in habitat for these species, including

TABLE 1. IMPERILLED BIRDS HARMED BY GRAANUL INVEST’S LOGGING PRACTICES

Species	Population Status	Estonian Red List	Protected under EU Law	Habitat harm by biomass logging?
Capercaillie	30% decline over past 20 years	Yes (vulnerable)	Yes	Yes
Three-toed woodpecker		Yes (threatened)	Yes	Yes
Hazel grouse	25% decline in 5 years	Yes (threatened)	Yes	Yes
Red-breasted flycatcher		Yes (endangered)	Yes	Yes
Northern goshawk	30% decline in sighted birds in last 10 years	Yes (vulnerable)	Yes	Yes

*This table is based on information from van der Wal, *supra* note 3, at pp. 24-27.

21 van der Wal, *supra* note 3 at 24.

22 Id. at 24-27. When species are listed on Annex I of the EU Birds Directive, EU Member States are required to conserve these species’ “most suitable territories in number and size as Special Protection Areas.” EU Birds Directive, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009L0147&from=EN>.

23 Id.

registered and mapped habitats and areas nearby registered and mapped habitats.²⁴

Logging for biomass in Estonia also fails to “conserve key ecosystems.” Instead, Estonian wood pellets burned for biomass energy in the UK likely *come from* key ecosystems, including nationally and internationally protected areas, peatlands, and watersheds. Indeed, logging for biomass and other purposes is rampant in some of Estonia’s most prized natural areas, including nationally protected areas (referred to as “Woodland Key Habitats”) and Natura 2000 sites.

Over the last decade, 5,700 hectares of Estonia’s unregistered Woodland Key Habitats – small fragments of forests that provide important habitat to rare and threatened species – have been logged for purposes including wood pellets.²⁵

Logging – including by clearcutting – has also become prevalent in Estonia’s Natura 2000 reserves—a network of protected areas covering Europe’s most valuable and threatened species and habitats that have the highest level of protection under European law. Between 2001 and 2019, Estonia’s Natura 2000 areas lost an area more than twice the size of Manhattan, due in part to biomass production.²⁶ This has become especially common over the past five years, as the Estonian government has relaxed logging restrictions that previously applied to these sites, enabling clearcutting in many of them.²⁷ Forest loss in Natura 2000 sites was twice as fast on those forests owned by Graanul Invest than on those in other ownership.²⁸

In fact, logging has been so destructive to Estonia’s forest Natura 2000 areas that the Estonian Environmental Board moved to suspend logging in these areas for 28 months in February 2022.²⁹ This was in response to the European Commission

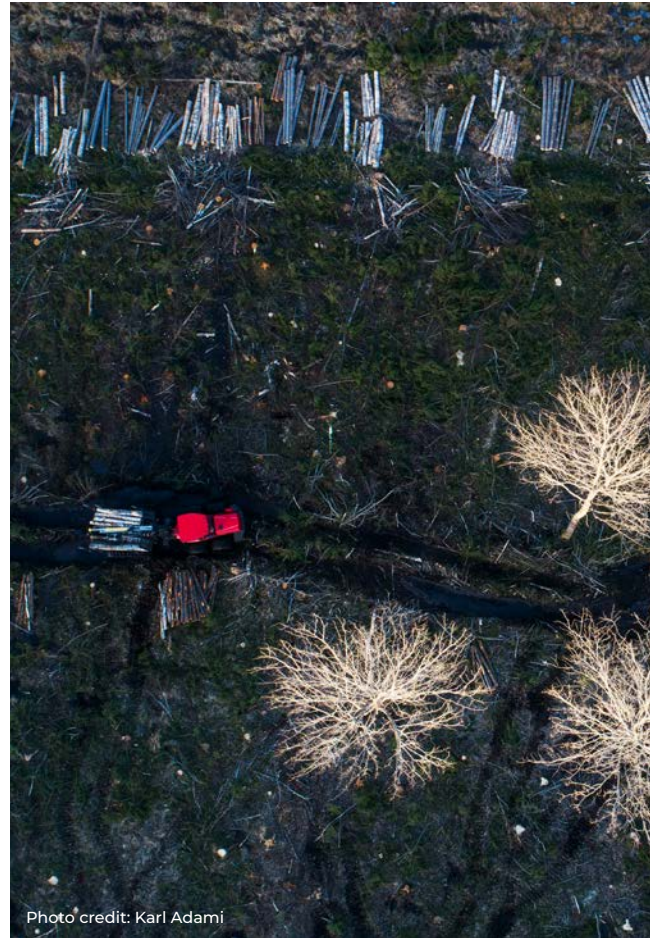


Photo credit: Karl Adami

commencing proceedings against Estonia for failing to properly implement environmental impact assessments for Natura 2000 sites.³⁰

**BETWEEN 2001 AND 2019, ESTONIA’S
NATURA 2000 AREAS LOST AN AREA
MORE THAN TWICE THE SIZE OF
MANHATTAN, DUE IN PART TO
BIOMASS PRODUCTION**

24 Id. “Mapped habitat” is habitat that has been evaluated in terms of its ecological value but lacks any protection. “Registered habitat” is habitat that has been evaluated and officially registered as having significant ecological value, but may or may not be protected.

25 Id. at 5, 16.

26 Sheffield, Hazel. Jan. 14, 2021. “Carbon neutrality is a fairy tale: how the race for renewables is burning Europe’s forests. The Guardian, <https://www.theguardian.com/world/2021/jan/14/carbon-neutrality-is-a-fairy-tale-how-the-race-for-renewables-is-burning-europes-forests>. From 2008-2018, 1,663 hectares of Natura 2000 forest were logged in Estonia, in part for biomass. Estonian Fund for Nature & Eswatch (2021), *supra* note 3 at 4. Inventories have not been conducted on a large proportion of Natura 2000 forests, so the logged area could be higher.

27 Estonian Fund for Nature & Eswatch (2021), *supra* note 3 at 5, 16-19, 23-24.

28 van der Wal (2021), *supra* note 3.

29 See Fern (2022), *supra* note 4.

30 European Commission. June 9, 2021. June Infringements Package: Key Decisions, https://ec.europa.eu/commission/presscorner/detail/en/inf_21_2743.

TABLE 2. CLEARCUT WOODLAND KEY HABITATS AND NATURA 2000 SITES WHERE WOOD WENT TO GRAANUL INVEST OR THE SITE WAS OWNED BY GRAANUL

Woodland Key Habitat/ Natura 2000 site	Forest Type	Indicator/Protected Species
Tromsi WKH	Spruce forest with old aspens	Protected moss species <i>Neckera pennata</i> which is also an indicator of old-growth forests. Threatened fungi species, including <i>Fomitopsis rosea</i> , <i>Skeletocutis odora</i> and <i>Asterodon ferruginosus</i> .
Jõeveere WKH	Old-growth pine forest	
Mäksa WKH	1.9 ha of spruce forests mixed with deciduous trees and biologically old aspens	4 species indicating high natural value and old-growth characteristics, including protected moss <i>Neckera pennata</i> and protected lichen <i>Leptogium saturninum</i> . Evidence that the area was habitat for the threatened three-toed woodpecker (<i>Picoides tridactylus</i>).
Harjuküla WKH	Coniferous forest with old pine trees	6 indicator species, including the moss <i>Ulotia crispa</i> and the liverwort <i>Nowellia curvifolia</i> .
Jõgeveste WKH	Pine forest with high natural value	4 species indicating high natural value, including threatened fungus <i>Fomitopsis rosea</i> .
Oldremetsa WKH	Herb-rich Fennoscandian forest	
Lahemaa National Park	Dominated by pine and spruce, with large areas of wetland swamp forest.	Registered habitat for threatened three-toed woodpecker
Haanja Nature Park	Watercourses with riverside vegetation.	Protection of otters is a specific aim of Haanja Nature Park.

*This table is based on information from van der Wal at pp. 16-21 and 23, supra note 3; and from Estonian Environmental Board.³¹

Logging for biomass is also occurring in Estonia's peatland forests—one of the world's most important ecosystems due to their capacity to store vast amounts of carbon. While peatlands cover only three percent of land area globally, they store 30 percent of all land-based carbon.³² Despite this, Estonia's peatlands are being clearcut. There is direct evidence that some of this is being carried out by Estonia's State Forest Management Centre (RMK), which has sold some of the wood to Graanul Invest to manufacture wood pellets for biomass energy production.³³

Finally, Estonia's watersheds have also been logged for biomass, despite their status as a key ecosystem under national law. This finding is troubling in the context of UK biomass imports from Estonia, given the particular emphasis UK biomass sustainability criteria place on protecting both water and soil.³⁴

Watersheds are an essential buffer to reduce and/or prevent harmful nutrients in the ecosystem.³⁵ These ecosystems also provide food to aquatic life (e.g., leaves, insects) and provide shade for surface water, making them ecologically rich.³⁶ In fact, watersheds

³¹ Estonian Environmental Board, "Lahemaa National Park: Nature", <https://kaitsealad.ee/en/protected-areas/lahemaa-national-park/about-protected-area/nature-6#:~:text=The%20most%20common%20forest%20types,National%20Park%20are%20swamp%20forests.>

³² IUCN website. "Peatlands and climate change," <https://www.iucn.org/resources/issues-briefs/peatlands-and-climate-change>.

³³ van der Wal (2021), supra note 3 at 45, 51. Graanul Invest is a client of RMK, purchasing at least 8 percent of wood harvested by the agency in 2020. Id. at 51.

³⁴ Id. at 36-43.

³⁵ Id. at 35.

³⁶ Id.



are so critical that Estonia protects them under the Water Act of Estonia, which prohibits logging within 10 metres of banks, rivers, streams, and large ditches absent a permit.³⁷ Nonetheless, between 2018 and 2019, 54 hectares of riparian zone were clearcut on land belonging to Graanul Invest.³⁸ These areas are scattered across Estonia on over 300 different sites on Graanul-owned lands, showing that these incidents were not accidents, but common practice for the company.³⁹

B. BIOMASS SOURCING IN ESTONIA DOES NOT MINIMISE HARM TO ECOSYSTEMS AND DOES NOT MAINTAIN THEIR HEALTH AND VITALITY

To be considered “sustainably sourced” UK biomass sustainability criteria require, among other things, that biomass sourcing minimise harm to ecosystems, including protecting

soil, water, and biodiversity, and maintain their “health and vitality.” However, recent investigations have uncovered that logging for biomass in Estonia fails to comply with these criteria.

95%
of the logging in Estonia is done by clearcutting

Most logging in Estonia (95 percent) – including logging for biomass – is done via clearcutting, an especially damaging practice in the context of natural forest ecosystems like those in Estonia.⁴⁰ After a forest is clearcut (as opposed to selectively logged), it can take decades or centuries to recover both from a biodiversity standpoint (i.e., wildlife

³⁷ Id. at 36.

³⁸ Id.

³⁹ Id. European Commission. June 9, 2021. June Infringements Package: Key Decisions, https://ec.europa.eu/commission/presscorner/detail/en/inf_21_2743.

⁴⁰ Estonian Fund for Nature (2020), *supra* note 3 at 11.

supported, etc.) and a climate standpoint (i.e., carbon sequestered).⁴¹ As such, this form of logging clearly violates the UK sustainability criteria's requirement to "minimise" harm to ecosystems, especially when it occurs in key habitats and ecosystems.

Further, as described in Section A, logging for biomass in Estonia has occurred in Natura 2000 reserves, Woodland Key Habitats, peatlands, and watersheds. Because of their ecological importance, logging in these areas has outsized impacts from both a biodiversity and climate perspective. Harm to these ecosystems could be minimised by avoiding logging in these areas altogether or, at the very least, employing less destructive logging practices. Thus, logging in these areas does not comply with the UK requirement to "minimise harm to ecosystems."

Logging licences were issued for

82,411

hectares of Estonia's Natura 2000 forests without an appropriate assessment

Finally, much of the logging in Estonia, including for biomass, is conducted on land that has not been inventoried – meaning its ecological values are as yet unknown – or assessed for the harm logging will have on it. To "minimise harm," biomass companies should not log in areas that could be ecologically important, but have not been evaluated. They should also ensure the impacts of logging have been evaluated on a particular site before logging. Unfortunately, biomass logging regularly takes place on land (including Natura 2000 reserves) that has not been inventoried. Further, between 2009 and 2018, logging licences were issued in 82,411 hectares of Estonia's Natura 2000 forests without an appropriate assessment, despite the fact that such assessments are legally required by the European Union's Bird and Habitat Directives.⁴²

C. BIOMASS SOURCING IN ESTONIA DOES NOT HAVE REGARD FOR "LEGAL, CUSTOMARY AND TRADITIONAL RIGHTS OF TENURE AND LAND USE"

The UK requires that the party managing a forest have regard to "legal, customary and traditional rights of tenure and land use." In Estonia, "cross trees" are sacred natural objects that are marked with a cross to commemorate the dead on the way to the cemetery, becoming the "soul trees" of the deceased.⁴³ Given this information, the UK's sustainability criteria should prohibit the use of these trees for biomass. However, since 2002, 25 cases of harm (i.e., logging or serious damage) to cross trees by the RMK have been reported in Estonia.⁴⁴ In the five most recent cases of harm to cross trees, the wood was sold to Graanul Invest, as per the results of FOI (Freedom of Information) requests to RMK from the Estonian Fund for Nature.⁴⁵ While cases of logging and/or harm to these trees are rare, these trees are highly culturally significant.⁴⁶



⁴¹ See Malcolm, Jay R., Holtsmark, Bjart & Piasecik, Paul W. 2020. *Forest harvesting and the carbon debt in boreal east-central Canada*. *Climate Change* 161: 433-449. <https://link.springer.com/article/10.1007/s10584-020-02711-8>. Indeed, studies have shown that some forests don't grow back at all. See, e.g., Wildlands League. 2019. *Logging Scars*, <https://loggingcars.ca/report/>.

⁴² Kuepper (2021), *supra* note 3 at 13.

⁴³ van der Wal (2021), *supra* note 3 at 28.

⁴⁴ *Id.* at 28-33.

⁴⁵ *Id.*

⁴⁶ *Id.* at 28.

CONCLUSION

Logging in Estonia, in part for biomass, is harming imperilled species, key ecosystems and biodiversity, and customary land uses, and is therefore likely violating the UK's legally binding biomass sustainability criteria. There is a strong possibility some of this wood is entering the UK, given that many of the above-described practices are taking place on land owned by Graanul Invest, which is the biggest supplier of wood pellets from Estonia to the UK. As such, UK sourcing for biomass from Estonia warrants further investigation by the UK Government and its regulatory bodies.

The fact that the UK has potentially imported wood from Estonia that is certified as meeting sustainability criteria, yet was sourced using the destructive methods described herein, shows that the UK's sustainability criteria do not protect forests. Instead, given the troubling findings and the overwhelming risk that this biomass is entering the UK energy market, the UK government should do the following:

1

Charge the Office for Environmental Protection with conducting an investigation of biomass sourcing from Estonia for the UK energy market to determine whether such imports comply with the UK's biomass laws.

2

Halt all imports of wood pellets produced in or using wood from Estonia until the above-referenced investigation has been completed.

3

Open a consultation on redirecting ROCs from biomass energy to genuinely clean and renewable alternatives that are low-cost, low-risk, and readily available like wind and solar.

4

Avoid approving any new subsidies for more industrial-scale biomass-burning, including for BECCS.