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Site Rehabilitation at Abandoned Artisanal and Small-scale Gold Mining (ASGM) Sites at Compagnie Kreek

Project Closure Report

September 22, 2026

Our reference R007-1291225IKR-V01-efm-NL

Responsibility

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1 Introduction

1.1 Project Background

Artisanal and small-scale gold mining (ASGM) is a key economic activity in the Guianas but also a major driver of environmental degradation in its high-forest-cover, low-deforestation landscapes. By 2024, ASGM-related deforestation had reached nearly 200,000 hectares. Mining activities have destroyed soil profiles, disrupted hydrological functions, and released mercury into the environment, creating ecological damage and health risks for local communities. Addressing these impacts requires rehabilitation of degraded mining lands while supporting sustainable alternative livelihoods.

A comprehensive seven-step participatory framework for post-ASGM site rehabilitation was developed through pilot trials at Compagnie Kreek, Suriname, under the TAUW Foundation and EMSAGS-funded project Soil Function Restoration at Abandoned Artisanal and Small-Scale Gold Mining Sites. The framework emphasizes active community involvement in planning and decision-making; covering activities from baseline assessments to long-term governance and financing.

The current project is a scaled-up demonstration pilot focused on the area north of Compagnie Kreek, primarily between the village boundaries and the creek. The project promotes mining practices that safeguard surrounding soil functions and facilitate future restoration for alternative land uses. Rehabilitation activities will improve community safety by reducing risks from landslides and open pits, create temporary income opportunities through implementation activities, and strengthen local capacity for restoring post-ASGM landscapes.

The project aims to demonstrate a systematic approach to post-ASGM rehabilitation and test the previously developed framework at a larger scale. It seeks to increase awareness among miners, traditional leaders[1], authorities, and local communities of ASGM's environmental and social impacts, while highlighting the broader value of land beyond gold extraction. By restoring soil functions at abandoned mining sites, the project contributes to improved community livelihoods and supports local leadership in sustainable land-use planning.

1.2 Purpose of this report

This Project Closure Report documents the implementation, outcomes, and lessons learned of the project Site Rehabilitation at Abandoned Artisanal and Small-scale Gold Mining (ASGM) Sites at Compagnie Kreek. The report serves as the final technical and project-level deliverable to EMSAGS and the TAUW Foundation.

The purpose of this report is threefold. First, it provides an overview of the rehabilitation activities that were implemented at Compagnie Kreek, including the earthworks, drainage improvements, agroforestry establishment, site safety measures, and community-related activities. Second, it

[1]The traditional leaders also called local authorities in this proposal are the Granman, The village Chief or Captain, the Captain assistances, the informal youth leaders and the village eldest.

evaluates the effectiveness of the rehabilitation measures by presenting monitoring results related to soil quality, vegetation establishment, and water management. Third, it documents stakeholder feedback, implementation challenges, lessons learned, and recommendations relevant for future rehabilitation initiatives in Suriname.

The project was not intended solely as a site rehabilitation exercise. The rehabilitation activities formed part of a broader effort to demonstrate and validate a practical framework for post-ASGM rehabilitation under real field conditions. The project therefore combined technical implementation, community participation, capacity building, and guideline validation.

This report should be read in conjunction with the project deliverables developed under the EMSAGS programme, including the Best Practices for Soil Restoration at Post-ASGM Sites guideline and its public summary version. Together, these documents provide both the practical rehabilitation experience and the methodological framework required to support future rehabilitation efforts on abandoned ASGM sites in Suriname.

2 Project Implementation Overview

2.1 Project Location

The participatory site rehabilitation pilot covers an area of approximately 40,000 m² located directly north of Compagnie Kreek. An estimated 60% of this area has historically been affected by mining activities. Approximately 150 meters of the creek traverses the project site. The location and layout of the site are presented in Figure 2.1.

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Figure 2.1 Site Layout of the participatory site rehabilitation pilot site

2.2 Project Objectives

The overarching objective of the project is to demonstrate a coherent and systematic approach to the rehabilitation and redevelopment of abandoned ASGM sites, with soil function restoration as a central component. Specific objectives include:

- Restoring soil structure and functionality to enable sustainable future land use
- Improving site safety by mitigating risks related to unstable slopes, open pits, and uncontrolled surface water
- Enhancing water management and drainage to reduce flooding risks for the village
- Testing and refining the Guideline: Best Practices for Soil Restoration at post-ASGM sites (both the official document and the public summary) under real field conditions
- Strengthening community awareness of alternative land values beyond gold extraction
- Building local technical capacity for future rehabilitation efforts

2.3 Rehabilitation Works

The rehabilitation works consisted of two core phases: the first phase consisted of earthwork and the second phase consisted of revegetation work. The rehabilitation started on January 25th, 2026. After initial preparations and a baseline assessment (Baseline Assessment I), the on-site earthwork was performed from February 1st till February 14th. This core phase included floodplain excavation, agroforestry soil preparation, drainage and soil restoration, and constructing the basins and embankments. After the implementation a second baseline assessment (Baseline

Assessment II) was performed. The aim of this second baseline assessment was to determine the soil characteristics after the earthworks, before the revegetation works.

After Baseline Assessment II, the revegetation works were performed between the 5th of March and the 19th of May, consisting of a staged planting schedule. Further maintenance and replanting efforts were performed from the 19th of May until the day of writing this report. Figure 2.2 shows the original layout of the site, and Figure 2.3 the site design overview after the rehabilitation works. Figure 2.4 shows the agroforestry plot after completion of the revegetation works.



Figure 2.2 Original layout of the Pilot Site

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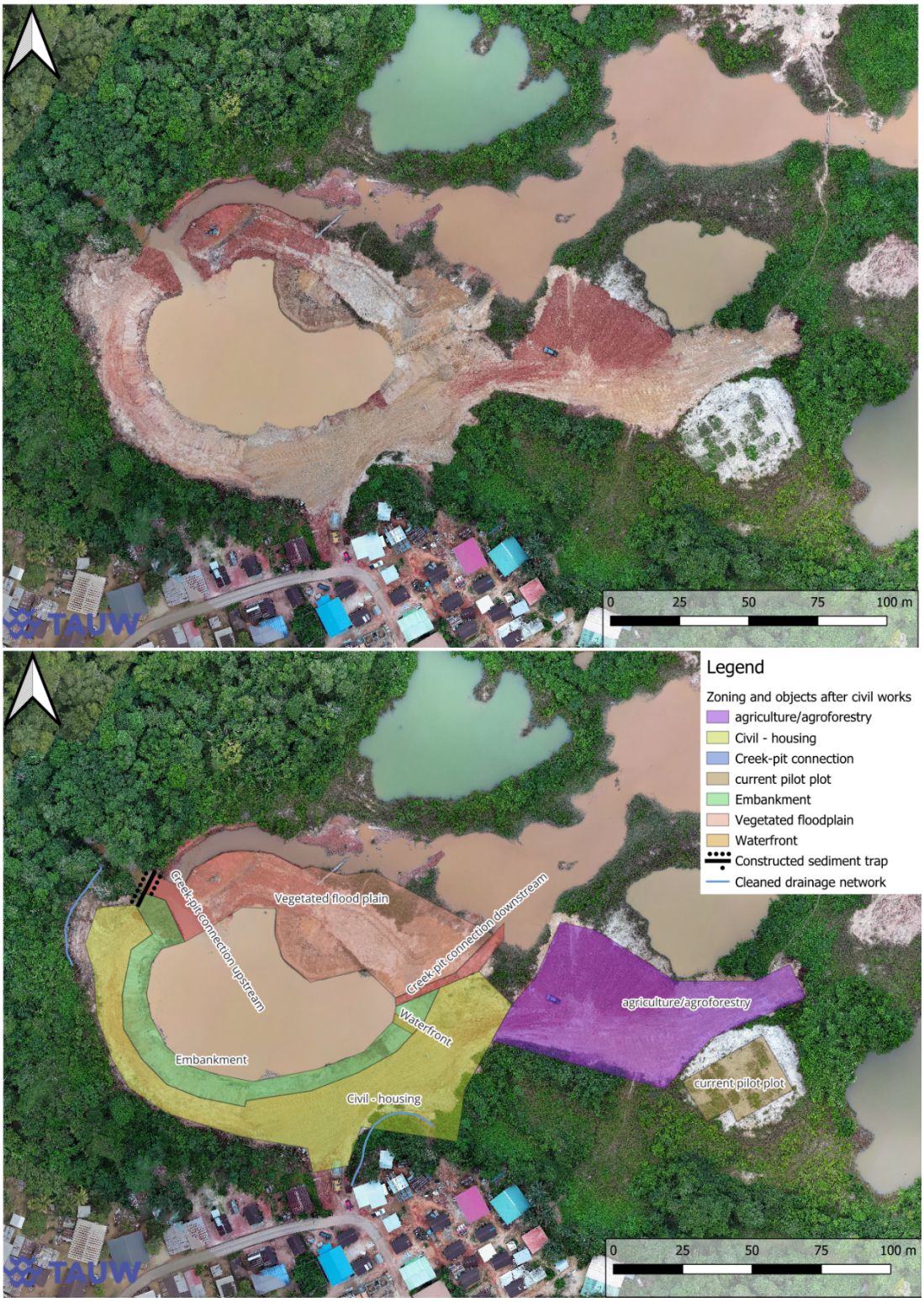


Figure 2.3 Layout of the Pilot Site after the earthworks as part of the rehabilitation works, without (top) and with (below) the site design

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Figure 2.4 Overview of the agroforestry plot after completion of the planting activities. Photo taken on 19th of May

The following activities were performed for the remediation:

- The floodplain was excavated first to provide material for the agroforestry plot and to allow water to flow in an eastwards direction instead of towards the village in case of high-water levels. This area is slightly enlarged compared to the original design to improve high-water flow capacity and accommodate adjustments to the sediment basin footprint
- The sediment basin design was adapted by creating upstream and downstream hydraulic connections between the creek and the former mining pit, improving water circulation and sedimentation in the pit, while maintaining flood safety; erosion at the connection points should be monitored and stabilized if necessary
- The agroforestry plot was levelled and raised using material from the floodplain and sediment basin. This allowed for silt and clay material to cover the infertile coarse sand, improving the survivability of the vegetation to be planted. This resulted in varying soil conditions across the site that should be considered in future planting, sampling, and soil management activities
- The civil/housing plot was enlarged and elevated using surplus excavated material to support future community expansion and improve construction access, while additional community benefits included the provision of materials for football goals
- Embankments were constructed around the former mining pit and civil/housing plot with safe side slopes in order to increase site safety, although some sections remain temporarily unstable due to wet fill material and may require future compaction and vegetation establishment

- A waterfront access stairway with handrails was constructed using local materials to provide the community with easier and safer access to the creek for daily household activities
- Existing drainage ditches within Compagnie Kreek were cleaned of waste, sediment, and debris to address standing water issues identified during field inspections and community consultations
- The agroforestry site was prepared and established. The executed works for the agroforestry plot consisted of:
  - Site demarcation
  - Tree pit establishment
  - Planting of vegetation, with amounts provided in Table 4., and the logbook in Appendix 3
  - Construction of halfmoon shapes in the soil as soil and water conservation measure
  - Fertilisation of the new crops with chicken manure and mulch
- Agroforestry site operation and maintenance together with the Compagnie Kreek community, including:
  - Regular fertilization
  - Irrigation when required. The large amount of precipitation resulted in few irrigation demands
  - Pest control
  - Replacement of crops lost due to pests
  - Crop management, irrigation and maintenance, including mulching and fertilization, monitoring plant establishment and health, replacing dead plants, implementing pest control measures, and involving community members through training sessions and participatory tree-planting activities

The completed earthworks involved the excavation and relocation of approximately 7,000 m^3 of soil, which was redistributed across an area of approximately 12,150 m^2 (1.2 ha) to create the floodplain, sediment basin, agroforestry plot, civil/housing plot, and associated infrastructure. Approximately 3.350 m^2 of agroforestry plot was created.

A photo logbook of the performed activities is provided in Appendix 4.

3 Project Results and Achievements

The project successfully achieved its overall objective of demonstrating a participatory and technically sound approach for the rehabilitation and redevelopment of degraded post-ASGM land in Suriname. The project combined scientific research, practical implementation, community participation, capacity building and guideline development into a single demonstration programme centred around the Compagnie Kreek pilot site.

3.1 Achievement of Objective 1: Development of a Viable Redevelopment Plan

The project successfully developed a rehabilitation and redevelopment plan for the Compagnie Kreek pilot area through a combination of stakeholder consultations, technical studies, design optimisation and validation activities. Governance arrangements between TAUW, CELOS and EMSAGS were established, community consultations were conducted, and the final rehabilitation design was repeatedly refined. Refinements were based on stakeholder feedback and implementation considerations, including detailed discussions with Haukes as experienced contractor. As a result, a technically feasible and socially supported redevelopment plan was produced and accepted by the relevant stakeholders.

All planned project preparation milestones, including stakeholder consultations, inception activities and design refinement, were successfully completed, resulting in an approved redevelopment plan for implementation.

A key success factor was the intensive engagement with local stakeholders. Community consultations enabled local priorities to be incorporated into the redevelopment concept, including safer land use, improved drainage, better access to agricultural land, agroforestry opportunities and the reduction of hazards associated with abandoned mining areas. The project therefore exceeded its original objective of developing a technical restoration plan by creating a redevelopment vision that directly links environmental restoration to long-term community benefits.

3.2 Achievement of Objective 2: Demonstration of a Systematic Rehabilitation Approach

The project successfully established a demonstration site showing how degraded ASGM landscapes can be rehabilitated for future productive use. The rehabilitation works exceeded the original minimum physical targets:

- Approximately 12,150 m² of degraded land was rehabilitated compared to a minimum target of 10,000 m²
- Regarding water quality: the creek was connected with the open pit to allow it to function as a sedimentation basin, and a sediment dam was constructed. Additionally, approximately 100 m of existing drainage were cleaned out. This slightly deviated from the original target of 50 m of creek restoration. While the final design differed from the original creek restoration concept, the implemented measures exceeded the original restoration target and improved hydraulic connectivity, sediment retention and drainage functionality
- Approximately 7,000 m³ of material was excavated and relocated to create a floodplain area, prepare the area for civil expansion, and prepare a more fertile soil bed for the agroforestry plot
- Approximately 3,350 m² of agroforestry area was developed and planted, compared to a minimum target of 3,000 m^2

The project also successfully demonstrated how multiple rehabilitation objectives can be integrated within a single intervention. In addition to soil restoration, the project addressed

drainage improvement, creek restoration, site safety, land-use planning, agroforestry development and community needs. As a result, Compagnie Kreek now functions as an operational demonstration site for future post-ASGM rehabilitation initiatives in Suriname.

Monitoring activities conducted during implementation indicated early improvements in organic matter content within the agroforestry plots. While nutrient levels remained variable and longer-term monitoring remains necessary, the results indicate that soil recovery processes have been successfully initiated and that the rehabilitation measures are functioning as intended during the early stages of ecosystem recovery.

3.3 Achievement of Objective 3: Capacity Building and Stakeholder Empowerment

The project substantially exceeded its capacity-building ambitions by combining classroom training, practical field demonstrations, stakeholder workshops, site visits and direct involvement in implementation activities. A training programme consisting of all activities to be performed according to the Guideline, was held on 5 February 2026. This training reached 31 participants, exceeding the original target, while additional stakeholder engagement activities exposed a wider group of local and national stakeholders to the rehabilitation approach.

Capacity building extended beyond technical training. The project not only transferred technical knowledge but also created a practical learning environment in which community members, CELOS staff and national stakeholders participated directly in rehabilitation planning, implementation and monitoring.

Importantly, the project demonstrated that the active engagement of the local communities throughout the rehabilitation process, from planning and implementation to maintenance and future management is an important factor to success. This contributes to local ownership and increases the likelihood of long-term sustainability after project completion.

3.4 Achievement of Objective 4: Development and Validation of Restoration Guidance

One of the most important project deliverables was the successful completion and validation of the Best Practices for Soil Restoration at Post-ASGM Sites guideline. This participatory guideline translates scientific knowledge, practical field experience and stakeholder feedback into an accessible framework for future restoration projects. The guideline covers site assessment, restoration planning, implementation, safety protocols, monitoring, governance and adaptive management.

The guideline incorporates lessons learned from both the earlier soil restoration pilot and the Compagnie Kreek rehabilitation project. Validation activities confirmed stakeholder support for the approach and ensured that both technical and community perspectives were integrated into the final document. Both the technical guideline and accompanying public communication materials were successfully updated, tested under field conditions and validated by stakeholders.

3.5 Contribution to Long-Term Impact

Beyond the achievement of its direct outputs, the project has contributed to a broader national discussion on rehabilitation of post-ASGM sites in Suriname. The demonstration project, guideline development and stakeholder engagement process showed that environmental restoration can be successfully linked to safer land use, livelihood development, agroforestry and community participation. The project therefore provides a replicable model for future rehabilitation initiatives within Suriname's mining sector.

The project has already generated interest among governmental institutions, NGOs, research organisations and international partners working on mining, environmental management and restoration. As a result, Compagnie Kreek now serves not only as a successful rehabilitation pilot, but also as a practical learning site supporting future policy development, capacity building and large-scale restoration efforts throughout Suriname.

4 Monitoring Outcomes

To assess the effectiveness of the soil rehabilitation measures, indicative soil and water quality parameters were monitored. Baseline Assessment I was executed before the start of the rehabilitation works and aimed to characterize existing soil conditions. Baseline Assessment II was conducted after completion of the civil / earthmoving works. In July 2026, final samples were collected to assess the influence of the rehabilitation activities on different soil functions.

The assessments focused on among others soil texture, estimated organic matter content, soil colour, and laboratory analysis of organic matter and nutrients in the topsoil (0.00–0.30 m below surface). During all monitoring rounds, samples were collected from the same sampling locations to ensure compatibility between the samples. Figure 4.1 shows the sampling locations. Sampling locations in the agroforestry plot with code AFV are areas with vegetation and code AFB are without vegetation during the start of the project.

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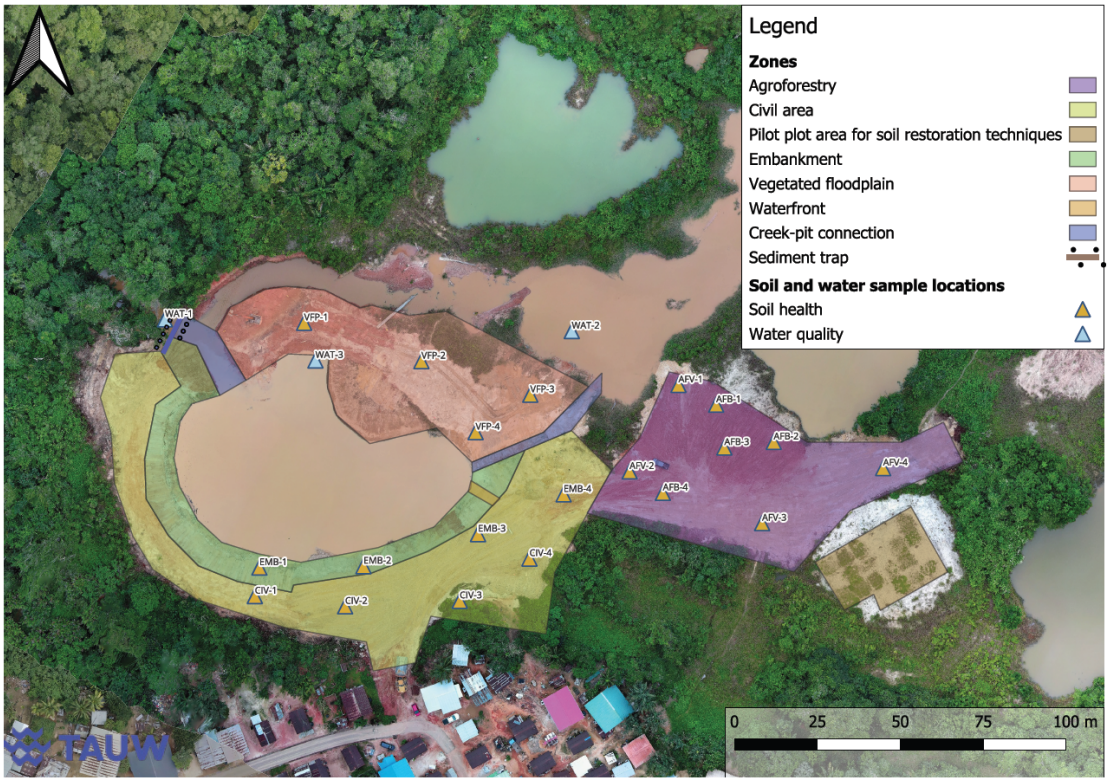


Figure 4.1 Monitoring sampling locations

4.1 Soil Organic Matter Content

Table 4.1 presents the organic matter content of the samples during all sampling rounds. Note that vegetation growth and soil rehabilitation was only relevant for the vegetated floodplain and agroforestry areas. The civil area and embankment did not require vegetation, hence were not tested for in the July monitoring round.

Table 4.1 Organic matter content (%) for the soil samples

Bore hole number / sample code	Baseline Assessment I	Baseline Assessment II**	Monitoring July 2026	Difference between BA I and July 2026
VFP-1	3.5	2.2	6.7	3.2
VFP-2	1.7	2.2	1.3	-0.4
VFP-3	0.9	0.8	1.0	0.1
VFP-4	0.7	0.8	1.3	0.6
Average VFP	*1.7*	*1.5*	*2.6*	*0.9*
AFV-1	2.3	7	5.8	3.5
AFV-2	1.1	7	6.1	5.0
AFV-3	1.6	3.5	1.6	0.0
AFV-4	1.9	3.5	1.7	-0.2
Average AFV	*1.7*	*5.3*	*3.8*	*2.1*

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Bore hole number / sample code	Baseline Assessment I	Baseline Assessment II**	Monitoring July 2026	Difference between BA I and July 2026
AFB-1	<0.7	2.1	6.3	5.6
AFB-2	<0.7	2.1	2.1	1.4
AFB-3	<0.7	2.8	6.0	5.3
AFB-4	2.5	2.8	1.9	-0.6
Average AFB	*1.2*	*2.5*	*4.1*	*2.9*
CIV-1	4.2	1.5	n/a	n/a
CIV-2	1.8	1.5	n/a	n/a
CIV-3	<0.7	0.8	n/a	n/a
CIV-4	<0.7	0.8	n/a	n/a
EMB-1	1.2	1.2	n/a	n/a
EMB-2	<0.7	1.2	n/a	n/a
EMB-3	0.9/1.0*	0.7	n/a	n/a
EMB-4	0.8	0.7	n/a	n/a

**two samples were collected for EMB-3, both were analyzed*

***due to limited sample volumes, composite samples were prepared where every second sample was combined*

Some observations and trends in the organic matter content stand out:

Overall trends

- Organic matter content generally increased between the baseline assessments and the July 2026 monitoring campaign, particularly in the agroforestry areas (AFV and AFB)
- The highest increases are observed in locations where vegetation is present or where organic material may accumulate, suggesting early soil development and organic matter build-up
- Results remain highly variable within each land-use type, indicating that soil conditions are still heterogeneous following earthworks and soil redistribution

Floodplain (VFP)

The floodplain shows mixed results. VFP-1 increased strongly from 2.2% to 6.7%, while VFP-2 decreased from 2.2% to 1.3%. VFP-3 and VFP-4 increased slightly. This variability likely reflects differences in sediment deposition, waterlogging, and organic matter accumulation across the floodplain. The vegetated and submerged conditions appear to promote localized organic matter accumulation, but not uniformly across the entire area.

Agroforestry with vegetation (AFV)

AFV shows the highest average organic matter contents overall. AFV-1 and AFV-2 maintained high values (5.8-6.1%) after reaching 7% during Baseline Assessment II. AFV-3 and AFV-4 remained relatively low (1.6-1.7%). The average organic matter increase between the first baseline and July monitoring round is 2,1 %. This suggests that vegetation establishment may already be contributing to organic matter build-up, although the response differs substantially between locations due to varying soil types and fill materials.

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Agroforestry bare (AFB)

The bare agroforestry samples show the largest relative improvement. Three of the four locations increased substantially, with AFB-1 rising to 6.3% and AFB-3 to 6.0%. Only AFB-4 decreased slightly from 2.8% to 1.9%. The average organic matter increase between the first baseline and July monitoring round is 2,9 %. Since these sites started with very low organic matter (<0.7% in several locations), the increases indicate that imported topsoil and/or early organic matter accumulation are having a positive effect.

4.2 Soil Nutrients

Nutrient contents of the soil were analysed during Baseline Assessment II and the sampling round in July 2026. Table 4.2 presents the results of these sampling campaigns.

Table 4.2 Nutrient content of the soil samples

Bore hole number / sample code	N – ammonium Baseline II* (mg/kg)	N – ammonium July 2026 (mg/kg)	N – nitrate Baseline II* (mg/kg)	N – nitrate July 2026 (mg/kg)	P Baseline II* (g/kg)	P July 2026 (g/kg)	K Baseline II* (mg/kg)	K July 2026 (mg/kg)
VFP-1	<0.5	<0.5	<2.0	<2.0	0.063	0.48	97	61
VFP-2	<0.5	<0.5	<2.0	<2.0	0.063	<0.05	97	110
VFP-3	0.8	1.4	<2.0	<2.0	<0.05	<0.05	74	96
VFP-4	0.8	<0.5	<2.0	<2.0	<0.05	<0.05	74	110
Average VFP	*0.7*	*0.7*	*2*	*2*	*0.057*	*0.156*	*86*	*94*
AFV-1	4.6	<0.5	<2.0	<2.0	0.2	0.15	82	91
AFV-2	4.6	<0.5	<2.0	<2.0	0.2	0.12	82	110
AFV-3	<0.5	<0.5	<2.0	<2.0	<0.05	<0.05	53	92
AFV-4	<0.5	0.82	<2.0	<2.0	<0.05	<0.05	53	120
Average AFV	*2.55*	*0.58*	*2*	*2*	*0.125*	*0.0925*	*67.5*	*103.25*
AFB-1	0.8	1.9	<2.0	<2.0	0.096	0.19	65	87
AFB-2	0.8	0.53	<2.0	<2.0	0.096	<0.05	65	140
AFB-3	<0.5	<0.5	<2.0	<2.0	<0.05	0.30	110	70
AFB-4	<0.5	0.9	<2.0	<2.0	<0.05	0.062	110	150
Average AFB	*0.65*	*0.9575*	*2*	*2*	*0.073*	*0.1505*	*87.5*	*111.75*
CIV-1	2.6	n/a	<2.0	n/a	<0.05	n/a	130	n/a
CIV-2	2.6	n/a	<2.0	n/a	<0.05	n/a	130	n/a
CIV-3	0.66	n/a	<2.0	n/a	<0.05	n/a	74	n/a
CIV-4	0.66	n/a	<2.0	n/a	<0.05	n/a	74	n/a
EMB-1	4.5	n/a	<2.0	n/a	<0.05	n/a	85	n/a
EMB-2	4.5	n/a	<2.0	n/a	<0.05	n/a	85	n/a
EMB-3	<0.5	n/a	<2.0	n/a	<0.05	n/a	69	n/a
EMB-4	<0.5	n/a	<2.0	n/a	<0.05	n/a	69	n/a

***due to limited sample volumes, composite samples were prepared where every second sample was combined*

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Some observations and trends in the organic matter content stand out:

General trends and observations
Overall, nutrient concentrations were generally low across all land-use types, with nitrogen and phosphorus often below detection limits, while potassium showed the greatest variation between sampling periods.

- Ammonium ($N\text{-}NH_4$) was mostly low as well. Several baseline samples showed detectable ammonium concentrations, but July 2026 values were generally lower or remained below detection limits, suggesting a stable to declining trend in available inorganic nitrogen. Low ammonium levels could indicate a quick nitrification process of ammonium to nitrate (likely in tropical soils) and fast plant uptake (likely given the planting efforts)
- Nitrate ($N\text{-}N0_3$) concentrations were consistently low. Nitrate was below the detection limit (<2.0 mg/kg) in all samples and both monitoring periods, indicating little evidence of nitrate accumulation across the sites. Low nitrate levels could, just like ammonium, indicate a fast plant uptake (likely given the planting efforts) or high levels of leaching (likely given the large amounts of rain between the two sample rounds and relative low amount of clay and organic matter in the soil)
- Phosphorus (P) remained low overall. Many samples were below the detection limit (<0.05 g/kg), although some locations showed modest increases in July 2026. Despite these increases, phosphorus levels generally remained relatively low and variable. This could be explained, also similar to ammonium and nitrate by large uptake of plants, especially for root development, and phosphate fixation to iron oxides (likely in tropical soils)
- Potassium (K) was the most dynamic nutrient. In contrast to nitrogen and phosphorus, potassium frequently increased between the baseline and July 2026 sampling, indicating greater temporal variability and potential enrichment at some sites. Other than ammonium, nitrate and phosphorus, potassium is released quicker from the applied chicken manure and organic material

Overall, no increases in ammonium, nitrate and phosphorus are measured, while the potassium concentration and organic matter content has increased.

Comparison between land-use types

- Vegetated systems (VFP and AFV) tended to show relatively low nutrient concentrations overall, with nitrogen remaining low and only moderate changes in phosphorus and potassium. This might be explained by the fact that the vegetation takes up nutrients from the soil
- Agroforestry bare (AFB) displayed the greatest variability, particularly for potassium, with several samples showing substantial increases over time. This suggests nutrient dynamics may be more heterogeneous in areas lacking vegetation cover

4.3 Soil eDNA and organisms

Additional to the abovementioned soil samples, SOILITYX has collected and analysed soil samples for eDNA and organisms present in the soil. These samples were collected at the following locations:

- At the agroforestry plot
- At a former mine tailing area, with very degraded coarse sand
- At the banks of the creek where vegetation was present

The results for the total concentration of DNA in the soil, and the fungal biodiversity (Shannon index) are portrayed in Figure 4.2. Each of the analysed samples consisted of a composite sample of four soil samples collected at different locations with the same land use. The agroforestry samples were collected at the agroforestry plot, the goldmine samples were collected on the main tailing area consisting of coarse sand, and the '*oever'* samples were collected at the vegetated embankment of the creek. The fungal diversity of the goldmine sample was below the detection limit, which is why this value is not displayed in the graph.

These results indicate that the total DNA concentration in the agroforestry area is low, even compared to the mine tailing area. This could be explained by the fact that the soil that was applied to this area was harvested from up to 2m below the original soil surface at the vegetated flood plain, while organisms are more likely to be present at the soil surface. Additionally, this soil has simply not had the time to grow substantial organisms as part of the soil rehabilitation.

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Figure 4.2 Total DNA concentration (left) and fungal diversity (Shannon index) of the soil samples

Besides these DNA analyses, SOILYTIX has analysed the soil texture in terms of clay, silt and sand content. The results of these analyses have been portrayed in Figure 4.3. This analysis shows that the soil texture of the agroforestry (S-AY71) area is loam, while the embankment (S-AY-70) is sandy loam and the mine tailings (S-AY72) are sand. These results are in line with the expectations and aim of the performed works. The soil applied to the agroforestry area was specifically selected to improve the soil texture.

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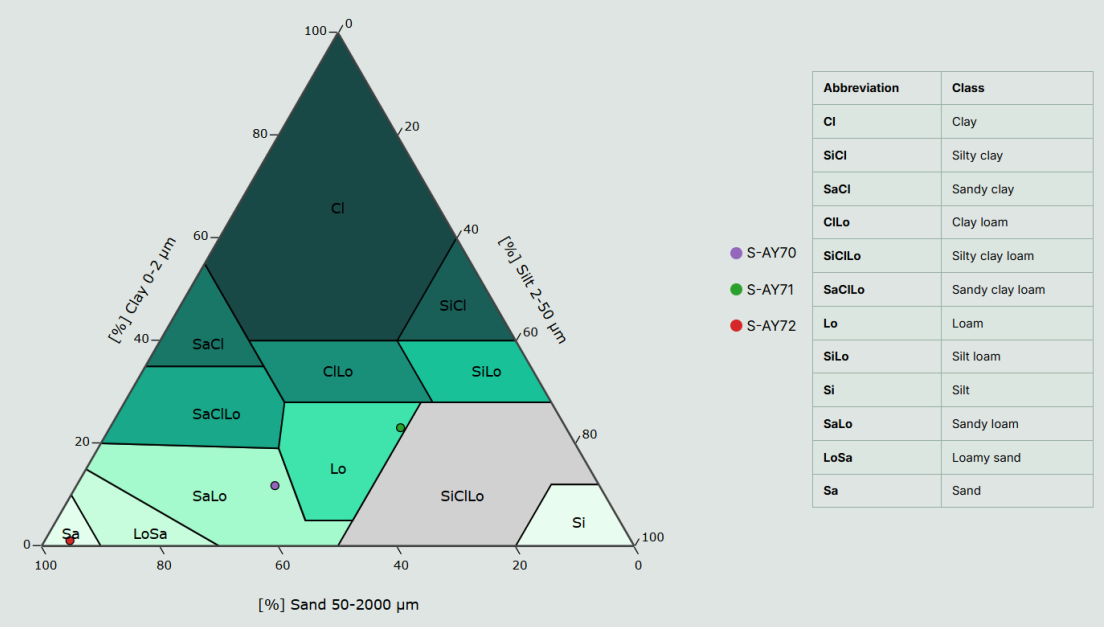


Figure 4.3 USDA soil texture triangle including placement of the three analyse soil samples of Compagnie Kreek, with the agroforestry (S-AY71) embankment (S-AY-70) and the mine tailings (S-AY72) sample results displayed

4.4 Vegetation

At all locations where soil samples were collected, the percentage of vegetation cover was estimated in July 2026. These values are presented in Table 4.3.

Table 4.3 Overview of vegetation cover at the soil sample locations in July

Sample location	Visually estimated vegetation cover (% per 1 m²)
VFP-1	5
VFP-2	20
VFP-3	35
VFP-4	3
Average VFP	*16*
AFV-1	10
AFV-2	5
AFV-3	20
AFV-4	20
Average AFV	*14*
AFB-1	15
AFB-2	20
AFB-3	15
AFB-4	10
Average AFB	*15*

Our reference R007-1291225IKR-V01-efm-NL

The number of planted crops and survival until the monitoring in July, including the number of crops lost due to pests of Woodlouse and Leafcutter Ants are provided in Table 4.4. As mentioned in paragraph 2.3, corrective action in the form of applying pesticides was taken after the presence of these pests was observed. In general, the percentage of seeds sprout and alive in July is relatively high, with a clear exception for Vigna (and to a lesser extent for Gliricida). We have no clear explanation for these lower percentages, but as many of the crops did sprout and survive well, we suspect it not to be due to a structural soil issue.

Table 4.4 Planted and lost crops

Crop	Amount	Percentage of seeds sprout in July 2026	Lost due to pest and replaced after July 2026	Unit
Plantain	235	99%		Cormel
Acai	84	100%		Seedling
Tania	160	60%		Seedling
Moringa	59	80%	20	Seedling
Inga	8	100%		Seedling
Mucuna	755	60%		Seed
Bitter Cassave	1060	80%	548	Stem cut
Gliricidia	61	40%		Stem cut
Vigna	1530	20%		Seed
Corn	1342	n/a		Seed
Coconut	24	n/a		Seedling
Palepu	20	n/a		Seedling

An aerial overview of the agroforestry site has been provided in Figure 4.4. This overview depicts clearly what is visible in the estimated vegetation cover: the planted vegetation is developing well, but in the only at the specific locations where they have been planted. The general area remains relatively bare.

Our reference R007-1291225IKR-V01-efm-NL



Figure 4.4 Aerial overview of the agroforestry plot at 12th of July

4.5 Water quality

The results of the water analysis are provided in Table 4.5. The pH of the water has remained relatively stable, with samples upstream in the creek and downstream in the pit showing a slight elevation to a more neutral pH, and the pH in de former mining put showing a slight decrease to a more alkaline pH. However, these differences are small and not considered significant. The turbidity does show a large difference between sampling moments. The turbidity upstream in the creek and downstream in the pit has decreased by over 50%, which has positive ecological effects. The turbidity in the former mining pit has increased. This is to be expected as the water in the mining pit is no longer stagnant, and the moving water causes sediments to be resuspended which increases the turbidity. The samples were taken at different times in the year, hence with different discharge rates of the creek.

Table 4.5 Overview of water quality analysis

Location	pH		Turbidity (NTU)	
	Baseline	July 2026	Baseline	July 2026
Upstream in the creek	5.95	6.05	473	206
Former mining pit	6.23	6.17	76,6	202
Downstream in the pit	5.99	6.02	468	197

5 Effectiveness of Soil Rehabilitation Practices

Soil rehabilitation and revegetation of a former ASGM with unfertile soil is a lengthy process. This process generally consists of the following aspects in order:

1. Improving soil structure
    a. Initiated with the earthworks
    b. Further enhanced by adding mulch and manure
2. Development of the soil in terms of organic matter
    a. Improved during the project from an average of 2.1 and 2.9 percentage points between the first baseline and the July monitoring for the agroforestry plot
3. Increase of soil moisture and nutrient retention capacity
    a. Not directly measured but is related to the clay and organic matter content of the site, which has demonstratively improved throughout the project
4. Increase of microorganisms and nutrient content of the soil
    a. We have not yet measured a significant nutrient increase of the soil except for potassium. The added nutrients have likely been taken up by vegetation and partially leeched out
    b. The number of microorganisms in the agroforestry area are still low, indicating that soil life has not restored yet. The restoration of soil life at the agroforestry plot might benefit from the transplantation of topsoil from the embankment of the forest to small spots throughout the area
5. Throughout the process: vegetation growth
    a. The planted seeds have largely sprouted and survived, and the vegetation is visually observed to have grown positively. However, spread of vegetation has not yet occurred. This is in line with expectations, as the spread of vegetation is to be preceded by the spread of soil development, after which seeds from the planted areas are to spread. This will take multiple years to develop

The soil rehabilitation started in February 2026, with revegetation starting in March. The soil data was collected in July, meaning the soil and vegetation have had approximately 6 months to develop. As the full process will take years, a lushly vegetated site is not to be expected within the timeframe of this project. The results for now do strongly indicate that the process of soil restoration has started and is positively developing: organic matter content has increased, and vegetation has sprouted and is growing. Nutrient concentration, the development of soil life, and further spreading of the vegetation is expected to take more time. With proper care for the site, we are confident that the site will keep developing towards a fully restored site.

6 Stakeholder Feedback

6.1 Local stakeholders

A local stakeholder validation session was organized on 16 July 2026 in Compagnie Kreek. During this session, community members discussed the rehabilitation process, the achieved results, and the identified best practices and lessons learned. The participants were divided into three groups and provided feedback using a colour-card system (red, orange, and green), after which the outcomes were discussed plenary.

Overall, the community indicated that the project implementation process was positive. Although some participants were initially sceptical because they had not previously been involved in a similar project, they reported no complaints regarding the implementation process and stated that the cooperation with CELOS and Haukes was good.

The community indicated that the rehabilitation works improved access to the water and created additional usable space. Residents noted that it is now easier to perform household activities such as washing dishes. However, community members also stated that they are not fully satisfied with the final result. Concerns were raised regarding the safety of children near the water, bank erosion at some locations, and the continued presence of an oily layer and poor water quality in the creek. According to the participants, part of the water quality issues originates from upstream areas near Brownsweg.

Community members suggested several improvements, including the provision of shade trees or seating facilities near the waterfront and rehabilitation of an additional area near the former football field. They also indicated that greater consideration of community input during the design phase might have reduced some of the observed erosion issues.

The agroforestry component was generally received positively. Participants considered the agroforestry system a good way of planting and were interested in the development of the newly established crops. At the same time, they reported challenges related to drought conditions, unsuitable soil conditions during the initial cassava pilot, and pest pressure from leafcutter ants. Community members expressed their willingness to support pest monitoring and control activities.

The validation session further showed that children and women use the rehabilitated area frequently. According to the participants, children visit the area daily for playing, football, swimming and other recreational activities, while women regularly use the site for household activities such as washing dishes and bathing.

Finally, the community expressed interest in future rehabilitation activities and indicated that they would remain open to restoring additional degraded areas. Participants also emphasized the importance of continued guidance and support after project completion, as the agroforestry system is still new to the community and further experience is required for long-term management of the site.

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6.2 (Inter)national stakeholders

On 13 August 2026, an international stakeholder validation session was held in Paramaribo. During this session, the project approach, outcomes, and lessons learned were presented, after which participants provided feedback through a Mentimeter questionnaire. The discussion focused on future rehabilitation of abandoned ASGM sites, governance arrangements, and the role of different stakeholder groups in scaling up rehabilitation efforts.

When asked what the most important action for Suriname should be, participants most frequently emphasized the need to strengthen and implement legislation and policy related to post-mining rehabilitation. Several participants indicated that rehabilitation requirements should be embedded in mining legislation, permits, and broader national development planning. Others stressed the importance of effective enforcement, monitoring, and governance of the gold mining sector. Government institutions, particularly the Ministry of Natural Resources (Ministry of NH), the National Environmental Authority (NMA), and other relevant governmental bodies, were repeatedly identified as key actors in this process.

Another recurring theme was the need for a national inventory of abandoned and degraded mining areas. Participants highlighted the importance of mapping former mining sites, identifying priority rehabilitation areas, and assessing vulnerable locations and biodiversity hotspots. This inventory was considered an essential basis for planning, budgeting, and prioritizing future rehabilitation interventions.

Capacity development was also identified as a priority. Respondents noted the importance of strengthening technical and institutional capacity within government agencies, improving enforcement capabilities, and increasing knowledge among local populations, mining communities, and traditional authorities. Educational efforts and awareness raising were viewed as important components for improving implementation of rehabilitation measures and promoting sustainable land management practices.

Participants further emphasized that successful rehabilitation requires cooperation among multiple stakeholder groups. Responses highlighted the roles of government agencies, local communities, traditional authorities, non-governmental organizations, the private sector, and scientific institutions. Several respondents stressed that rehabilitation planning and implementation should be carried out jointly and supported by transparent communication and stakeholder engagement.

Regarding the question of how local authorities and communities can gain greater control over land and be protected from the negative impacts of ASGM, stakeholders frequently referred to land rights and Free, Prior and Informed Consent (FPIC). Respondents indicated that stronger recognition of the rights of Indigenous and Tribal Peoples, clearer legal definitions of local authority responsibilities, and greater involvement of communities in decision-making processes would be important steps. Several participants also suggested that local communities should have a stronger role in determining where and how mining activities take place.

Feedback also identified several ongoing initiatives that support change in the ASGM sector. These included efforts to improve monitoring and control of small-scale mining activities, the development of a digital registration system for small-scale miners, biodiversity monitoring activities following rehabilitation, FPIC-related initiatives by indigenous organizations, and projects implemented by organizations such as Tropenbos Suriname, UNDP Suriname, and IUCN NL in collaboration with local partners. Participants further noted that some communities are actively opposing mining activities in their territories due to concerns about environmental degradation.

Overall, the validation session demonstrated broad support for strengthening rehabilitation efforts in Suriname. Stakeholders consistently identified stronger governance, improved legal frameworks, increased stakeholder participation, recognition of community rights, enhanced institutional capacity, and continued collaboration between governmental, local, and international actors as important conditions for achieving successful rehabilitation of abandoned ASGM sites.

7 Rehabilitation Challenges, Lessons Learned, and Replication

Several challenges were encountered during the rehabilitation works, providing important lessons for the design and implementation of future rehabilitation projects on former ASGM sites.

- One of the key challenges related to site hydrology and drainage. During this pilot, a comprehensive overview of the drainage patterns within the project site and its immediate surroundings was not available at the time the site design was developed. ASGM activities frequently disrupt natural drainage systems, either intentionally or unintentionally, resulting in blocked waterways, poor surface drainage, stagnant water bodies, and increased flood risk. In response to some observed hydraulic issues at the site, a decision was taken to hydraulically connect the former mining pit, both upstream and downstream, to the creek system. In some areas, small drainage channels had to be cleaned and restored to improve water movement. Future site assessments should therefore include a detailed hydraulic analysis, covering local drainage patterns as well as the wider catchment area. In addition, an inventory of existing water-related issues within surrounding communities should be conducted during the planning phase to ensure that rehabilitation measures adequately address current and potential future drainage problems
- Another challenge concerns crop protection during establishment. Pest damage was observed, particularly during the initial growth stages of planted vegetation. Effective pest management measures are therefore required to improve plant survival rates and support successful establishment of rehabilitation plantings
- Soil erosion was also identified as a recurring issue, especially along the slopes of waterways and drainage channels. Without adequate protection, these slopes are vulnerable to erosion during rainfall events, potentially leading to sediment transport and loss of soil stability. The implementation of erosion control measures, such as establishing vegetation cover on vulnerable slopes, is recommended to improve long-term site stability
- Infrastructure maintenance remains an important consideration. During the project a fallen tree damaged one of the sedimentation dams. The structure still requires repair to ensure that

it can function effectively as a sediment control measure and continue protecting downstream water quality

- A further challenge was the proximity of the local football field to one of the mining pits. The location poses a potential safety risk and is therefore not considered suitable for long-term use. Relocation of the football field has been identified as a necessary measure and will be undertaken by CELOS
- The project also highlighted the importance of accurately estimating earthmoving costs during the design phase. Initial cost estimates underestimated both the unit cost per cubic metre of soil moved and the fact that soil often needs to be moved multiple times during implementation. As a result, the original design was revised. Rather than completely backfilling the pit, the final design incorporated the pit into the site drainage system, allowing water to flow through the area. This adjustment significantly reduced earthmoving requirements and associated costs. Furthermore, because the rehabilitation was implemented as a community-oriented project, the contractor agreed to work without including a profit margin. The timing of the works also proved advantageous, as contractors generally have fewer income-generating opportunities during the rainy season and are therefore more willing to undertake projects at reduced rates
- The project showed how integrating livelihood opportunities through agroforestry, productive land use, and community stewardship can strengthen the long-term relevance of soil restoration by ensuring that restored land remains locally useful rather than only technically rehabilitated

8 Conclusion

The Compagnie Kreek rehabilitation project successfully demonstrated that degraded post-ASGM landscapes can be transformed into safer, more productive, and more environmentally sustainable areas through an integrated rehabilitation approach that combines earthworks, water management, soil restoration, agroforestry, and community participation.

During the project, approximately 12,150 m² of degraded land was rehabilitated, including the creation of a floodplain, improvements to site drainage, rehabilitation of a former mining pit, establishment of an agroforestry plot, construction of safer community slopes of the present former mining pit, and implementation of several community-oriented improvements. Approximately 7,000 m³ of soil was excavated and redistributed to improve site functionality and future land-use potential. The project therefore exceeded several of the original physical rehabilitation targets.

The monitoring results indicate that the process of soil restoration has been successfully initiated. Organic matter contents generally increased across the rehabilitated areas, particularly within the agroforestry plot. Vegetation establishment was successful for most planted species and visual observations indicate that the restored areas are developing positively. Although nutrient concentrations and indicators of soil biological activity remain relatively low, these results are

consistent with the early stages of soil development and demonstrate that the rehabilitation trajectory is progressing in the intended direction.

An important outcome of the project is that it validated the practical applicability of the rehabilitation approach that was previously developed through the Compagnie Kreek soil restoration pilot and translated into the guideline Best Practices for Soil Restoration at Post-ASGM Sites. The project demonstrated that successful rehabilitation requires more than soil restoration alone. Community priorities, drainage restoration, site safety, future land use, governance arrangements, and long-term management all proved to be critical factors influencing rehabilitation success.

The project also generated important capacity-building outcomes. Rehabilitation training activities reached 31 participants, while local stakeholders were actively involved throughout the implementation phase, including monitoring, site maintenance, agroforestry activities, and validation sessions. The community validation workshop attracted 11 participants, while approximately 60 stakeholders participated in the national validation workshop through both physical and online attendance. These activities contributed to increased awareness of rehabilitation opportunities and strengthened local ownership of the rehabilitation process.

The project has already created a foundation for longer-term continuation of the rehabilitation effort. CELOS has committed to incorporating the agroforestry plot into its broader agroforestry management activities. In addition, discussions with IUCN NL and associated partners have resulted in plans for continued ecological monitoring of the site, including biodiversity monitoring activities that will help assess longer-term ecosystem recovery beyond the current project period.

The lessons learned from Compagnie Kreek demonstrate that rehabilitation of abandoned ASGM sites in Suriname is technically feasible and can generate tangible environmental and social benefits. At the same time, the project confirmed that rehabilitation is a long-term process that requires continued maintenance, monitoring, community engagement, and institutional support after physical implementation has been completed.

Overall, the project can be considered a successful proof of concept for integrated post-ASGM rehabilitation in Suriname. The experiences obtained during the project provide a practical basis for future rehabilitation initiatives and contribute to the further development of national approaches to restoring degraded mining landscapes.

Our reference R007-1291225IKR-V01-efm-NL

Appendix 1 Analytical Certificates Soil

Our reference R007-1291225IKR-V01-efm-NL

Appendix 1a Baseline I en Baseline II

Tauw Nederland BV
Dhr. Jasper Wisman
Zekeringstraat 43G
AMSTERDAM
Nederland

Analysecertificaat

Datum: 09-03-2026

Hierbij ontvangt u de resultaten van het navolgende laboratoriumonderzoek.

Certificaatnummer/Versie	AR-421-2026-034861-01
Project/verslagnummer klant	1291225-001
Projectnaam klant	Companie Kreek
Opdrachtnummer	421-2026-034861
Projectafspraak	-
Ontvangst monster(s) op	25-02-2026
Monsternemer klant	-
Startdatum analyse	26-02-2026
Datum einde analyse	05-03-2026
Validatiedatum	09-03-2026
Bijlage(n)	A

Accreditatie/Erkenning:
S0: AS3000 Erkenning L010

Nadere informatie over de toegepaste onderzoeksmethoden alsmede een classificatie van de meetonzekerheid staan vermeld in de laatst geldende versie van ons overzicht "Specificaties analysemethoden".

Alle informatie in het rapport met betrekking tot het monster is van Eurofins afkomstig, tenzij anders aangegeven.

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd. De analyseresultaten hebben alleen betrekking op het door u aangeleverde monster.

Wij vertrouwen erop uw opdracht hiermee naar verwachting te hebben uitgevoerd. Mocht u naar aanleiding van dit analysecertificaat nog vragen hebben, verzoeken wij u contact op te nemen met de afdeling Customer Support.

Met vriendelijke groet,

Eurofins Analytico (Barneveld)

Ing. A. Veldhuizen
Technical Manager

	Analyse	Eenheid	1[1)]	2[1)]	3[1)]	4[1)]
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	96,1	89,0	84,0	92,4
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	< 0,7	1,4	4,3	0,9
	Gloeirest	% (m/m) ds	99,5	98,3	95,3	98,7

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
1	A0	Grond AS3000	25-02-2026	421-2026-00092591
2	A1	Grond AS3000	25-02-2026	421-2026-00092592
3	A2	Grond AS3000	25-02-2026	421-2026-00092593
4	A3	Grond AS3000	25-02-2026	421-2026-00092594

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	Analyse	Eenheid	5[1)]	6	7	8
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	85,1	87,8	90,5	91,4
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	0,8	< 0,7	< 0,7	< 0,7
	Gloeirest	% (m/m) ds	98,8	99,5	99,6	99,6

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
5	A4	Grond AS3000	25-02-2026	421-2026-00092595
6	AFB-1.1	Grond AS3000	25-02-2026	421-2026-00092596
7	AFB-2.1	Grond AS3000	25-02-2026	421-2026-00092597
8	AFB-3	Grond AS3000	25-02-2026	421-2026-00092598

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	Analyse	Eenheid	9[1)]	10[1)]	11[1)]	12[1)]
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	82,5	83,6	81,8	85,9
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	2,5	1,9	2,3	1,1
	Gloeirest	% (m/m) ds	97,1	97,7	97,3	98,6

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
9	AFB-4	Grond AS3000	25-02-2026	421-2026-00092599
10	AFV-4.1	Grond AS3000	25-02-2026	421-2026-00092600
11	AFV-1	Grond AS3000	25-02-2026	421-2026-00092601
12	AFV-2	Grond AS3000	25-02-2026	421-2026-00092602

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TESTEN
RvA L010

	Analyse	Eenheid	13[1)]	14[1)]	15	16
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	84,6	94,5	89,7	86,5
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	1,6	< 0,7	1,4	2,3
	Gloeirest	% (m/m) ds	98,0	99,4	98,3	97,4

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
13	AFV-3	Grond AS3000	25-02-2026	421-2026-00092603
14	B0	Grond AS3000	25-02-2026	421-2026-00092604
15	B1	Grond AS3000	25-02-2026	421-2026-00092605
16	B2	Grond AS3000	25-02-2026	421-2026-00092606

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TESTEN
RvA L010

	Analyse	Eenheid	17	18[1)]	19[1)]	20[1)]
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	90,7	83,7	87,6	81,5
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	< 0,7	1,1	< 0,7	2,0
	Gloeirest	% (m/m) ds	99,0	98,6	99,7	97,6

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
17	B3	Grond AS3000	25-02-2026	421-2026-00092607
18	B4	Grond AS3000	25-02-2026	421-2026-00092608
19	C0	Grond AS3000	25-02-2026	421-2026-00092609
20	C1	Grond AS3000	25-02-2026	421-2026-00092610

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	Analyse	Eenheid	21[1)]	22	23[1)]	24[1)]
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	77,5	83,0	82,3	84,9
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	3,3	1,3	1,2	1,8
	Gloeirest	% (m/m) ds	96,3	98,3	98,4	97,8

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
21	C2	Grond AS3000	25-02-2026	421-2026-00092611
22	C3	Grond AS3000	25-02-2026	421-2026-00092612
23	C4	Grond AS3000	25-02-2026	421-2026-00092613
24	CIV-2.1	Grond AS3000	25-02-2026	421-2026-00092614

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TESTEN
RvA L010

	Analyse	Eenheid	25[1)]	26	27[1)]	28
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	87,6	91,6	75,9	88,5
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	< 0,7	< 0,7	4,2	< 0,7
	Gloeirest	% (m/m) ds	99,3	99,5	95,5	99,6

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
25	CIV-3.1	Grond AS3000	25-02-2026	421-2026-00092615
26	CIV-4	Grond AS3000	25-02-2026	421-2026-00092616
27	CIV-1	Grond AS3000	25-02-2026	421-2026-00092617
28	D0	Grond AS3000	25-02-2026	421-2026-00092618

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

	Analyse	Eenheid	29	30	31[1)]	32
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	89,4	80,5	89,9	85,3
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	2,0	2,6	< 0,7	1,0
	Gloeirest	% (m/m) ds	97,6	97,0	99,0	98,7

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
29	D1	Grond AS3000	25-02-2026	421-2026-00092619
30	D2	Grond AS3000	25-02-2026	421-2026-00092620
31	D3	Grond AS3000	25-02-2026	421-2026-00092621
32	D4	Grond AS3000	25-02-2026	421-2026-00092622

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

	Analyse	Eenheid	33[1)]	34[1)]	35[1)]	36[1)]
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	87,5	84,6	83,8	88,8
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	1,0	1,2	< 0,7	0,9
	Gloeirest	% (m/m) ds	98,6	98,4	99,0	98,8

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
33	EMB-3.1	Grond AS3000	25-02-2026	421-2026-00092623
34	EMB-1	Grond AS3000	25-02-2026	421-2026-00092624
35	EMB-2	Grond AS3000	25-02-2026	421-2026-00092625
36	EMB-3	Grond AS3000	25-02-2026	421-2026-00092626

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

	Analyse	Eenheid	37[1)]	38[1)]	39	40
	Bodemkundige analyses					
	pb. 3010-2 & NEN-EN 15934					
S0	Droge stof	% (m/m)	91,1	87,1	81,9	84,3
	pb. 3010-3 & NEN 5754					
S0	Organische stof	% (m/m) ds	0,8	0,7	3,5	1,7
	Gloeirest	% (m/m) ds	98,8	98,9	96,1	97,9

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
37	EMB-4	Grond AS3000	25-02-2026	421-2026-00092627
38	VFP-4	Grond AS3000	25-02-2026	421-2026-00092628
39	VFP-1	Grond AS3000	25-02-2026	421-2026-00092629
40	VFP-2	Grond AS3000	25-02-2026	421-2026-00092630

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

	Analyse	Eenheid	41
	Bodemkundige analyses		
	pb. 3010-2 & NEN-EN 15934		
S0	Droge stof	% (m/m)	87,9
	pb. 3010-3 & NEN 5754		
S0	Organische stof	% (m/m) ds	0,9
	Gloeirest	% (m/m) ds	98,7

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
41	VFP-3.1	Grond AS3000	25-02-2026	421-2026-00092631

Vrijgegeven door: K5LS

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

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Opmerkingen:

1) Minder dan de minimaal benodigde 375mL of 400g monstermateriaal geleverd.

Uw aanvullende monsterinformatie:

Ons Monsternr.: 421-2026-00092591

ORDERNR2	2022022
IDANLMONS	1011127614
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092592

ORDERNR2	2022022
IDANLMONS	1011127616
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092593

ORDERNR2	2022022
IDANLMONS	1011127618
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092594

ORDERNR2	2022022
IDANLMONS	1011127620
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092595

ORDERNR2	2022022
IDANLMONS	1011127622
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092596

ORDERNR2	2022022
IDANLMONS	1011127680
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092597

ORDERNR2	2022022
IDANLMONS	1011127682
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092598

ORDERNR2	2022022
IDANLMONS	1011127684
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092599

ORDERNR2	2022022
IDANLMONS	1011127686
SAMPLEDATE	25-02-2026 00:00

Ons Monsternr.: 421-2026-00092600

ORDERNR2	2022022

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Ons Monsternr.: 421-2026-00092600	
IDANLMONS	1011127694
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092601	
ORDERNR2	2022022
IDANLMONS	1011127688
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092602	
ORDERNR2	2022022
IDANLMONS	1011127690
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092603	
ORDERNR2	2022022
IDANLMONS	1011127692
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092604	
ORDERNR2	2022022
IDANLMONS	1011127624
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092605	
ORDERNR2	2022022
IDANLMONS	1011127626
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092606	
ORDERNR2	2022022
IDANLMONS	1011127628
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092607	
ORDERNR2	2022022
IDANLMONS	1011127630
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092608	
ORDERNR2	2022022
IDANLMONS	1011127632
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092609	
ORDERNR2	2022022
IDANLMONS	1011127634
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092610	
ORDERNR2	2022022
IDANLMONS	1011127636
SAMPLEDATE	25-02-2026 00:00

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Ons Monsternr.: 421-2026-00092611	
ORDERNR2	2022022
IDANLMONS	1011127638
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092612	
ORDERNR2	2022022
IDANLMONS	1011127640
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092613	
ORDERNR2	2022022
IDANLMONS	1011127642
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092614	
ORDERNR2	2022022
IDANLMONS	1011127656
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092615	
ORDERNR2	2022022
IDANLMONS	1011127658
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092616	
ORDERNR2	2022022
IDANLMONS	1011127660
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092617	
ORDERNR2	2022022
IDANLMONS	1011127654
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092618	
ORDERNR2	2022022
IDANLMONS	1011127644
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092619	
ORDERNR2	2022022
IDANLMONS	1011127646
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092620	
ORDERNR2	2022022
IDANLMONS	1011127648
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092621	
ORDERNR2	2022022
IDANLMONS	1011127650

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Ons Monsternr.: 421-2026-00092621	
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092622	
ORDERNR2	2022022
IDANLMONS	1011127652
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092623	
ORDERNR2	2022022
IDANLMONS	1011127670
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092624	
ORDERNR2	2022022
IDANLMONS	1011127662
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092625	
ORDERNR2	2022022
IDANLMONS	1011127664
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092626	
ORDERNR2	2022022
IDANLMONS	1011127666
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092627	
ORDERNR2	2022022
IDANLMONS	1011127668
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092628	
ORDERNR2	2022022
IDANLMONS	1011127678
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092629	
ORDERNR2	2022022
IDANLMONS	1011127672
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092630	
ORDERNR2	2022022
IDANLMONS	1011127674
SAMPLEDATE	25-02-2026 00:00
Ons Monsternr.: 421-2026-00092631	
ORDERNR2	2022022
IDANLMONS	1011127676
SAMPLEDATE	25-02-2026 00:00

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Appendix (A): met deelmonsterinformatie behorende bij analysecertificaat AR-421-2026-034861-01

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr. 421-2026-00092591	**Monsteromschrijving klant**	A0			
6200019608	Companie kreek	0	10	25-02-2026	A0
Ons Monsternr. 421-2026-00092592	**Monsteromschrijving klant**	A1			
6200019610	Companie kreek	0	10	25-02-2026	A1
Ons Monsternr. 421-2026-00092593	**Monsteromschrijving klant**	A2			
6200019607	Companie kreek	0	10	25-02-2026	A2
Ons Monsternr. 421-2026-00092594	**Monsteromschrijving klant**	A3			
6200019606	Companie kreek	0	10	25-02-2026	A3
Ons Monsternr. 421-2026-00092595	**Monsteromschrijving klant**	A4			
6200019617	Companie kreek	0	10	25-02-2026	A4
Ons Monsternr. 421-2026-00092596	**Monsteromschrijving klant**	AFB-1.1			
6200019858	Companie kreek	0	10	25-02-2026	AFB-1.1
Ons Monsternr. 421-2026-00092597	**Monsteromschrijving klant**	AFB-2.1			
6200019866	Companie kreek	0	10	25-02-2026	AFB-2.1
Ons Monsternr. 421-2026-00092598	**Monsteromschrijving klant**	AFB-3			
6200019877	Companie kreek	0	10	25-02-2026	AFB-3
Ons Monsternr. 421-2026-00092599	**Monsteromschrijving klant**	AFB-4			
6200019848	Companie kreek	0	10	25-02-2026	AFB-4
Ons Monsternr. 421-2026-00092600	**Monsteromschrijving klant**	AFV-4.1			
6200019872	Companie kreek	0	10	25-02-2026	AFV-4.1

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr.	421-2026-00092601 **Monsteromschrijving klant**	AFV-1			
6200019873	Companie kreek	0	10	25-02-2026	AFV-1
Ons Monsternr.	421-2026-00092602 **Monsteromschrijving klant**	AFV-2			
6200019875	Companie kreek	0	10	25-02-2026	AFV-2
Ons Monsternr.	421-2026-00092603 **Monsteromschrijving klant**	AFV-3			
6200019881	Companie kreek	0	10	25-02-2026	AFV-3
Ons Monsternr.	421-2026-00092604 **Monsteromschrijving klant**	B0			
6200019570	Companie kreek	0	10	25-02-2026	B0
Ons Monsternr.	421-2026-00092605 **Monsteromschrijving klant**	B1			
6200019566	Companie kreek	0	10	25-02-2026	B1
Ons Monsternr.	421-2026-00092606 **Monsteromschrijving klant**	B2			
6200019572	Companie kreek	0	10	25-02-2026	B2
Ons Monsternr.	421-2026-00092607 **Monsteromschrijving klant**	B3			
6200019573	Companie kreek	0	10	25-02-2026	B3
Ons Monsternr.	421-2026-00092608 **Monsteromschrijving klant**	B4			
6200019578	Companie kreek	0	10	25-02-2026	B4
Ons Monsternr.	421-2026-00092609 **Monsteromschrijving klant**	C0			
6200019579	Companie kreek	0	10	25-02-2026	C0
Ons Monsternr.	421-2026-00092610 **Monsteromschrijving klant**	C1			
6200019574	Companie kreek	0	10	25-02-2026	C1
Ons Monsternr.	421-2026-00092611 **Monsteromschrijving klant**	C2			
6200019571	Companie kreek	0	10	25-02-2026	C2

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr.	421-2026-00092612 **Monsteromschrijving klant**	C3			
6200019577	Companie kreek	0	10	25-02-2026	C3
Ons Monsternr.	421-2026-00092613 **Monsteromschrijving klant**	C4			
6200019519	Companie kreek	0	10	25-02-2026	C4
Ons Monsternr.	421-2026-00092614 **Monsteromschrijving klant**	CIV-2.1			
6200019526	Companie kreek	0	10	25-02-2026	CIV-2.1
Ons Monsternr.	421-2026-00092615 **Monsteromschrijving klant**	CIV-3.1			
6200019567	Companie kreek	0	10	25-02-2026	CIV-3.1
Ons Monsternr.	421-2026-00092616 **Monsteromschrijving klant**	CIV-4			
6200019862	Companie kreek	0	10	25-02-2026	CIV-4
Ons Monsternr.	421-2026-00092617 **Monsteromschrijving klant**	CIV-1			
6200019568	Companie kreek	0	10	25-02-2026	CIV-1
Ons Monsternr.	421-2026-00092618 **Monsteromschrijving klant**	D0			
6200019575	Companie kreek	0	10	25-02-2026	D0
Ons Monsternr.	421-2026-00092619 **Monsteromschrijving klant**	D1			
6200019576	Companie kreek	0	10	25-02-2026	D1
Ons Monsternr.	421-2026-00092620 **Monsteromschrijving klant**	D2			
6200019569	Companie kreek	0	10	25-02-2026	D2
Ons Monsternr.	421-2026-00092621 **Monsteromschrijving klant**	D3			
6200019564	Companie kreek	0	10	25-02-2026	D3
Ons Monsternr.	421-2026-00092622 **Monsteromschrijving klant**	D4			
6200019532	Companie kreek	0	10	25-02-2026	D4

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr.	421-2026-00092623 **Monsteromschrijving klant**	EMB-3.1			
6200019876	Companie kreek	0	10	25-02-2026	EMB-3.1
Ons Monsternr.	421-2026-00092624 **Monsteromschrijving klant**	EMB-1			
6200019879	Companie kreek	0	10	25-02-2026	EMB-1
Ons Monsternr.	421-2026-00092625 **Monsteromschrijving klant**	EMB-2			
6200019849	Companie kreek	0	10	25-02-2026	EMB-2
Ons Monsternr.	421-2026-00092626 **Monsteromschrijving klant**	EMB-3			
6200019844	Companie kreek	0	10	25-02-2026	EMB-3
Ons Monsternr.	421-2026-00092627 **Monsteromschrijving klant**	EMB-4			
6200019824	Companie kreek	0	10	25-02-2026	EMB-4
Ons Monsternr.	421-2026-00092628 **Monsteromschrijving klant**	VFP-4			
6200019855	Companie kreek	0	10	25-02-2026	VFP-4
Ons Monsternr.	421-2026-00092629 **Monsteromschrijving klant**	VFP-1			
6200019854	Companie kreek	0	10	25-02-2026	VFP-1
Ons Monsternr.	421-2026-00092630 **Monsteromschrijving klant**	VFP-2			
6200019868	Companie kreek	0	10	25-02-2026	VFP-2
Ons Monsternr.	421-2026-00092631 **Monsteromschrijving klant**	VFP-3.1			
6200019880	Companie kreek	0	10	25-02-2026	VFP-3.1

Tauw Nederland BV
Dhr. Jasper Wisman
Zekeringstraat 43G
AMSTERDAM
Nederland

Analysecertificaat

Datum: 13-03-2026

Hierbij ontvangt u de resultaten van het navolgende laboratoriumonderzoek.

Certificaatnummer/Versie	AR-421-2026-043469-01
Project/verslagnummer klant	1291225-001
Projectnaam klant	Companie Kreek
Opdrachtnummer	421-2026-043469
Projectafspraak	-
Ontvangst monster(s) op	10-03-2026
Monsternemer klant	-
Startdatum analyse	10-03-2026
Datum einde analyse	13-03-2026
Validatiedatum	13-03-2026
Bijlage(n)	A

Accreditatie/Erkenning:
AC: NEN EN ISO/IEC 17025: 2017, RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd. De analyseresultaten hebben alleen betrekking op het door u aangeleverde monster.

Wij vertrouwen erop uw opdracht hiermee naar verwachting te hebben uitgevoerd. Mocht u naar aanleiding van dit analysecertificaat nog vragen hebben, verzoeken wij u contact op te nemen met de afdeling Customer Support.



Met vriendelijke groet,

Eurofins Analytico (Barneveld)

Ing. A. Veldhuizen
Technical Manager

	Analyse	Eenheid	1	2	3	4
	Bodemkundige analyses					
	NEN-EN 15934					
AC	Droge stof	% (m/m)	80,9	83,0	88,0	84,4
	NEN 5754					
AC	Organische stof	% (m/m) ds	7,0	3,5	2,1	2,8
AC	Gloeirest	% (m/m) ds	92,6	96,1	97,5	96,8
	Metalen					
	NEN-EN-ISO 17294-2					
AC	Fosfor totaal (P)	g/kg ds	0,20	< 0,050	0,096	< 0,050
AC	Fosfor totaal (PO4)	g/kg ds	0,61	< 0,15	0,29	< 0,15
AC	Fosfor totaal (P2O5)	g/kg ds	0,46	< 0,12	0,22	< 0,12
AC	Kalium (K)	mg/kg ds	82	53	65	110
	Anorganische verbindingen					
	Eigen methode					
	Ammonium (NH4-N)	mg/kg ds	4,6	< 0,50	0,80	< 0,50
	Ammonium (NH4)	mg/kg ds	5,9	< 0,64	1,0	< 0,64
	Nitraat (NO3-N)	mg/kg ds	< 2,0	< 2,0	< 2,0	< 2,0
	Nitraat (NO3)	mg/kg ds	< 9,0	< 9,0	< 9,0	< 9,0

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
1	Meng II AFB 1.2	Grond	10-03-2026	421-2026-00115825
2	Meng II AFB 3.4	Grond	10-03-2026	421-2026-00115826
3	Meng II AFV 1.2	Grond	10-03-2026	421-2026-00115827
4	Meng II AFV 3.4	Grond	10-03-2026	421-2026-00115828

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

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	Analyse	Eenheid	5	6	7	8
	Bodemkundige analyses					
	NEN-EN 15934					
AC	Droge stof	% (m/m)	87,8	90,5	89,1	89,8
	NEN 5754					
AC	Organische stof	% (m/m) ds	1,5	0,8	1,2	0,7
AC	Gloeirest	% (m/m) ds	98,1	98,8	98,4	98,9
	Metalen					
	NEN-EN-ISO 17294-2					
AC	Fosfor totaal (P)	g/kg ds	< 0,050	< 0,050	< 0,050	< 0,050
AC	Fosfor totaal (PO4)	g/kg ds	< 0,15	< 0,15	< 0,15	< 0,15
AC	Fosfor totaal (P2O5)	g/kg ds	< 0,12	< 0,12	< 0,12	< 0,12
AC	Kalium (K)	mg/kg ds	130	74	85	69
	Anorganische verbindingen					
	Eigen methode					
	Ammonium (NH4-N)	mg/kg ds	2,6	0,66	4,5	< 0,50
	Ammonium (NH4)	mg/kg ds	3,4	0,85	5,8	< 0,64
	Nitraat (NO3-N)	mg/kg ds	< 2,0	< 2,0	< 2,0	< 2,0
	Nitraat (NO3)	mg/kg ds	< 9,0	< 9,0	< 9,0	< 9,0

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
5	Meng II CIV 1.2	Grond	10-03-2026	421-2026-00115829
6	Meng II CIV 3.4	Grond	10-03-2026	421-2026-00115830
7	Meng II EMB 1.2	Grond	10-03-2026	421-2026-00115831
8	Meng II EMB 3.4	Grond	10-03-2026	421-2026-00115832

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

	Analyse	Eenheid	9	10
	Bodemkundige analyses			
	NEN-EN 15934			
AC	Droge stof	% (m/m)	85,9	90,2
	NEN 5754			
AC	Organische stof	% (m/m) ds	2,2	0,8
AC	Gloeirest	% (m/m) ds	97,4	98,8
	Metalen			
	NEN-EN-ISO 17294-2			
AC	Fosfor totaal (P)	g/kg ds	0,063	< 0,050
AC	Fosfor totaal (PO4)	g/kg ds	0,19	< 0,15
AC	Fosfor totaal (P2O5)	g/kg ds	0,14	< 0,12
AC	Kalium (K)	mg/kg ds	97	74
	Anorganische verbindingen			
	Eigen methode			
	Ammonium (NH4-N)	mg/kg ds	< 0,50	0,80
	Ammonium (NH4)	mg/kg ds	< 0,64	1,0
	Nitraat (NO3-N)	mg/kg ds	< 2,0	< 2,0
	Nitraat (NO3)	mg/kg ds	< 9,0	< 9,0

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
9	Meng II VFP 1.2	Grond	10-03-2026	421-2026-00115833
10	Meng II VFP 3.4	Grond	10-03-2026	421-2026-00115834

Vrijgegeven door: K5LS

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Uw aanvullende monsterinformatie:

Ons Monsternr.: 421-2026-00115825

ORDERNR2	2022421
IDANLMONS	1011129996
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115826

ORDERNR2	2022421
IDANLMONS	1011129997
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115827

ORDERNR2	2022421
IDANLMONS	1011129998
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115828

ORDERNR2	2022421
IDANLMONS	1011129999
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115829

ORDERNR2	2022421
IDANLMONS	1011130000
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115830

ORDERNR2	2022421
IDANLMONS	1011130001
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115831

ORDERNR2	2022421
IDANLMONS	1011130002
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115832

ORDERNR2	2022421
IDANLMONS	1011130003
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115833

ORDERNR2	2022421
IDANLMONS	1011130004
SAMPLEDATE	10-03-2026 00:00

Ons Monsternr.: 421-2026-00115834

ORDERNR2	2022421
IDANLMONS	1011130005
SAMPLEDATE	10-03-2026 00:00

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Appendix (A): met deelmonsterinformatie behorende bij analysecertificaat AR-421-2026-043469-01

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr. 421-2026-00115825	**Monsteromschrijving klant**	Meng II AFB 1.2			
6200018916	CK	0	30	10-03-2026	Meng II AFB 1.2
Ons Monsternr. 421-2026-00115826	**Monsteromschrijving klant**	Meng II AFB 3.4			
6200018920	CK	0	30	10-03-2026	Meng II AFB 3.4
Ons Monsternr. 421-2026-00115827	**Monsteromschrijving klant**	Meng II AFV 1.2			
6200018915	CK	0	30	10-03-2026	Meng II AFV 1.2
Ons Monsternr. 421-2026-00115828	**Monsteromschrijving klant**	Meng II AFV 3.4			
6200018922	CK	0	30	10-03-2026	Meng II AFV 3.4
Ons Monsternr. 421-2026-00115829	**Monsteromschrijving klant**	Meng II CIV 1.2			
6200018927	CK	0	30	10-03-2026	Meng II CIV 1.2
Ons Monsternr. 421-2026-00115830	**Monsteromschrijving klant**	Meng II CIV 3.4			
6200018917	CK	0	30	10-03-2026	Meng II CIV 3.4
Ons Monsternr. 421-2026-00115831	**Monsteromschrijving klant**	Meng II EMB 1.2			
6200018919	CK	0	30	10-03-2026	Meng II EMB 1.2
Ons Monsternr. 421-2026-00115832	**Monsteromschrijving klant**	Meng II EMB 3.4			
6200018918	CK	0	30	10-03-2026	Meng II EMB 3.4
Ons Monsternr. 421-2026-00115833	**Monsteromschrijving klant**	Meng II VFP 1.2			
6200018914	CK	0	30	10-03-2026	Meng II VFP 1.2
Ons Monsternr. 421-2026-00115834	**Monsteromschrijving klant**	Meng II VFP 3.4			
6200018921	CK	0	30	10-03-2026	Meng II VFP 3.4

Our reference R007-1291225IKR-V01-efm-NL

Appendix 1b July 2026

Tauw Nederland BV
Mevr. Ellen Verboom
Zekeringstraat 43G
AMSTERDAM
Nederland

Analysecertificaat

Datum: 12-08-2026

Hierbij ontvangt u de resultaten van het navolgende laboratoriumonderzoek.

Certificaatnummer/Versie	AR-421-2026-122941-01
Project/verslagnummer klant	1291225
Projectnaam klant	Suriname - TAUW Foundation 2023
Opdrachtnummer	421-2026-122941
Projectafspraak	-
Ontvangst monster(s) op	06-08-2026
Monsternemer klant	-
Startdatum analyse	06-08-2026
Datum einde analyse	11-08-2026
Validatiedatum	12-08-2026
Bijlage(n)	A

Accreditatie/Erkenning:
AC: NEN EN ISO/IEC 17025: 2017, RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd. De analyseresultaten hebben alleen betrekking op het door u aangeleverde monster.

Wij vertrouwen erop uw opdracht hiermee naar verwachting te hebben uitgevoerd. Mocht u naar aanleiding van dit analysecertificaat nog vragen hebben, verzoeken wij u contact op te nemen met de afdeling Customer Support.



Met vriendelijke groet,

Eurofins Analytico (Barneveld)

Ing. A. Veldhuizen
Technical Manager

	Analyse	Eenheid	1	2	3	4
	Bodemkundige analyses					
	NEN-EN 15934					
AC	Droge stof	% (m/m)	81,2	89,0	91,9	90,2
	NEN 5754					
AC	Organische stof	% (m/m) ds	6,7	1,3	1,0	1,3
AC	Gloeirest	% (m/m) ds	93,0	98,3	98,6	98,3
	Metalen					
	NEN-EN-ISO 17294-2					
AC	Fosfor totaal (P)	g/kg ds	0,48	< 0,050	< 0,050	< 0,050
AC	Fosfor totaal (PO4)	g/kg ds	1,5	< 0,15	< 0,15	< 0,15
AC	Fosfor totaal (P2O5)	g/kg ds	1,1	< 0,12	< 0,12	< 0,12
AC	Kalium (K)	mg/kg ds	61	110	96	110
	Anorganische verbindingen					
	Eigen methode					
	Ammonium (NH4-N)	mg/kg ds	< 0,50 [1)]	< 0,50 [1)]	1,4 [1)]	< 0,50 [1)]
	Ammonium (NH4)	mg/kg ds	< 0,64 [1)]	< 0,64 [1)]	1,8 [1)]	< 0,64 [1)]
	Nitraat (NO3-N)	mg/kg ds	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]
	Nitraat (NO3)	mg/kg ds	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
1	1291225/50-50	Grond	31-07-2026	421-2026-00358567
2	1291225/51-51	Grond	31-07-2026	421-2026-00358568
3	1291225/52-52	Grond	31-07-2026	421-2026-00358569
4	1291225/53-53	Grond	31-07-2026	421-2026-00358570

TESTEN
RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

	Analyse	Eenheid	5	6	7	8
	Bodemkundige analyses					
	NEN-EN 15934					
AC	Droge stof	% (m/m)	86,4	85,1	90,1	91,6
	NEN 5754					
AC	Organische stof	% (m/m) ds	5,8	6,1	1,6	1,7
AC	Gloeirest	% (m/m) ds	93,8	93,5	98,0	97,9
	Metalen					
	NEN-EN-ISO 17294-2					
AC	Fosfor totaal (P)	g/kg ds	0,15	0,12	< 0,050	< 0,050
AC	Fosfor totaal (PO4)	g/kg ds	0,46	0,38	< 0,15	< 0,15
AC	Fosfor totaal (P2O5)	g/kg ds	0,35	0,29	< 0,12	< 0,12
AC	Kalium (K)	mg/kg ds	91	110	92	120
	Anorganische verbindingen					
	Eigen methode					
	Ammonium (NH4-N)	mg/kg ds	< 0,50 [1)]	< 0,50 [1)]	< 0,50 [1)]	0,82 [1)]
	Ammonium (NH4)	mg/kg ds	< 0,64 [1)]	< 0,64 [1)]	< 0,64 [1)]	1,1 [1)]
	Nitraat (NO3-N)	mg/kg ds	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]
	Nitraat (NO3)	mg/kg ds	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
5	1291225/54-54	Grond	31-07-2026	421-2026-00358571
6	1291225/55-55	Grond	31-07-2026	421-2026-00358572
7	1291225/56-56	Grond	31-07-2026	421-2026-00358573
8	1291225/57-57	Grond	31-07-2026	421-2026-00358574

TESTEN
RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

	Analyse	Eenheid	9	10	11	12
	Bodemkundige analyses					
	NEN-EN 15934					
AC	Droge stof	% (m/m)	84,5	90,6	85,1	89,6
	NEN 5754					
AC	Organische stof	% (m/m) ds	6,3	2,1	6,0	1,9
AC	Gloeirest	% (m/m) ds	93,4	97,5	93,6	97,7
	Metalen					
	NEN-EN-ISO 17294-2					
AC	Fosfor totaal (P)	g/kg ds	0,19	< 0,050	0,30	0,062
AC	Fosfor totaal (PO4)	g/kg ds	0,58	< 0,15	0,93	0,19
AC	Fosfor totaal (P2O5)	g/kg ds	0,43	< 0,12	0,70	0,14
AC	Kalium (K)	mg/kg ds	87	140	70	150
	Anorganische verbindingen					
	Eigen methode					
	Ammonium (NH4-N)	mg/kg ds	1,9 [1)]	0,53 [1)]	< 0,50 [1)]	0,90 [1)]
	Ammonium (NH4)	mg/kg ds	2,4 [1)]	0,68 [1)]	< 0,64 [1)]	1,2 [1)]
	Nitraat (NO3-N)	mg/kg ds	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]	< 2,0 [1, 2)]
	Nitraat (NO3)	mg/kg ds	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]	< 9,0 [1, 2)]

No.	Monsteromschrijving klant	Monstermatrix	Bemonsterings - datum klant	Ons Monsternr.
9	1291225/58-58	Grond	31-07-2026	421-2026-00358575
10	1291225/59-59	Grond	31-07-2026	421-2026-00358576
11	1291225/60-60	Grond	31-07-2026	421-2026-00358577
12	1291225/61-61	Grond	31-07-2026	421-2026-00358578

Vrijgegeven door: K5LS

TESTEN
RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

Opmerkingen:

1) De conserveringstermijn is voor de betreffende analyse overschreden.
2) De rapportagegrens is verhoogd ten gevolge van een verlaagde monsterinzet en/of te laag droog gewicht.

Uw aanvullende monsterinformatie:

Ons Monsternr.: 421-2026-00358567

ORDERNR2	2026986
IDANLMONS	1011157032
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358568

ORDERNR2	2026986
IDANLMONS	1011157033
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358569

ORDERNR2	2026986
IDANLMONS	1011157034
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358570

ORDERNR2	2026986
IDANLMONS	1011157035
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358571

ORDERNR2	2026986
IDANLMONS	1011157036
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358572

ORDERNR2	2026986
IDANLMONS	1011157037
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358573

ORDERNR2	2026986
IDANLMONS	1011157038
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358574

ORDERNR2	2026986
IDANLMONS	1011157039
SAMPLEDATE	31-07-2026 00:00

Ons Monsternr.: 421-2026-00358575

ORDERNR2	2026986
IDANLMONS	1011157040
SAMPLEDATE	31-07-2026 00:00

TESTEN
RvA L010

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

Ons Monsternr.: 421-2026-00358576	
ORDERNR2	2026986
IDANLMONS	1011157041
SAMPLEDATE	31-07-2026 00:00
Ons Monsternr.: 421-2026-00358577	
ORDERNR2	2026986
IDANLMONS	1011157042
SAMPLEDATE	31-07-2026 00:00
Ons Monsternr.: 421-2026-00358578	
ORDERNR2	2026986
IDANLMONS	1011157043
SAMPLEDATE	31-07-2026 00:00

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.

TESTEN
RvA L010

Appendix (A): met deelmonsterinformatie behorende bij analysecertificaat AR-421-2026-122941-01

Barcode	Boornr	Van	Tot	Bemonsterings - datum klant	Deelmonsteromschrijving
Ons Monsternr. 421-2026-00358567	**Monsteromschrijving klant**	1291225/50-50			
0520499220	50	0	10	31-07-2026	50
Ons Monsternr. 421-2026-00358568	**Monsteromschrijving klant**	1291225/51-51			
0520499729	51	0	10	31-07-2026	51
Ons Monsternr. 421-2026-00358569	**Monsteromschrijving klant**	1291225/52-52			
0520499736	52	0	10	31-07-2026	52
Ons Monsternr. 421-2026-00358570	**Monsteromschrijving klant**	1291225/53-53			
0520499748	53	0	10	31-07-2026	53
Ons Monsternr. 421-2026-00358571	**Monsteromschrijving klant**	1291225/54-54			
0520499726	54	0	10	31-07-2026	54
Ons Monsternr. 421-2026-00358572	**Monsteromschrijving klant**	1291225/55-55			
0520499730	55	0	10	31-07-2026	55
Ons Monsternr. 421-2026-00358573	**Monsteromschrijving klant**	1291225/56-56			
0520499742	56	0	10	31-07-2026	56
Ons Monsternr. 421-2026-00358574	**Monsteromschrijving klant**	1291225/57-57			
0520499219	57	0	10	31-07-2026	57
Ons Monsternr. 421-2026-00358575	**Monsteromschrijving klant**	1291225/58-58			
0520499223	58	0	10	31-07-2026	58
Ons Monsternr. 421-2026-00358576	**Monsteromschrijving klant**	1291225/59-59			
0520499733	59	0	10	31-07-2026	59
Ons Monsternr. 421-2026-00358577	**Monsteromschrijving klant**	1291225/60-60			
0520499233	60	0	10	31-07-2026	60
Ons Monsternr. 421-2026-00358578	**Monsteromschrijving klant**	1291225/61-61			
0520499227	61	0	10	31-07-2026	61

Our reference R007-1291225IKR-V01-efm-NL

Appendix 2 Analytical Certificates Water



ANTON DE KOM UNIVERSITEIT VAN SURINAME

Nationale Zoölogische Collectie van Suriname (NZCS)/ Centrum voor Milieu Onderzoek (CMO)

Universiteitscomplex, Leysweg 86, Postbus 9212, Paramaribo, Suriname,
Tel. 465558 tst. 2339/2340, fax (597) 494756,
e-mail: nzcs@uvs.edu, website: nzcs.uvs.edu

Paramaribo, 23 juli 2026

Aanvraag nr: ML09
Aanvrager: Jasper Wisman - TAUW
Australielaan 5
Utrecht - Nederland

ANALYSE CERTIFICAAT

Datum sampling: 22 juli 2026
Locatie: Companie kreek

Sample ID	Tijd	Temperatuur (°C)	Conductiviteit (µS/cm)	pH	Troebelheid (NTU)
Bovenstrooms	10:31	27.2	36.6	6.05	206
Pit	10:46	28.0	36.8	6.17	202
Benedenstrooms	10:57	27.9	36.5	6.02	197

Opmerking:

- Toegepaste analysemethode: Fysisch chemisch methode

Hoogachtend,

Mevr. G. Landburg
Hoofd Milieu-Laboratorium NZCS/CMO

- *Het analyserapport mag niet ten dele gekopieerd of gereproduceerd worden, maar slechts in zijn geheel vermenigvuldigd worden.*
- *Indien de bemonstering niet door het laboratorium is uitgevoerd kan het laboratorium niet verantwoordelijk gesteld worden voor afwijkende resultaten veroorzaakt door de invloeden op het monster wegens een eventuele niet toereikende bemonstering en/of transport van het monster.*
- *Het resultaat van de analyse is slechts gebaseerd op het geanalyseerd monster. Bij volume proportionele monsters kan er geen uitspraak gedaan worden over de gehele partij of de totale hoeveelheid waartoe het monster behoort.*
- *Het laboratorium impliceert door dit certificaat niet dat ondersteuning gegeven wordt aan het product, de merknaam of de producent indien een product geanalyseerd is of als de analyse van het monster deel is van een procesmeting.*
- *Het Milieulab NZCS/CMO, noch derden die zij betrekt ten behoeve van de uitvoering van de analyse, zijn aansprakelijk voor enige schade, voortvloeiende uit en verband houdende met deze dienst, welke de afnemer of enige door deze bij de uitvoering van de overeenkomst betrokken derde mocht lijden, direct of indirect, ongeacht wat daarvan de oorzaak.*
- *Resultaten van de analyses worden niet geïnterpreteerd. Voor interpretatie moet expliciet een mondeling of schriftelijk verzoek daartoe gericht worden aan het labhoofd.*
- *Als u een klacht heeft kan die persoonlijk aangegeven worden op het Milieulab NZCS/CMO of kunt u een verzoek doen voor een klachtenformulier.*

Appendix 3 Crop planting logbook

Our reference R007-1291225IKR-V01-efm-NL

Realised 2026						
Crop local name	**Crop English name**	**Date planted / transplanted / lost**	**Amount**	**Unit**	**Origin**	**Comment**
Banaan	**Banana**	13-03-2026	102	Tubers	Coronie	Planted
Banaan	**Banana**	28-03-2026	133	Tubers	Coronie	Remaining tubers planted; 235 tubers in total
Podosirie	**Acai**	28-03-2026	10	Plants	AH	Planted
Podosirie	**Acai**	19-06-2026	37	Plants	AH	Planted in large plot
Pomtayer	**Arrowleaf elephant's ear**	28-03-2026	96	Plants	Coronie	Planted
Pomtayer	**Arrowleaf elephant's ear**	24-04-2026	64	Plants	Coronie	Newly planted; records indicate that 20 still needed to be planted
Moringa	**Moringa**	28-03-2026	29	Plants	AH	Planted
Moringa	**Moringa**	14-05-2026	20	Plants	CELOS	Planted and lost
Moringa	**Moringa**	19-05-2026	10	Trees	AH	Planted
Sweet bontjie	**Inga fruit**	28-03-2026	8	Plants	AH	Planted
Mucuna	**Velvet bean**	29-04-2026	525	Seeds	AH	Planted in 5 rows
Mucuna	**Velvet bean**	19-05-2026	210	Seeds	AH	Additional planting; 755 seeds in total
Bittere cassave	**Cassave**	05/07/2026	280	Sticks	L. Afonsoewa	Planted
Bittere cassave	**Cassave**	05/08/2026	140	Sticks	L. Afonsoewa	Planted
Bittere cassave	**Cassave**	05/09/2026	92	Sticks	L. Afonsoewa	Planted; first planting phase totalled 512 plants
Bittere cassave	**Cassave**	06/09/2026	161	Sticks	L. Afonsoewa	Lost
Bittere cassave	**Cassave**	22-07-2026	221	Sticks	L. Afonsoewa	Lost
Bittere cassave	**Cassave**	26-07-2026	166	Sticks	L. Afonsoewa	Lost, completed
Gliricidia	**Gliricidia**	19-05-2026	61	Sticks	CELOS	Planted
Capucijnen pesie	**Field peas**	19-05-2026	1,53	Seeds	CELOS	510 planting holes × 3 seeds
Maïs	**Corn**	14-06-2026	1,342	Seeds	Brownsweg-dorientje	671 planting holes × 2 seeds
Kokos	**Coconut**	19-06-2026	24	Plants	CELOS	
Palepu	**Peach palm fruit**	19-06-2026	20	Plants	CELOS+AH	
Pakoeli	**Bacuri tree**	19-06-2026	1	Plants	CELOS	
Podosirie	**Acai**	19-06-2026	37	Plants	AH	

Appendix 4 Photo logbook



Site Rehabilitation at Abandoned Artisanal and Small-scale Bold Mining (ASGM) Sites at Compagnie Kreek

Photo report

14 september 2026

Week 5: 25 – 31 January



Meeting with the Captain his eldest from CK and the contractor Haukes, CELOS and BFSC on Wednesday 28 January.

Meeting was held after the site-walkover to inform the Captain of CK on the last changes of the design.

The Captain of CK also recieved a hard copy of the sitelocation map with the future lay-out



Baseline survey I carried out on Thursday 29 January.

The picture is taken from the sampling location VFP-4. This sample location is at the mine tailngs at the future floodplain.

For the installation of the boreholes an Edelman auger or gauge were used. The top 30m cm of soil was sampled.



Baseline survey I carried out on Thursday 29 January.

The photo is taken of the recording of soil data on the borelog of the borehole installed at the future Agroforestry plot.



Baseline survey I carried out on Thursday 29 January.

Water sample WAT-1 was taken from creek upstream the project site.



Baseline survey I carried out on Thursday 29 January

The water samples WAT-1 taken upstream the project location from creek, WAT-2 taken downstream the project location from creek, WAT-3 taken from former mining pit before the connections are made with creek.

Week 6: 01 – 07 February



Site walk-over on Sunday 01 February.

The microrelief (small gullies) in the mine tailings plays an important role in the drainage of the whole site.



Site walk-over on Sunday 01 February

A part of the old creek partly filled with sediments draining the swampy area West of the project location.



Site walk-over on Sunday 01 February

The relief of the mine tailings are not always clearly visible on the orthophoto map.



Site walk-over on Sunday 01 February

The alluvial fan of mine tailing in the former mining pit with standing water.



Capturing corner points of the different zones were marked based on the GPS coordinates, by TAUW and the Haukes surevey team on Monday 02 February.

The photo is taken from the marking of the Southwest corner of the Agroforestry plot.



Capturing the corner points of the different zones with GPS, and marking corners of the different zones by the Haukes survey team on Monday 02 February

The Haukes survey team and TAUW consultant at work.



Mobilisation of the long-reach excavator on Monday 02 February.



Mobilisation of the bulldozer on Monday 02 February.



Toolbox safety meeting on Monday 02 February.



The team (Haukes and TAUW) that was present for the toolbox meeting on Monday 02 February.



Clearing of parking plot for the Haukes equimpment (excavator, dozer and dumper truck) on Monday 02 February.

The entrance of the working site was closed-off with a Safety Caution Tape.



Clearing of parking area for the Haukes equimpment on Monday 02 February.



Clearing of parking area for the Haukes equimpment on Monday 02 February.



The road construction on the floodplain towards the sediment basin commenced on Monday 02 February.

The surplus of soil (cut) was used to fill the agroforestry plot.



The soil assessment to monitor the soil development of the pilot project on Monday 02 February,

The top 30 cm of soil on each of the 20 experimental plots was sampled on Monday 02 February.

Samples are stored in a coolbox.



60 locally sourced walaba poles of 2,5 m long were delivered for the contsruction of the sediment trap and other structures such a stairs to the waterfront.

The arrengements were made by CELOS. CELOS also took care of the tranportation from the place they were bought to CK.

The photo was taken on Tuesday 03 February.



The road construction at the floodplain towards the sediment basin and the excavation of the floodplain on Tuesday 03 February.

The surplus of soil (cut) was bulldozered, the dumper truck could not be used to transport the fill the agroforestry plot as the soil was too wet and unstable. It was expected that it needed a few days to dry before safe transport was possible.



The road construction to the sediment basin and the excavation of the floodplain on Tuesday 03 February.

The surplus of soil (cut) was used to fill the agroforestry zone.



Constrution of the 13 meters long sediment trap on Tuesday 03 February.



The sediment trap is 13 meters long, consits of two rows with a walaba pole installed every meter, 0.3 meter apart. Between the two rows of poles sticks and branches will be placed.

Photo was taken on Wednesday 04 February.

To have surface water entrying the former mining pit with less sediments, the construction of additional sediment traps upstream is recommended



Construction of the connection between creek and the mining pit started by bulldozering the soil.

This photo was taken on Wednesday 04 February.



Mobilisation of the dumper truck on Wednesday 04 February.



Construction of the connection between creek and the pit (bypass of the creek) on Wednesday 04 February.



The tanker truck fills up the dozer on Wednesday 04 February.



Classroom training on Thursday 05 February.

Boudewijn Fokke presents the draft approach of the "*Praktische Richtlijn Herstel van bodem en natuur op verlaten mijnbouwlocaties"*



Classroom training on Thursday 05 February.

Jasper Wisman from TAUW presents the design of the pilot project of site rehabilitation of a part of the mine adjacent to Compagnie Kreek.



The afternoon onsite training session on Thursday 05 February.

Trainees recieved explanation on the installation and use of the 20 experimental plots.



The afternoon onsite training session on Thursday 05 February.

Trainees are on their way to the Southern part of the abondened ASGM mine of Compagnie Kreek to map and make a preliminar design of possible future rehabilitation with the land-uses.



The construction of the floodplain on Friday 06 February.

The excavation of the floodplain by the longreach excavator, the dozer transported the cuts to the agroforestry plot. The dozer assisted by maintaining the road.



Part of the cleared trench at the West site of the former mine pit.

Picture was taken on Friday 06 February.

When cleaned this trench will enhance the drainage of the swampy area west of the project site and north of the village.

Week 7: 08 – 14 February



The cleaned trench west of the former mine pit. Picture taken on Monday 09 February.

This trench, West of the former mining pit and North of the village, is connected to the swampy area. and the creek The idea is that the cleaned trench enhance the drainage of the swampy area.



Painting of the four water level beacons on Monday 09 February.

The four beacons were installed: (1) two upstream the former mine pit in the creek, (2) one in the former mine pit and (3) one downstream the former mine pit in the creek.



The former mining pit with the waterlevel drop of around 1,5 - 2,0 meter after the upstream connection with the creek was made.

This photo was taken on Monday 09 February.



The different types of soil excavated from the floodplain and used to backfill the agroforestry plot.

In front sandy loam/loamy sand next to (behind) laterite soil consisting of sandy clay loam with iron concretions and pieces of laterite. Photo was taken on Monday 09 February.



The spreading by the dozer of the soil brought by the dumper truck to the agroforestry plot. The excavated soil (cut) originated from the floodplain

The photo was taken on Monday 09 February.



Construction of a step in creek to force the water to flow in the former mining pit on Tuesday 10 February.



Delivery of cut branches to construct the sediment trap on Tuesday 10 February.



Construction of the sediment trap by placing branches between the two rows of Walaba poles on Tuesday 10 February.



The sediment trap was completed on Tuesday 10 February.



The completed sediment trap with the two installed water level beacons. The photo was taken on Tuesday 10 February.

The water level beacons are fixed on a walaba pole and the scale is 10 cm with a total lengt of 1.60 m

The lower water level beacon is to record lower water level. The higher installed water level beacon can be used to record during high water levels.

The height of top of the water level beacons will be measured with GPS (x,y,z) in relation to a fixed point.



After the agroforestry plot was completed, the remaining soil excavated from the floodplain was used the construct the Civil-housing plot.

The photo was taken on Tuesday 10 February.



Delivery of soil from the floodplain to raise the height and extend the Civil-housing plot on Wednesday 11 February.



The refueling of equipment on Wednesday 11 February



Part of the constructed slope collapsed due to the fact that the soil of the slope was wet. Due to safety precausions taken (constructed gentle slope, daily checks on stability before using heavy equipment at this location), no harm or damage resulted from this collapsed slope.

The photo was taken on Wednesday 11 February



Excavation of the last part of the floodplain on Wednesday 11 February.

The soil from the floodplain was used to raise the height and extend the civil-housing plot.



The civil-housing plot was on average raised by 1 meter.

Photo taken on Wednesday 11 February.



Constrution of the downstream connection between the former mine pit and the creek on Wednesday 11 February.

The connection is constructed to allow the water to flow from the creek trough the former mine pit.



Constrution of the downstream connection between the former mine pit and the creek on Wednesday 11 February.

The material excavated was wet loam sand / sandy loam .



The nearly completed connection Wednesday 11 February.



The local stakehlders were invited to visit the project site on Thursday 12 February.



The school kids were also invited to visit the project site on Thursday 12 February.



Installing Walaba poles with the excavator to construct stairs for the waterfront in the former mine pit on Friday 13 February.

The villagers now have safe and easy access to the water in the former mine pit.

The former mine pit which is now connected to the up- and dowstream part to the creek allowing the water to stream in and out the former mine pit. This will result in cleaner water in the former mine pit.



The installed stairs to the water front in the former mine pit on Friday 13 February.

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Demobilisation of the dozer on Friday 13 February.



Demobilisation of the excavator on Friday 13 February.

Week 8: 15 – 21 February



Part of the embankment slided down in the former mine pit. This photo was taken on Monday 16 of February.

The most likely reason for the landslides are that the slope is too steep, the material used to make the slope is very wet, and the former mine pit is here deep.

The sliding/collapsing of the slopes may probably take place at other parts of the slope. In consultation with the kapitein this side of the former mine pit will be marked and the kids will be warned to enter the water only using the stairs.

Haukes advised to have after six months a maintenance/repair campaign of the slopes as than the soil is setlled and dried.



The baseline soil assessment II after installation on Monday 16 of February.

Soil samples where collected from the same locations as during the baseline survey I, carried out on the on Thursday 29 January.

The picture is taken of the sampling of location AFB-4, the filled materials originating from the cut of the floodplain.

See Appendix 4 for the site location map with the sampling points of the baseline survey I and II.

For the installation of the boreholes an Edelman auger or gauge were used. The top 30m cm of soil was sampled.The boreholes were installed till 50 cm below surface.



The baseline soil assessment II after installation on Monday 16 of February.

Soil samples where collected from the same locactions as during the baseline survey I, carried out on the on Thursday 29 January.

The picture is taken of the sampling of location CIV-4, the filled materials originating from the cut of the loodplain.



Site visit with agroforestry experts of CELOS on Wednesday 18 February.

The aim of the visit was to discuss the planting scheme for the whole site.



A former mine pit north of the agroforestry plot to be used as irrigation former mining pit for the furure trees and crops that will planted on the Agroforestry plot.

Photo was taken on Wednesday 18 February.



The natural vegetation with Sweet Bontie next to the agroforestry plot.

The photo was taken on Wednesday 18 February.



A nearby Agroforestry plot under construction by CELOS was visited on Wednesday 18 February.



In consultation with the kapitein the side of the former mine pit with the slide embakment is marked and the kids are warned to enter the water only using the stairs.

The photo was taken Thursday 19 February.

After this week, the major earthmoving works were finished, and the preparation for the agroforestry/revegetation works began

Week 10: 2 – 8 March

Stakes were placed to prepare for revegetation works.




Week 11: 9 – 15 March

Half moon shapes were prepared and seedbeds were prepared.






Week 13: 23 – 29 March

Crops were planted, including banana and podosirie.



Week 17: 20 - 26 April

Check on survivability of the crops. Replacement crops have been planted, including pomtayer and moringa.



Week 18: 27 April - 3 May

Additional seeds for Mucuna have been planted.



Week 19: 4 – 10 May

Cassava sticks have been prepared for planting and planted.



Week 20: 11 – 17 May

Moringa have been planted.



Week 21: 18 – 24 May

Various additional crops have been planted, the entire agroforestry plot was mown and the cuttings were spread as mulch throughout the plot.



Week 24: 8 – 14 June

Fertilizer was applied and maize was planted.





Week 25: 15 – 21 June

Trees were planted and additional crops were planted.





Week 26: 22– 28 June

General maintenance was performed and fertilizer was applied.



Week 28: 6– 12 July

Ants and lice were observed to be feeding on the crops. Pesticide was applied.



Week 30: 20– 26 July

Loss of cassava was observed; new cassava was planted.

