LIFE Project Number

LIFE18 NAT/DK/000747

Mid-term Report

Covering the project activities from 01/09/2019 to 31/12/2022

Reporting Date

31/12/2022

LIFE PROJECT NAME or Acronym

LIFE Open Woods

Data Project

Project location:	
Project start date:	01/09/2019
Project end date:	31/12/2027
Total budget:	6,705,710 €
EU contribution:	4,023,426 €
(%) of eligible costs:	60 %

Data Beneficiary

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This table comprises an essential part of the report and should be filled in before submission

Please note that the evaluation of your report may only commence if the package complies with all the elements in this receivability check. The evaluation will be stopped if any obligatory elements are missing.

Package completeness and correctness check	
Obligatory elements	**✓ or N/A**
Technical report	
The correct latest template for the type of project (e.g. traditional) has been followed and all sections have been filled in, in English *In electronic version only*	✓
Index of deliverables with short description annexed, in English *In electronic version only*	✓
Mid-term report: Deliverables due in the reporting period (from project start) annexed Final report: Deliverables not already submitted with the MTR annexed including the Layman's report and after-LIFE plan Deliverables in language(s) other than English include a summary in English *In electronic version only*	✓
Financial report	
The reporting period in the financial report (consolidated financial statement **and** financial statement of each Individual Beneficiary) is the same as in the technical report with the exception of any terminated beneficiary for which the end period should be the date of the termination.	✓
Consolidated Financial Statement with all 5 forms duly filled in and signed and dated *Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets + full Excel file)*	✓
Financial Statement(s) of the Coordinating Beneficiary, of each Associated Beneficiary and of each affiliate (if involved), with all forms duly filled in (signed and dated). The Financial Statement(s) of Beneficiaries with affiliate(s) include the total cost of each affiliate in 1 line per cost category. *In electronic version (pdfs of signed sheets + full Excel files) + in the case of the Final report the overall summary forms of each beneficiary electronically Q-signed or if paper submission, signed and dated originals**	✓
Amounts, names and other data (e.g. bank account) are correct and consistent with the Grant Agreement / across the different forms (e.g. figures from the individual statements are the same as those reported in the consolidated statement)	✓
Mid-term report (for all projects except IPs): the threshold for the second pre-financing payment has been reached	✓
Beneficiary's certificate for Durable Goods included (if required, i.e. beneficiaries claiming 100% cost for durable goods) *Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets)*	✓
Certificate on financial statements (if required, i.e. for beneficiaries with EU contribution ≥750,000 € in the budget) *Electronically Q-signed or if paper submission signed original and in electronic version (pdf)*	N/A
Other checks	
Additional information / clarifications and supporting documents requested in previous letters from the Agency (unless already submitted or not yet due) *In electronic version only*	✓
This table, page 2 of the Mid-term / Final report, is completed - each tick box is filled in *In electronic version only*	✓

**signature by a legal or statutory representative of the beneficiary / affiliate concerned*

1. Table of contents

2. List of key-words and abbreviations

AC	Amphi Consult
AVJF	Aage V Jensens Fonde
BTG	LIFE Bridging the Gap project
DE	Germany
DEP	Danish Environmental Protection Agency
DK	Denmark
DNA	Danish Nature Agency
FLC	Forest and Landscape College, University of Copenhagen
GEUS	The Geological Survey of Denmark and Greenland institute
INFOBIOM	Nordic Networks for integrated forest resource and biodiversity monitoring
LUKE	Natural Resources Institute Finland
NIBIO	Norwegian Institute of Bioeconomy Research
NINA	Norsk Institutt for Naturforskning
NNP	Nature National Park
N2000	Natura 2000
PMG	Project Management Group
POW	Private Owners Network
SLU	Swedish University of Agricultural Sciences
SN	Stiftung Naturschutz
SYKE	Finnish Environment Institute

3. Executive summary

The overall project objectives of the LIFE Open Woods project is to improve the conservation status of forest habitats with a special focus on the hermit beetle (*Osmoderma eremita)* in Denmark and Northern Germany.

The project targets 8.6 % (1.855 ha) of all deciduous forest habitats in Danish N2000 sites including EU priority habitats 91E0 (214 ha) and 91D0 (183 ha). All targeted habitats (9110, 9120, 9130, 9150, 9160, 9170, 9190, 91D0, 91E0) have unfavorable conservation status in DK, 8 of them in EU. Although the area and range are mostly stable, their structure and ecological function are unfavorable.

In the 19th century in DK, the forest area had fallen to 2-4%, which led to the first Danish forestry law[1] and prohibition of grazing in the woods. Extensive forest drainage in the 19th and 20th centuries intensified timber production, which remained in focus until 1989. This resulted in drained, dark forests with little amount of deadwood and few veteran trees, uniform age structure, lack of natural dynamic and focus on economically attractive tree species.

The Danish Forest Act in 1989 introduced a multipurpose for the forests, but management has not sufficiently focused on nature. The average amount of deadwood in managed Danish forests is 5.7 m3/ha. Significant loss of saproxylic species diversity was found when deadwood falls below 50-70 m3/ha. Although the average amount of dead wood in deciduous forests within Danish N2000 sites is almost 3 times higher than outside of the network, it is still below thresholds set by the Danish definition of favorable conservation status.

The project focuses also on the hermit beetle which is a priority species in the habitats directive appendix II and IV, which is dependent on veteran trees and deadwood, as is 30 % of the forest related biodiversity. The species has an unfavorable conservation status in DK and DE and is among most threatened invertebrates in the EU. It is most abundant in old open semi-natural forests and in veteran trees in human made environments. The intensive forestry and fragmentation of the habitats have led to a decline of the spreading of the species due to the lack of successors for the suitable host trees, overgrowth and little regeneration of suitable habitat across the species range. There is an urgent need for action to protect and appropriately manage existing veteran trees and ensure suitable habitat in the future. The project targets the Danish population of hermit beetle on three N2000 sites. The remaining populations are on private land and dependent on extensive cooperation with private landowners, which needs facilitation. In Schleswig-Holstein (DE) the population of hermit beetle is very small with approximately 40 host trees. Only in 1 out of 3 N2000 areas in Schleswig-Holstein that are designated for the hermit beetle, is the species present.

To reach the project objectives the project have some deliverables where the key deliverables are:

1. Best practice methods catalogue
2. Baseline for monitoring saproxylic beetles report (in DE)
3. Baseline monitoring report
4. Final monitoring report
5. Best practice guidelines for private forest owners

Furthermore, the key outputs expected are:

1. Collection and dissemination of best practice within forest management for biodiversity
2. The conservation activities: veteranization, giving light to veteran trees, forest grazing, restoring natural hydrology, enrichment plantings, risk tree management, management of hermit beetle population

[1] Approved in 1805

3. Monitoring of the conservation actions
4. Private owners network for private forest owners with hermit beetle populations
5. Developing compensation schemes for forest management for biodiversity purposes
6. Developing and executing a competence course in forest management for biodiversity
7. Facilitation workshops on selected conservation activities
8. Dissemination to the general public and the national and international fields for forest management for biodiversity

So far, two of the five key deliverables have been delivered; the best practice methods catalogue and the baseline monitoring report. Of the key outputs we are well on our way with all the above mentioned key outputs. Number 6 is completed.

Some deviations of significance have occurred, however, there are no issues that are expected to affect the overall implementation of the project. The two main issues for the project implementation have been COVID-19 and the political appointment of 15 Nature National Parks (NNPs) and up to 75.000 hectares of untouched forest in total in Denmark during the first years of the project period. Both issues have delayed the project, however, the political appointment of NNPs and untouched forests have also created some synergies with the project that have most likely supported the project and vice versa. This is a complex matter and therefore further described in detail in chapter 5 page 12-13.

A2 Application for permissions and implementation plans

Obtaining the permissions for C3, grazing and C4, hydrology have been delayed, due to the political decision of establishing NNPs and appointing large areas as untouched forest.

A4 Revision of management and action plans

It will not be possible to deliver recommendations to the Natura 2000 management plans, as these have already been produced. It is proposed to change the action A4 removing the recommendations to the Natura 2000 plans and keeping the recommendations to the Natura 2000 action plans. This is further described on page 20-21 and app. III.

C3 Establishment of grazing and C4 Improvement of hydrological conditions

Due to the establishment of NNPs some geographical changes will occur for C3 and C4 and implementation delayed. It has been assessed where to move the activities to, and new suitable sites have been found within the existing project areas.

C5 Increasing connectivity and promotion of oak rejuvenation

The action will be changed slightly. The objective will include reintroducing locally missing native seed sources of woody species. To support this mean, some planting models have been developed.

C7 Population management for hermit beetle + E5 Dissemination to public and info materials

DK-24 decided to stop the collaboration in the project. Therefore, the activities have been moved to other locations and actors. It is proposed that DK-23 will take over the activities for the hermit beetle, where the wood mould boxes will be changed to veteranization targeted to the hermit beetle. It is proposed to move the dissemination activities to Copenhagen ZOO, which is a very relevant actor within conservation management for saproxylic beetles, see page 44-45 and app. XI for more information.

D2 Ecosystem services and socio-economic surveys

There have been a delay in the baseline monitoring of ecosystem services and socio-economic surveys. This action is proposed revised and by the end of 2023 an updated plan for this action is done, and set into action.

E5 Dissemination to public and info materials

The public excursions were delayed due to COVID-19 and a heavy load of public excursions in the DNA sites due to the appointment of NNPs and untouched forest.

F1 Change in the Project management

By the 1st of October 2022 a new project manager took over for the former project manager Steffen Michael Thomsen. The new project manager is Maria Voigt Sonnichsen. This was announced to CINEA by Maria Voigt Sonnichsen the 10th of October 2022. Maria Voigt Sonnichsen is also the project contact person, which was announced to CINEA by the coordinating beneficiary and legal representative represented by Signe Nepper Larsen on the 24th of February 2023.

4. Introduction

The overall objectives of the project are to:

- Improve conservation status of app. 1,855 ha of nine forest habitat types in 20 N2000 sites in Denmark by improving the structure and ecological function.
- Improve conservation status of the hermit beetle in four N2000 sites.
- Build capacity, share best practice, increase and update knowledge and experience as well as awareness among site managers, landowners, state administration, students, public and NGOs.
- Contribute to the development of the next generation of action plans for state owned forests in 23 N2000 sites in Denmark based on best practice on achieving favorable conservation status of habitats and species of EU concern.
- Contribute to lower barriers in Danish compensation schemes uptake by private estate owners to secure habitats of hermit beetle populations in Denmark.
- Contribute to the Biodiversity 2020 targets.

The overall objectives are foreseen to be met by the expected long-term results of the projects, which are:

- Development towards favorable conservation status on ca. 7,571 ha of deciduous forest habitats, where ca. 1,855 ha are currently classified N2000 forest habitat types.
- Structure and ecological function of 9 forest habitats improved.
- Implementation plan for Bechsteins bat (*Myotis bechsteinii)* in one N2000 site prepared.
- Improving of the conservation status of app. 50% hermit beetle populations in DK N2000 and entire hermit beetle population in Schleswig- Holstein (Germany).
- Secured existing and future habitat for hermit beetle populations by: min. 370 veteran trees secured, 113 selected prunings, long-term management agreements with private landowners signed in 3 Danish N2000 sites.
- Connectivity of hermit beetle habitats increased by setting up mould boxes in two Danish N2000 sites.
- Preservation of genetic variability of hermit beetle population in Schleswig- Holstein (Germany) achieved by creation of mirror population in the project site DE-1 which is an N2000 site.
- Implementation plans for sites with hermit beetles in four (three in DK and one in DE) N2000 based on best management practice prepared.
- Guidelines for best practice prepared and disseminated.
- A Private Owners Network organized in Denmark of min. nine estate owners of land with hermit beetle populations. Aiming on increasing the private owners' knowledge on forest management for hermit beetle.
- Recommendations for improvement of Danish compensation schemes for forest biodiversity prepared.
- 21 drafts of next generation action plans (2021) for DK forests in N2000 prepared.
- Present and future forest managers educated in principles and best practice of management of all forest habitats for favorable conservation status (app. 80-95 members of DNA staff, min. 50 state and private forest managers/owners, approx. 100 students).
- Awareness and knowledge about best practice management of forest habitats and habitats of hermit beetle increased among stakeholders.

The two targeted species which both have unfavorable conservation status are:

Hermit beetle (*Osmoderma eremita*)[2]	Bechsteins bat (*Myotis bechsteinii*)

The nine targeted habitat types are:

9110 Luzulo-Fagetum beech forests	9150 Medio-European limestone beech forests of the Cephalanthero-Fagion	9190 Old acidophilous oak woods with Quercus robur on sandy plains
9120 Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	91D0 Bog woodland
9130 Asperulo-Fagetum beech forests	9170 Galio-Carpinetum oak-hornbeam forests	91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)

To improve the conservation status the threats are identified, and listed below:

- Intensive forestry
- Dark forests
- Lack of veteran trees
- Lack of natural processes and dynamics in the forests (grazing, natural hydrology)
- Low diversity in tree species, especially flowering bushes and trees are missing

[2] A prioritized specie protected by the habitats directive appendix II and IV

The project is carried out at 24 sites in 24 different SPAs/pSCIs. DK-24 in the N2000 area DK006X238 is no longer a part of the project. This is further elaborated in chapter 5 p. 12. The project sites are listed below:

Site	Site name SPA/pSCA	Site	Site name SPA/pSCA
DK-01	Farumskove /DK002X212	DK-13	Stagsrode Skov DK00BX045/DK00BX167
DK-02	Hellebæk, Teglstrup Hegn, Hammermølle Skov /DK003X204	DK-14	Silkeborgskovene /DK00DY262
DK-03	Gribskov /DK003X208	DK-15	Velling Skov DK00DZ034/DK002153
DK-04	Bidstrupskovene /DK004X216	DK-16	Hald Inderø /DK00EX139
DK-05	Myrdeskov /DK005X224	DK-17	Livø /DK00EY124
DK-06	Klinteskoven DK006X090/DK006X090	DK-18	Rold Skov, Skindbjerglund DK00FX126/DK00FX126
DK-07	Ulvshale DK006X089/DK006X233	DK-19	Tofte Skov og Høstemark Skov DK00FX007/DK00FX125
DK-08	Almindingen DK007B371/DK007B387	DK-20	Æbelø DK008X076/DK008X184
DK-09	Hammersholm og Slotslyngen /DK007X243	DK-21	Lekkende /DK006X237
DK-10	DK-10 Pamhule Skov DK009X059/DK009B390	DK-22	Bognæs DK004Y105/DK003X209
DK-11	Gråsten Dyrehave DK009X068/DK009B392	DK-23	Sorø Sønderskov /DK005X227
DK-12	Augustenborg Skov /DK009X280	~~DK-24~~	~~Knuthenborg Safaripark~~ ~~DK006X238~~[3]
		DE-1	Naturwald Stodthagen und angrenzende Hochmoore /DE1526353

[3] Project site DK-24 has withdrawn from the project. This is explained in page 14.

5. Administrative part

The project management is handled in action F1.

DNA is coordinating beneficiary and handles the overall project management. From April 2020 and until September 2022 the overall project manager, who oversees the technical implementation of the project, was Steffen Michael Thomsen, and from October 2022 Maria Voigt Sonnichsen took over this role. A financial officer assists the overall project manager; Søren Rasmussen who is very experienced in implementing LIFE projects and Berit Land Nielsen is assisting financial manager. Together these three constitute the project secretariat.

The project management group (PMG) handles the site specific project management and implementation of actions, with support from the project secretariat. The project management group is comprised of project coordinators from each of the beneficiaries. DNA has 10 project coordinators, DEP has 2, Amphi Consult have 2, AVJF has 2, SN has 1, and the FLC have 1. The PMG meets when necessary. So far, it has been once a year except in 2022.

The project is controlled by the steering committee, which is comprised of the deputy director of DNA, the project owner (DNA), one representative from DEP, 2 from Amphi Consult, one from AVJF, one from SN, and one from FLC. The deputy director of DNA Signe Nepper Larsen is also head of the steering committee. The steering committee meets once a year. The project secretariat assists the steering group. The project organization can be seen in figure 1.

The work of the steering committee and the project management group is further described in chapter 6.1, F1 on pages 47-48.

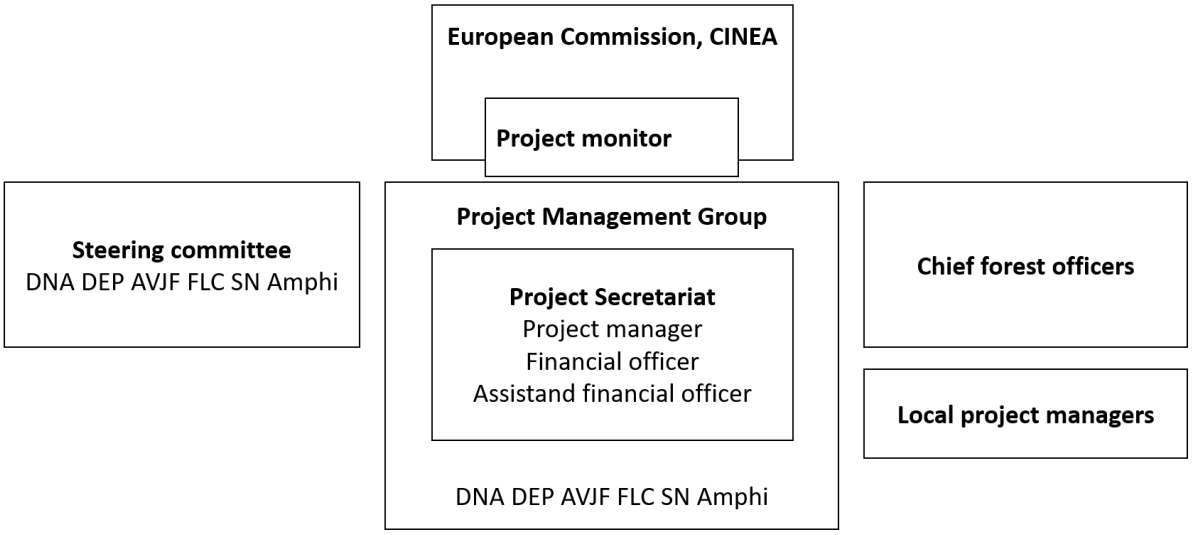


Figure 1: LIFE Open Woods organogram

Since 2020 and until present there have been some big political change within the national nature policy in DK. Firstly, in 2020 two Nature National Parks were appointed, then 3 more, and then 10 more with areas spanning from 300-5.000 hectares. Furthermore, a total of 75.000 hectares have been set aside as untouched forest. The new appointings of untouched forest constitute 68 % of the total state forest areas. All of the LIFE Open Woods project sites on state owned land (DK01-DK18) coincide with either a Nature National Park or untouched forest. The LIFE Open Woods project and the appointment of untouched forest can

coexist in the same area. There have been some initial debate on whether the application processes[4] for LIFE Open Woods activities and untouched forest activities should be applied for altogether, which would delay the LIFE Open Woods activities. However, it is now decided that the LIFE Open Woods projects activities aren't dependent on the untouched forest activities, and no further delay due to untouched forest activities is expected. The coexistence of LIFE Open Woods activities and the Nature National Parks on mutual sites is more complex. For the Nature National Parks an add-on to the legal documents[5] has the consequence that within the application process period for the Nature National Park (from the application is sent until the Nature National Park is approved) the implementation of LIFE Open Woods conservation actions (C-actions) aren't allowed. Five LIFE Open Woods project sites coincides with Nature National Parks: DK-02, DK-03, DK-04, DK-07, and DK-08. In Table 1 and 2 it can be seen which conservation actions that will be affected in the five project sites. As it is seen in table 2 for DK-03 and DK-07 the process of Nature National Parks will not affect the LIFE Open Woods project. However, in DK-02, DK-04 and DK-08 many of the conservation actions within the areas where there is an overlap of LIFE Open Woods and a Nature National Park cannot be implemented within the project period. Therefore, it will be proposed to move these activities outside the Nature National Park areas. Alternative locations have been found either within the same project site or another LIFE Open Woods project site. The particular allocations are described further in chapter 6.1. The Nature National Parks is a project where nature is the main objective and it is sought to develop a more open ended management approach so nature can develop on its own premises. All production activity will come to an end, the natural hydrology will be restored[6] and year-round grazing will be established. Thereby the objectives of the Nature National Parks is close to the objectives of LIFE Open Woods and thereby, the areas will not diminish in nature quality by allocating LIFE Open Woods activities.

Table 1: An overview of the overlapping LIFE Open Woods projects sites and Nature National Parks. For each site an for each action it is assessed whether it is likely or not that the LIFE Open Woods actions can be implemented at the site within the time period of the LIFE Open Woods project.

Can LIFE Open Woods deliver within the time frame of the Nature National Parks?	**DK-02**	**DK-03**	**DK-04**	**DK-07**	**DK-08**
C1 Veteranization	Yes	Yes	Yes	Yes	No
C2.1 Light for veteran trees	Yes	No activities	Yes	No activities	Yes
C2.3 Removal of unwanted species	No	Yes	No	No activities	No activities
C3 Grazing	No activities	Yes	No	No activities	No activities
C4 Restore natural hydrologic conditions	No	Yes	No	No activities	No
C5 Enrichment plantings	No activities	Yes	No activities	Yes	Yes
C6 Risk tree management	Yes	No activities	No activities	No activities	No activities

The project managers of LIFE Open Woods, Nature National Parks and Untouched Forest respectively are in close dialogue to ease implementation of all three projects.

5.1 Communication with EASME/CINEA

There has been one amendment thus far. We have received three letters from EASME/CINEA as follow-up on monitor visits. CINEA emphasized in the letters that the following issues should be reported on in this midterm. These are issues 16, 17, 20, 21, 24, 27, 10. See in appendix I for an overview of important questions raised in the letters and corresponding answers and remarks. Issue 16 is handled in chapter 5 page 12-13 and throughout the midterm report, issue 17 is handled in chapter 6.1, issue 20 is handled in pages 28,

[4] In Denmark, a project of restoring natural hydrology and establishment of forest grazing in more than 10 % of the forest area requires legal approvals.
[5] The add-on affects a number of Danish legal acts.
[6] To the extent that is possible.

35-36, 49, and 65. Issue 21 is handled in chapter 6.1 pages 20-21. Issue 24 is handled, see the attached deliverables, issue 27 is handled in chapter 5 just below here, and issue 10 is handled in chapter 6.1 page 46.

Amendment no. 1

- Proposed by CINEA on the 31st of May 2022
- Request sent on the 6th of February 2023
- Approved on the 23rd of March 2023

The local office of the Danish Environmental Protection Agency (DEP), Storstrøm, has been merged with another regional office, DEP Sjælland, as of 01 January 2022 to become part of the Danish Environmental Protection Agency, Sjælland. This is not a new legal entity. DEP Sjælland will take over all the obligations of the former DEP Storstrøm, and no changes in the budget is needed because of this amendment.

Another change to the project is that the private owner of site DK-24 decided to leave the project. The obligations at DK-24 have been dispersed on other project sites and project actors. The conservation obligations have been moved to DK-21, DK-22 and DK-23, this if further elaborated in chapter 6.1. Regarding the dissemination obligations it is proposed that Copenhagen ZOO will deliver a dissemination product and activities. This is further elaborated in chapter 6.1 p 46. It is a part of collaborating with private landowners that they can change their mind. Luckily, the project partner DEP has managed to deliver on these obligations by engaging other project actors.

6. Technical part

6.1 Technical progress, per action

All actions are reviewed below. For each action, a table shows the progress at each site. The tables only feature relevant sites.

A – Preparatory actions, elaboration of management plans and/or of action plans

Action A1 Adaptation of best practice	
Foreseen start date: 01-06-2020	Actual start date: 01-06-2020
Foreseen end date: 31-03-2023	Actual or anticipated end date: 31-12-2023

The aim of this action is to share best practice knowledge on the actions and to standardize the implementation. Some of the methods are new, and need to be adapted by and disseminated to the local management level, forest workers as well as landowners.

The action has not progressed as foreseen, as there have been delays due to COVID-19. It is proposed to postpone the end date of the action to 31/12/2023, and it is expected that this is a realistic end date.

The best practice method catalogue was finished and distributed among partners in 2021. In 2022 a process of revision began, with the aim of qualifying the catalogue. Some of the methods in the catalogue are relatively new, and therefore the project management group decided that it would be beneficial with a quality revision. The quality revision is an ongoing process, where in 2022 the C5 action were revised, and in 2023, the action C2.3 will be revised. The quality revision shall be understood the following way: The projects coordinators that will execute the action in focus will be invited together with some technical experts to discuss how to do the action in the best way and thereby, further qualifying the best practice for some targeted actions. The benefit of such an ongoing process is that up until the action is carried out in the project sites, the partners and local project managers with a special knowledge are invited to a reflection process of which the outputs are incorporated in a revised catalogue for the benefit of the practitioners within the project and beyond the project. A final revision is planned by the end of the project period, where the catalogue will be processed into a digital form, which will make it easy to use and more accessible.

A study tour to visit the project LIFE Bridging the Gap (LIFE15 NAT/SE/000772) was planned for 2021, however, it was postponed to 2022 due to COVID-19. The study tour aims at gaining experiences from the Swedish LIFE project Bridging the Gap, and therefore the trip was timed with the final seminar of the LIFE Bridging the Gap on May 31st to June 2nd 2022. Unfortunately, too few listed for participation, and it was decided to reschedule the study tour to September 2023. The project partner Amphi Consult is the main organizer of the study tour, and the project manager will help disseminating dates and information to all the partners. A new deadline of September 2023 is proposed.

The other study tour was changed to four webinars. This was due to the COVID-19 pandemic.[7] 3 webinars have already been conducted on the topics veteranization, veteran trees and risk management, and hermit beetle conservation. The fourth will be conducted in the May 2023. The aim of this webinar is to enhance the process of Natura 2000 planning in forests in Denmark. In the former planning period, the DNA produced the Natura 2000 action plans in forests. This responsibility is now on the hands of the DEP. Public landowners such as DNA are contributing to the N2000 action planning on their own sites by delivering written inputs for the N2000 action plans to the local municipalities and DEP.

[7] See the response letter from CINEA commenting on matters risen on the LIFE18 NAT/DK/000747 Mission Meeting the 14th-15th of April 2021.

To ensure sufficient transfer of knowledge this webinar will facilitate knowledge sharing and networking between the two agencies with an objective of easing the transfer of the task, and incorporating recommendations from the LIFE Open Woods projects into the N2000 action plans. The Natura 2000 management plans, made by DEP, have been delayed and are not yet official. As the Natura 2000 action plans are based on the Natura 2000 management plans the webinar was postponed to ensure it is beneficial for the planning process.

Milestone name	Deadline	New suggested deadline	Status	Expected activities until next Midterm
Best practice methods catalogue	1/2021		Completed	Two revisions planned
2nd study tour organized	10/2021	10/2023	Delayed – due to COVID-19.	A study tour to Sweden is planned for September 2023.
Best practice methods catalogue distributed among partners	10/2021		Completed	-
1st study tour organized	9/2022	6/2023	Changed to 4 webinars. Delayed – due to COVID-19.	A new deadline is proposed. 1 webinar will be conducted in 2023.

Deliverable	Deadline	Status	Expected activities until next Midterm
Best practice methods catalogue	6/2021	Completed	-

Action A2 Application for permissions and implementation plans	
Foreseen start date: 01-06-2020	Actual start date: 01-06-2020
Foreseen end date: 31-12-2022	Actual or anticipated end date: 31-12-2025

The aim of this action is to obtain the needed permissions for the conservation actions and to ensure a successful implementation of the actions by preparing implementation plans.

The action has not progressed as foreseen due to delays. The delays are mainly caused by political changes in Denmark. These are elaborated in chapter 5 pages 12-13. The permissions in the DNA project sites overlapping with NNP's cannot be obtained before the new management plans for these areas have been finalized and approved. Due to these delays, it is proposed to postpone the end date of this action until 31/12/2025.

For the baseline report for monitoring saproxylic beetles, the sampling was done in 2022. Four rounds of samples were collected from April to August 2022. The samples were send to the Swedish expert Nicklas Jansson, and will be analyzed in May and June 2023. In the beginning of May 2023 a species list will be ready. The final report will be ready in the autumn 2023. This postponement has formerly been accepted by CINEA.

With DK-24 out of the project, DEP has the responsibility of 3 implementation plans for actions concerning the hermit beetle in the privately owned project sites. 2 were completed on schedule (DK-21 and DK-22), and 1 (DK-23) was delayed due to changes and new agreements on the project site. AVJF has the

responsibility of 2 implementation plans for DK-19 and DK-20 which were delivered in February 2023. Amphi Consult has the responsibility of 1 implementation plan for actions concerning the Bechstein's bat in DK-08. The first draft was delivered in April 2022. The final document required alignment with the planning of the general work of DNA in the project site (DK-08), which the bat inhabits. This process has delayed finalization of the document. The final version of the implementation plan was delivered in January 2023. The delay did not influence planning of and execution of the implementation of veteranization methods targeted on Bechstein's bat (C1.3), since the implementation plan was prepared in close cooperation with local DNA administration of the project site DK-08.

SN has the responsibility of 1 implementation plan for site DE-1. This has not been made, because the planned actions so far do not need a permission, and subsequently an implementation plan. During the Mission Meeting in March 2023 it was confirmed by the monitor that an implementation plan is needed for DE-1. In DE-1 it is planned to reintroduce the hermit beetle in the end of the project period. This will be done be transferring colonized nesting boxes from the source population living close by in Wulfshagen. For placement of the colonized boxes, it is needed to know where there are possible habitats for the hermit beetle in DE-1. Large areas of the Stodthagen woodland have the legal status of "Naturwald" based on the forest law of Schleswig-Holstein[8]. That means any interventions, such as felling trees or managing the forest, need a permission from the upper forest authority[9]. Some parts of DE-1 don't have the status of Naturwald. There, management activities can be applied without permission. A tree micro habitat monitoring is currently in the making[10]. This will be finished in mid-May 2023. Based on this the most important areas with tree micro habitats will be identified. Then the saproxylic beetle expert Nicklas Jansson with the help of an arborist will inspect large cavities. The quality of the potential habitats for hermit beetle will be evaluated. Based on that evaluation, locations for putting up the colonized boxes will be pointed out by the saproxylic beetle expert. The evaluation by the expert will be done in autumn 23 or spring 24, when the trees have no leaves. These data will be used for the application for permission of box transfer. The monitoring will also identify concurrent trees for important habitat trees. In that part of DE-1 where there is no permission needed, the suggested management can be carried out. In the Naturwald area, the data will be used in the application for permission. This monitoring assessment will serve as the basis for the implementation plan. Therefore, it is suggested to postpone the deadline for this implementation plan to July 2024.

The need for hydrological impact assessment studies were foreseen in 3 project sites managed by DNA. They have been delayed in part due to the political changes regarding new untouched forest and Nature National Parks described in chapter 5. For DK-04 the delay have also been related to the specific design needed, realized in the planning of the impact assessment study. To reach a qualified assessment of the best implementation for the 3 selected areas with existing or potential habitat types, both registration of existing natural values in all areas and ground water level fluctuations in two areas are needed. Water loggers have been placed in the two areas in June 2022 and existing species of moss mapped in all areas in the fall of 2022. Mapping of vascular plants in all areas are planned for summer 2023. The final report with recommendations is expected in fall 2024, when 2 years data of ground water data has been collected, giving a more valid picture of seasonal fluctuations. In DK-06 one of the two areas (the southern) have been assessed. The study concluded, that a hydrological project wasn't possible as it would affect privately owned areas outside the project area. A study of the northern area was originally cancelled during the tendering process where GEUS recommended data collection and analysis amounting far above the budget, to assess the risk of landslide in the chalky soil if rising ground water level. The area of interest consist of an east-west going ditch and a north-south bound. The former is related to the expected possible risk of landslide, but recent planning have realized a smaller project regarding the north-south bound ditch might be feasible. A

[8] Landeswaldgesetz
[9] Obere Forstbehörde
[10] Which is a part of action A1

supplementary impact assessment study is planned in 2023 to conclude on this. In DK-14 the impact assessment study of relevant areas haven't begun, mainly due to the local project manager having been on long-term sick leave. A colleague with relevant hydrological qualifications have been employed at the local district for other projects, and it has been agreed that he can support the local project manager with assessment studies. These are planned to begin in 2023 and finalized no later than 2024.

Site name	Status on 31st of December 2022	Expected activities before next Midterm
DK-01 Farumskove	Application for permission has been send, but not approved.	New revised application prepared and send for permission to C4 actions.
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	No permissions obtained.	Applications for permissions awaits an approved management plan for designated Nature National Park
DK-03 Gribskov	Permissions obtained, but on hold due to complaints.	Permissions regarding C3 and C4 actions were given in June 2022 by the relevant authorities but a complaint to the Danish Environment and Food Board of Appeal have put them on hold. A decision on the complaint is expected around June 2023.
DK-04 Bidstrupskovene	Hydrological impact assessment started. No permissions obtained.	Finishing hydrological impact assessment studies in 2024. Applications for permissions regarding C3 and C4 actions awaits an approved management plan for designated Nature National Park
DK-05 Myrdeskov	No permissions obtained.	Obtaining permissions for action C4.
DK-06 Klinteskoven	Hydrological impact assessment completed for 1 out of 2 areas. No permissions obtained, but applications have been prepared for action C3.	Finish hydrological impact assessment study in 2023 for the second area. Obtaining permissions for action C3.
DK-08 Almindingen	No permissions obtained.	Applications for permissions regarding C3 and C4 actions awaits an approved management plan for designated Nature National Park.
DK-09 Hammersholm og Slotslyngen	Done.	None. Permissions obtained for the possible hydrological actions. Screening process resulted in one planned area cancelled, due to conflict with technical facilities for public access.
DK-10 Pamhule Skov	No permissions obtained.	Obtaining permissions for action C4.
DK-11 Gråsten Dyrehave	No permissions obtained.	Obtaining permissions for action C4.
DK-13 Stagsrode Skov	No permissions obtained, but applications for C4 actions prepared.	Obtaining permissions for C4 actions – expected in 2023.
DK-14 Silkeborgskovene	Action not started	Finishing hydrological impact assessment studies (expected in 2024). Obtaining permissions for action C4.
DK-15 Velling Skov	Action not started	Obtaining permissions for action C4.
DK-17 Livø	Done	No permission for C3 action needed.

DK-18 Rold Skov, Skindbjerglund	Permission for action C3 obtained.	Obtaining permissions for action C4.
DK-19 Tofte Skov og Høstemark Skov	Permissions for action C3 obtained.	Obtaining permissions for action C4, if needed. This will be consolidated with the relevant authorities.
DK-20 Ærbelø	No permissions are obtained.	Obtaining permissions for action C4.

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
50 % of permissions obtained	12/2021	12/2024	Delayed	The application process for permissions will begin in 2023.
All implementation plans prepared	6/2022	7/2024	Delayed. 6 out of 7 implementation plans delivered with Midterm report.	Implementation plan for DE-1 delivered in 2024.
100 % of permissions obtained	12/2022	12/2025	Delayed	-
Saproxylic beetle baseline monitoring report (Germany)	12/2023		On track	Data analysis and report

Deliverable	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Implementation plans for 7 project sites	12/2021	7/2024	Delayed. 6 out of 7 implementation plans delivered with Midterm report.	Implementation plan for DE-1 delivered in 2024.
3 hydrological impact assessment studies	12/2021	12/2024	Delayed. 1 out of 2 areas in DK-06 has been finished. In DK-04, data collection has begun.	Finalizing hydrological impact assessment studies in DK-04, DK-06 and DK-14.
Saproxlic beetle baseline monitoring report (German)	12/2023		On track	Data analysis and report

Action A3 Management agreements and applications for compensation schemes	
Foreseen start date: 01-08-2020	Actual start date: 01-08-2020
Foreseen end date: 31-12-2022	Actual or anticipated end date: 31-12-2023

The aim of this action is to facilitate preparation of applications for compensation schemes concerning conservation of hermit beetle habitats. The action has almost progressed as foreseen. Two out of three agreements are consolidated.

Applications to the compensation scheme "Forest with Biodiversity objectives"[11] were submitted in May 2022 for 2 sites – DK-21 and DK-22. Due to uncertainties on activities for site DK-23, an application for this site was not submitted. This specific compensation scheme had its last application round in 2022. If a similar scheme becomes available, there is the possibility to apply again. This action is considered done.

Due to uncertainties and a long negotiation period with a new agreement with the private owner in DK-23, one of the management agreement is delayed. Two of the management agreements are in the signing process by the owners. If the new activities are approved by both the Commission and the owner, the last management agreement can be signed. A new deadline in December 2023 is proposed to allow both the private owner and CINEA, the EU Commission, to approve the new agreements.

Milestone name	Deadline	New suggested deadline	Status	Expected activities until next Midterm
Applications for compensation schemes submitted 1st time	6/2022		Compensation schemes submitted for DK-21 and DK-22.	Done for DK-21 and DK-22. Not possible for DK-23.
3 management agreements with land owners of sites with O. Eremita in DK signed	6/2022	12/2023	Two out of three are in a signing process with the private owners.	Getting the 3 signed management agreements.

Action A4 Revision of management and action plans	
Foreseen start date: 01-03-2022	Actual start date: 01-03-2022
Foreseen end date: 31-03-2023	Actual or anticipated end date: 30-06-2024

The aim of this action is to provide recommendations to the Natura 2000 planning based on the knowledge gained by the actions A1 and A2. The action has not progressed as foreseen. The deliverables of this action were handed in before the mission meeting in 2022, however declined, and new deliverables must be handed in. A change to the action is proposed, which is described in the following.

The Danish Natura 2000 management plans is a planning tool with objectives for the areas concerned. It does not include concrete methods and means for obtaining these goals for each concrete area in the plan. DEP has therefore concluded that it is not feasible to deliver specific recommendations for the management plans. Furthermore, the LIFE Open Woods project application was supposed to be handed in for a project start in 2016, however, this did not happen. If the project had begun in 2016 instead of 2019 it would have been possible to collect project knowledge to deliver recommendation to the Natura 2000 management plans for the plan period 2022-2027. However, as the project activities of A1 was generally delayed due to COVID-19 it has not been possible to deliver recommendations to the Natura 2000 management plans of a satisfying quality. Because of these reasons it is proposed to change the following milestones:

1. Recommendations for management & action plans of 9 Danish Natura 2000 sites with O. eremita prepared
2. Recommendations for management & action plans of 18 Danish Natura 2000 sites prepared

To:

1. Recommendations for action plans of 9 Danish Natura 2000 sites with O. eremita prepared

[11] "Skov med Biodiversitetsformål"

2. Recommendations for action plans of 18 Danish Natura 2000 sites prepared

Furthermore, it is proposed to remove the following deliverable:

1. Recommendations to the management plans of 27 Danish Natura 2000 sites

This action also considers the Natura 2000 action plans. It will be feasible to deliver project recommendations to these plans, and it is assessed that the work capacity is better utilized by focusing the work on developing the recommendations to the action plans. In May 2023 a webinar covering different aspects of how the project knowledge and experiences can be used in the Natura 2000 planning in more general terms and in the preparation of the Natura 2000 action plans will be held involving staff from DNA and DEP. The N2000 planning period for forest nature is 12 years, and the former plans (2009-2021) were conducted by the DNA. In the meantime the obligation of Natura 2000 plans has moved to DEP. The Natura 2000 management plans should've been published by the end of 2022, however have been delayed. This delay is due to the general election in October 2022 and the following prolonged government formation. The Natura 2000 management plans are expected to be published in May 2023. Afterwards the process of producing the Natura 2000 action plans will begin. When the Natura 2000 management plans are published the DEP has one year (from the publication date of the Natura 2000 management plans) to prepare the Natura 2000 action plans. Therefore, a new deadline is proposed in June 2024.

In the following it is described how the recommendations to the Natura 2000 action plans are generated. DEP is responsible for writing the Natura 2000 management and actions plans, with the agreement that owners of public areas within a specific Natura 2000 site can deliver an action plan for their areas in place of this, as long as it follows the objectives of the Natura 2000 management plan. The forthcoming webinar (A1) covers the topic of recommendations based on LIFE Open Woods experiences. The staff of DEP and DNA producing the coming generation of Natura 2000 action plans are invited to the webinar, and thereby the recommendations to the Natura 2000 action plans is shared. Furthermore, the webinar power points including the recommendations from the LIFE Open Woods project to the Natura 2000 action plan will be delivered as the deliverable "Recommendations to the action plans of 27 Danish Natura 2000 sites".

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Recommendations for management & action plans of 9 Danish Natura 2000 sites with O. eremita prepared	3/2022	6/2024	Delayed	Proposed changed to only covering action plans.
Recommendations for management & action plans of 18 Danish Natura 2000 sites prepared	3/2022	6/2024	Delayed	Proposed changed to only covering action plans.

Deliverable	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Recommendations to the management plans of 27 Danish Natura 2000 sites	12/2021		-	Proposed removed
Recommendations to the action plans of 27 Danish Natura 2000 sites	12/2022	6/2024	Delayed	Webinar planned for May 2023

C – Conservation actions

Action C1 Creation of decaying wood habitats	
Foreseen start date: 01-10-2021	Actual start date: 01-10-2021
Foreseen end date: 30-06-2026	Actual or anticipated end date: 30-06-2026

The aim of this action is to improve the forest structure and ecological function. The action is on track.

The action have been focused on selecting trees in areas of the forest close to existing or expected habitats for species, that would benefit from the habitats produced by the action. The selected trees were typically between 30 and 60 cm in diameter and with little or none existing microhabitats. If possible, it was recommended to veteranize groups of trees to improve the possibility of developing potential habitats, and with different methods and positions on the trees supporting preferences for different species. The best practice veteranization methods applied are; mechanical induced surface damage, burning, mechanical induced cavities and partial damage to the crown. In addition, some artificial windfalls with partial uprooting have been made in a couple areas and experiences will be followed in the monitoring program for potential up-qualifying of the best practices catalogue.

When implementing the methods it is important to not kill the tree. Dead wood is created with e.g. full cambium girdling as part of the action C2.1, but this is not a veteranization activity.

This action was planned as a supplement to similar activities financed by the political approved budget for implementation of the designated untouched forests, with Open Woods funding an additional 2 trees/ha veteranized in the targeted areas within the project sites, adding app. 8 m3/ha of trees with decaying wood habitats. In the local implementation planning of the Open Woods activities it was recognized as more cost-effective to split the activities funded by different budgets in separate stands in the forests. Therefore veteranization in some stands are done as part of Open Woods activities with more than 2 trees/ha, but covering fewer hectares. The remaining hectares planned in this project will be veteranized using the budget for implementation of designated untouched forests.

Note, that the number of trees listed in the table below under expected results differs from the appendix in the Grant agreement in regard to DNA project sites. The numbers below are the correct and relates to the targeted area per project site, with on average 2 trees/ha veteranized (adding app. 8 m3/ha of trees with decaying wood habitats). The number of trees listed in the Grant agreement were by mistake only the number expected to be done by external contractors, and not including the numbers done by DNA forest workers. The actual number of veteranized trees was based on a local assessment of relevant trees to be treated. Therefore, some project sites have less veteranized trees than foreseen, while others have more.

DK-23: It is proposed to move the budget for DK-24 action C7 to DK-23 action C1 to perform at veteranization specifically targeting hermit beetle populations, and thereby extending the specific action for hermit beetle population to one more project site. This is described and explained in chapter 6.1 page 35-36.

DK-24: Since DK-24 has ended the project activities it is proposed to move the budget for C1 to C7 in project site DK-22. The reason for this is described in chapter 6.1 page 35-36.

Site name	Expected results (Grant agreement)	Status on 31st of December 2022	Expected activities until next Midterm
DK-01 Farumskove	30 trees	Not started.	Not yet planned. Awaits approved management plan.
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	72 trees	Finished. 109 trees veteranized.	-
DK-03 Gribskov	804 trees	384 trees veteranized.	Continued veteranization.
DK-04 Bidstrupskovene	120 trees	52 trees veteranized.	Finalizing veteranization.
DK-05 Myrdeskov	22 trees	Finished. 43 trees veteranized.	-
DK-06 Klinteskoven	32 trees	Finished. 29 trees veteranized.	-
DK-07 Ulvshale	18 trees	Not started.	Planned for 2023.
DK-08 Almindingen	198 trees	Not started.	Veteranization specifically for Bechsteins bat planned for 2023.
DK-09 Hammersholm og Slotslyngen	52 trees	Not started.	Planned for 2023.
DK-10 Pamhule Skov	22 trees	Finished. 21 trees veteranized.	-
DK-11 Gråsten Dyrehave	14 trees	Finished. 59 trees veteranized.	-
DK-12 Augustenborg Skov	6 trees	Not started.	Planned for 2023.
DK-13 Stagsrode Skov	152 trees	Finished. 200 trees veteranized.	-
DK-14 Silkeborgskovene	116 trees	Not started.	Planned to begin in 2023.
DK-15 Velling Skov	50 trees	Not started.	Planned to begin in 2023.
DK-17 Livø	4 trees	Not started.	Planned for 2023.
DK-18 Rold Skov, Skindbjerglund	168 trees	Not started.	Planned to begin in 2023.
DK-19 Tofte Skov og Høstemark Skov	40 trees	Not started.	The amount of relevant trees veteranized is expected to be lower than 40. If so, more trees in DK-20 will be veteranized. Planned to begin in the winter 2023/2024.
DK-20 Æbelø	40 trees	Not started.	Planned to begin in the winter 2023/2024. Awaits approval from the Nature conservancy board.[12]
DK-23	10 trees	Proposal for 10 trees with a targeted veteranization activity for the hermit beetle.	Awaiting potential approval from CINEA.
~~DK-24 Knuthenborg~~	100 trees	N.A.	The budget is proposed redistributed to action C7 on project site DK-22.
Total	**2,064 trees**	**897 trees**	

[12] Fredningsnævnet

Milestone name	Deadline	Status	Expected activities until next Midterm
50 % trees veteranized	12/2023	On track. 897 trees have been veteranized so far, which amounts to 43 % of total expected number of trees veteranized.	Veteranization continues in project areas.
100 % trees veteranized	6/2026	-	-

Action C2 Open woods - increasing structural diversity and control of alien species	
Foreseen start date: 01-04-2020	Actual start date: 01-04-2020
Foreseen end date: 31-12-2026	Actual or anticipated end date: 31-12-2026

The aim of this action is to remove shading trees around veteran and old valuable trees (C2.1), conduct thinning for future veteran trees (C2.2) and removing alien species (C2.3). The action is on track for action C2.1 and C2.3, whereas thinning for future veteran trees is delayed (C2.2).

C2.1: The actual number of treated trees is based on a local assessment of relevant veteran trees, where removal of shading trees is considered feasible for prolonging the life expectancy of the veteran tree. Therefore some project sites will have less trees treated than foreseen, while others will have more.

The action has focused on selecting the veteran trees with most existing or potential micro habitats, especially oak trees due to their potential for becoming very old and the many species relying on oaks as habitat. The methods used have primarily been felling of trees, full and partial cambium girdling of trees and veteranization, usually in that order working outwards in a perimeter around the veteran tree. In addition to reducing competition from neighboring trees and increase light around the veteran tree, deadwood has been added to the forest stands, both laying and standing deadwood by this action.

The method has been adjusted for veteran trees with species vulnerable to drastic changes in micro climate i.e. exposure to sun/dehydration, for example species of moss and lichen. For example by only increasing light around part of the veteran tree.

C2.2: The action has been delayed becauce DEP wants to offer a joint contract for all the C-actions on each project site. This to obtain the best possible price, reduce the time required to carry out tenders and to make it easier for the private owners. Therefore, DEP proposes to await the answers on the application for fundings from a compensation scheme. This is delayed, which delays this action. Therefore, a new deadline is proposed: 12/2023. DEP is not certain when or if the applied funding will be granted. Either way DEP will begin the thinning actions in the fall 2023.

C2.3: The activity focuses on establishing knowledge on successful removal of alien species from the project sites, when they are considered a threat to the forest habitats. In this project the main focus is on *Rubus spectabilis* in the project site DK-12, and regrowth of alien coniferous species such as *Picea sitchensis* in the other project sites listed in the table below.

In DK-12 some adjustments to the actions have been needed. On further inspection *Rubus spectabilis* was found on a much larger area than originally indicated – approximately 22 ha. The treatment of the area was divided in five sub compartments, with the plan of starting treatment on a new compartment every year and retreat the formerly treated areas. The method used is manually pulling the plants up. The first compartment (1,7 ha) was treated in 2019, and subsequently in 2020-2022. The second compartment (10 ha) in 2020 and

again in 2021-2022. The third compartment (6,1 ha) in 2021 and 2022 and the fourth compartment (2,7) in 2022. The theory was, that the treatment would be more cost-effective over the years, as fewer plants needed to be removed. But in reality the costs have increased, as more time now goes to actually finding the regrowth of seedlings, formerly missed plants etc. For compartment four and five it is therefore planned to test if treatment every second year is more cost-effective and with the same eradication success, as it is expected to be easier to identify regrown plants if they are larger, but before they can reproduce.

For the remaining project sites no activities has begun. The best time and method applied will be discussed on a workshop which will be conducted in 2023. AVJF has tested some different methods on their areas as part of a research project. Therefore it's been planned to host a workshop in 2023 for the relevant local project managers, using their experiences to reflect on the best practice for the local implementation of the action on the project sites.

C2.1 - Removing shading trees around veteran/old trees			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-01 Farumskove	App. 21-42 trees	18 trees	Finalizing treatment of veteran trees.
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	App. 102-204 trees	88 trees	Finalizing treatment of veteran trees.
DK-04 Bidstrupskovene	App. 111-222 trees	69 trees	Continued treatment of veteran trees.
DK-08 Almindingen	App. 54-108 trees	Not started.	Planned to begin in 2023.
DK-10 Pamhule Skov	App. 27-54 trees	Finished. 188 trees treated.	-
DK-12 Augustenborg Skov	App. 45-90 trees	Not started.	Planned for 2023.
DK-13 Stagsrode Skov	App. 60-120 trees	Finished. 61 trees treated.	-
DK-14 Silkeborgskovene	App. 24-48 trees	Not started.	Planned to begin in 2023.
DK-15 Velling Skov	App. 3-6 trees	Not started.	Planned to begin in 2023.
DK-16 - Hald Inderø	App. 9-18 trees	Not started.	Planned for 2023.
DK-18 Rold Skov, Skindbjerglund	App. 6-12 trees	Not started.	Planned for 2023.
DK-19 Tofte Skov og Høstemark Skov	20 trees	Not started.	Planned for 2023/2024
DK-20 Æbelø	21 trees	Not started.	Planned to begin in the winter 2023/2024. Awaits approval from the Nature conservancy board.[13]
DK-21 Lekkende	110 trees + a part of the trees from DK-24.	Not started.	An assessment of potential veteran trees is planned in 2023-2024.
DK-22 Bognæs	130 trees + a part of the trees from DK-24.	Not started.	An assessment of potential veteran trees is planned in 2023-2024.
DK-23 Sorø Sønderskov	10 trees + a part of the trees from DK-24.	Not started.	An assessment of potential veteran trees is planned in 2023-2024.
~~DK-24 Knuthenborg~~	120 trees	N.A.	Activity moved to DK-21, DK-22, DK-23

[13] Fredningsnævnet

Total	**App. 873-1335 trees**	**424 trees**	

C2.2 - Increasing structural variation of tree plantations			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-21 Lekkende dyrehave	11 ha	Not started.	Will begin in the autumn 2023
DK-22 Bognæs	20 ha	Not started.	Will begin in the autumn 2023
Total	**31 ha of structural variation**	**-**	

C2.3 - Removing of alien species			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	7 ha alien species	Not started.	Activity planned to begin after workshop on methods in 2023.
DK-03 Gribskov	8 ha alien species	Not started.	Activity planned to begin after workshop on methods in 2023.
DK-04 Bidstrupskovene	8 ha alien species	Not started.	Activity planned to begin after workshop on methods in 2023.
DK-12 Augustenborg Skov	10 ha alien species	20.5 ha cleared minimum once and majority of area several times.	Continued removal of *Rubus spectabilis*.
DK-13 Stagsrode Skov	6 ha alien species	Not started.	Might not be relevant anymore. If so, activities will be relocated to other project sites.
DK-14 Silkeborgskovene	20 ha alien species	Not started.	Activity planned to begin after workshop on methods in 2023.
DK-15 Velling Skov	7 ha alien species	Not started.	Activity planned to begin after workshop on methods in 2023.
Total	**66 ha alien species removed**	**20.5 ha alien species removed**	

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Clearing of the area of alien species 1st time completed	12/2020		Done. 11.7 ha cleared once by end of 2020.	-

50 % shading trees around veteran and old trees removed	12/2022	-	Done. 424 trees treated, amounting to almost 50 % of lower range target.	-
50 % area planned for thinning conducted	12/2022	12/2023	Delayed	Thinning conducted.
100 % shading trees around veteran and old trees removed	3/2026	-	-	Further treatment of veteran trees.
100 % area planned for thinning conducted	12/2026		-	-

Action C3 Establishment of grazing	
Foreseen start date: 01-07-2021	Actual start date: 01-07-2021
Foreseen end date: 31-03-2026	Actual or anticipated end date: 31-12-2026

The aim of this action is to establish grazing in order to create structural variation and increase the natural dynamics as well as maintain effects of removal of the shading trees. The action has not progressed as foreseen due to the implementation of Nature National Parks in Denmark in some of the project areas and appointing of Untouched Forest in others.

In DK-03, the tendering is finished and establishing of fence line has started, with clearing of fence line and purchase of fencing materials. This has been put on hold due to a complaint to the Danish Environment and Food Board of Appeal.[14] The complaint is related to the Nature National Park within the same area, see chapter 5 page 12-13, for a detailed description, and targets the NNP management plan and permissions related to it. The complaint is expected to be processed in 2023. The area planned to be grazed has been expanded to approximately 1,300 ha.

In DK-04 the planning, tendering and implementation has not started, as most of the project site has been designated as Nature National Park. A decision on keeping the grazing activity in the Open Woods project awaits an approved management plan for the Nature National Park. If not feasible, then the activity will be relocated to other relevant project sites.

In DK-06 the activity awaits the relevant permissions, but the fencing and subsequent grazing is expected to be in place no later than 2024.

In DK-17 the establishment of the mobile fence has begun and is planned to be finished in the first half of 2023.

In DK-18 the activity is finished, but financed by other means. The original activity was based on the ownership of relevant areas during the application phase for this project and the designated untouched forest at the time. In the meantime, the neighboring property with over 100 ha came up for sale. This gave the opportunity of a grazing project on a much larger scale, as almost all of the state owned area is now grazed with livestock.

In DK-19 the grazing with European bison is established. This has required the construction of a release facility with a wooden boma and a holding pen (ca. 4.6 ha), and the replacement and/or reinforcement of stretches of the existing outer and inner fence, as well as two of the existing gates. 4 animals from Denmark (from Randers Regnskov) were introduced in March 2019. The bull had to be put down in the fall. In April

[14] Miljø- og fødevareklagenævnet

2021 another 7 animals were donated from the Netherlands and then 3 from Randers Regnskov were introduced. 1 calf has been born. Another 5 animals from Knuthenborg Safari Park in Denmark were introduced in February 2022. 4 calves were born in the spring/summer of 2022, amounting to 20 European bison in total. All of the bisons were donated, and therefore no costs have been added to this part.

As a part of the introduction of the European bisons an advisory team have been established with the following members/consultants:

- VetConsult with the two veterinarians Monica Lønborg Frederiksen and Carsten Grøndahl. They are among the most experienced veterinarians both in Denmark and internationally when it comes to capture, release and monitoring of wild animals.
- Trine Hammer Jensen: Veterinarian from Aalborg Zoo and Aalborg University and as such a capacity in monitoring and investigating wild animal species and at the same time a local resource person.
- Faunaforst owned by Steffen R. Bengtsson with extensive knowledge of legal requirements and management of fenced areas with wild animals in Denmark.

It is expected that there will be increased expenses due to increased supervision of the animals, increased veterinary inspections, increased expenses on the monitoring of the animals behavior and animal welfare. Furthermore, there might be future unforeseen expenses for potential fence mending.

In DK-23 four grazing patches were planned for approx. 8 ha. The private owner has already established one of the patches and one cannot be established due to neighboring considerations. The remaining two are respectively 0.97 and 1.86 ha. Depending on the duration and timing of the grazing, it is recommended to graze forests together with some grasslands due to the low amount of forage in the wooded areas. Due to the fact, that these patches are very small, DEP recommends that they are being grazed together with an adjoining meadow. This is only possible in the southern fold. Furthermore, DK-23 wish to receive an annual grant for grazing with cattle on their property. This is not included in the project's budget and cannot be granted by any compensation schemes or DEP. Due to the challenges it is not fruitful to establish grazing in DK-23. Therefore it is proposed to remove the grazing activity at project site DK-23 and move the budget to purchase of threes (Category F5 – Land purchase), removal of shading trees and creation of decaying wood habitats (Category F3 – External assistance costs). Moving costs from A2 external assistance to the cost categories F3 and F5 was accepted by CINEA in 2022[15], within the budget of 32.000 EUR. With this, it is proposed to increase the amount to 52.000 EUR. If this is accepted by CINEA, the private owner of DK-23 has preapproved the following changes; The budgeted amount for C3 can be transferred to two different category costs; purchase of threes (Category F5 – Land purchase), removal of shading trees and creation of decaying wood habitats (Category F3 - External assistance costs). More veteran trees can then be bought to ensure short-term habitat trees and younger trees will be veteranized for long-term habitat trees and to give the veteran trees more light and space. The reason for this change proposal were that DEP encountered some challenges at site DK-23 as the landowner requested compensation to maintain the trees in the area to naturally decay. To solve the problem it was suggested offering a one-off compensation payment to the landowner to secure that the trees included in the project will be left to naturally decay in the area. This was accepted by CINEA on the condition that, the trees are registered in the land register as ancient trees that are to be left in the area to naturally decay. For the first amount, the process have begun, and a model for valuing the individual veteran trees is currently being developed. It is expected to select the trees for purchase in 2023, and the official registration in the land register is expected to be done in 2024. If this extension is accepted, this can come into the work already being done, and therefore it will not demand a large workload, as the work has already started for the formerly accepted subset.

[15] The 31st of May 2022 the project received from CINEA: LIFE18 NAT DK 000747 MISMC3LET 220511

Site name	Expected results (Grant agreement)	Status on 31st of December 2022	Expected activities until next Midterm
DK-03 Gribskov	App.1,122 ha	In progress.	Establish fence line and related facilities, when the complaint to the Danish Environment and Food Board of Appeal about the planned activities has been processed, expected in June 2023, and when the NNP is approved.
DK-04 Bidstrupskovene	App. 317 ha	Not started	None. This activity might have to be moved to other sites, due to a large part of the forest being designated as future Nature National Park.
DK-06 Klinteskoven	App. 112 ha	Not started	Planned to be established in 2023/2024
DK-17 Livø	App. 54 ha	In progress	Planned to be finished in 2023.
DK-18 Rold Skov, Skindbjerglund	App. 32 ha	Done.	-
DK-19 Tofte Skov og Høstemark Skov	App. 3,773 ha	Done. 3,750 ha grazed with European bison, moose, deer and wild boar.	Only costs related to animal supervision and fence repairs if needed.
DK-23 Sorø Sønderskov	App. 8 ha	Proposal: Removing C3 activities	Converting this to other activities
Total	App. **5,197 ha grazing**	**3,782 ha grazing**	

Milestone name	Deadline	New suggested deadline	Status	Expected activities until next Midterm
First grazing facilities purchased	6/2022		Done.	-
50 % fences installed	12/2022		Done. The necessary fences are established on 3,782 ha of grazed area, corresponding to 73 % of the area expected to be grazed.	-
Grazing in place in 50 % of sites	12/2023		Grazing in place in DK-18 and DK-19, corresponding to 33 % of sites.	Grazing in place in DK-03, DK-06 and DK-17.
100 % fences installed	12/2024	12/2026	Delay expected.	

Grazing in place in 100 % of sites	3/2026	12/2026	Delay expected.	

Action C4 Improvement of hydrological conditions	
Foreseen start date: 01-01-2022	Actual start date: 01-01-2022
Foreseen end date: 30-06-2026	Actual or anticipated end date: 30-09-2026

The aim of this action is to improve hydraulics in sites where a relatively high groundwater table is an important feature or/and in the formerly drained land for forest production. The action has not progressed as foreseen due to the implementation of Nature National Parks in Denmark in some of the project areas and appointing of untouched forest in others. So far, the action has only been implemented in one project site. This is mainly due to the delay in obtaining the required permissions, as described under action A2 page 16-19, caused by the political changes with additional large state areas being set aside as untouched forest and Nature National Parks.

The site where this action have been implemented is DK-09. During the screening process for DK-09 it was assessed, that blocking ditches in one out of the four areas wasn't feasible as it would affect a public bike path, requiring costly adjustments. Compensation areas will be found in DK-08.

Due to the establishment of Nature National Parks it is likely that the hydrology action within some of the sites have to be moved, for a thorough description of the issue see chapter 5 p 12-13. However, it is possible to find other locations to move the action to within the Natura2000 sites included in the LIFE Open Woods project.

Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-01 Farumskove	8 ha	Not started.	-
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	9 ha	Not started.	-
DK-03 Gribskov	220 ha	Not started.	Planned to start in 2023/2024.
DK-04 Bidstrupskovene	72 ha	Not started.	-
DK-05 Myrdeskov	7 ha	Not started.	Planned for 2023/2024.
DK-06 Klinteskoven	14 ha	Not started.	-
DK-08 Almindingen	110 ha	Not started.	Planned to start in 2023/2024.
DK-09 Hammersholm og Slotslyngen	11 ha	Done. App. 4 ha.	-
DK-10 Pamhule Skov	1 ha	Not started.	-
DK-11 Gråsten Dyrehave	3 ha	Not started.	-
DK-12 Augustenborg Skov	0,07 ha	Done. (Established with alternative funding)	-
DK-13 Stagsrode Skov	27 ha	Not started.	Planned to start in 2023.
DK-14 Silkeborgskovene	26 ha	Not started.	-
DK-15 Velling Skov	26 ha	Not started.	-
DK-18 Rold Skov, Skindbjerglund	17 ha	Not started.	-
DK-19 Tofte Skov og Høstemark Skov	101 ha	Not started.	Planned to start in 2023.

DK-20 Æbelø	10 ha	Not started.	Planned to start in 2023.
Total	**App. 662 ha affected**	App**. 4 ha affected**	

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
50 % ditches blocked	1/2024	3/2025	This will most likely be delayed. So far ditches have been blocked corresponding to ca. 4 ha of impacted area, or 0.6 % of expected area impacted.	Applying for and granting of permissions and then further implementation of the action.
100 % ditches blocked	6/2026	9/2026		-

Action C5 Increasing connectivity and promotion of oak rejuvenation	
Foreseen start date: 01-07-2021	Actual start date: 01-07-2021
Foreseen end date: 30-06-2025	Actual or anticipated end date: 30-06-2026

The aim of this action is to improve the forest structure, connectivity and ecological function of fragmented target habitats as well as support oak rejuvenation and development of future habitats. The action has seen some changes. Firstly, the proposition for a modification of the action is presented, and then the activity status on relevant sites.

It is proposed to modify this action. Originally, the objective of this action was to increase the connectivity and promotion of oak rejuvenation and introducing flowering and/or thorny bushes and trees. During the knowledge collection, it has become clear that a key issue is that there is a lack of many important wooden flowering species. To improve the habitual conditions of key target habitats and to improve the condition for biodiversity the objective of this action should move towards reintroducing the missing local tree and bush species, where the main objective is to reinforce a sustainable seed source of the different species. Many of the project sites are mainly even-aged, more or less monoculture beech stands, and therefore, many local woody species are missing for these to be considered natural forest habitats. Forest experts have developed lists for each project site listing the missing local species of flowering trees and bushes. From this material and the knowledge of the local foresters a number of planting models have been developed. Some of the local project managers were already working on developing planting methods for biodiversity purposes, and therefore, to use and share this potential knowledge for long-term survival of the targeted species a workshop was held in August 2022 on planting with an aim of reestablishing seed sources of local and missing woody plants.

It became clear on this workshop that the main distinctions of import are the natural processes like grazing, soil wetness, and the soil structure. On the workshop, there was a consensus that the most important distinction is grazing, which contains two important factors: grazing pressure and light conditions. Introducing grazing in a forest system will keep the forest landscape more open as the herbivores will contribute to this, which will give more light conditions for the plants to grow in than a non-grazed forest system. When the planted woody plants are small they are a food source for the herbivores, and thereby, the herbivores provide a threat to the planting at the establishing phase. A forest system without grazing will

have darker conditions, and the threat towards the establishment of the planting will be lower. In the dark conditions, mostly climax woody species will thrive, and in a well-established beech system, it is hard for any competing growth to develop well. On the workshop, there was a consensus that a potential process that could change the competition from beech dominance towards a more diverse woody system is the hydrological gradient. Altering the hydrology towards wetter systems, where possible, can provide a system where plantings of other woody species can compete. 4 local project managers of DNA and AVJF worked on some models for planting, and these were done and dispersed to project partners and local managers in January 2023.

These models will be used to execute successful plantings reaching the stated objective. The models are universal and are adaptable to different localities, but contain local cases that can inspire similar sites. With the modification the action will still aim at the original objective as well (together with the new species, oak will also be planted to ensure rejuvenation of the oak forests), and the modification will deliver an add-on. Namely a focused action for ensuring locally missing native species of flowering trees and bushes. Furthermore, the planting models explore how to use other methods for plant protection in addition to traditional fencings. These methods are; planting in a brushwood fence made with logging waste, felling down larger trees in a micado constellation to shelter the new plantings from being eaten, and using the natural hydrology as a completion driver for the woody species in the forests and thereby changing the competition regime of the woody plant species creating a higher diversity of woody plant species. For more information, see the planting models in app. VI.

Therefore, it is suggested to change the milestones of C5 as follows;

- C5.2 will be removed as it is technically unnecessary to use another method for planting along forest edges. The methods of the developed planting models can be used in forest edges a well.

C5.1, C5.3 and C5.4 will remain as they are. As will the planting in DE-1.

With this proposal of change, it must also be considered how this action is reported most efficiently. It is proposed to report as done in C5.1 on planting level. This way it will be reported how many plantings, where they are located, and which planting model that is used.

DK-04: Four areas has been planted as described in appendix VI, model 1, with different protection methods of the planted patches – fenced, the micado model and the brushwood fence model.[16] The registered area is the clear felled area with the planted patches. The areas selected for planting are close to registered findings of common dormouse (*Muscardinus avellanarius)* to secure future habitats for this and other species.

DK-07: During assessment of the project sites it was observed, that if the area is protected from deer and given enough light, natural regeneration is possible. Therefore, it is assessed that an actual planting is not needed to reach the objective. Instead of a traditional planting, the action is therefore planned to be thinning around the tree seedlings, with the crowns from felled trees used as natural fence/protection of the naturally regenerated seedlings, resembling the micado model.

DK-08: Acorns from local sessile oaks (*Quercus petraea*) were collected in autumn 2020 and sent to plant nursery for seedling production. Planting of the seedlings in combination with other species (primarily bushes) within the designated areas is planned for 2023.

DK-12 and DK-16: During further assessment of the project sites and the new guidelines for the designated untouched forests, the plantings are no longer considered relevant. It is proposed to move the activity and budget to other sites.

[16] Thereby protecting the plantings from wild herbivores' bite.

DK-23/DK-22: The planting is proposed moved to DK-22. The reason for this is, that if the grazing activity is removed as formerly proposed, see chapter 6.1 page 28, it is not relevant to carry out the planting in DK-23.

DE-1: In the LIFE Open woods project, it is planned to plant 100 single trees in the woodland and 10 scrub islands in the surrounding pastures. In the grazing areas surrounding the Stodthagen woodland it is planned 15 plots with scrub and tree species oak, prunus and/or tilia plantings. The detailed planning for Stodthagen will be based on the soil conditions and will be made by the forester from the company Silva concept. First the fences will be built in September 2023 by external company. The planting is foreseen for the next planting season from November 2023 to February 2024.

C5.1 – Planting of "stepping stones"			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-01 Farumskove	1 patch	Not started.	Planned for 2023.
DK-03 Gribskov	14 patches	Not started.	Planned for 2023.
DK-12 Augustenborg Skov	3 patches	Not started.	Proposed moved to other project site.
DK-13 Stagsrode Skov	9 patches	Not started.	Planned for 2023.
DK-16 - Hald Inderø	20 patches	Not started.	Proposed moved to other project site.
DK-19 Tofte Skov og Høstemark Skov	15 patches	In progress.	Started in 2023.
DK-20 Æbelø	15 patches	Not started.	-
DK-23 Sorø Sønderskov	20 patches	Not started	Proposed moved to DK-22
Total	**97 patches**		

C5.2 – Planting of forest edge zone			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-04 Bidstrupskovene	20 ha edge zone	5.7 ha established	Proposed changed to C5.1
DK-08 Almindingen	7 ha edge zone	Not started.	Proposed changed to C5.1
DK-11 Gråsten Dyrehave	5 ha edge zone	Not started.	Proposed changed to C5.1
Total	**App. 32 ha**	**5.7 ha**	

C5.3 – Planting of *Quercus petraea*			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-07 Ulvshale	1 ha *Q. petrea*	Not started.	Planned for 2023.
DK-08 Almindingen	6 ha *Q. petrea*	In progress.	Planned for 2023.
Total	**7 ha**		

C5.4 – Planting of oaks and limes			
Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DE-1 Naturwald Stodthagen und angrenzende Hochmoore	130 trees	Not started.	Planned for 2023.

Milestone name	Deadline	New suggested deadline	Status	Expected activities until next Midterm
50 % of 'stepping stone' patches established	6/2023	12/2024	A delay is expected	Plantings planned for 2023 and 2024
100 % of forest edge planting established	12/2023		-	Proposed removed
100 % of 'stepping stone' patches established	6/2025	6/2026	-	-
100 % of the area of *Quercus petrea* planted	6/2025		-	-

Action C6 Tree management for public safety	
Foreseen start date: 01-04-2022	Actual start date: 01-04-2022
Foreseen end date: 30-06-2026	Actual or anticipated end date: 30-06-2026

The aim of this action is to ensure safety for the public visiting a forest area by reducing risk of falling branches or trees, and habitat retention and maintaining the habitat features for targeted species. The action has had a minor delay. The action has been delayed because of the need to move the action from DK-01 to DK-14, as the trees along the public road planned to be treated in this action, had to be felled for safety purposes.

DK-01/DK-14: Due to assessment of public safety, the trees along the public road planned to be treated during this action, had to be felled. As there was not enough alternative trees to treat instead, the action was moved to project site DK-14, which has several areas with old trees along public roads, which need to be assessed and treated regularly for risk reduction.

DK-02: The action has been finalized in the project site. The trees were selected by the local project manager, following an assessment of the existing high biodiversity/many micro habitats and the possibility of making interventions for risk reduction as opposed to the traditional felling of the trees. The specific interventions were described for each tree and handed to the entrepreneurs. This included how much of the crown to be reduced, at what height, if only a specific side of the crown etc.

DK-20: The action is planned for the winter 2023/2024. Currently the decision from the nature conservancy board[17] is awaited, and when it is in hand, the action can begin.

DE-1: The number of trees expected to be treated was based on experiences in previous years (approximately 2 trees/year). Based on an annual inspection it is decided whether there are any risk trees that need management that year. So far, no trees has needed to be treated. Therefore, the expected number of trees listed above is the maximum amount of trees; however, it might end up being fewer trees that will become relevant to manage.

Site name	Expected results (Grant agreement)	Status on 31st of December 2022	Expected activities until next Midterm
~~DK-01 Farumskove~~	N.A.	Action moved to DK-14	-
DK-02 Hellebæk, Teglstrup Hegn, Hammermølle Skov	30 trees	Done. 40 trees treated	-

[17] Fredningsnævnet

DK-12 Augustenborg Skov	40 trees	Not started.	Planned for 2023.
DK-14 Silkeborgskovene	20 trees	Action moved from DK-01	Planned for 2023.
DK-20 Æbelø	8 trees	Not started.	-
DE-1 Naturwald Stodthagen und angrenzende Hochmoore	15 trees	Not started.	-
Total	**113 trees**	**40 trees**	

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Assessment of 100 % of veteran/old trees accomplished	4/2022	6/2026	Delayed – due to changes in the action, the action has been moved within some of the sites.	
Safety risk reduction interventions on 50 % of trees conducted	9/2022	12/2023	A minor delay. Interventions on 40 trees conducted, corresponding to 35 % of expected results.	
Safety risk reduction interventions on 100 % of trees accomplished	12/2023	6/2026		

Action C7 Population management for hermit beetle	
Foreseen start date: 01/09/2019	Actual start date: 01/09/2019
Foreseen end date: 31/12/2022	Actual or anticipated end date: 31/03/2025

The aim of this action is to support existing populations of Hermit Beetle. The action has almost progressed as foreseen, however there have been some minor delays. A new end date of March 2025 is proposed.

The mould boxes have been successfully set up at DK-21. In DK-22 16 of 25 boxes have been set up. Thereby 9 boxes are still needed. The reason for this is that the material price was higher than first expected, due to the general high prices on material in Europe due to the demand for building materials and the rising inflation levels in Denmark. When it was clear, that the price per box would be higher it was considered to make smaller boxes instead. However, this was reassessed as the experiences on using mould boxes indicates the importance of the boxes' large size. Additionally it was prioritized to make the boxes of oak wood and fill it with oak mould. This increase weather resistance and durability, and the habitat quality of the boxes. To deliver the remaining 9 boxes in project site DK-22 it is suggested to transfer the budget of C1 from the former DK-24 to the C7 action in project site DK-22 and spend the budget on the remaining boxes.

On the former site DK-24, 10 mould boxes should have been set up. Based on a professional justification it is relevant to use this remaining budget to develop activities that can suit the landowner of project site DK-23 and thereby perform conservation activities on yet another location. The suggested activity is to transfer the budget to F3[18], F5[19] and C1 to acquire 10 trees on site DK-23 for veteranization activities specifically targeted on the hermit beetle, and perform targeted veteranization for the hermit beetle. Artificial cavities will be drilled and carved into these trees, to resemble the habitats of hermit beetle. Different methods and

[18] External assistance costs
[19] Land purchase

experiences from similar projects in Sweden and Allindelille Fredskov in Denmark, will be used. DEP believe this is a comparable alternative to the mould boxes, as they simulate the same habitat. This method is less invasive in the landscape and blends more into the forest which is a concern for this private landowner. Furthermore, that way more conservation methods will be assessed in this project. All in all this is assessed to improve the project. Based on this, it is suggested to, instead of dispersing these on the sites DK-21 and DK-22, convert the 10 mould boxes to buying trees suited for veteranization and performing special veteranization targeting the hermit beetle. Thereby, the budget for DK-24 action C7 is proposed transferred to project site DK-23 to the cost categories C1, F3, and F5.

Site name	**Expected results (Grant agreement)**	**Status on 31st of December 2022**	**Expected activities until next Midterm**
DK-21 Lekkende	8 mould boxes	Done. 8 boxes established	
DK-22 Bognæs	25 mould boxes	16 boxes established. Additional funding for 10 more boxes have been applied for.	Receiving response from additional funding. Establishing the remaining boxes.
~~DK-24 Knuthenborg~~	10 mould boxes	N.A.	Proposed moved to DK-23 and changed to 10 trees for veteranization targeted the hermit beetle.
DE-1 Naturwald Stodthagen und angrenzende Hochmoore	40 mould boxes	Done. 39 boxes established (36 small, 3 large)	-
Total	**83 mould boxes**	**63 mould boxes**	

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
50 % of the nesting boxes put up	7/2021		Done.	-
100 % of the nesting boxes put up	12/2022	6/2025	Delayed. 63 mould boxes are established, corresponding to 76 % of expected results.	Establish the remaining boxes.

D – Monitoring of the impact of the project actions

Action D1 Monitoring of impact on habitats and species	
Foreseen start date: 01-01-2020	Actual start date: 01-01-2020
Foreseen end date: 31-12-2027	Actual or anticipated end date: 31-12-2027

The aim of this action is to monitor the effects of C1-C7. The action is on track, however the milestone 'Formulation of quantitative goals for improvement of conservation status of the targeted habitats and species – a strategy' has to be redelivered.

All the monitoring actions are on track. The strategy have been rewritten and will be delivered with this midterm report. Two activities are relevant to mention; an extended monitoring program for mosses and lichens and the kick off of the hydrological monitoring program in 2023. These are described below.

The monitoring of C1 and C2 have been expanded on three locations: DK-2, DK-13, and DK-16. In DK-2 and DK-13 an extended monitoring baseline report on mosses and lichens were made to monitor how veteranization and especially giving light to veteran trees will affect the development of lichens and mosses. In DK-16 there is a population of tree lungwort (*Lobaria pulmonaria*), and therefore it was necessary to setup a specific monitoring program of this species to follow how the population will be affected by the activities. Furthermore, the program included a small experimental study on transplantation of the species to potential host trees.

The monitoring of C4 will be set up in 2023. The water loggers will be set up before the hydrological project will be initiated to get data prior to the activity as well as during and after the implementation. Monitoring planned in either DK-03 or DK-02.

Action name	Status	Expected activities until next Midterm
C1 – Veteranization	Finished in DK-13, initiated in DK-02.	Continued collection of baseline data in 2023 in DK-02 and DK-06. Maybe also in DK-19.
C2.1 – Increasing structural diversity	Initiated in DK-13 and DK-03.	Continued collection of baseline data in 2023 in DK-13 and DK-03. Maybe also in DK-19.
C2.2 – Control of alien species	On track.	Continued monitoring for removal of *Rubus spectabilis* in DK-12.
C3 – Grazing	Continuous collection of GPS data from Bison in DK-19.	Continued collection of data related to Bison grazing in DK-19.
C4 – Hydrology	The technical description is ready.	The water loggers will be set up in 2023. The monitoring will take place in either DK-2 or DK-3.
C5 - Planting	No monitoring action.	Monitoring may be expanded to include this action.
C6 – Tree management for public safety	On track	None foreseen.
C7 – *Osmoderma eremita*	On track	None foreseen.
Bechsteins bat	On track	None foreseen.

Milestone name	Deadline	Status	Expected activities until next Midterm
Basic monitoring for habitat types and species completed	12/2020	Done	-
Formulation of quantitative goals for improvement of conservation status of the targeted habitats and species – a strategy.	6/2021	Delayed, finished in March 2023.	-
Monitoring report about colonization of boxes by saproxylic beetles 2024 (German)	12/2026	-	None foreseen
Monitoring report about colonization of boxes by saproxylic beetles 2027 (German)	10/2027	-	-
Final monitoring for habitat types and species completed	10/2027	-	None foreseen

Deliverable	Deadline	Status	Expected activities until next Midterm
Baseline report	12/2020	Done.	-
A strategy for formulation of quantitative goals for improvement of conservation status of the targeted habitats and species both during and after the project - 3 main reports	6/2021	Done. Delivered with the midterm in April 2023.	-
Final report	10/2027	-	None foreseen

Action D2 Ecosystem services and socio-economic surveys	
Foreseen start date: 01-01-2020	Actual start date: 01-01-2020
Foreseen end date: 31-12-2027	Actual or anticipated end date: 31-12-2027

The aim of this action is to monitor the projects' effect on ecosystem services and socio-economic impacts. The project is expected to restore forest ecosystem, however, the trade of is among other things timber production. The effect of some selected services will be analyzed. The action has not progressed as foreseen. The before project survey and analysis design should have been done by the end of 2021. However, the course that the former project manager should have taken to be prepared for doing this was unfortunately cancelled. Therefore this action is proposed revised, and the revision will be finished by the end of 2023. This revision will include the choice of parameters and the analysis designs. In the tables below the ecosystem services and socio-economic currently chosen for this project is shown.

Assessment of ecosystem services		
Ecosystem services	**Status**	**Expected activities until next Midterm**
Timber	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Soil processes	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Structural ecosystem attributes (Deadwood)	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Structural ecosystem attributes (Abundance of habitat trees)	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Education	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Recreational	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Biodiversity	Sampling for monitoring saproxylic beetles is done. Currently the samples are being analyzed.	The baseline report will be finished by autumn 2023.

Socio-economic assessment		
Assessment elements	**Status**	**Expected activities until next Midterm**
Rising awareness from general public, residents and visitors on biodiversity forests and knowledge about the N2000 network result in increased knowledge and positive attitude towards the protection of the target species, and thus improve cooperation of public in the protection of their habitats.	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Building up a new discipline within education and in the end professional working with management of forest in appropriate way with regards to biodiversity and securing good conservation status for the forest types.	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023
Project objectives will be communicated and is expected to rise more interest for seeing, experience and understand the nature more "wild". The increase in interest will be monitored by counting website visitors and adherence to specific tours arranged in the project.	Proposal for revision	If the revision proposal is approved, it will done by the end of 2023

Milestone name	**Deadline**	**New suggested deadline**	**Status**	**Expected activities until next Midterm**
Before project surveys and analysis completed	12/2021	12/2023	In process. Proposed revised.	Proposed revision of action D2 throughout 2023.
After project surveys and final report completed	9/2027		-	None foreseen

Deliverable	**Deadline**	**Status**	**Expected activities until next Midterm**
Assessment of Ecosystem Services report	9/2027	-	Revision of action D2 in 2023.
Final socio-economic report	9/2027	-	Revision of action D2 on 2023.

Action D3 Key Project Level Indicators (KPI)	
Foreseen start date: 01-10-2019	Actual start date: 01-10-2019
Foreseen end date: 31-09-2027	Actual or anticipated end date: 31-09-2027

The aim of this action is to contribute to evaluating the impact of the project. The action is on track. The KPIs have been filled into the KPI database; therefore, consult the database for a status on this action. Depending on the conclusions on the current revision of D2, the KPI-database might be updated in 2023.

Milestone name	Deadline	Status	Expected activities until next Midterm
Before project surveys and analysis completed	12/2021	Done – can be seen in the KPI database	Potential update based on proposed revision of action D2.
LIFE Key project level indicators completed	9/2027	-	None foreseen

E – Public awareness and dissemination of results

Action E1 Involvement of forest managers and private forest owners	
Foreseen start date: 01-01-2020	Actual start date: 01-01-2020
Foreseen end date: 31-12-2027	Actual or anticipated end date: 31-12-2027

The aim of this action is to establish a Private Owners Network (POW) to increase the private owners' knowledge and understanding of forest ecosystems and management for threatened species and to increase the willingness to make agreements to secure core habitats for the hermit beetle and facilitate uptake of compensation schemes on biodiversity in forests. The action is on track.

Two meetings has been held in the POW:

1. A 2 hour kick off meeting on project site DK-22 on the 16th of November 2020. The focus was an introduction to the project in general and the specific site.
2. A 5 hour meeting on the project site DK-21 on the 16th of June 2021. The focus was the biology of the hermit beetle (guided by an entomologist) and the best practice catalog.

DEP is planning to do a two-day workshop in 3rd quarter of 2023. The study tour will take place in Zealand and possibly Lolland, Denmark. Furthermore, three locations will be visited with participation of forest managers and private forest owners as well as local authorities and entrepreneurs working with forest-biodiversity. The focus is how to create and/or improve habitats for saproxylic insects (beetles).

Milestone name	Deadline	Status	Expected activities until next Midterm
1st Private Owners Network meeting organized	6/2020	Done	-
1st of study tour organized	12/2023	Done	-
2nd study tour organized	12/2024	In progress. MST is planning a two day study tour in DK	2-day study tour in DK planned for 3rd quarter of 2023
3rd study tour organized	12/2025	-	None foreseen
4th study tour organized	12/2026	-	None foreseen
Best practice guidelines published	3/2027	-	None foreseen
Guidelines for private forest owners published	3/2027	-	None foreseen

Deliverable	Deadline	Status	Expected activities until next Midterm
Best practice guidelines	3/2027	-	None foreseen
E1 Guidelines for private forest owners	3/2027	-	None foreseen

Action E2 Competence development on forest management for habitats, species and biodiversity	
Foreseen start date: 01-01-2020	Actual start date: 01-01-2020
Foreseen end date: 31-12-2023	Actual or anticipated end date: 31-03-2022

The aim of this action is to disperse knowledge on forest management for biodiversity purposes among the employees of the projects partners. The action is completed.

With the political decisions on appointing Nature National Parks and further areas as untouched forests as described in chapter 5 page 12-13, there was an increased relevance and need for a competence course on how specific actions can be used to develop favorable conservation status for forest habitat types and species, thereby supporting the implementation decisions in the management plans. Since the course would be relevant for a majority of the employees in DNA, it was decided to appoint a focus group with participants from both the management and technical level in DNA to support FLC in the development of the course.

The courses were developed as a diploma course (10 ECTS) for forest managers and three practical adult vocational training courses[20] for forest and nature technicians, machine operators and contractors. Based on input from the focus group it was decided to conduct them as a coherent course. The objective was expected synergies in ensuring the same focus and knowledge for all participants and the possibilities for discussing the biodiversity management in forests across the fields of competences.

The content of the courses focused on two scenarios for management of forests for biodiversity purposes:

[20] Arbejdsmarkedsuddannelse (abbreviated AMU)

a) Areas with existing biodiversity, which should be conserved or improved.

b) Areas with only marginal biodiversity, where the aim is to kick-start natural processes supporting higher biodiversity.

The courses were completed as 4 joint modules (2 days each) from Novemberin 2021 to April 2022, supplemented with a final written paper in the diploma course and a 5th module with practical tests for the adult vocational training courses. Modules 1 and 4 were held at FLC for all participants, introducing basic knowledge about management of biodiversity in forests, monitoring and documentation, and legal framework etc. Module 2 and 3 were held regionally at local DNA sites, mainly LIFE Open Woods project sites, focusing on concretes cases related to the two scenarios. The full course description for the diploma course can be found in appendices VII and VIII.

The course turned out to be quite successful with approximately 60 forest managers and 35 forest and nature technicians/machine operators completing all modules. Among the participants were employees from AVJF, Amphi Consult and DEP besides employees from DNA. The full evaluation can be seen in appendix VIII, but the inclusion of different fields of expertise and networking across professional fields was particularly emphasized as contributing positively to the course. The reason for bringing forward the execution of the course was, that it became clear in the beginning of the project, that this field of forest management was so new in Denmark, that it was needed to perform preliminary training to ensure a good execution of the conservation actions.

Milestone name	**Deadline**	**Status**
1st course held	12/2023	Done
2nd course held	12/2023	Done
3rd course held	12/2023	Done

Action E4 Capacity building for partners and networking with other LIFE and non-LIFE projects	
Foreseen start date: 01-10-2019	Actual start date: 01-10-2019
Foreseen end date: 31-12-2027	Actual or anticipated end date: 31-12-2027

The aim of this action is to facilitate exchange of experience, networking, involvement and ownership among the partners. Through this action, experiences and knowledge gained during the project will be disseminated. This will also encourage replication of the project methodology. The action is on track.

There is an ongoing reflection on topics for the 1st workshop. The workshop planning is started and will continue. The workshops are foreseen to be held according to the time plan

In 2022, a number of networking activities took place. Past networking activities:

- May 2022: LIFE Open Woods attended The People's Festival of Nature[21] 2022 in May, which is a national political meeting that lasts 3 days with an agenda of nature. 30.000 people visited the The People's Festival of Nature in 2022, among the participants are notably politicians, political parties, non-governmental organizations, universities, and state institutions. LIFE Open Woods organized, in corporation with other LIFE projects in Denmark, a stand presenting the LIFE initiative and the concrete projects. In the occasion of the 30-year anniversary of the LIFE program Mrs. Sylvia Barova participated in the The People's Festival of Nature 2022 and gave a speech on the LIFE program.

[21] The peoples' festival of Nature is a fair on nature where both the public and professionals attend. It has 30,000 visitors, 500+ debates, conversations and activities, and 70 stands.

- May 2022: Two employees of DEP participated in the final seminar of LIFE Bridging the gap on May 31st to June 2nd 2022.
- July 2022: LIFE Open Woods were represented at the International Congress of Entomology, 17 – 22 July 2022 in Helsinki, Finland.
- August 2022: A workshop on planting for biodiversity was hosted by LIFE Open Woods on the 11th of August 2022. The participants were employees of DNA, local project managers of LIFE Open Woods and AVJF. This was very fruitful and led to a production of four models for planting for biodiversity which will be include in the best practice catalogue.
- October 2022: LIFE Open Woods were represented on the LIFE Platform meeting, which took place in Klaipeda, Lithuania. LIFE Open Woods contributed with a presentation of the competence course on forest management for biodiversity purposes.
- November 2022: LIFE Open Woods participated in the first workshop, of more to come, in the INFOBIOM network on the 24th-25th of November 2022. INFOBIOM focuses on developing methods for biodiversity monitoring in forest ecosystems and is organized by NIBIO and includes NINA, LUKE, SYKE, SLU, University of Copenhagen, and University of Aarhus as partners.

Future networking activities:

In the coming year LIFE Open Woods will participate in The People's Festival of Nature 2023, where activities disseminating the management for hermit beetle will be held; LIFE Platform meeting in Finland; a workshop hosted by LIFE Open Woods on controlling unwanted species; and the Nature management conference 2023[22].

Milestone name	Deadline	Status	Expected activities until next Midterm
50% networking activities held	12/2024	Four large network activities took place in 2022.	4-6 networking activities planned for 2023.
1st workshop held	12/2025	Discussion on topic and participants	The discussion will continue.
2nd workshop held	12/2026	-	None foreseen
100% networking activities held	12/2027	-	None foreseen

Action E5 Dissemination to public and info materials	
Foreseen start date: 01-01-2020	Actual start date: 01-01-2020
Foreseen end date: 31-12-2027	Actual or anticipated end date: 31-12-2027

The aim of this action is to disseminate the project to the general public. The action is not progressing as foreseen due to some changes and delays caused by COVID-19. The main reason for the delays in this action is the restrictions following the pandemic, and a need for digital dissemination, which partly was realized because of the pandemic, however, the digital dissemination have other advantages as well such as reaching a larger part of the general public.

A general template for info boards have been designed. In 2023, there will be a process of designing signs for all the local project sites. Some sites are ready for setting up info boards in 2023. The info boards are

[22] The Nature Management Conference is hosted by FLC and focuses on management of the natural processes and dynamics. This year the following themes are discussed: Natural processes; restoration of light-open oak forests, restoring raised bogs.

especially relevant on sites with many visitors or where the LIFE Open Woods actions will be very visible, and thereby, creating a need for explaining and describing the activities.

It is proposed to revise the public excursions. This is because of the excursions being delayed due to COVID-19 and the situation of having several parallel large projects in the same project sites (LIFE Open Woods, Nature National Parks and Untouched forest). Public excursions have been held for Nature National Parks and Untouched forest pushing the possibilities of doing public excursions for LIFE Open Woods in the same areas as well. It could be relevant to postpone the public excursions to later in the project for an optimal dissemination when more conservation activities have been executed in all projects sites.

The leaflet in Danish and English were delayed. The Danish version were printed in April 2022, and the English one in December 2022. Due to COVID-19 there weren't relevant events to engage in during 2020 and 2021, and therefore the production of the leaflet were postponed as other LIFE Open Woods project tasks were prioritized instead. For example creating the video material. It was assessed that it was more important to finish the video material for publication, as this would be able to reach the public even in a pandemic situation. The German translation and publication has been delayed as well, and is not yet in hand. This was due to some central employees being on sick leave. This created a general internal delay for Stiftung Naturschutz. However, in December 2022, the work on the leaflet began and it is expected to be finished in May 2023. Therefore, it is proposed to move the deadline to May 2023.

The site specific leaflet is delayed. This was due to a delay in some of the conservation actions due to the political decisions described in chapter 5 page 12-13. It was assessed, that it was not yet clear, how the site specific leaflets should be made to disseminate the specific project sites in the best way. Therefore, it was assessed, that it is optimal to postpone the deadline. Therefore it is proposed to postpone the deadline until March 2025, where some of the hydrological projects and grazing projects are expected to be finished.

14 videos have been produced and they were published during 2021 and 2022 on YouTube. The objective of producing the movies is to ease digital dissemination of the project. The videos have been viewed 24,000 times in total. When the dissemination activities were being planned the COVID-19 pandemic came and disrupted the plans. It became clear that it would be beneficial for the project to have more digital dissemination products, and therefore this has formerly been proposed and approved by CINEA to disperse the budget for video production on creating several videos with different disseminations means. The videos are divided into themes: Introduction; Knowledge on natural forest systems; Competence development; and Species specific conservation. Some of the videos serves as an introduction and invitation into thinking in biodiversity forest management, others provide useful facts and knowledge within the field, and others again provide general info about the LIFE Open Woods specific activities such as the competence course developed. The videos are designed for multiple possibilities of use, so they can be used by the partners in different contexts. Two examples are that the DNA have used some of the videos for the public to understand natural forest development within the Nature National Parks, and that DEP in cooperation with Copenhagen ZOO will show some of the videos on The peoples' festival of Nature 2023 to disseminate to the general public and professionals. It will be useful in the future networking activities and further competence development to have these videos presenting the project and inspiring the public and professionals. In the following a list of the videos:

- LIFE Open Woods – introduction (release date: 3rd of March 2021)
- LIFE Open Woods – introduction in English (release date: 1st of March 2021)
- Open Woods: Mere lys og vand skal sikre biodiversiteten i Danmarks skove (release date: 27th of February 2020)
  (More light and water to ensure the biodiversity in the Danish forests)
- LIFE Open Woods // Sådan skaber vi bedre forudsætninger for biodiversiteten i skoven (release date: 27th of September 2022)

(How to create better preconditions for the forest biodiversity)

- Fremtidens skov // Sådan kan en urørt skov udvikle sig fra spire til genfødsel (release date: 16th of March 2022)
  (The future forests // How an untouched forest develops from sprout to rebirth)
- Skoven som økosystem // Græsning og vand giver dynamik, variation og plads til skovens biodiversitet (release date: 25th of October 2021)
  (The forest ecosystem // Grazing and water provide dynamics, variation and space for the forest biodiversity)
- Skovens strukturer // Fra produktionsskov til urørt skov (release date: 25th of October 2021)
  (The forest structure // From production forest to untouched forest)
- Skovens træer og arter // Større variation – mere plads, flere arter (release date: 25th of October 2021)
  (The trees and species of the forest // More variation, more space, more species)
- Eremit // Vores arbejde for at bevare de sjældne arter // LIFE Open Woods (release date: 27th of Sepember 2022)
  (The hermit beetle // Our work on conserving rare species)
- Bechsteins flagermus // Vores arbejde for at bevare de sjældne arter // LIFE Open Woods (release date: 27th of Sepember 2022)
  (The Bechstein bat // Our work on conserving rare species)
- Europes largest wild animal // The return of the European Bison in Denmark (release date: 3rd of September 2021)
- Kompetenceudvikling // Fra produktion til urørt skov // LIFE Open Woods (release date: 17th of August 2022)
  (Competence development // From production forest to untouched forest)
- Mere vildskab på CV'et (release date: 16th of August 2022)
  (A more wild resume)
- LIFE Open Woods – Det praktiske arbejde, Hald Inderø (release date: 1st of March 2021)
  (The practical work, Hald Inner Island)

Because of the scope of the usability of the video material it is proposed to upgrade the video material to a deliverable, which could be titled: Video material for digital dissemination. See app. X for the proposal.

The dissemination activities of the former project site DK-24 have been taken over by Copenhagen ZOO. DK-24 were to deliver 1 guided tour to DK-24 for app. 25 participants, and additionally disseminating information about the project in DK-24 where there are 200.000 visitors annually. This can be converted into Copenhagen ZOO creating a dissemination product and launch the product at The People's Festival of Nature 2023. Afterwards the dissemination product can be included in their general exhibitions and also act as a course in their school program. Approximately 1 million people visit Copenhagen ZOO each year, and the school program is popular and active in all the school breaks during the year. The People's Festival of Nature, where the dissemination product will be launched, is visited by approximately 30.000 people, whom are a mix of professionals and the general public. Therefore, it is assessed that Copenhagen ZOO by far can live up to the dissemination task of the former DK-24. Another valuable element of engaging Copenhagen ZOO in the LIFE Open Woods project is that they have a conservation program for native saproxylic beetles. The noble chafer (*Gnorimus nobilis*) is one of their focus species where they have conservation activities such as an ambulance service to conserve species if the habitats are suddenly wrecked a breeding program, and a targeted veteranization action for the species. The conservation of the noble chafer is much similar to the conservation of the hermit beetle that this project is focused on and there can be a potential future collaboration on the conservation activities for the hermit beetle.

Milestone name	Deadline	Status	Expected activities until next Midterm
50% public excursions held	12/2021	Delayed – due to COVID-19	This activity is proposed revised
Info boards installed in all the project sites	12/2024	A general template have been designed.	Planned to begin in 2023
Layman report printed	6/2027	-	None foreseen
100% public excursions held	6/2027	-	This activity is proposed revised

Deliverable	Deadline	New suggested deadline	Status	Expected activities until next Midterm
A general leaflet (DK: 2000 cop./ENG:1000cop.)	8/2020		Done.	
Flyer about project in German	12/2020	5/2023	In progress, however, delayed.	Planned to be finished and printed by May 2023.
Site specific leaflet (DK: 1000 cop.)	12/2021	12/2024	Delayed.	None foreseen
Layman report	6/2027		-	None foreseen
Flyer with project results in German	12/2027		-	None foreseen

F – Project management

Action F1 Project management	
Foreseen start date: 01-07-2019	Actual start date: 01-07-2019
Foreseen end date: 31-03-2028	Actual or anticipated end date: 31-03-2028

The aim of this action is to make strategic decisions concerning project implementation and resources, and have an overall control of the progress and approval of major changes and corrective actions in the project. The action is progressing as foreseen. On the 1st of October 2022, a new project manager was appointed. Maria Voigt Sonnichsen is the new project manager.

The Steering Committee has had three meetings

- The first on the 11th of November 2020
- The second on the 25th of March 2021
- The third on the 30th of March 2022

Meetings in project management group:

- The first on the 12th of May 2020
- The second the 29th of October 2020
- The third on the 1st of March 2021
- The fourth on the 12th of November 2021

The project has had three mission meetings with the project monitor. NEEMO/CINEA external monitoring visits:

- The first on the 28th of May 2020 (virtual)
- The second on the 14th-15th of April 2021 (virtual)
- The third on the 19th-20th of April 2022

The overall project manager has a close dialogue with the associated beneficiaries, and she supports them in clarification of technical or financial questions or issues.

Milestone name	Deadline	Status
Steering group organized	10/2019	Done
Project manager assigned and project manager group set up	10/2019	Done

Deliverable	Deadline	Status
Mid-term report	4/2023	On track
Mid-tem report	8/2025	-
Final report	3/2028	-

Action F2 Revision	
Foreseen start date: 01-07-2027	Actual start date: 01-07-2027
Foreseen end date: 31-03-2028	Actual or anticipated end date: 31-03-2028

The aim of this action is to ensure a certificate on the financial statements and accounts are produced.

DNA, DEP and AVJF all have requested payment as reimbursement of actual costs, and/or estimated budgets above the threshold. These partners will deliver a certificate on the financial statements and accounts. The audit reports will be completed after the end of the project and submitted together with the final report, to certify that all costs incurred respect national legislation and accounting rules as well as the General Conditions of the Model LIFE Grant Agreement.

Milestone name	Deadline	Status
Audit is started	1/2028	-

Deliverable	Deadline	Status
An audit report	2/2028	-

Action F3 After LIFE plan	
Foreseen start date: 01-07-2027	Actual start date: 01-07-2027
Foreseen end date: 31-03-2028	Actual or anticipated end date: 31-03-2028

The After-LIFE plan will describe how the long-term management, dissemination, replication and communication of the project will ensure the maintenance of the actions and the results carried out in the project and how they will continue after end of the project. Amphi Consult will coordinate the preparation of the plan with contribution from all other partners. The action secures production of obligatory project document: The After- LIFE Plan.

Deliverable	Deadline	Status
After LIFE Plan	3/2028	-

6.2 Main deviations, problems and corrective actions implemented

Some deviations of significance have occurred, however, there are no issues that are expected to affect the overall implementation of the project. Some delays have occurred. Some because of COVID-19 and some because of the political changes described in detail in chapter 5 pages 12-13. In the following the main issues and changes to the project will be elaborated.

A2 Application for permissions and implementation plans

Obtaining the permissions for C3, grazing and C4, hydrology have been delayed. This is due to the political decision of establishing the 15 NNPs and appointing large areas as untouched forest. There was some uncertainties on whether the applications for permissions needed to be pooled with the permissions for untouched forest projects, however, now it is clear that the LIFE Open Woods and the untouched forest project permission applications can run separately. The LIFE Open Woods project management are in close dialogue with the project management of the NNP and untouched forest projects to, at the best of our ability, prevent further complications of the three simultaneous and closely related projects.

A4 Revision of management and action plans

As clarified in chapter 6.1 pages 20-21 it will not be possible to deliver recommendations to the Natura 2000 management plans, as these have already been produced. Therefore, it is proposed to change the action A4 be removing the milestone on recommendations to the Natura 2000 plans and keep the recommendations to the Natura 2000 action plans. Se the proposal in app. III.

C3 Establishment of grazing and C4 Improvement of hydrological conditions

Due to the establishment of Nature National Parks some geographical changes will occur for C3 and C4. It has been assessed where to move the activities to, and new suitable sites have been found within the existing project areas. For further details on the Nature National Parks see chapter 5 pages 12-13.

C5 Increasing connectivity and promotion of oak rejuvenation

The action 'Increasing connectivity and promotion of oak rejuvenation' (C5) will be changed. The objective will include to reintroduce locally missing native seed sources of woody species. Furthermore, some planting models have been developed for C5.1. This has been elaborated in chapter 6.1 pages 31-32.

C7 Population management for hermit beetle

The original plan for DEP setting up mould boxes was 8 in DK-21, 25 in DK-22, and 10 in the former DK-24, in total 43 mould boxes. So far, 8 boxes have been established in DK-21, and 16 boxes in DK-22. Additional funding have been applied for to set up the remaining mould boxes at DK-22. It is proposed to convert the 10 boxes from DK-24 to doing a special veteranization activity targeting the hermit beetle on 10 trees in DK-23, as this private owner don't want the wood mould moxes, however agrees to having trees veteranized. The special veteranization activity is inspired by similar activities in Allindelille Fredskov in Denmark and activities in Sweden for saproxylic beetles.

D2 Ecosystem services and socio-economic surveys

There have been a delay in the baseline monitoring of ecosystem services and socio-economic surveys. This was due to cancellation of a methods course that the former project manager was planning to attend to be able to do the baseline surveys in corporation with a consultant. The course should have taken place in the end of 2021, however, the course that the former project manager should have taken to be prepared for doing this was unfortunately cancelled. Furthermore, there was a change in the project management and a new project manager took over from October 2022. Because of these reasons, this milestone has been delayed, and there is a need for revising this action, which have been proposed.

E5 Dissemination to public and info materials

The public excursions were delayed due to COVID-19 and a heavy load of public excursions in the DNA sites due to the appointment of Nature National Parks and untouched forest. See chapter 5 pages 31-32 for further elaboration.

F1 Change in the Project management

By the 1st of October 2022 a new project manager took over for the former project manager Steffen Michael Thomsen. The new project manager is Maria Voigt Sonnichsen. This was announced to CINEA by Maria Voigt Sonnichsen the 10th of October 2022. Maria Voigt Sonnichsen is also the project contact person, which was announced to CINEA by the coordinating beneficiary and legal representative represented by Signe Nepper Larsen on the 24th of February 2023.

6.3 Evaluation of Project Implementation

The overall progress of the project implementation is going according to the plan, however, there have been two matters that have caused some severe delays to the project. These are the COVID-19 and the implementation activities of the politically decided Nature National Parks and extension of Untouched Forest sites which are formerly described in this report.

6.3.1 Methodology

It is too soon to discuss the methodology of the project, as there are not yet any relevant indications collected in the project on the efficiency of the implemented actions.

6.3.2 Actual results compared to objectives and expected results

Action sub components completed	Foreseen in the revised proposal	Achieved	Evaluation
A1 sub components Best practice methods catalogue Best practice methods catalogue distributed among partners	**Action objectives**: Standardization of implementation of C-actions and give common understanding of the methods to be implemented in the project among the project actors. **Action expected results:** Best practice will be consolidated from relevant projects and publications.	The best practice methods catalogue is distributed among project partners. Furthermore, it is available online to meet the general interest in the matter from municipalities and private entrepreneurs and landowners	The best practice methods catalogue meets the goals and expected results. Because of the general awareness in the field regarding forest management for biodiversity purposes the catalogue will come in a second edition based on the ongoing project knowledge sharing.
C2 sub components Clearing of the area of alien species 1st time completed	**Action objectives**: The N2000 management plan prescribes, that the bush shall be combated, to prevent from becoming dominant in the forest habitats **Action expected results**: No regrowth	The first clearing was achieved successfully.	The first clearing was achieved successfully. It is not yet possible to evaluate on regrowth.
C3 sub components European bisons introduced in DK-19	**Action objectives**: It is expected by University of Copenhagen that bison can promote biodiversity thanks to supplementing existing wild grazers.	The European bisons were introduced in 2021, and currently the herd contains 20 animals.	It is too early to evaluate for this activity in a useful way.
C7 sub components 50 % of the nesting boxes put up	**Action objectives**: Supporting of existing populations of hermit beetle **Action expected results**: 83 mould boxes set up in Denmark and Germany	Currently 63 (76 %) mould boxes are established.	It is too early to evaluate for this activity in a useful way.

D1 sub components Baseline report Basic monitoring for targeted habitat types and species completed Formulation of quantitative goals for improvement of conservation status of the targeted habitats and species – a strategy	**Action objectives**: Monitoring the impact of the project on the forest habitat types. **Action expected results**: To successfully monitor target habitats and activities (C1-C7) in Denmark.	The baseline monitoring for targeted habitat types and species and the baseline report were carried out successfully. The monitoring strategy has been carried out successfully.	The baseline monitoring for targeted habitat types and species and the baseline report were carried out successfully. The monitoring strategy has been carried out successfully.
D3 sub components Before project surveys and analysis completed	**Action objectives**: Reporting on the outputs and impact of the project taking into account the LIFE Key project level indicators. These indicators will contribute to evaluating the impact of the LIFE project.	The key project level indicators were chosen and filled into the KPI-database successfully.[23]	The key project level indicators were chosen and filled into the KPI-database successfully.
E1 sub components 1st Private Owners Network meeting organized 1st of study tour organized	**Action objectives**: Establish Private Owners Network (POW) to facilitate uptake of compensation schemes on biodiversity in forests and increase willingness to make agreements to secure core habitats for hermit beetle for the future editions of the N2000 action plans. Network will help DEP to prepare recommendations for improvement of existing compensation schemes to lower barriers in their uptake.	The first meeting took place the 16th of November 2020. The first study tour was held the 16th of June 2021 at the project site DK-21, focusing on the biology of the hermit beetle and the best practice catalog.	The first study tour: 10 participants. A framework for principles of the network was outlined
E2 sub components 1st course held 2nd course held 3rd course held	**Action objectives**: Developing courses on forest management for biodiversity purposes to increase knowledge in the public and private sector, and to qualify future	The 3 courses were carried out as one big course. The objective of this was to obtain the synergies of having forest managers and forest workers together in the courses.	The participation was successful, and more employees than expected participated in the course.

[23] Based on the forthcoming revision of D2, changes might be necessary in the KPI database.

	education programs on this topic. **Action expected results**: Participation: 35-45 forest managers, 25-30 forest technicians, 35 machine operators and contractors.	Participants: Module 1 Forest managers: 62 Forest workers: 36 Module 2 Forest managers: 56 Forest workers: 36 Module 3 Forest managers: 66 Forest workers: 47 Module 4 Forest managers: 53 Forest workers: 32	
E5 sub components Video material Leaflets in English and Danish Roll ups and beach flags	**Action objectives**: Disseminating the project targeted at the general public. **Action expected results**: No expected results on the video material as this is not in the grant agreement, but is afterwards agreed.	14 videos were produced and published in the period 2020 to 2022. The leaflets were designed and printed in Danish in April 2022 and in English in December 2022. Beach flags and roll ups were produced in April 2021.	Within the period of February 2020 – September 2022 the videos have been viewed on average 1715 times each. The most exposed video had more than 6700 views. Besides enabling digital dissemination the video material supports the networking activities (E4). The leaflets support the dissemination activities (E) in general. The roll ups and beach flags support the dissemination activities (E) in general.
F1 sub components Steering group organized Project manager assigned and project manager group set up	**Action objectives**: to steer and manage the project towards success. **Action expected results**: Steering group meetings follow the schedule for reporting, PMG will meet once a year or when necessary.	The steering committee meets annually and have met three times (2020, 2021, and 2022) and the fourth meeting is planned in March 2023. The PMG meets whenever necessary and so far, four meetings have been conducted. The PMG group meets on the annual mission meetings as well, and	It is beneficial to have annual meetings in the steering committee to ensure the overall project progress. For the Project management group the procedure of meeting when necessary will be continued.

		therefore no further meetings were conducted in 2022 and aren't planned for 2023, as the PMG will meet on the forthcoming mission meeting in March 2023.	

6.3.3 Visibility of results and 6.3.4 Effectiveness of dissemination

Some of the achieved results so far have immediate visibility. Here the results with immediate visibility are listed in a prioritized order from most efficient visibility to least.

1. E5 Dissemination videos
   Within the period of February 2020 – September 2022 the videos have each been viewed on average 1715 times. The most exposed video had more than 6,700 views. Furthermore, the videos have been used by the partners in related contexts, for example by DNA to disseminate knowledge on forest systems in the context of public meetings related to the Nature National Parks and the new untouched forest sites.

2. E2 Education program
   The education program have been presented on network activities and conferences such as the LIFE platform meeting 2022, and is scheduled on the Danish Nature Management conference 2023 at FLC.

3. C3 European bison in DK-19
   The European Bisons have been visited many times by professionals and by the public on guided tours. The visitors' center at Lille Vildmose also contains dissemination information on the European bisons and has approximately 150.000 annual visitors. Furthermore, it has been disseminated on the social media by the AVJF nature fund and by the Lille Vildmose visitors' center.

4. C7 The mould boxes in DK-21, DK-22, and DE-1
   The mould boxes have been set up in three sites in Denmark and Germany as planned and are visible for the general public, information boards have been set up on the boxes in Denmark.

5. E4 Networking and workshops
   The project have been represented on various networking activities see chapter 6.1 pages 43-44 for further details.

6. A1 Best practice methods catalogue
   The best practice methods catalogue has been distributed to project partners and when external relations have asked for it (such as actors in the Danish municipalities and private sector). Furthermore, it is available as a PDF online.

7. E5 The dissemination leaflets and roll ups
   The leaflets and the roll ups have been brought to the different networking arrangements the project have participated in so far.

A drawback in the dissemination activities is that the public excursions were delayed due to COVID-19, and many activities going on in the same sites by the NNP and untouched forest projects. For more details, see chapter 6.1 page 45.

6.3.5 Policy impact

LIFE Open Woods have provided best practice on a new field within Danish forest management. This have supported and eased the DNAs ongoing implementation processes of the political decisions on the projects NNPs and Untouched Forests formerly described in pages 12-13. The LIFE Open Woods project application were in the making in 2015, and the project were first supposed to begin in 2016, however this was postponed, and the project began in 2019. Back then, the project was representing some new thoughts in the Danish forest management. During the years from 2020 and until now, there have been a growing focus, interest and awareness on the topic of biodiversity in forest both politically and in the general public. LIFE Open Woods supports this development by providing best practice knowledge. The competence course was the first university level course made in Denmark targeting specifically practical actions and means for forest management for biodiversity. In 2023 replications and similar courses will be held in Denmark by for instance DNA and the Danish Forest association.[24]

The policy implementations of NNPs and untouched forest have affected this project as well. To some extend the project context has changed due to these. The project context has become more complex in the matter of project locations and the legal work of applying for permissions. On the other hand, the implementations of NNPs and untouched forest have increased the awareness of forest management for biodiversity purposes within the DNA institution, and in the general public, which all in all is considered positive for the project.

In conclusion the project has had a positive effect on the Danish nature policy, and the coinciding projects of LIFE Open Woods, NNP and untouched forest is all in all positive despite some logistically complications regarding project sites and applying for permissions.

[24] An association for private forest owners in Denmark

6.4 Analysis of benefits

6.4.1 Environmental benefits

All the C1-C7 activities executed until now and in the future are within targeted Natura 2000 areas. In that way the activities are contributing to improvements in conservation status of the natural habitat types and the species, although this may not yet be measureable. It has been discussed with the DNA employee controlling the projects monitoring program, and thus far, it is too soon to appoint certain trends.

6.4.2 Economic benefits

The competence courses developed in corporation with the Forest and Landscape College create a basis for a market of biodiversity forest management that are currently expanding in Denmark.

There is a growing demand for knowledge and tools for managing forests for biodiversity purposes. The demand has rapidly grown in the public sector. Especially with the political environment the most recent years where more assets have been set aside for biodiversity purposes.[25]

The demand for competences within forest management for biodiversity is also present in the private sector, and is slowly growing. For instance, a competence course, much similar to the LIFE Open Woods course, has been developed by the Danish association of private forests and will run in Denmark in May and June 2023. Furthermore, the same actor plans a meeting debating biodiversity as a new business mean. Other actors in the private sector are developing tools specifically made for veteranization. Danish municipalities are asking for courses in forest management for biodiversity purposes, and have directly contacted the LIFE Open Woods project management several times. The project management is following this trend thoroughly in media and by participating in relevant meetings.

6.4.3 Social benefits

Training of forest personnel, changing the work assignments within forestry from traditional timber production towards conservation actions for enhancing forest biodiversity provides a social benefit, as employees participating in the retraining will be more robust in a field were the work tasks are changing. In 2022, the DNA management committee published and promoted a new vision for the DNA with a main focus on biodiversity and recreation. The LIFE Open Woods competence course is a facilitator of a successful implementation of the vision by training the employees in new work tasks within management for biodiversity.

Furthermore, dissemination initiatives will be taken to improve public knowledge, awareness and positive connotation of biodiversity and ‘wild’ nature. This will also promote the Natura 2000 network in general.

6.4.4 Replicability, transferability, cooperation

The project products are developed with replicability and transferability in mind. The competence course is replicable, the best practice catalogue mediates replication, and the work with editing the best practice catalogue by the project participants mediates replication in similar projects. The following project products mediate direct replication and transferability:

- The best practice methods catalogue
- The competence course
- The strategy for monitoring the quantitative goals for improvement of conservation status

Given the material produced in the project, and planned to be further developed as the project comes along the replicability and transferability of the project are estimated as high. Based on the interest in the project

[25] A political agreement in 2020 stating that 120 million EUR were earmarked for improving the Danish biodiversity in the period 2021-2024, thus financing the Nature National Parks and expansion of untouched forest.

nationally and internationally the likelihood of replication is also high. In 2022, a focus on revisiting the best practice methods began by facilitating internal project workshops. Hereby, the cooperation within the project will be strengthened in the future. There will be a future focus on following the demand in the private sector, and potentially disseminate the project knowledge and best practice further. In 2023, the DNA will do a replicate course for the employees who did not attend the LIFE Open Woods competence course. Also taking place in 2023, the Danish Forest Association have made a similar two-day course, with the same themes and some of the same academic professors teaching. Furthermore, the knowledge and experiences collected in the project is directly used in DNAs projects with the NNPs and untouched forest. For instance, the DNA have defined, that their network focused on forest management should incorporate the knowledge of LIFE Open Woods and act as a standard bearer when the project period has ended.

6.4.5 Best Practice lessons

The methods used in the concrete conservation actions are in general implemented as expected. Some methodological development have been made within parts of C5 – enrichment plantings. Furthermore, it is expected that there will be some development within the action C2 – removal of alien species as a session of workshop and methods development is planned for in the second half of 2023.

6.4.6 Innovation and demonstration value

So far, the actions C1, C2.1, C3 (only the introduction of the European Bison), C6, and C7 are done in some project sites to a level of demonstration character. The project is testing and implementing a new way of managing forests and thereby the project has a high level of innovation. Furthermore, developing the competence course and the following demand communicated to the project management, and some experiments within the monitoring program on transplanting the lichen Tree lungwort (*Lobaria pulmonaria)* show the high level of innovation within the project. As a compensation of DK-24 leaving the project a cooperation with Copenhagen ZOO have been established on disseminating the management activities on conserving the hermit beetle. Copenhagen ZOO have skills within conserving populations of the saproxylic beetle the noble chafer (*Gnorimus nobilis)*. As the hermit beetle and the noble chafer are both scarab beetles, this cooperation could lead to future synergies on the conservation of the hermit beetle.

6.4.7 Policy implications

The competence course and the first edition of the best practice methods catalogue have supported the DNA in the work of planning for and implementing the politically decided 15 new Nature National Parks and in total 75.000 ha of Untouched Forest. The management of especially LIFE Open Woods and Untouched Forest are using similar methods and activities. There is also an overlap of methods and activities between LIFE Open Woods and Nature National Parks. The political decisions on NNP and untouched forest is elaborated in chapter 5 pages 12-13.

7. Key project-level indicators

The Key Project-level Indicator (KPI) targets have been included into the KPI database webtool at the early stage of the project. Currently there are no additions or changes to this. The KPI will be updated at the final report stage.

8 Comments on the financial report

8.1 Summary of Costs Incurred

The table below shows the project's aggregated consumption distributed by cost categories. The consumption within each cost category aligns well with the overall progress of the project. Regarding the cost category Personnel, the aggregated budget consumption is 34 %, which is considered appropriate in relation to the reporting period, which covers approximately 40 % of the total project period.

Regarding the cost category travel, consumption has been significantly lower than expected, in relation to the stage of the project. The main reason for this has been the COVID-19 shutdown from March 2020 to February 2022, where the opportunities to gather in larger groups for workshops, networking etc. have been extremely limited.

Correspondingly, the overall level of activity in the project has been negatively affected by the COVID-19 pandemic, which is evident from the realized consumption for the rest of the cost categories, as is also apparent from the action-wise review in chapter 6.1.

Overall, there is an appropriate balance between the project's technical and financial progress.

PROJECT COSTS INCURRED			
Cost category	Budget according to the grant agreement in €*	Costs incurred within the reporting period in €	%**
1. Personnel	2.203.634	742.051	34 %
2. Travel and subsistence	189.012	22.095	12 %
3. External assistance	2.974.567	696.423	23 %
4. Durables goods: total non-depreciated cost	-	-	-
a. - *Infrastructure sub-tot.*	-	-	-
b. - *Equipment sub-tot.*	167.579	27.586	16 %
c. - *Prototype sub-tot.*			
6. Consumables	603.037	148.759	25 %
7. Other costs	129.193	6.889	5 %
8. Overheads	438.688	115.064	26 %
TOTAL	**6.705.710**	**1.758.867**	26 %

8.2 Accounting system

DNA and DEP

The two Agencies make use of – more or less – the same coherent accountancy. All internal appropriations, budgets and accounts are kept in one system. This system also holds information about each employee's time

registration. This means that all financial reporting materials are stored in one system, with easy access to extract the information again.

Amphi, AVJF, FLC and SN

These partners are using different accountancy. All systems work though more or less the same way and are based on the same principles. All project relevant information is combined in one system and is easily extracted to be used in the financial reporting.

Project account

DNA and DEP

Each LIFE-Nature project has one or more accounts, depending on the complexity of the project, to hold the financial information. Each local-unit in the Agencies participating in a LIFE-Nature project has a specific account-number to hold internal appropriations, budgets and accounts, relevant for the actions this local unit is involved in. The local unit participating in a LIFE-Nature-project will get an internal appropriation in the beginning of the project, based on a budget regarding the actions the local-unit must complete. These project accounts are balanced each year.

Partner	Account no:	Account Text
DNA:	640700	LIFE-OpenWoods - Forbrug NST:
DEP:	222603	TFA/LIF/ LIFE Nat/DK/000747 - LIFE Open Woods

Amphi, AVJF, FLC and SN

Each partner has set up an account-number system reflecting the actions the partner are involved in. The accounts are typical build in a hierarchical way and the basis numbers are unique for the LIFE-project, which is also reflected in the account text.

Partner	Account no:	Account Text
Amphi	747	OpenWoods LIFE 18 NAT/DK/000747
AVJF.:	21190	LIFE Openwoods
FLC	118541- 50507200	LIFE Open Woods
SN:	T20035	LIFE Open Woods

All partners

The following practice applies to all partners. All invoices undergo a control procedure before they are sent for accounting registration. When the invoice is received in the digital invoice handling system, the person who ordered the commodity accepts the invoice, and verifies that the invoice complies with the specification of the contract, including a clear reference to the LIFE-project. If something is missing, the requestor rejects the invoice, which is then returned to the supplier for modification.

After the requestor has accepted the invoice and made some initial registrations, the invoice is forwarded to an accountant for additional registrations. Finally, payment of the invoice is approved by the head of office or someone authorized to do so.

That means that all invoices are approved by a minimum of two authorized persons.

DNA and DEP

All officials make time registration into an electronic system on a daily basis . All project relevant activities are marked with project and action specific numbers. Each month the employee accepts and locks the time registration, after which the registration is approved by the head of the Unit.

Forest workers complete their time registration also on a daily basis, typically on a sheet of paper, or into an Excell-sheet covering one month. As is the case for the officials, the forest worker also marks their time registrations with project relevant ID's and action specific numbers. The employee and the personnel manager sign the timesheets immediately after the end of the month. The manual registrations are subsequently entered into the same electronic time registration system that the officials use.

All time registration, both for the officials and for the forest workers is then accessible in the accountancy.

Statistical information based on the employee's information in the timesheet database is composed every year. The "yearly-statistic" is the foundation when calculating the annual working time. The annual working time is calculated on an individual basis for every employee.

The total time registered is then reduced with the non-productive time.

Amphi and SN

These partners use the standard time registration sheet, supplied by EASME. The Excell-sheet is modified to better serve the needs of the project. The time-registration is made on a daily basis, completed and signed by the employee and personnel manager within a period of 10 days after the end of the registration-period.

The annual working time is calculated on basis of the Excell time-registration sheets. I order to do so, the employee must prepare Excell time-registration sheets for all months, January to December, also for months the person has not been working on LIFE-Openwoods. The annual working time is calculated on an individual basis for every employee.

AVJF and FLC

Project staff from these two partners have a limited number of working hours (less than 15 hours in average per month) on the LIFE-Openwoods project. Project staff make an extensive/reduced time registration. They just record time spent on the project, assigned to a specific project action, on a monthly base. This is carried out so that the project management team can continuously monitor the action-wise consumption, including the consumption for personnel costs.

The annual working time for these employees will be the standard 1.720 hours per year.

Invoices are generally marked with a clear reference to LIFE-Openwoods. In some rare occasions, when this is not possible, other documentation is attached to the invoice, that clearly certify project relevance.

If a purchase or service is provided via a tender, it is always explicitly stated in the signed agreement that all invoices must be provided with a unique reference to LIFE-Openwoods.

All partners

Calculation of the annual gross salary is based on the actual cost for each individual employee. The monthly salary slip for the employee is used as a clear reference to the different elements included in the salary. The salary slip specifies which wage-components the salary is composed of.

Included in the Financial Reports (Excell-file) you will find a sheet, detailing the calculation of the annual gross salary (***BruttoLon***).

The majority of the annual salary consists of regular wage, including different merit awards etc. In the Financial Report (***BruttoLon***) this element is mentioned as "SumEgentligLoen" (salary).

Some wage-elements included in the accumulated annual salary for some employees, are considered not eligible, and are therefore again deducted from the total salary, these include:

- Bonuses,
- "Taxation-Technical"-benefits - Company payed benefits, which the employee must pay tax on i.e. telephone, company paid car.
- Allowance to maintain an office at home

These wage-elements are listed in the Financial Report as "SumFradrag" (deduction).

Included in the annual gross salary is "wage earners' supplementary pension" (ATP). The employee pays 1/3 of this, which is included in the salary, and the employer pays 2/3. The employer contribution element is included as "SumStatsATP".

Also included in the annual gross salary is Pension ("SumPension").

The social charges schemes are obligatory/compulsory for all employees except some trainees/apprentices. The schemes consist of the different components in the column 'AUBmm' and the column 'FLEX og Barsel':

- Aub (Arbejdsgiverens Uddannelsesbidrag) a financial support scheme mainly for trainees
- Aes (Arbejdsmarkets Erhvervssygsomssikring) A labour market fund for occupational diseases.

- Fleksbidrag: A financial support scheme, for getting unemployed persons back on the labour market.
- Barselsfonden : A financial support scheme so employers can receive reimbursement for part of the salary of employees who are on maternity leave.

It is compulsory to take part in/pay to these support-schemes. But not all partners have chosen to claim social charges, consequently these cost are ***not*** included in the annual gross salary.

Relationship between the two sheets ***Personnel_EMPLOYEES*** and ***BruttoLon***

In the sheet ***Personnel_EMPLOYEES*** the following columns appear, all amounts in these cells are imported from the ***BruttoLon***-sheet

- The column 'E1 – Annual gross salary' corresponds to *Bruttoløn (Løn + Pension)*
- The column 'E2 – Annual obligatory social charges' corresponds to *Social Charges*.
- The column 'E3 – Justification on other eligible statutory – is not relevant for any partner in this project.

8.3 Partnership arrangements

Financial transactions between the coordinating beneficiary and the associated beneficiaries are specified in the partnership agreement. The payment scheme between the coordination beneficiary and the associated beneficiary is based on the actual realised spending by the associated beneficiary. The payment is made once a year per April 1st the following year, after approval of the annual financial report by the Financial Manager. The pre-financing payment for 2019/2020 was made in 2021 and the pre-financing payment for 2021 was made in 2022. The pre-financing payment for 2022 will be made after CINEA's approval of this Interim Report.

The coordinating beneficiary has established a common data sharing platform called "Filkassen". Each partner uploads updated Financial Reports and supporting documents every 3 months. During the month following the upload, the Financial manager makes a quality assurance of the financial reports and the supporting documentation.

Based on these quarterly updated and uploaded financial reports, the financial manager prepare a consolidated financial report and cost statement.

8.4 Certificate on the financial statement

According to ***2018_annex_x_financial_administrative_guidelines*** the following thresholds are applicable for Life-Openwoods, with respect to which beneficiary must deliver a certificate on the financial statements and accounts.

For each beneficiary and for each affiliated entity, if:

(i) the cumulative amount of payments the beneficiary requests as reimbursement of actual costs is EUR 325 000 or more;
(ii) the maximum grant amount indicated for that beneficiary and its affiliated entities in the estimated budget as reimbursement of actual costs is EUR 750 000 or more.

In the table below, budget for total costs, EU-contribution and own contribution for each beneficiary is listed.

Beneficiary short name	Total costs of actions in € (including overheads)	Amount of EU contribution requested in €	Beneficiary's own contribution in €	Audit Report
DNA	***4.045.055***	***2.318.070***	1.726.985	***YES***
AVJF	***1.284.902***	***613.761***	671.141	***YES***
DEP	578.470	***551.625***	26.845	***YES***
SN	504.179	302.508	201.671	***NO***
AMPHI	209.057	187.034	22.023	***NO***
FLC	84.047	50.428	33.619	***NO***
In Total	6.705.710	4.023.426	2.682.284	

DNA, AVJF and DEP have all requested EU-contribution above the threshold value of 325.000 EURO. In addition, DNA and AVJF have estimated budget of total cost well above the threshold value of 750.000 EURO.
DNA, AVJF and DEP will deliver audit reports. These will be completed after the end of the project and submitted together with the final report, to certify that all costs incurred respect national legislation and accounting rules as well as the General Conditions of the Model LIFE Grant Agreement.

Certificates on the financial statements are not relevant for LIFE18 NAT/DK/000747 - Open Woods at interim stage.

8.5 Estimation of person-days used per action

The table below shows how the time registration of the staff are distributed to the overall action types. In general, there is good alignment between the consumption of person days spent 31% and the corresponding realized personal cost 34% cf., the table first in this section.

Action type	Budgeted person-days	Estimated % of person-days spent
All projects when applicable Action A: Preparatory actions	510	51%
NAT and CLIMA projects Action B: Purchase/lease of land and/or compensation payment for payment rights	0	
NAT projects Action C – Concrete conservation actions	1.450	21%
NAT and CLIMA projects Action D: Monitoring and impact assessment	506	25%
NAT and CLIMA projects Action E: Communication and Dissemination of results	1.161	34%
NAT and CLIMA projects Action F: Project management (and progress)	2.650	33%
TOTAL	**6.277**	**31%**

A-Action ***Prepatory actions*** reveal, quite naturally, the greatest relative consumption. More than half of the budgeted hours have been used til now. A number of initiatives are still pending. It is expected that these will be able to be implemented without significant budgetary challenges.

B-Actions. ***Purchase/lease of land and/or compensation payment for payment rights***. Not relevant for LIFE-Openwoods

C-Actions. ***Concrete conservation actions***: A number of project activities have been postponed/delayed due to the implementation of political initiatives regarding NNP and untouched forests. There is now so much clarity about the ongoing process regarding the NNP and untouched forest projects that the project secretariat is optimistic about implementing the action plan for LIFE-Openwoods.

Action D: ***Monitoring and impact assessment***: Activities in relation to monitoring of impact on habitats and species and Key Project Level Indicators (KPI), are on track, whereas the work with Ecosystem services and socio-economic surveys is significantly delayed. We expect that this work will have a special focus in the coming period. The activity plan is expected to be implemented without significant adjustments.

Action E: ***Communication and Dissemination of results***: Activities are implemented as expected and according to the existing schedule. However, the amount of the public tours have so far been limited, but this will be upgraded in the coming period. The activity plan is expected to be implemented without significant adjustments.

Action F: ***Project management (and progress)***: The consumption of time for Project management fits well with the established budgets. The activity plan is expected to be implemented without significant adjustments.

Additional information on the financial reporting

Financial Issue 3 – procurement and purchase of the fence on site DK-19 Tofte Skov

Please refer to appendix XII for a more thorough explanation of the case.

In CINEA's letter Ref. Ares(2022)4034514 of 31st of May 2022 – a financial issue (no. 3) was raised. The issue concerns the procedure involved in the procurement and purchase of the fence on site DK-19 Tofte Skov and whether this has been in line with the General Conditions article II.10 requiring an open tendering process including a publication of the call for tenders in relevant media.

Aage V. Jensen Naturfond invited only three contractors to tender for the fencing project but should have used an open tendering procedure since the project exceeded the threshold of EUR 135,000 with EUR 3,000. Arguments for not using an open tendering process are:

- There was very limited time available to construct the fence and release pen before the European Bisons should be moved to Tofte Skov
- Adverse winter conditions were likely to cause delays
- Aage V. Jensen Naturfond, local municipalities and the Nature Agency had previous experiences with similar fencing projects in the area and two of the three contractors invited to tender for the contract had previously been selected for these
- It was estimated that the cost of the project would be very close to but not above the amount limit of EUR 135,000

Recovering VAT:

AVJF and SN cannot recover VAT, which is reflected in the financial reporting for the two partners. The required VAT-statements will be included in the Final Report.

AVJF – Bison donation

The present herd of wisents consists of 20 animals of which 2 came from Randers Regnskov Zoo, 7 from the Netherlands and 5 from Knuthenborg Estate and 6 calves have been born while the animals have been in Tofte/Høstemark forests. All animals have been given to the project free of cost apart from transportation and veterinary costs.

After the release of the animals considerable costs related to additional feeding in winter and veterinarian control that were not foreseen have been incurred. It is foreseen that there will be further costs like these in the remaining project period. It is expected that the budget for purchase of 9 pcs. European bison, EURO 67.114 (cost category 4.b Equipment), will be spent on veterinarian costs, supplementary feeding and increased surveillance and monitoring of the wisents, if this is acceptable for CINEA.

Monitoring and surveillance of the wisents is considered a very important part of the project since it is part of gaining sufficient experience with management of wisents as a way to secure more biodiversity. Wisents are currently being introduced to a number of natural areas in many parts of Europe and the Herd in Tofte Skov can generate useful information on their requirements, effect on the vegetation, diseases etc. For this purpose AVJF is also working closely with Copenhagen and Aarhus Universities to study changes in vegetation in Tofte Skov as a parallel activity. Data from the GPS-collars of the wisents are important in this work.

DEP – Chance of budget – landowner compensation

DEP has had recurring challenges in getting appropriate operating agreements with the private lot owner of DK-23, in light of securing existing and potential habitats for the hermit beetle. As described in section ??, DEP appears to be able to enter into an agreement with the landowner for compensation to take a number of old oak trees out of operation and allow these to become permanent habitat for the hermit beetle.

In connection with the monitor meeting in 2022, this possibility was discussed, and CINEA has in a letter[26] accepted that a total budget for landowner compensation of 32,000 EURO was acceptable.

As stated in page 28 DEP wish for CINEA to approve that this budget item is increased to 52,000 EURO. The budget change will be provided via redistribution between actions on DK-23 and activities that were originally intended for DK-24.

[26] On the 31st of May 2022 the project received the following letter from CINEA, The European Commission, LIFE18 NAT DK 000747 MISMC3LET 220511

9 Envisaged progress until next report

	Year	2019		2020				2021				2022				2023				2024				2025				2026				2027				2028
	Quarter	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1
Overall project schedule		Start date 01-09-2019														Midterm I 31-03-2023									Midterm II 31-08-2025											End date 31-12-2027	
A1 Adaptation of best practice	Proposed																		●																	
	Expected																		♦																	
A2 Application for permissions and implementation plans	Proposed														●																					
	Expected																										♦									
A3 Management agreements and applications for compensation schemes	Proposed														●																					
	Expected																																			
A4 Revision of management and action plans	Proposed																●																			
	Expected																				♦															
C1 Creation of decaying wood habitats	Proposed																											●								
	Expected																											♦								
C2 Open woods - increasing structural diversity and control of alien species	Proposed																														●					
	Expected																														♦					
C3 Establishment of grazing	Proposed																											●								
	Expected																														♦					
C4 Improvement of hydrological conditions	Proposed																												●							
	Expected																														♦					
C5 Increasing connectivity and promotion of oak rejuvenation	Proposed																								●											
	Expected																								♦											
C6 Tree management for public safety	Proposed																												●							
	Expected																												♦							
C7 Population management for hermit beetle	Proposed																							●												
	Expected																							♦												
D1 Monitoring of impact on habitats and species	Proposed																																●			
	Expected																																♦			
D2 Ecosystem services and socio-economic surveys	Proposed																																●			
	Expected																																♦			
D3 Key Project Level Indicators (KPI)	Proposed																																●			
	Expected																																♦			
E1 Involvement of forest managers and private forest owners	Proposed																																●			
	Expected																																♦			
E2 Competence development on forest management for habitats, species and biodiversity	Proposed																		●																	
	Expected												♦																								
E4 Capacity building for partners and networking with other LIFE and non LIFE projects	Proposed																																●			
	Expected																																♦			
E5 Dissemination to public and info materials	Proposed																																●			
	Expected																																♦			
F1 Project management	Proposed																																			●
	Expected																																			♦
F2 Revision	Proposed																																			●
	Expected																																			♦
F3 After LIFE plan	Proposed																																			●
	Expected																																			♦

Appendix I: Letters from CINEA, the EU Commission, answering issues raised on the Mission meetings

On the 24th of June 2020 the project received the following letter from CINEA, The European Commission, LIFE18 NAT DK 000747 MISMC1LET 200617

This contained four technical issues, and two financial issues. These have been taken care of prior to the midterm report.

On the 18th of August 2021 the project received the following letter from CINEA, The European Commission, LIFE18 NAT DK 000747 MISMC2LET 210505_FINAL 2089217_1_1

This contained 10 technical issues. These have been taken care of prior to the midterm report.

On the 31st of May 2022 the project received the following letter from CINEA, The European Commission, LIFE18 NAT DK 000747 MISMC3LET 220511

This contained 11 technical issues, and two answers to former technical issues, and one financial issue.

Of these issues 16, 17, 20, 21, 24, 27, 10 have been answered in this midterm. In the following is given a short description on, how the issues are handled in the project.

Issue 16: The project was asked to keep CINEA and the project monitor updated on the status of the Nature National Parks. The project monitor was updated on this at the mission meeting 2023, and CINEA and the project monitor will be updated on the process of Nature National Parks in the midterm report.

Issue 17: The project management was asked to report for C-actions on action and site level. This have been done during the mission meeting 2023, and in the midterm report.

Issue 20: The challenges at site DK-23 Sorø and the related changes should be clearly reported in the midtem, which has been done.

Issue 21: The deliverable, *Recommendations to the management plans of 27 Danish Natura 2000 sites,* was rejected and a resubmission was needed.

Issue 24: The deliverable, *A strategy for formulation of quantitative goals for improvement of conservation status of the targeted habitats and species both during and after the project,* was rejected and a resubmission was needed. This is done with the midterm report.

Issue 27: The *Danish Environmental Protection Agency (DEP), Storstøm,* changed name to *Danish Environmental Protection Agency (DEP), Sjælland*. Therefore, an amendment was needed. This was granted by CINEA on the 23rd of March 2023.

Issue 10 (2021): Copenhagen ZOO took over the dissemination activities for site DK-24. It was emphazised to report on this in the midterm, which have been done. In appendix XI the task description is seen.

Appendix II: A1 Preliminary program for the study tour to Southern Sweden visiting LIFE Bridging the Gap among other LIFE projects

Date	Time	Place	Details
4/9 2023 **Monday**	The program begins app. 15.00 (therefore, transport to Naturum Tåkern before then)	Naturum Tåkern	Introduction to the study tour, & visited LIFE projects (LIFE Bridging the Gap & LIFE RestoRED) https://www.naturumtakern.se/ *Possibility of seeing the exhibition & the area. Transfer to Linköping*
5-6/9 2023 **Tuesday and Wednesday**	Whole days	Different sites from LIFE Bridging the Gap (BTG) and LIFE RestoRED in Östergötland	Topics: 1. Evaluation of veteranization and halo clearance for veteran trees– which methods have proven most effective? 2. Forest grazing 3. Hermit beetle management as well as more general management for saproxylic beetles 4. Monitoring – methods and lessons learned. https://lifebridgingthegap.se/english/; https://www.liferestored.se/ *We will meet: Anneli Lundgren (PM LIFE RestoRED), Carina Greiff (PM LIFE Bridging the Gap), Nicklass Jansson*
7/9 2023 **Thursday**	On the way back home	Tromtö near Karlskrona (Blekinge)	The site in the BTG project: effects of the project (beech forest, veteran oaks & introduction of Cerambyc cerdo). https://lifebridgingthegap.se/wp-content/uploads/Uppfoljning-av-skyddsvarda-trad-inom-LIFE-Bridging-the-Gap.pdf

Appendix III: A4 changes in deliverables and milestones

Before

Milestone/Deliverable	Name
Milestone	Recommendations for management & action plans of 9 Danish Natura 2000 sites with O. eremita prepared
Milestone	Recommendations for management & action plans of 18 Danish Natura 2000 sites prepared
Deliverable	Recommendations to the management plans of 27 Danish Natura 2000 sites
Deliverable	Recommendations to the action plans of 27 Danish Natura 2000 sites

Proposal

Milestone/Deliverable	Name
Milestone	Recommendations for ~~management &~~ action plans of 9 Danish Natura 2000 sites with O. eremita prepared
Milestone	Recommendations for ~~management &~~ action plans of 18 Danish Natura 2000 sites prepared
~~Deliverable~~	~~Recommendations to the management plans of 27 Danish Natura 2000 sites~~
Deliverable	Recommendations to the action plans of 27 Danish Natura 2000 sites

Appendix IV: Description of Knuthenborg Safaripark ending LIFE Open Woods activities, and who will take over the responsibilities

Cancellation of activities on DK-24, Knuthenborg

It has never been confirmed that there is a hermit in Knuthenborg and the location has therefore always been uncertain. On 17 December 2020, Knuthenborg was finally able to state that they are not interested in participating in the project and therefore do not want to confirm whether or not there is a hermit.

The following actions were planned at Knuthenborg:

- **C1**. Creation of decaying wood habitats
  A part of the amount has been moved to C7, see appendix item no. 2. The remaining amount will be distributed among the three other locations (DK-21, DK-22, DK-23).
  Some of the budget (6,700 EUR) is proposed transferred to C7 (mould boxes). The rest of the budget will be divided between the 3 remaining locations, DK-21, DK-22 and DK-23. Veteranization of minimum 100 trees will be divided between the other three locations, DK-21, DK-22 and DK-23.
- **C2**. Open Wood – increasing structural diversity and control of alien species
  The amount is distributed to the three other locations (DK-21, DK-22, DK-23).
  The activity, as it is, will be added to the three other locations, DK-21, DK-22 and DK-23. The amount of trees pr. location will be determined later and will depend on which location will benefit the most, but it will add up to removal of shading trees around 120 veteran trees across the three locations.
- **C7**. Population management for hermit beetle
  The amount is distributed to the other two locations (DK-21, DK-22).
  Due to increased oak tree prices, the entire budget for C7 has been used to obtain the requirements on the amount of mould boxes on locations DK-21 and DK-22.
  Alternative deliverable:
  Instead of setting up more mould boxes on location DK-21 and DK-22, we are interested in having a similar activity on DK-23. However, the private owner on this location is not interested in getting mould boxes on their property. Therefore, we propose to convert the 10 mould boxes to 10 trees on site DK-23. Manmade cavities will be drilled and carved into these trees, to resemble the habitats of hermit beetle. Different methods, experienced from Sweden and Allindelille Fredskov in Denmark, will be used.
  DEP believe this is a comparable alternative to mould boxes, as they simulate the same habitat. This method is less invasive in the landscape and blends more in the forest.
  DEP propose to change the remaining action from C7 to C1 “Creating of decaying wood habitats.”
  A new deadline proposed: 06/25. This deadline gives us time to come to a final agreement with DK-23 and buy the required trees (see also Activities on site DK-23 Sorø Sønderskov).
- **E5** Communication: the responsibilities of DK-24, Knuthenborg, is taken over by Copenhagen Zoo. The task is further described in appendix XI.

Appendix V: C5 changes to the action

Before

Action/Milestone	Name
Action	C5.1. 'Stepping stone' patches with mixture of flowering/thorny bushes and deciduous trees (mainly oak)
Action	C5.2. Planting along forest edge bordering with the former alien conifer plantations
Action	C5.3. Planting of Quercus petraea in fragmented Galio-Carpinetum oak-hornbeam forest (9170)
Action	C5.4. Planting of oaks and limes to fill age gaps in habitats of O.eremita
Milestone	50% of 'stepping stone' patches established
Milestone	100% of 'stepping stone' patches established
Milestone	100% of forest edge planting established
Milestone	100% of the area of Quercus petraea planted

Proposal

Action/Milestone	Name
Action	C5.1. 'Stepping stone' patches with mixture of flowering/thorny bushes and deciduous trees (mainly oak)
~~Action~~	~~C5.2. Planting along forest edge bordering with the former alien conifer plantations~~
Action	C5.3. Planting of Quercus petraea in fragmented Galio-Carpinetum oak-hornbeam forest (9170)
Action	C5.4. Planting of oaks and limes to fill age gaps in habitats of O.eremita
Milestone	50% of 'stepping stone' patches established
Milestone	100% of 'stepping stone' patches established
~~Milestone~~	~~100% of forest edge planting established~~
Milestone	100% of the area of Quercus petraea planted

Appendix VI: C5 Planting models

In the following the four planting models created is shown. Model 1, 2, and 4 target locations where there is established grazing or there is a high biting rate from wild deer. The locations are different regarding grazing intensity and local conditions, and therefore it is relevant with 3 different models to cover different location types. Model 3 targets locations where there I no grazing, and where the hydrological gradient can be used as a differentiator instead. The models are in Danish, and on request they can be sent in a translated form.

Planting model 1: Oak forest

FORMÅL At etablere og bibeholde egeskov som bidrager med vigtige habitater for mange skovlevende plante- og dyrearter. Ved at skabe områder med lavere græsningstryk opnås en variation af levesteder på kort sigt til gavn for skovens biodiversitet.

BESKRIVELSE Arealer er forskellige, og det er vanskeligt på forhånd at vide, hvad der virker på et specifikt areal. Derfor kan det være en fordel at kombinere flere typer plantningsmodeller på ét område, da man derved får en fornemmelse af, hvad der virker på de forskellige typer af arealer. Derfor er denne model en kombination af følgende værktøjer: Hegn, mikado, og kvashegn.

HEGN Der hegnes og plantes i rækker på en mindre del af arealet for at sikre, at en del af det plantede kommer over bidhøjde. Hegningerne er på 2400 m^2 – ca. 15-25% af arealet. Der plantes på rækker med planteafstand 1,5 m og rækkeafstand 2 m. Ved større planteafstand vil det være vanskeligt at finde rækkerne ved slåning. Buske af samme art i grupper på 3-5 stk. Træer plantes enkeltvist. Kvas skrabes sammen for at tilgodese skovlevende biodiversitet samt at lette plantningen i rækker. Kvaset skal ligge i bunker og ikke i lange ranker af æstetiske årsager. Placér hegninger, hvor der ikke er massiv opvækst af ørnebregner eller andre arter, som begrænser succesraten. Rationelle hegnslinjer prioriteres. Lav i stedet bugtede plantninger og frihold hegningens hjørner m.m. for plantning. Efter ca. 5 år er der således ikke helt så skarpe hegnslinjer. Inden for hegnet kan der komme en del uønsket opvækst, hvilket potentielt skal skæres ned. Er den uønskede opvækst massiv, skæres dette ned i forbindelse med hegnsnedtagning, således at vildtet kan være med til at begrænse genvæksten. Ved massiv birkeopvækst skal al birk ikke nødvendigvis skæres ned. Der kan i stedet tyndes kraftigt, så plantningerne får tilstrækkeligt lys.

MIKADO Der udvælges områder, hvor det er muligt at fælde randtræer og overstandere således, at der dannes en barriere for vildtet. I disse områder plantes/sås i grupper af 3-5 stk. af samme art, på nær træer som plantes/sås enkeltvist, *ikke* på række. Det samlede antal planter per område tilpasses mængden af randtræer/overstandere som fældes. Det tilplantede/-sådede område markeres med bånd for at markere området præcist til, når træerne skoves ned over. Det er meget vigtigt, at træerne skoves præcist, så de dækker det plantede/sådede areal bedst muligt. Fælderetning kan med fordel anvises med en pil. Der kan tages hensyn til opblødning af lige linjer fra driftsskovbruget i omkringliggende bevoksninger, hvilket gøres bedst ved at skove træer fra nabobevoksninger ind på det sådede/plantede område.

KVASHEGN Med rendegraver skrabes kvas sammen i en cirkel med en kvasfri midte, hvori der plantes/sås i små grupper på min. 3 af samme art. Træer fordeles over området. Kvascirklernes størrelse afhænger af tilgængeligt materiale. Max en diameter på 10 m, for at vildtet ikke springer ind. Hellere flere mindre end få store cirkler. De kan med fordel placeres, hvor der er meget kvas. De bør være forholdsvis høje, så dyrenes færdsel besværliggøres. Ved afdrift kan der gives instruks om, at en andel af toppene ikke gøres helt op. Således er der materiale til at danne kvascirkler.

Billede 1: Eksempel på kvashegn.
Foto: Kristian Selmer

CASE – Bidstrup, Afd. 1404d

Kort 1: Afd. 1404d Bistrup, ©Naturstyrelsen

Afdriftsareal efter rødgran med enkelte Douglas. Arealet er ca. 1,5 ha og ligger i den sydlige del af Bidstrupskovene. Mod syd er den afgrænset af skel til nabo med lysåbne arealer, mod vest en egebevoksning med eg fra 1947, mod nord ær fra 1970, og mod øst bøg fra 1950. Vildtrykket er forholdsvist højt i Bidstrupskovene med både kron-, då- og råvildt. I dette område af skoven ynder kronvildtet at opholde sig, og vildttrykket er derfor særligt højt. Der er derfor udvalgt arter til plantning, der forventes at kunne klare sig godt under disse vilkår.

Omkring 20 % af arealet er præget af ørnebregner, hvor der ikke foretages plantning/såning. På den nordlige del af arealet, er der en del opvækst af selvsået ær, som også begrænser muligheden for succes. Centralt på afdriften hegnes et areal på 2400 m^2. Hegnet er formet som en rektangel. Inde i hegnet samles kvas i bunker eller korte ranker med rendegraver, dels for at gøre det muligt at plante og dels for at skabe overvintringsmuligheder for bl.a. hasselmus. I hegningen plantes der med en planteafstand på 1,5 m og med en rækkeafstand på 2 m. Planteforbruget i hegningen forventes at være ca. 500 planter. Der udvælges 2 steder på afdriften, hvor der laves kvashegn og plantes i det omkransede areal. Der plantes i grupper på det resterende areal, og der udvælges overstandere/ kanttræer der skoves ned over planterne. Det forventede plantetal er 1000 planter pr ha med en meget heterogen fordeling.

TRIN-FOR-TRIN

1. Planlæg: Valg af placering i området, valg af planter, afsætning til hegn, udvisning af randtræer mm.
2. Udfør: Hegnssætning, såning/plantning mm.
3. Opfølgning/pleje: Efterse og vedligehold hegn jævnligt, evt. kratrydning og nedskæring af uønsket træopvækst.
4. Reflektér: Hvad virkede, hvad virkede ikke?

BUDGET

Tabel 2: Budget for afdeling 1404 d i Bidstrupskovene på 1,5 HA

Aktivitet	Enheder	kr.	Pr. plantning kr.
Planlægning og afsætning	2 timer	900	900
1 Hegnet plantning			
Planter og plantning	500 planter	5.000	
Kvasrydning	2 timer med rendegraver	1.200	
Hegnsopsætning	200 meter	9.000	
Hegns-vedligehold og nedtagning		5.000	
Bekæmpelse af problemarter	40 timer over 5 år	16.000	36.200
2 Mikado-plantninger			
Planter og plantning	500 planter	5.000	
Fældning af randtræer	4 timer	2.000	7.000
2 Kvashegns-plantninger			
Kvasrydning	2 timer med rendegraver	1.200	
Planter og plantning	100 planter	1.000	
Bekæmpelse af problemarter	10 timer over 5 år	5.000	7.200
Total (5 plantninger)			**51.300**
Total pr HA			**34.200**

Planting model 2: Grazing forest

FORMÅL At introducere lokale frøkilder som aktuelt er fraværende/sjældne i en græsningsskov, samt at sikre den introducerede frøkildes etablering i området på længere sigt.

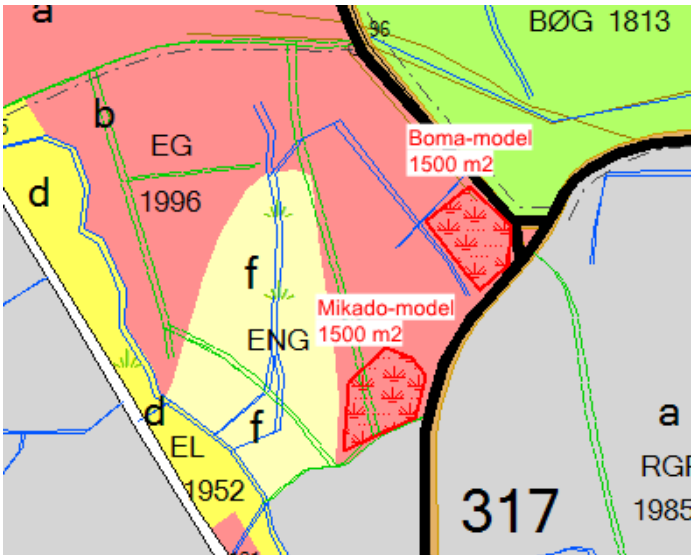
BESKRIVELSE I relevante løvskovsbevoksninger indplantes der holme med hjemmehørende lokale blomstrende og/eller stikkende buske. Der etableres i størrelsesordenen 1 holm pr. ha og gerne i yderkanten (sydkanten) af den aktuelle bevoksning for at sikre maksimal lystilgang.

Holmenes størrelse er 1000-2000 m2 med 500-1000 planter pr holm. Der forventes en relativ høj planteafgang – derfor det høje plantetal.

BOMA Efter plantning foretages en maskinel naturnær fældning/tynding i bevoksningen, og de fældede træer lægges i en ranke uden om det plantede areal som en fysisk barriere for vildtet (en boma).

MIKADO Efter plantning foretages en maskinel naturnær fældning/tynding i bevoksningen, og de fældede træer lægges ind over det plantede areal som et mikadospil. Træerne skal endelig ikke afgrenes, idet det er vigtigt, at de "svæver" over planterne.

CASE – Gribskov, afdeling 317 b, 3,0 ha eg 1996



Kort 2: Litra, afdeling 317b Gribskov ©Naturstyrelsen

Den valgte afdeling ligger centralt i Gribskov i den kommende Naturnationalpark Gribskov, hvor forekomster af blomstrende/stikkende buske er meget begrænsede. Bevoksningen har været traditionelt udrenset i 2017. Der etableres to holme – en efter Boma-modellen og en efter Mikado-modellen. Så kan de to modellers funktionalitet sammenlignes direkte under samme vilkår. Der plantes i alt 750 planter pr. holm fordelt på 5 arter – dvs. 150 planter pr. art. Hver art plantes i 3 grupper – dvs. 50 buske pr. gruppe (100 m2) – og 15 grupper i alt. Følgende hjemmehørende og lokale buske er valgt: Alm. hvidtjørn, slåen, hunderose, benved, skovabild.

TRIN-FOR-TRIN

1. Valg af plantefelt i henhold til terræn og lysforhold.
2. Afmærkning af plantefelt med landmålerstokke.
3. Grov afmærkning af 15 holme/grupper.
4. Manuel plantning – de valgte arter plantes gruppevis, hvor jordbund/terræn er bedst egnet.
5. Plantefeltet tyndes hårdt maskinelt (80 % udtag), og de fældede træer lægges som en tæt ranke uden om plantefeltet. Der lysnes kraftigt mod syd.

BUDGET

Tabel 3: Budget for plantning i græsningsskov. Budgettet for en plantning efter mikado-modellen og boma-modellen er ens.

Aktivitet	Pr enhed	kr.	Pr plantning (1000-2000 m2)	kr.
Klargøring af plantefelt, transport etc.				1.500
Indkøb af planter	kr./plante	5	1000 planter	5.000
Plantning	kr./time	300	20 timer - 1000 planter	6.000
Maskinel fældning	kr./time	1.250	2 timer	2.500
Total				**15.000**
Total pr HA (2 plantninger)				**30.000**

Planting model 3: Dark forest without grazing

FORMÅL At skabe grundlag for at blomstrende buske og træer kan etablere sig i ugræsset skov med et lavt vildttryk.

BESKRIVELSE Mørk skov, typisk bøgeskov, giver på langt sigt ikke meget lys til andre vedarter end bøg. Andre vedarter kan kun etablere sig, hvor bøgen ikke har konkurrencefordel. I den urørte bøgeskov vil det være, hvor der er så fugtigt at bøgen ikke kan spire frem. Der kan således skabes variation i vedarterne, såfremt det er muligt at genetablere naturlig hydrologi. På fladgrundende jorde vil genskabelse af naturlig hydrologi give god plads til andre arter både indplantede og naturforyngede arter. I skove med større terrænforskelle bliver arealer med potentiale for diversitet i vedarterne typisk noget mindre. Grøfter i lavninger på svagt skrånende terræn kan med fordel tilkastes helt eller lukkes med flere propper. En særlig fordel ved denne model er, at omkostningerne er relativt lave og effektens fremtidsudsigter er gode, da plantningen vil have permanent lokal konkurrencefordel over bøg på grund af det hævede vandspejl.

INDPLANTNING OG NATURLIG SPREDNING AF VEDARTER Indplantning af fraværende og sjældne arter vil kunne ske når bøgene på arealet er stærkt svækkede eller døde. En række arter, som gror i det lokale område, vil indfinde sig naturligt – særligt arter som spredes med vind og vand.

CASE – Sønderborg Sønderskov afd. 218, bøgeskov

Kort 1: Litra-kort med grøfter ©Naturstyrelsen. På litra-kortet ses hoved- og ledegrøfter. Mængden af grøfter fortæller noget om potentialet for genskabelse af naturlig hydrologi

Kort 2: Danmarks højdemodel DHM ©Naturstyrelsen ©SDFE. Lavninger identificeres ved hjælp af Danmarks højdemodel. Tegningerne er Forvaltningsplanernes aktivitets app.

Størrelse, plantetal og arter: H1 er på 0,27 ha. og H 2 er på 0,52 ha (se kort 2). Berigelsesplantningen kan udføres i nord og østside af holmene, således at arterne sikre god blomstring. I Sønderskoven forekommer kvalkved og benved samt hunderose som fåtallige, derfor er de valgt. Mange andre arter vil indfinde sig ved naturforyngelse. De nævnte arter plantes i de delvise tørre rande. En afstand på 3 x 3 meter sikrer god udvikling af disse arter. Planterne plantes i grupper af 5-10 planter – 2-4 grupper pr. 100 m. Antallet af grupper er en individuel vurderingssag.

TRIN-FOR-TRIN

1. Planlægning, vurdering af hvilke lokale planter som er manglende/fåtallige i området som med fordel kan indplantes.
2. Udpegning af plantningsområder ved at vurdere, hvilke områder der vil blive vådere.
3. Genskabelse af naturlig hydrologi ved eksempelvis grøftelukning
4. Revidering af udpegningen af plantningsområde på baggrund af den fysiske udformning af den naturlige hydrologi.
5. Indplantning af lokalt hjemmehørende, fraværende arter af blomstrende træer og buske. Typisk på stor afstand og i grupper af 5-10 styk af samme arter for at højne etableringens succesrate.

BUDGET

Tabel 4: Budget for en plantning samt grøftelukning. Plantningens størrelse afhænger af, hvor der vil komme vådere gradienter i forbindelse med etablering af naturlig hydrologi. Derfor er det for nuværende ikke relevant at komme med et bud på et budget pr ha.

Aktivitet	Pr. plantning	kr.
Grøftelukning	En lille gravemaskine 1 dag	5.000
Planter og plantning	100 planter	1.500
Total (1 plantning)		**6.500**

Planting model 4: Island plantings

FORMÅL At etablere varierede mindre plantninger med lokalt hjemmehørende blomstrende træ- og buskarter, som frøkilder til det afdrevne areal samt området omkring.

BESKRIVELSE Berigelsesplantninger skal understøtte etablering af en naturligt hjemmehørende sammensætning af træarter på større afdriftsflader efter monotone kulturer. Plantningerne etableres som små "øer" på en kvart hektar spredt over afdriftsfladen.

Er der høj risiko for etablering af græspels, hegnes der, bores plantehuller, og plantes samme år, som der afdrives. Plantevalget består af naturligt hjemmehørende arter for området. Plantetal og plantemønster bestemmes efter inspiration af naturligt forekommende bevoksninger i området.

Foto: Thomas Holst Christensen

CASE – Tofte skov, afdrifter efter sitka

Der er i Tofte Skov afdrevet flere arealer med sitka, hvorefter der er etableret berigelsesbeplantninger. Der kommer en stor mænge selvforyngelse af sitka på flere af afdriftsfladerne og inden for få år er arealerne dækket af en tyk græspels. Arealerne knuses umiddelbart efter afdrift og der laves forsøg med både plantning samme år og plantning efter 1-2 år. Der udføres i disse år maskinel udpining af sitkafrøpulje med slåning/let knusning af den fremspirede selvforyngelse af sitka eller bekæmpelse af denne med afbrænding.

Hegn etableres som firkantede hegn, hvor der inden for hegningen bores plantehuller med jordbor (Ø-60). Hullerne bores i grupper af 30-40 huller. Derved skabes dynamik i plantningen inden for hegnet. I midten af grupperne plantes enkelte hovedtræer af hjemmehørende træer (primært eg og skovfyr) og omkring disse plantes et krat af stikkende buske, såsom hvidtjørn og slåen, med en mindre indblanding af andre buske og træarter. Dette plantningsmønster efterligner naturlige bevoksninger, hvor de stikkende busker agerer spirely for de øvrige planter. De enkelte arter, på nær hovedtræerne, plantes i grupper af mindst 5 planter for at sikre plads til artstilpasset vækst. Der sættes to planter i hvert plantehul for at etablere et tæt krat.

Planterør er afprøvet, som alternativ til hegn. Dog ikke med succes, pga. det høje vildttryk i Tofte Skov. Planterørene væltes og træerne bides, når de vokser op over planterørene.

TRIN-FOR-TRIN

1. Opsætning af hegn
2. Boring af plantehuller i grupper
3. Plantning i grupper, med enkelte hovedtræer i midten og kratdannende buske og træer omkring. Planter plantes i grupper af min. 5 planter.

BUDGET

Tabel 5: Budget for én berigelsesplantning på 50 x 50 meter (2500 m^2) på en afdrift på 1 HA.

Aktivitet	Pr. enhed	kr.	Pr. plantning (2500 m2	kr.
Hegn	kr./meter	45	200 meter	9.000
Hulboring	kr./hul	3	370 huller	1.110
Planter	kr./plante	3,5	625 planter	2.188
Plantning	kr./plante	1,5	625 planter	938
Total (1 plantning)				**13.235**
Total pr HA				**13.235**

Appendix VII: E2 Course program – Forest management for biodiversity purposes

The course program can be seen in the deliverable for E2

Appendix VIII: E2 Course evaluation

The evaluation can be seen in the deliverable for E2

Appendix IX: E4 Strategy for future networking activities

The focus of the project networking activities is dispersed on four pillars: Internal project networking, and external networking activities in general, with LIFE projects specifically, and with the private sector specifically. Objectives have been defined for each of these pillars, and examples of activities planned are listed.

Internal project activities

Objectives: To reflect, evaluate, and discuss the conservation means in this project to up-qualify the employees as well as the best practice guidelines.

Workshops targeted on project participants within different conservation actions

- Excursion to LIFE Bridging the gap (August/September 2023)
- C2.3 Burning as a mean for treating regrowth of especially sitka spruce (2023)
- C3 Forest grazing (2024)
- C4 Hydrological restoration (2024)
- D1 Monitoring (2023)

External project activities

Objectives: Share the knowledge developed within the project to the sector in general and collecting inspiration and qualifying the project best practice.

- Participation in Forest Management and Biodiversity across Europe, Sunday 10 – Sunday 17 September 2023, Białowieża, Poland
- Presentation at the FLC Nature management conference (September 2023)

Network activities with other LIFE projects

Objectives: Share the knowledge developed with other LIFE projects and collecting inspiration and qualifying the project best practice.

- LIFE Platform meeting Helsinki (2023)
- Future LIFE Platform meetings

External project activities focused on the private sector

Objectives: Strengthen the public private networks and understanding the demand for subsidies within biodiversity forests, inspiration for how to design the subsidies

- Seminar + excursion with a focus on means of interest for the private sector

Appendix X: E5 Proposal – Upgrading the produced video material to a deliverable

Deliverable name	Video material for digital dissemination

14 videos covering the different actions within the project including: Veteranization, giving light to veteran trees, grazing, species specific conservation actions, the competence course. Furthermore, more general themes will be covered for a general understanding of the project objective: Introductory videos, The future natural forests, The forest ecosystem, the forests structures and the forest species.

Objectives:

- Introducing the project
- Knowledge sharing on the best practice conservation actions
- National and international transverse knowledge sharing
- Disseminating natural forest ecology, dynamics and processes
- Introducing the project partners
- Setting a vision framework for the project

Appendix XI: E5 Copenhagen ZOO Task description

1) **Background**

The purpose is to communicate LIFE Open Wood's activities with population management and conservation of habitats for Osmoderma eremita. These activities must be communicated via physical communication material and oral communication to as large a part of the public as possible. This is a lump sum. The Danish Nature Agency and the Danish Environmental Protection Agency contribute to the oral communication.

2) The content of the assignment

Production of physical communication material that conveys LIFE Open Wood's activities with population management and conservation of habitats for Osmoderma eremita. In addition, 3-4 dissemination events, organized by Copenhagen ZOO in the period 2023-2024, where the Nature Agency and the Environmental Protection Agency make a total of 2-4 employees available for dissemination for up to 3-4 working days.

3) Requirements for the execution of the task

The communication material must be mobile so that it can be included in a traveling activity. During the LIFE Open Woods project period (-2027), the material is at home in Copenhagen ZOO. The Danish Nature Agency reserves the right to borrow the material for a maximum of 5 weeks per year, but not in the period June-August. During the project period, Copenhagen ZOO provides data for the number of participants for the dissemination activities.

Delivery from Copenhagen ZOO:

- A physical communication material that can be used in Copenhagen ZOO's school service, as well as on Copenhagen ZOO's excursions, which conveys LIFE Open Woods' work with the management and conservation of Osmoderma eremita and its habitat. The material includes the following 3 parts:
  1. An activity sheet with a maze through an old tree, a "Find-5 error on the hermit" and a dot pattern that reveals a beautiful black hermit beetle when all the dots are connected. Along the way is a bit of info about the hermit. Target group: school entry + parents. However, older children and adults can also be activated.
  2. 2 tree trunks filled with crumb/soil/sphagnum/chips/bark and lots of small larvae in plastic/rubber. A sign briefly explains that the caterpillar feeds on the decay of dead wood and that you have to see how many caterpillars you can find. The target group will again be the first and middle school, but will also be able to ignite some form of competition in older children and adults. At the Zoo, we would be able to use this activity in our teaching process
  3. A joint turning game for larger groups. Plates are laid out with the bark side up, and either food/stomach/predator down. Participants start as caterpillars and by flipping tiles they go through the life cycle of the hermit. They die and remain larvae if they land on a predator/stomach, but if they land on food, they develop into beetles. If they find a mate, they are allowed to call an extra larva onto the game board. The aim is to get all larvae developed into beetles in as few rounds as possible. Target groups: All age groups, but typically 8-15 years.

- Data for the number of students and excursion participants at the dissemination events in the LIFE Open Woods period.

Delivery from the Danish Nature Agency:

- One or two employees make themselves available for dissemination activities for 3-4 working days.

Delivery from the Danish Environmental Protection Agency:

- One or two employees make themselves available for dissemination activities for 3-4 working days.

4) Schedule

Spring 2023

- The physical exhibition and dissemination material as well as the dissemination activity is finished and ready for use by 1 May 2023 at the latest, so that it can be used by the Danish Nature Agency and Copenhagen ZOO for events from spring 2023.

2023-2024

- Dissemination activities coordinated by Copenhagen ZOO will take place during 2023 and 2024.

2023-2027

- The communication material can continue to be used by Copenhagen ZOO.

Appendix XII: Explanatory notes regarding procurement and purchase of the fence on site DK-19 Tofte Skov

Background

The European Climate, Infrastructure and Environment Executive Agency (CINEA) in its letter of 31st of May 2022 – Ref. Ares(2022)4034514 – raised a number of technical issues listed in an Annex. Financial Issue 3 (page 6 of the Annex) concerns the procedure involved in the procurement and purchase of the fence on site DK-19 Tofte Skov and whether this has been in line with the General Conditions article II.10 requiring an open tendering process including a publication of the call for tenders in relevant media.

The fencing project

The objective of the fencing project was to strengthen an existing fence around Tofte Forest and construct a release facility prior to the arrival of 7 European bisons from the Netherlands and 3 European bisons from Denmark which was scheduled for April 2021.

The project was described in a bidding document of 33 pages including annexes and comprised the following tasks:

1. Removal of an existing outer fence line with a length of 2,511 m
2. Construction of a new outer fence with a length of 2,346 m
3. Removal of an existing inner fence line with a length of 3,465 m
4. Construction of a new electrical inner fence with 2 electrical wires on a stretch of existing outer fence line - 2 x 2,997 m
5. Construction of an inner electrical fence mounted on the posts of the new outer fence (no. 2 above) with 4 electrical wires – 4 x 2,346 m
6. Construction of inner fence with 4 electrical wires on two existing gates
7. Construction of a release facility with a wooden boma and electrical fence with 4 wires around a holding pen of approximately 4,6 ha – 4 x 490 m

The construction period was scheduled to start no later than the 11th of January 2021 and to be finished no later than the 5th of March the same year. Any errors and deficiencies should be repaired/fixed no later than the 22nd of March 2021.

The bidding and tendering process

The bidding document was ready by the end of October 2020 which called for a relatively short bidding and tendering process to have the fence and release pen ready by the time the European Bisons were scheduled to arrive. The time of year with the risk of severe winter conditions also called for a speedy process. Therefore, and based on experiences with previous similar fencing projects in the area, it was decided that sufficient knowledge of relevant contractors was available to Aage V. Jensen Naturfond and only three known contractors were invited to tender:

1. HedeDanmark - an international landscape construction, trade and service company working in the green sector and being one of Denmark's largest suppliers of care and maintenance services for the forests, open areas, gardens, parks and open city spaces
2. Nordjysk Hegn og Sikring (NHS) – a regionally based company specialized in carpentry and security fencing. Since 2007 NHS has specialized in fencing and has provided solutions to both the Nature Agency and municipalities.
3. PODA Hegn - A company that since 1975 has sold, constructed and serviced fencing solutions all over Denmark to farmers, land owners, industry and parks.

Both PODA and NHS had previously worked for Aalborg Municipality in a different part of Lille Vildmose/Tofte Skov constructing a fence similar to the solution required for the LIFE Open Woods project.

The bidding document was sent to the three contractors 29th of October 2020 with a Tender Submission Deadline of 2nd of December.

All three contractors submitted tenders which were compared based on price and technical solutions. PODA was not able to meet all requirements and NHS was selected based on the parameters Price and Technical Solution/Time.

Project Item	**Price (50%)**			**Technical Solution/ Time (50 %)**			**Total**		
	HD	Poda	NHS	HD	Poda	NHS	HD	Poda	NHS
Perimeter fence	7,8	8,5	10,0	4,0	0,0	6,0	5,9	4,3	8,0
Release pen/boma	9,9	10,0	9,3				6,9	5,0	7,6
Total score							12,8	9,3	15,6

The total amount of the contract was DKK 1,036,700 equivalent to approximately EUR 138,000 – EUR 3,000 above the threshold of EUR 135,000 for projects requiring an open tendering procedure.

SUMMARY

Aage V. Jensen Naturfond invited only three contractors to tender for the fencing project but should have used an open tendering procedure since the project exceeded the threshold of EUR 135,000 with EUR 3,000. Arguments for not using an open tendering process are:

- There was very limited time available to construct the fence and release pen before the European Bisons should be moved to Tofte Skov
- Adverse winter conditions were likely to cause delays
- Aage V. Jensen Naturfond, local municipalities and the Nature Agency had previous experiences with similar fencing projects in the area and two of the three contractors invited to tender for the contract had previously been selected for these
- It was estimated that the cost of the project would be very close to the amount limit of EUR 135,000

On request we will be happy to send you the document on the invitation to tender for the fence.

Appendix XIII: Index of deliverables

Title of deliverable	Short description	Attachment
A1 Best practice methods catalogue	A best practice methods catalogue have been made to share the best practice on the conservation actions used in LIFE Open Woods. External experts have contributed.	• LIFE Open Woods Best practice catalogue.pdf
A1 3 out of 4 webinars	**Webinar on beetle boxes** A webinar was conducted on conservation management for hermit beetle populations with a special focus on making and setting up mould boxes. **Webinar on veteranization** A webinar was conducted on veteranization methods and best practice. **Webinar on veteran trees and risk management** A webinar was conducted on how to handle veteran trees when they constitute a risk situation.	**Webinar on beetle boxes** • 2021 Webinar Eremit_Nicklas Jansson beetle boxes 2021-low res til distrib.pdf • 2021 Webinar_ Eremit Nicklas Jansson - Oaks and beetles 2021-low res.pdf • 2021.01.11 Webinar on nesting boxes with the Swedish Bridging the gap project Participants 11_01_2021.pdf • 2022.1.11 Invitation and Agenda_ Webinar on nesting boxes with the Swedish Bridging the gap project 11_01_2022.pdf **Webinar on veteranization** • 2021.02 Webinar_Veteranisation Webinar_Feb 2021_Vikki Bengtsson.pdf • 2021.02.08 Webinar Veteranisation Agenda_080221.pdf • 2021.02.08 Webinar Veteranisation Participants 8_02_21.pdf • 2021.02.08 Webinar_veteranisation 8Feb2021_Jonas.pdf **Webinar on veteran trees and risk management** • 2021.05.06 Webinar Veteran trees & risk management Agenda_6-05_21.pdf • 2021.05.20 Webinar Veteran trees and risk management Participants 20_05_2021 • 2021.05.20 Webinar_Veteran trees posing risk Piotr TCh DK 200521 • Webinar_Risikotraer Veterantraer IMT kompr.pdf
A2 Implementation plans for 6 out of 7 project sites	Implementation plans for the 6 Danish sites DK-08, DK-19, DK-20, DK-21, DK-22, and DK-23. The implementation plan for DE-1 has been delayed.	• (AMPHI) Implementationplan_DK8 Bechsteinsbat 2023-02-21 • (AVJF) Implementationplan_DK19 • (AVJF) Implementationplan_DK-20 • (MST) Implementationplan DK-21 12.2022 • (MST) Implementationplan DK-22 12.2022

		• (MST) Implementationplan DK-23 12.2022
D1 A strategy for formulation of quantitative goals for improvement of conservation status of the targeted habitats and species both during and after the project	A monitoring strategy describing the following goals: 1. Mapping and registration of actions across all project sites. 2. Monitoring impact on habitat and species. 3. Effect monitoring of certain actions to better understand their impact.	• D1 monitoring strategy.pdf
D1 Baseline report	The baseline report provides a baseline on the forest structure for all the project sites.	• D1 Baseline monitoring report.pdf
E2 Competence course	The deliverables for the competence course is the course description for the diploma course, and the course evaluation.	• Documentation for E2 FLC performance in Life Open Woods.pdf • Evaluation of the competence course LIFE Open Woods by FLC.pdf
E5 A general leaflet	A general leaflet introducing the LIFE Open Woods project. The Danish version was printed in 2000 copies in April 2022, and the English version was printed in 1000 copies in December 2022.	• General Leaflet_DK.pdf • General Leaflet_ENG.pdf
E5 Flyer about project in German	A general leaflet introducing the LIFE Open Woods project in German.	• General Leaflet_DE.pdf