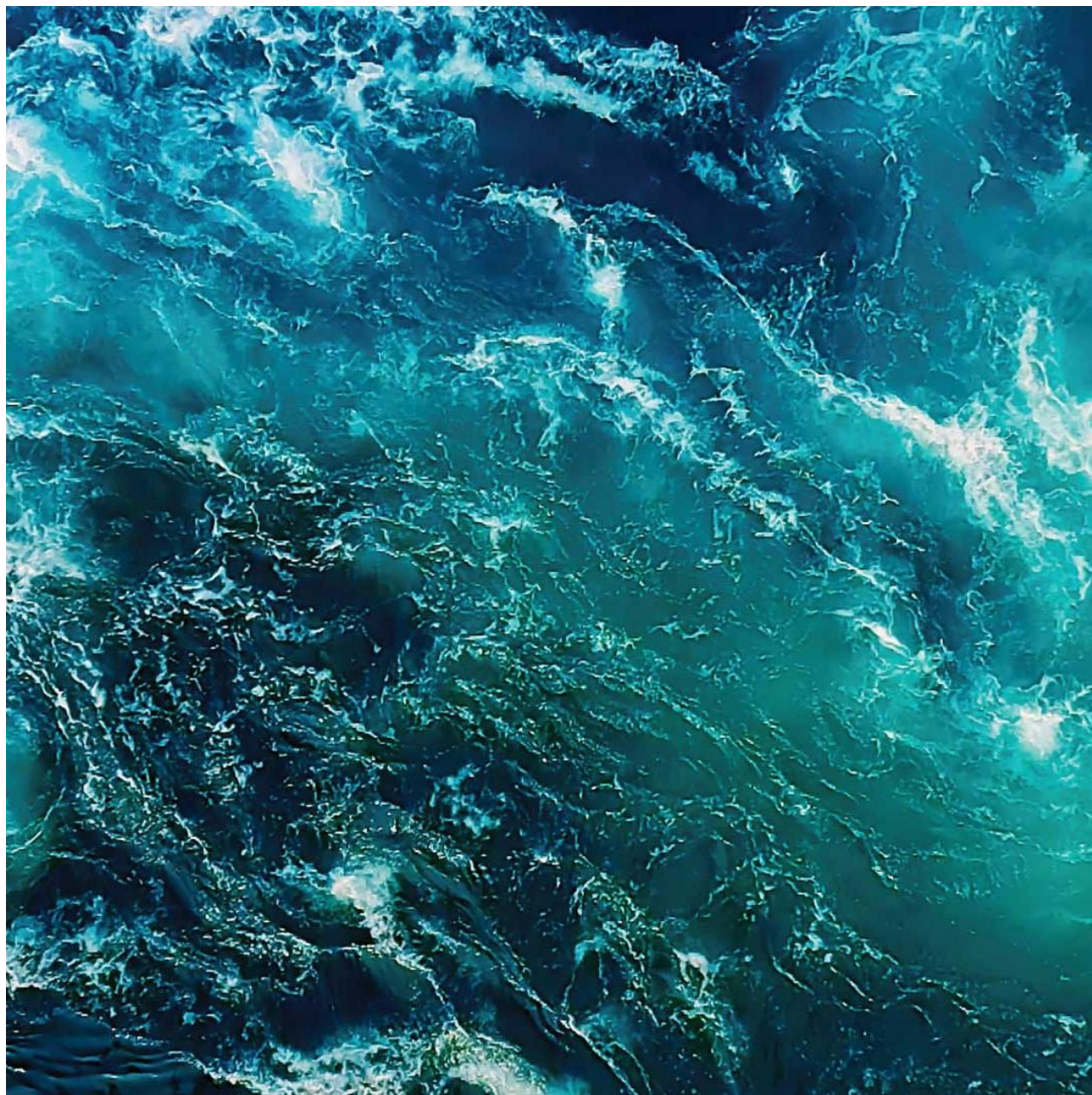


# **B-survey at Haganes, 2026 (fallow period), Arnarlax ehf**

**Akvaplan-niva AS Report:  
APN 2026 67560.B01**



## B survey at Haganes 2026 (fallow period), Arnarlax ehf

|                 |                                |
|-----------------|--------------------------------|
| Author(s)       | Snorri Gunnarsson              |
| Date            | 18.06 2026                     |
| Report No.      | APN 2026 67560.B01             |
| Number of pages | 25                             |
| Distribution    | Through customer               |
| Customer        | Arnarlax ehf                   |
| Contact person  | Kristian Leander Gillebo Sormo |

### Summary

Sediment or grab sample was recovered at 22 stations (91% soft bottom). The sediment consists mainly of clay in the deeper areas and mixture of clay with some silt, gravel and stones at more shallow stations (< 90 m). Valid samples were achieved in first attempt at seventeen stations, two attempts at four stations and three attempts at two stations (only stone at station 13 and defined as hard bottom) and at one station there was no sample after three attempts so the station was defined as hard bottom (station 10). Fauna was recorded to be present at all the twenty one soft bottom stations mainly in the form of polychaetes. There were no signs of out-gassing and no smell of H<sub>2</sub>S was recorded at any sampling station. The substrate was light/grey colour at sixteen stations and brown/black at six stations. Consistency of the sediment was solid and thickness of sludge was less than 2 cm at all stations. Grab was ¾ full or more at sixteen stations, ¼ - ¾ full at two stations and less than ¼ full at five stations.

Based on the classification of sediment chemistry (pH/Eh) and the sensory assessment all eight stations received status 1 - "Very good". Overall, the index score for parameter III (sensory parameters) was higher (0.44) compared with the index score for the parameter II (pH/Eh) (0.00). The main contributor to higher index score within parameter III (sensory) was full grab at sixteen stations and the brown/black sediment colour at six stations.

In summary, the site receives the environmental status 1 - "Very good" (average group II-III index =0.22).

### Approval



Snorri Gunnarsson  
Project Manager

 Digitally signed by  
Kari Elisabeth Justad  
Date: 2026.06.18  
15:54:42 +02'00'

Kari Elisabeth Justad  
Quality Control



## Key information

| Site details and license holder information |              |                              |                                |
|---------------------------------------------|--------------|------------------------------|--------------------------------|
| Site name                                   | Haganes      | Site coordinates             | 65°40.469' N<br>23°32.762' V   |
| County                                      | Vesturbyggð  | Municipality                 | Vesturbyggð                    |
| MTB (estimated max biomass)                 | 8.491 tonnes | Operations Manager / Contact | Kristian Leander Gillebo Sormo |
| License holder / customer                   | Arnarlax     |                              |                                |

| Production status on date of survey                   |                                     |                        |          |
|-------------------------------------------------------|-------------------------------------|------------------------|----------|
| Biomass at site                                       | 8.491 tonnes                        | Total feed use         | 0 tonnes |
| Farmed species                                        | Salmon                              | Total biomass produced | 0 tonnes |
| Type/time of survey                                   | Indicated with X                    | Comments               |          |
| Maximum organic load cf. chapter 7.9                  | <input type="checkbox"/>            |                        |          |
| Follow-up survey                                      | <input type="checkbox"/>            |                        |          |
| Half maximum load                                     | <input type="checkbox"/>            |                        |          |
| Pre-stock                                             | <input checked="" type="checkbox"/> |                        |          |
| Required by the state administrator - baseline survey | <input type="checkbox"/>            |                        |          |
| Other                                                 | <input type="checkbox"/>            |                        |          |
| Last fallowing period:                                | Started August 2025                 |                        |          |

| Results from B-survey in accordance with NS 9410:2016 (main results) |            |                            |            |
|----------------------------------------------------------------------|------------|----------------------------|------------|
| Parameter group and index                                            |            | Parameter group and status |            |
| Gr. II. pH/Eh                                                        | 0.00       | Gr. II. pH/Eh              | 1          |
| Gr. III. Sensory                                                     | 0.44       | Gr. III. Sensory           | 1          |
| GR. II + III                                                         | 0.22       | GR. II+ III                | 1          |
| Date of fieldwork                                                    | 10.06 2026 | Date of report             | 18.06 2026 |
| Environmental status (NS 9410:2016):                                 |            |                            | <b>1</b>   |

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# 1 Introduction

The present survey was conducted by Akvaplan-niva AS on behalf of Arnarlax in connection with the company's fish farming activities at the site Haganes in Arnarfjörður, Vesturbyggð municipality.

The purpose of a B-survey is to document the environmental status in the near zone of a fish farm by evaluating sediment condition (chemistry, sensory and presence/absence of fauna) in accordance with NS 9410:2016.

The B-survey is a tool for trend monitoring and allows to assess the status of organic enrichment beneath the net pens at different stages of the production cycle.

Figure 1 shows a map of the fjord Arnarfjörður where Haganes farm is located.

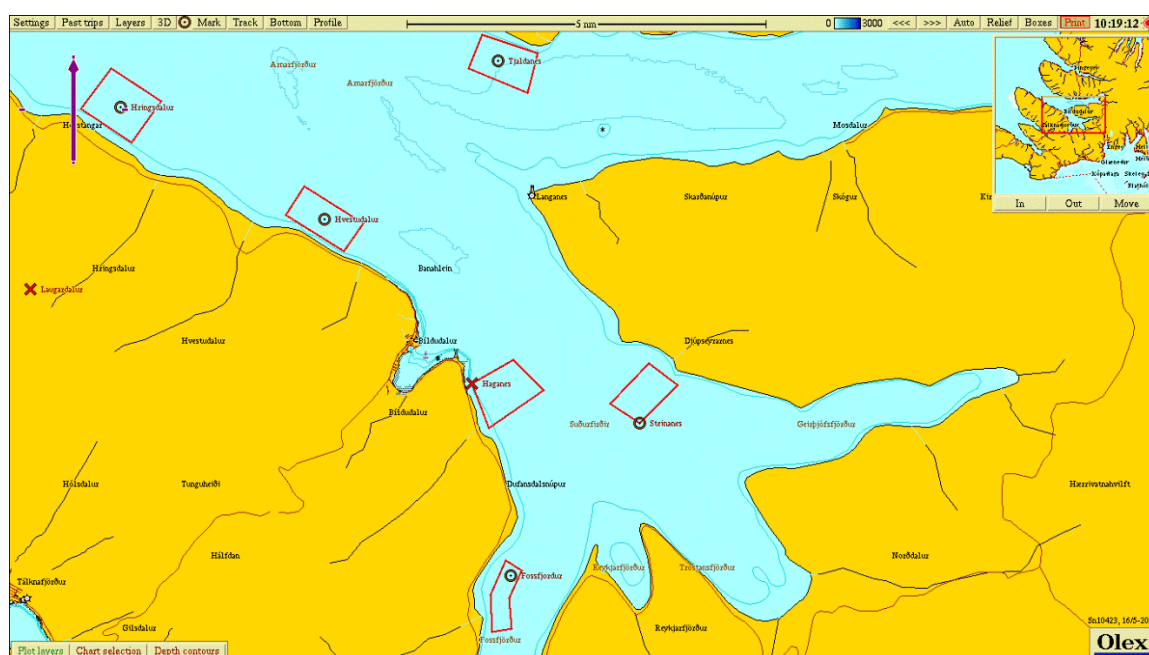


Figure 1. Overview map of Arnarfjörður where Haganes farm is marked with a red cross. Other fish farming areas in the nearest vicinity in Arnarfjörður are also show.

## 2 Methods

Monitoring of the environmental impact of fish farming activities on the seabed is standardised and regulated. All fish farming sites that are in use must be regularly assessed. This B-survey follows guidelines and methods outlined in NS 9410:2016 and ISO 12878. The Icelandic Environment and Energy Agency (Umhverfis og orkustofnun) can also set specific requirements regarding frequency of surveys for different fish farming sites, which can overrule the above-mentioned standards.

The B survey is a trend monitoring tool with the focus on sediment condition (benthic impact) under and in the immediate vicinity of an aquaculture site. Sediment samples are taken using a grab (min. 250 cm<sup>2</sup>). Sediment condition for each sample is assessed applying three indicators: sediment chemistry (pH and redox potential), sensory evaluation (gas bubbles; smell, texture, colour of substrate and thickness of deposited sludge) and the presence or absence of fauna. The performance of these indicators against predefined thresholds allows to categorise the site into four different environmental statuses (Table 1), which are used to determine subsequent sampling frequency. The number of sampling stations is based on the site's allocated MTB, here the estimated max biomass of the planned next generation i.e. 8.491 ton (Personal reference, Per Gunnar Hallan, 2026).

Table 1. Frequency of B-survey based on environmental status at site.

| Environmental status at maximum organic load (near zone) | Monitoring frequency for B survey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-very good                                              | At the next maximum load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2-good                                                   | Pre-stock and again at maximum load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3-poor                                                   | Pre-stock<br>If the survey prior to restocking / end of fallowing provides:<br>Status 1 – survey should be carried out at next maximum load.<br>Status 2 – survey should be carried out at half the maximum load and at the next maximum load.<br>Status 3 – survey should be carried out at half the maximum load and at maximum load. Implementation of measures to reduce impact should be planned for the next production cycle.<br>If any surveys show the environmental status to be 4 – "very poor", the site's environmental capacity has been exceeded. |
| 4- very poor                                             | Environmental capacity at site is exceeded. The authorities decide further measures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

The following equipment was used in this survey:

Grab: Van Veen grab (0.1 m<sup>2</sup>)

Sieve 1 mm: Akvaplan-niva

pH meter: Electrode, YSI Professional Plus

Redox meter: Electrode, YSI Professional Plus

Position determination – GPS map 62s

Digital camera

### 3 Site, production and survey design

#### 3.1 Site characteristics and production

The Haganes site is located in the southern part of Arnarfjörður, approximately 1,4 nm southeast of the town of Bíldudalur. The installed frame is suited for up to 18 net-pens with a circumference of 160 m in a 2 x 9 configuration. The frame is positioned in eastern direction from land (80°) with depth below the cages ranging from 44 to 100 m. In 2023 the mooring and cages were moved within the fish farming area to extend further out into the fjord and turned on an axis in a more eastern direction only partly overlapping the previous farming site.

Previously there have been farmed three generations at the "old" Haganes site and one generation at the "new" Haganes site.

Table 2 shows production and feed use for previous generations.

Table 2. Production and feed use for farm site Haganes. Data provided by customer.

| Generation of fish (G) | Production (tonnes) | Feed use (tonnes) |
|------------------------|---------------------|-------------------|
| Generation 2014-2016   | 2.609               | 3.342             |
| Generation 2017-2019   | 2.985               | 3.673             |
| Generation 2020-2022   | 5.092               | 6.791             |
| Generation 2023-2025   | 6.369               | 9.289             |

#### 3.2 Current and past surveys

Table 3 provides an overview on results and time of sampling for current and the last B-surveys at site.

Table 3. Present and previously conducted B-surveys at the site.

| Date of sampling | Report number | Production status      | Location condition |
|------------------|---------------|------------------------|--------------------|
| 10.06.2026       | APN 66208.B01 | Fallow period          | 1                  |
| 31.10.2024       | APN 64910.B01 | Max biomass            | 2                  |
| 26.04.2023       | APN 64106.B01 | Fallow period/New site | 1                  |
| 21.06 2022       | APN-62253.B01 | Max biomass            | 1                  |
| 11.06.2020       | APN 60258.01  | Fallow period          | 1                  |
| 05.09 2018       | AR131125C     | Max biomass            | 1                  |
| 22.10.2013       | APN 66208.B01 | New site               | 1                  |

#### 3.3 Hydrodynamic conditions

Dispersing current measurements were done in July-August 2020 at 56 m (65°40.428 N and 23°32.780 V), which is the dispersing depth for Hagnes site (Hermansen, 2020). The dominating current at 56 m is in north direction (0 degrees) with a just as strong counter current in opposite direction (165-180 degrees) (Figure 2). Average current speed is 6 cm/s. Highest current speed is measured to be 24.6 cm/s and 4.1 % of the measurements are zero current.

### 3.4 Survey design

Sampling stations were placed following an assessment of site configuration and local environmental conditions, i.e. bathymetry and hydrodynamics. An overview of the sampling stations can be found in Figure 2 with coordinates and depth provided in Table 4. The number of sampling stations were 23 according to guidance in NS 9410:2016. The placement of the sampling stations gives good coverage of the local impact zone of the fish farm. Sampling stations were placed to represent the environmental conditions within the near zone and cover thus both the deeper and shallower areas. The typical depth in the local impact zone is rather homogenous and in the range from about 44-102 m. Samples were collected from depths ranging from 52-102 metres. The station placements are considered representative for an environmental survey of the farm's near-zone and in accordance with the requirements outlined in NS 9410:2016.

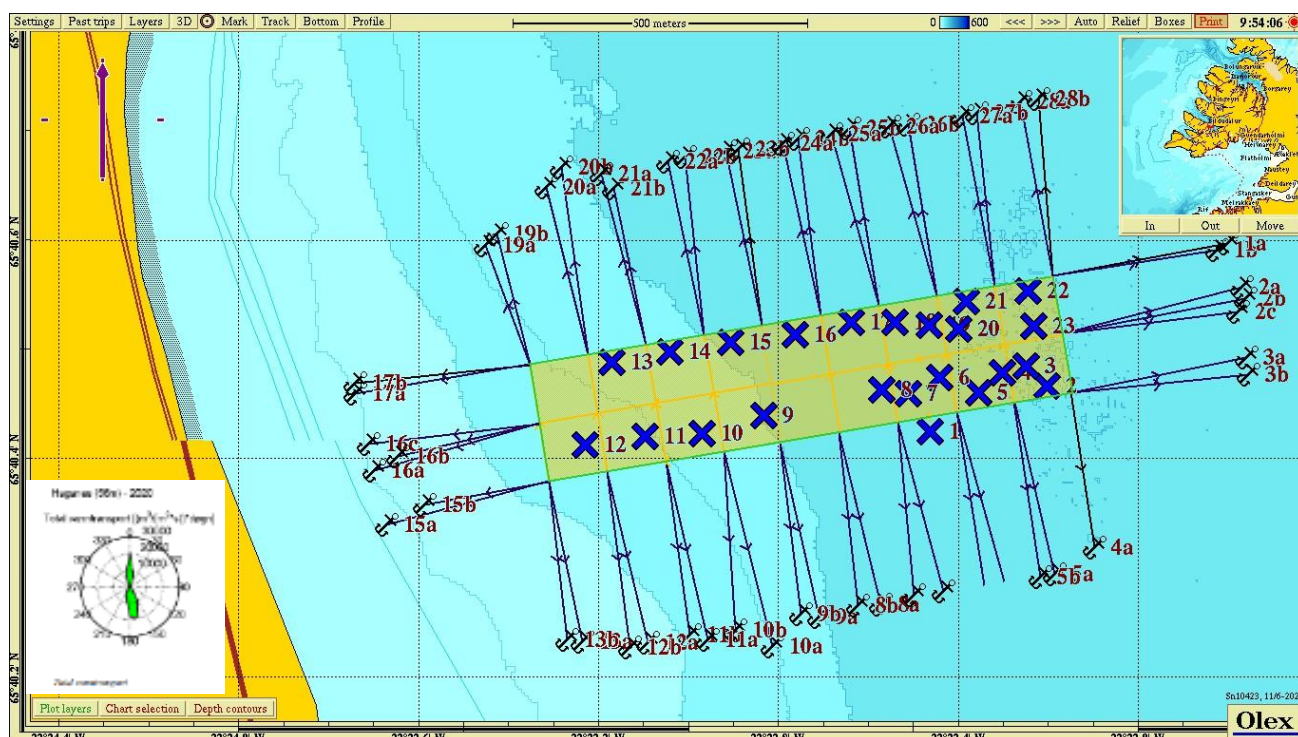


Figure 2. Overview map showing site configuration and local bathymetry at Haganes. Sampling stations are marked by crosses and colour coded to visualise the environmental status at the respective station following the classification outlined in NS 9410:2016, chapter 7.11 (1 = blue, 2 = green, 3 = yellow, 4 = red). The current rose in the left corner shows the direction of water transport of the dispersal current at 56 m depth (Hermansen, 2020).

Table 4. Position and depth of the sampling stations of this survey.

| Station number | Northing  | Westing   | Depth [m] |
|----------------|-----------|-----------|-----------|
| St 1           | 65°40,424 | 23°32,462 | 98        |
| St 2           | 65°40,466 | 23°32,203 | 99        |
| St 3           | 65°40,484 | 23°32,250 | 99        |
| St 4           | 65°40,478 | 23°32,303 | 102       |
| St 5           | 65°40,460 | 23°32,355 | 99        |
| St 6           | 65°40,474 | 23°32,441 | 98        |
| St 7           | 65°40,459 | 23°32,511 | 98        |
| St 8           | 65°40,463 | 23°32,571 | 98        |

| Station number | Northing  | Westing   | Depth [m] |
|----------------|-----------|-----------|-----------|
| St 9           | 65°40,439 | 23°32,834 | 80        |
| St 10          | 65°40,422 | 23°32,969 | 69        |
| St 11          | 65°40,420 | 23°33,096 | 58        |
| St 12          | 65°40,412 | 23°33,229 | 52        |
| St 13          | 65°40,488 | 23°33,171 | 64        |
| St 14          | 65°40,497 | 23°33,041 | 76        |
| St 15          | 65°40,506 | 23°32,906 | 83        |
| St 16          | 65°40,512 | 23°32,762 | 94        |
| St 17          | 65°40,524 | 23°32,637 | 97        |
| St 18          | 65°40,542 | 23°32,540 | 98        |
| St 19          | 65°40,522 | 23°32,464 | 98        |
| St 20          | 65°40,518 | 23°32,400 | 99        |
| St 21          | 65°40,544 | 23°32,382 | 99        |
| St 22          | 65°40,553 | 23°32,245 | 100       |
| St 23          | 65°40,521 | 23°32,232 | 101       |

## 4 Results

Classified survey results for the different parameter categories as well as the assigned environmental status of the site are shown in Table 5. The complete survey assessment form with results and classifications for each station can be found in the attachment.

Table 5. Results from the environmental assessment of the near zone of Haganes.

| Parameter                          | Status |
|------------------------------------|--------|
| Group II parameters (pH/Eh)        | 1      |
| Group III parameters (sensory)     | 1      |
| Group II + III – parameters (mean) | 1      |
| Environmental status (site)        | 1      |

Sediment or grab sample was recovered at 22 stations (91% soft bottom). The sediment consists mainly of clay in the deeper areas and mixture of clay with some silt gravel and stones at more shallow stations (< 90 m). Valid samples were achieved in first attempt at seventeen stations, two attempts at four stations and three attempts at two stations (only stone at station 13 and defined as hard bottom) and at one station there was no sample after three attempts so the station was defined as hard bottom (station 10). Fauna was recorded to be present at all the twenty one soft bottom stations mainly in the form of polychaetes. There were no signs of out-gassing and no smell of H<sub>2</sub>S was recorded at any sampling station. The substrate was light/grey colour at sixteen stations and brown/black at six stations. Consistency of the sediment was solid and thickness of sludge was less than 2 cm at all stations. Grab was  $\frac{3}{4}$  full or more at sixteen stations,  $\frac{1}{4}$  -  $\frac{3}{4}$  full at two stations and less than  $\frac{1}{4}$  full at five stations.

Based on the classification of sediment chemistry (pH/Eh) and the sensory assessment all eight stations received status 1 – "Very good". Overall, the index score for parameter III (sensory parameters) was higher (0.44) compared with the index score for the parameter II (pH/Eh) (0.00). The main contributor to higher index score within parameter III (sensory) was full grab at sixteen stations and the brown/black sediment colour at six stations.

In summary, the site receives the environmental status 1 - "Very good" (average group II-III index =0.22).

## 5 Summary

Applying the indicator thresholds and classification outlined in NS 9410:2016 it is shown that the site Haganes receives overall site status of 1 – "Very good" at the time of this B survey (fallow period) indicating little organic load in the local impact zone. Samples were collected with a Van Veen grab at 22 out of the total 23 stations. All sampling stations received status 1 – "Very good".

In a previous B survey at the time of max biomass at the site carried out in October 2024 the overall environmental status was 2 – "Good" (Gunnarsson, 2024). In the 2024 survey, seven stations received status 1 – "Very good", three stations received status 2 – "Good", five stations received status 3 – "Bad" and one station received status 4 – "Very bad". Also, five out of the six stations with condition "Bad" and the one station with condition "Very bad" were all placed at the southern part of the farming area so the results indicated some organic load mainly at the southern part of the local impact zone in the direction ocean flow of spread current at the site. The current results from sampling in 2026, after about nine months fallow period, show that the sediment condition has improved in the local impact zone and there are relatively little signs of organic load at the site compared to previous bottom survey.

**The site is given environmental status 1 – "Very good" following the criteria outlined in NS 9410:2016.**

## 6 References

Forskrift om drift av akvakulturanlegg (akvakulturdriftsforskriften) §§ 35 og 36.

Gunnarsson, S. 2019. Arnarlax ehf, B-undersøkelse, september 2018 Haganes (maksimal belastning). Akvaplan-niva AS rapport nr. 60528.01.

Gunnarson, S., 2020. Haganes, Arnarlax ehf B-bottom survey, June 2020 (fallow period), APN-62253.B01. Akvaplan-niva AS.

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Gunnarson, S., 2023. Haganes, Arnarlax B- survey (pre survey), April 2023, APN-64910.B01. Akvaplan-niva AS.

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Hermansen, S., 2020. Arnarlax ehf. Strømmålinger Haganes 5 meter, 15 meter og spredningsstrøm 56 meter. APN-62191.01. Akvaplan-niva AS

ISO 12878:2012. Environmental monitoring of the impacts from marine finfish farms on soft bottom.

ISO 5667-19:2004. Guidance on sampling of marine sediments.

Moe A.A. 2013. Environmental monitoring (MOM B) at finfish farm site Haganes. October 2013. Helgeland Havbruk report nr. AR131125C. 28 p.

Norsk Standard NS 9410:2016. Miljøovervåking av bunnpåvirkning fra marine akvakulturanlegg.

Personal reference. Per Gunnar Hallan, Biological controller, Arnarlax 2026.

## 7 Attachments

### 7.1 Form (B.1 and B.2) NS 9410:2016

| Prøveskjema B.1                                                                                                   |                                   |                    |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------|------------|------|---------|----------|--------|---------------|--------|------------|--------|---------------|---------------------|------------|-----|
| Firma:                                                                                                            |                                   | Amarlax            |            |      |         |          |        | Dato:         |        | 10.06 2026 |        |               |                     |            |     |
| Lokalitet:                                                                                                        |                                   | Haganes            |            |      |         |          |        | Lokalitetsnr: |        | -          |        |               |                     |            |     |
| Prøvetakingsansvarlig:                                                                                            |                                   | Snorri Gunnarsson  |            |      |         |          |        |               |        |            |        |               |                     |            |     |
| Gr                                                                                                                | Parameter                         | Poeng              | Prøvepunkt |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   |                    | 1          | 2    | 3       | 4        | 5      | 6             | 7      | 8          | 9      | 10            |                     |            |     |
|                                                                                                                   | Bunntype: B (bløt) eller H (hard) |                    | B          | B    | B       | B        | B      | B             | B      | B          | B      | B             |                     |            |     |
| I                                                                                                                 | Dyr > 1mm                         | Ja (0) Nei (1)     | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
| II                                                                                                                | pH                                | verdi              | 7,63       | 7,67 | 7,71    | 7,73     | 7,83   | 7,61          | 7,69   | 7,66       | 7,59   | 7,76          |                     |            |     |
|                                                                                                                   | Eh (mV)                           | ORP                | 82         | 52   | 92      | 90       | 82     | 47            | 71     | -15        | 36     | 18            |                     |            |     |
|                                                                                                                   |                                   | med ref. verdi     | 282        | 252  | 292     | 290      | 282    | 247           | 271    | 185        | 236    | 218           |                     |            |     |
|                                                                                                                   | pH/Eh                             | fra figur          | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   | Tilstand, prøve                   |                    | 1          | 1    | 1       | 1        | 1      | 1             | 1      | 1          | 1      | 1             |                     |            |     |
|                                                                                                                   |                                   | Buffer-temp        | 10,0 C     |      |         | Sje-temp |        |               | 9,0 C  |            |        | Sediment-temp | 5,0 C               |            |     |
|                                                                                                                   |                                   | pH sje             | 8,12       |      | ORP sje |          | 105 mV |               | Eh sje |            | 305 mV |               | Referanse-elektrode | 200 mV     |     |
| III                                                                                                               | Gassbobler                        | Ja (4) Nei (0)     | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   | Farge                             | Lys/grå (0)        | 0          |      | 0       | 0        |        |               |        | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   |                                   | Brun/sort (2)      |            | 2    |         |          | 2      | 2             | 2      |            |        |               |                     |            |     |
|                                                                                                                   | Lukt                              | Ingen (0)          | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   |                                   | Noe (2)            |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   | Sterk (4)          |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   | Konsistens                        | Fast (0)           | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   |                                   | Myk (2)            |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   | Løs (4)            |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   | Grabbb-volum (v)                  | v < 1/4 (0)        |            |      |         |          |        |               |        |            | 0      | 0             |                     |            |     |
|                                                                                                                   |                                   | 1/4 < v < 3/4 (1)  |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   | v > 3/4 (2)        | 2          | 2    | 2       | 2        | 2      | 2             | 2      | 2          |        |               |                     |            |     |
|                                                                                                                   | Tykkelse på slamslag              | t < 2 cm (0)       | 0          | 0    | 0       | 0        | 0      | 0             | 0      | 0          | 0      | 0             |                     |            |     |
|                                                                                                                   |                                   | 2 < t < 8 cm (1)   |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   | t > 8 cm (2)       |            |      |         |          |        |               |        |            |        |               |                     |            |     |
|                                                                                                                   |                                   | Sum                | 2,0        | 4,0  | 2,0     | 2,0      | 4,0    | 4,0           | 4,0    | 2,0        | 0,0    | 0,0           |                     |            |     |
|                                                                                                                   |                                   | Korrigert (**0,22) | 0,4        | 0,9  | 0,4     | 0,4      | 0,9    | 0,9           | 0,9    | 0,4        | 0,0    | 0,0           |                     |            |     |
|                                                                                                                   | Tilstand prøve                    |                    | 1          | 1    | 1       | 1        | 1      | 1             | 1      | 1          | 1      | 1             |                     |            |     |
|                                                                                                                   | Middelverdi gruppe II og III      |                    | 0,2        | 0,4  | 0,2     | 0,2      | 0,4    | 0,4           | 0,4    | 0,2        | 0,0    | 0,0           |                     |            |     |
|                                                                                                                   | Tilstand prøve                    |                    | 1          | 1    | 1       | 1        | 1      | 1             | 1      | 1          | 1      | 1             |                     |            |     |
| <table border="1"> <tr> <td>Grabb ID</td> <td>k-3</td> </tr> <tr> <td>pH / Eh ID</td> <td>#25</td> </tr> </table> |                                   |                    |            |      |         |          |        |               |        |            |        | Grabb ID      | k-3                 | pH / Eh ID | #25 |
| Grabb ID                                                                                                          | k-3                               |                    |            |      |         |          |        |               |        |            |        |               |                     |            |     |
| pH / Eh ID                                                                                                        | #25                               |                    |            |      |         |          |        |               |        |            |        |               |                     |            |     |

side 1 av 8 sider

## Prøveskjema B.2

|                        |                   |
|------------------------|-------------------|
| Firma:                 | Arnarlax          |
| Lokalitet:             | Haganes           |
| Prøvetakingsansvarlig: | Snorri Gunnarsson |

|               |            |
|---------------|------------|
| Dato:         | 10.06 2026 |
| Lokalitetsnr: | -          |

|                          |                         |                   |     |          |     |     |      |      |      |    |     |
|--------------------------|-------------------------|-------------------|-----|----------|-----|-----|------|------|------|----|-----|
| Prøvepunkt               |                         | 1                 | 2   | 3        | 4   | 5   | 6    | 7    | 8    | 9  | 10  |
| Dyp (m)                  |                         | 98                | 99  | 99       | 102 | 99  | 98   | 98   | 98   | 80 | 69  |
| Antall forsøk            |                         | 1                 | 1   | 2        | 2   | 1   | 1    | 1    | 1    | 2  | 1   |
| Bobling (i prøve)        |                         | No                | No  | No       | No  | No  | No   | No   | No   | No | No  |
| Sedimenttype             | Leire                   | X                 | X   | X        | X   | X   | X    | X    | X    | X  | X   |
|                          | Silt                    |                   |     |          |     |     |      |      |      |    |     |
|                          | Sand                    |                   |     |          |     |     |      |      |      | X  | X   |
|                          | Grus                    |                   |     |          |     |     |      |      |      | X  | X   |
|                          | Skjellsand              |                   |     |          |     |     |      |      |      |    |     |
| Fjellbunn                |                         |                   |     |          |     |     |      |      |      |    |     |
| Steinbunn                |                         |                   |     |          |     |     |      |      |      |    |     |
| Pigghuder, antall        |                         |                   |     |          | 1   |     |      |      |      |    |     |
| Krepsdyr, antall         |                         |                   |     |          |     |     |      |      |      |    |     |
| Skjell, antall           |                         |                   |     |          | 2   |     |      |      |      |    |     |
| Børstemark, antall       |                         | >50               | >50 | >50      | >50 | >50 | >100 | >100 | >100 | 10 | >10 |
| Andre dyr, totalt antall |                         |                   |     |          |     |     |      |      |      |    |     |
|                          |                         |                   |     |          |     |     |      |      |      |    |     |
|                          |                         |                   |     |          |     |     |      |      |      |    |     |
|                          |                         |                   |     |          |     |     |      |      |      |    |     |
|                          |                         |                   |     |          |     |     |      |      |      |    |     |
|                          |                         |                   |     |          |     |     |      |      |      |    |     |
| Beggiatoa                |                         |                   |     |          |     |     |      |      |      |    |     |
| Fôr                      |                         |                   |     |          |     |     |      |      |      |    |     |
| Fekalier                 |                         |                   |     |          |     |     |      |      |      |    |     |
| Kommentar                |                         |                   |     |          |     |     |      |      |      |    |     |
| Grabb                    | Areal [m <sup>2</sup> ] | 0,1               |     | Grabb ID |     | k-3 |      |      |      |    |     |
|                          |                         | side 4 av 8 sider |     |          |     |     |      |      |      |    |     |

## Prøveskjema B.1

|                        |                   |
|------------------------|-------------------|
| Firma:                 | Arnarlax          |
| Lokalitet:             | Haganes           |
| Prøvetakingsansvarlig: | Snorri Gunnarsson |

|               |            |
|---------------|------------|
| Dato:         | 10.06 2026 |
| Lokalitetsnr: | -          |

| Gr  | Parameter                         | Poeng             | Prøvepunkt |     |      |          |      |        |      |                     |      |        |
|-----|-----------------------------------|-------------------|------------|-----|------|----------|------|--------|------|---------------------|------|--------|
|     |                                   |                   | 11         | 12  | 13   | 14       | 15   | 16     | 17   | 18                  | 19   | 20     |
|     | Bunntype: B (bløt) eller H (hard) |                   | H          | B   | H    | B        | B    | B      | B    | B                   | B    | B      |
| I   | Dyr > 1mm                         | Ja (0) Nei (1)    | 1          | 0   | 1    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
| II  | pH                                | verdi             | 7,44       | Ut  | 7,51 | 7,52     | 7,65 | 7,45   | 7,72 | 7,71                | 7,76 |        |
|     | Eh (mV)                           | verdi             | 15         | Ut  | 55   | 66       | 19   | 13     | 58   | -11                 | 39   |        |
|     |                                   | med ref. verdi    | 215        |     | 255  | 266      | 219  | 213    | 258  | 189                 | 239  |        |
|     | pH/Eh                             | fra figur         | 0          | 0   | ut   | 0        | 0    | 0      | 0    | 0                   | 0    |        |
|     | Tilstand prøve                    |                   | 1          | 1   | ut   | 1        | 1    | 1      | 1    | 1                   | 1    |        |
|     |                                   | Buffer-temp       | 10,0 C     |     |      | Sje-temp |      | 9,0 C  |      | Sediment-temp       |      | 5,0 C  |
|     | pH sje                            | 8,12              | ORP sje    |     |      | Eh sje   |      | 305 mV |      | Referanse-elektrode |      | 200 mV |
| III | Gassbobler                        | Ja (4) Nei (0)    | 0          | 0   | 0    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
|     | Farge                             | Lys/grå (0)       | 0          | 0   | 0    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
|     |                                   | Brun/sort (2)     |            |     |      |          |      |        |      |                     |      |        |
|     | Lukt                              | Ingen (0)         | 0          | 0   | 0    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
|     |                                   | Noe (2)           |            |     |      |          |      |        |      |                     |      |        |
|     |                                   | Sterk (4)         |            |     |      |          |      |        |      |                     |      |        |
|     | Konsistens                        | Fast (0)          | 0          | 0   | 0    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
|     |                                   | Myk (2)           |            |     |      |          |      |        |      |                     |      |        |
|     |                                   | Løs (4)           |            |     |      |          |      |        |      |                     |      |        |
|     | Grabb- volum (v)                  | v < 1/4 (0)       | 0          | 0   | 0    |          |      |        |      |                     |      |        |
|     |                                   | 1/4 < v < 3/4 (1) |            |     |      | 1        | 1    |        |      |                     |      |        |
|     |                                   | v > 3/4 (2)       |            |     |      |          |      | 2      | 2    | 2                   | 2    | 2      |
|     | Tykkelse på slam lag              | t < 2 cm (0)      | 0          | 0   | 0    | 0        | 0    | 0      | 0    | 0                   | 0    | 0      |
|     |                                   | 2 < t < 8 cm (1)  |            |     |      |          |      |        |      |                     |      |        |
|     |                                   | t > 8 cm (2)      |            |     |      |          |      |        |      |                     |      |        |
|     | Sum                               |                   | 0,0        | 0,0 | 0,0  | 1,0      | 1,0  | 2,0    | 2,0  | 2,0                 | 2,0  | 2,0    |
|     | Korrigert (**0,22)                |                   | 0,0        | 0,0 | 0,0  | 0,2      | 0,2  | 0,4    | 0,4  | 0,4                 | 0,4  | 0,4    |
|     | Tilstand prøve                    |                   | 1          | 1   | 1    | 1        | 1    | 1      | 1    | 1                   | 1    | 1      |
|     | Middelverdi gruppe II og III      |                   | 0,0        | 0,0 | 0,0  | 0,1      | 0,1  | 0,2    | 0,2  | 0,2                 | 0,2  | 0,2    |
|     | Tilstand prøve                    |                   | 1          | 1   | 1    | 1        | 1    | 1      | 1    | 1                   | 1    | 1      |

|            |     |
|------------|-----|
| Grabb ID   | k-3 |
| pH / Eh ID | #25 |

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## Prøveskjema B.2

|                        |                   |
|------------------------|-------------------|
| Firma:                 | Arnarlax          |
| Lokalitet:             | Haganes           |
| Prøvetakingsansvarlig: | Snorri Gunnarsson |

|               |            |
|---------------|------------|
| Dato:         | 10.06 2026 |
| Lokalitetsnr: | -          |

|                          |            |                                                                                |    |     |     |          |     |     |      |      |     |
|--------------------------|------------|--------------------------------------------------------------------------------|----|-----|-----|----------|-----|-----|------|------|-----|
| Prøvepunkt               |            | 11                                                                             | 12 | 13  | 14  | 15       | 16  | 17  | 18   | 19   | 20  |
| Dyp (m)                  |            | 58                                                                             | 52 | 64  | 76  | 83       | 93  | 97  | 98   | 98   | 99  |
| Antall forsøk            |            | 3                                                                              | 3  | 3   | 1   | 2        | 1   | 1   | 1    | 1    | 1   |
| Bobling (i prøve)        |            | No                                                                             | No | No  | No  | No       | No  | No  | No   | No   | No  |
| Sedimenttype             | Leire      |                                                                                | X  |     | X   | X        | X   | X   | X    | X    | X   |
|                          | Silt       |                                                                                |    |     | X   | X        |     |     |      |      |     |
|                          | Sand       |                                                                                | X  |     | X   | X        |     |     |      |      |     |
|                          | Grus       |                                                                                | X  |     |     | X        |     |     |      |      |     |
|                          | Skjellsand |                                                                                |    |     |     |          |     |     |      |      |     |
| Fjellbunn                |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Steinbunn                |            | X                                                                              |    | X   |     |          |     |     |      |      |     |
| Pigghuder, antall        |            |                                                                                |    |     |     |          | 1   | 3   |      |      |     |
| Krepsdyr, antall         |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Skjell, antall           |            |                                                                                |    |     |     |          |     |     |      |      | 1   |
| Børstemark, antall       |            |                                                                                | 9  |     | >10 | 8        | >50 | >50 | >100 | >100 | >50 |
| Andre dyr, totalt antall |            |                                                                                |    |     |     |          |     |     |      |      |     |
|                          |            |                                                                                |    |     |     |          |     |     |      |      |     |
|                          |            |                                                                                |    |     |     |          |     |     |      |      |     |
|                          |            |                                                                                |    |     |     |          |     |     |      |      |     |
|                          |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Beggiatoa                |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Fôr                      |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Fekalier                 |            |                                                                                |    |     |     |          |     |     |      |      |     |
| Kommentar                |            | St. 11. 3 attempts but just seawater in grab. St. 13. just two stones in grab. |    |     |     |          |     |     |      |      |     |
| Grabb                    |            | Areal [m <sup>2</sup> ]                                                        |    | 0,1 |     | Grabb ID |     | k-3 |      |      |     |
|                          |            | side 5 av 8 sider                                                              |    |     |     |          |     |     |      |      |     |

# Prøveskjema B.1

|                        |  |                   |  |  |  |  |  |  |  |  |  |               |  |            |  |
|------------------------|--|-------------------|--|--|--|--|--|--|--|--|--|---------------|--|------------|--|
| Firma:                 |  | Arnarlax          |  |  |  |  |  |  |  |  |  | Dato:         |  | 10.06 2026 |  |
| Lokalitet:             |  | Haganes           |  |  |  |  |  |  |  |  |  | Lokalitetsnr: |  | -          |  |
| Prøvetakingsansvarlig: |  | Snorri Gunnarsson |  |  |  |  |  |  |  |  |  |               |  |            |  |

| Gr                    | Parameter                         | Poeng             | Prøvepunkt |             |        |        |          |                     |        |               |       |    | Indeks |    |
|-----------------------|-----------------------------------|-------------------|------------|-------------|--------|--------|----------|---------------------|--------|---------------|-------|----|--------|----|
|                       |                                   |                   | 21         | 22          | 23     | 24     | 25       | 26                  | 27     | 28            | 29    | 30 | B%     | H% |
|                       | Bunntype: B (bløt) eller H (hard) | B                 | B          | B           | B      |        |          |                     |        |               |       |    | 91     | 9  |
| I                     | Dyr > 1mm                         | Ja (0) Nei (1)    | 0          | 0           | 0      |        |          |                     |        |               |       |    |        |    |
| II                    | pH                                | verdi             | 7,74       | 7,84        | 7,80   |        |          |                     |        |               |       |    |        |    |
|                       | Eh (mV)                           | verdi             | 30         | -17         | 31     |        |          |                     |        |               |       |    |        |    |
|                       |                                   | med ref. verdi    | 230        | 183         | 231    |        |          |                     |        |               |       |    |        |    |
|                       | pH/Eh                             | fra figur         | 0          | 0           | 0      |        |          |                     |        |               |       |    | 0,00   |    |
|                       | Tilstand prøve                    |                   | 1          | 1           | 1      |        |          |                     |        |               |       |    |        |    |
|                       | Tilstand, gruppe II               |                   | 1          | Buffer-temp | 10,0 C |        | Sjø-temp | 9,0 C               |        | Sediment-temp | 5,0 C |    |        |    |
|                       | pH sjø                            | 8,12              | ORP sjø    | 105 mV      | Eh sjø | 305 mV |          | Referanse-elektrode | 200 mV |               |       |    |        |    |
| III                   | Gassbobler                        | Ja (4) Nei (0)    | 0          | 0           | 0      |        |          |                     |        |               |       |    |        |    |
|                       | Farge                             | Lys/grå (0)       | 0          |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | Brun/sort (2)     |            | 2           | 2      |        |          |                     |        |               |       |    |        |    |
|                       | Lukt                              | Ingen (0)         | 0          | 0           | 0      |        |          |                     |        |               |       |    |        |    |
|                       |                                   | Noe (2)           |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | Sterk (4)         |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Konsistens                        | Fast (0)          | 0          | 0           | 0      |        |          |                     |        |               |       |    |        |    |
|                       |                                   | Myk (2)           |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | Løs (4)           |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Grabb- volum (v)                  | v < 1/4 (0)       |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | 1/4 < v < 3/4 (1) |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | v > 3/4 (2)       | 2          | 2           | 2      |        |          |                     |        |               |       |    |        |    |
|                       | Tykkelse på slamlag               | t < 2 cm (0)      | 0          | 0           | 0      |        |          |                     |        |               |       |    |        |    |
|                       |                                   | 2 < t < 8 cm (1)  |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       |                                   | t > 8 cm (2)      |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Sum                               |                   | 2,0        | 4,0         | 4,0    |        |          |                     |        |               |       |    |        |    |
|                       | Korrigert (*0,22)                 |                   | 0,4        | 0,9         | 0,9    |        |          |                     |        |               |       |    | 0,44   |    |
|                       | Tilstand prøve                    |                   | 1          | 1           | 1      |        |          |                     |        |               |       |    |        |    |
|                       | Tilstand gruppe III               |                   | 1          |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Middelverdi gruppe II og III      |                   | 0,2        | 0,4         | 0,4    |        |          |                     |        |               |       |    | 0,22   |    |
|                       | Tilstand prøve                    |                   | 1          | 1           | 1      |        |          |                     |        |               |       |    |        |    |
|                       | Tilstand gruppe II og III         |                   | 1          |             |        |        |          |                     |        |               |       |    |        |    |
|                       | pH/Eh                             |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Korr.sum                          |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Indeks                            |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | Middelverdi                       |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
|                       | < 1,1                             |                   | 1          |             |        |        |          |                     |        |               |       |    |        |    |
|                       | 1,1 - <2,1                        |                   | 2          |             |        |        |          |                     |        |               |       |    |        |    |
|                       | 2,1 - <3,1                        |                   | 3          |             |        |        |          |                     |        |               |       |    |        |    |
|                       | ≥3,1                              |                   | 4          |             |        |        |          |                     |        |               |       |    |        |    |
| LOKALITETSTILSTAND: 1 |                                   |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
| Grabb ID              | k-3                               |                   |            |             |        |        |          |                     |        |               |       |    |        |    |
| pH / Eh ID            | #25                               |                   |            |             |        |        |          |                     |        |               |       |    |        |    |

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## Prøveskjema B.2

|                        |                   |
|------------------------|-------------------|
| Firma:                 | Arnarlax          |
| Lokalitet:             | Haganes           |
| Prøvetakingsansvarlig: | Snorri Gunnarsson |

|               |            |
|---------------|------------|
| Dato:         | 10.06 2026 |
| Lokalitetsnr: | -          |

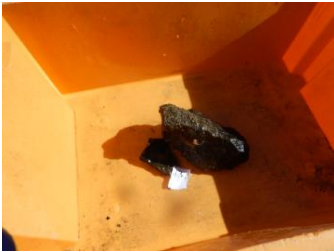
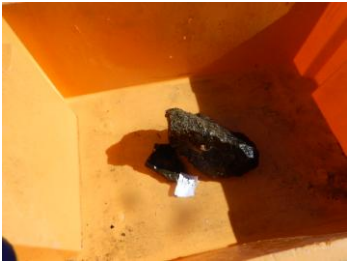
| Prøvepunkt                      |            | 21                                                                                  | 22   | 23  | 24       | 25 | 26  | 27 | 28 | 29 | 30 |
|---------------------------------|------------|-------------------------------------------------------------------------------------|------|-----|----------|----|-----|----|----|----|----|
| Dyp (m)                         |            | 99                                                                                  | 100  | 101 |          |    |     |    |    |    |    |
| Antall forsøk                   |            | 1                                                                                   | 1    | 1   |          |    |     |    |    |    |    |
| Bobling (i prøve)               |            | No                                                                                  | No   |     |          |    |     |    |    |    |    |
| Sedimenttype                    | Leire      | X                                                                                   | X    | X   |          |    |     |    |    |    |    |
|                                 | Silt       |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 | Sand       |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 | Grus       |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 | Skjellsand |                                                                                     |      |     |          |    |     |    |    |    |    |
| Fjellbunn                       |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Steinbunn                       |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Pigghuder, antall               |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Krepsdyr, antall                |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Skjell, antall                  |            | 1                                                                                   |      |     |          |    |     |    |    |    |    |
| Børstemark, antall              |            | >100                                                                                | >100 | >50 |          |    |     |    |    |    |    |
| Andre dyr, totalt antall        |            |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 |            |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 |            |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 |            |                                                                                     |      |     |          |    |     |    |    |    |    |
|                                 |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Beggiatoa                       |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Fôr                             |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Fekalier                        |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Kommentar                       |            |                                                                                     |      |     |          |    |     |    |    |    |    |
| Grabb                           |            | Areal [m <sup>2</sup> ]                                                             | 0,1  |     | Grabb ID |    | k-3 |    |    |    |    |
| Signatur prøvetakingsansvarlig: |            |  |      |     |          |    |     |    |    |    |    |

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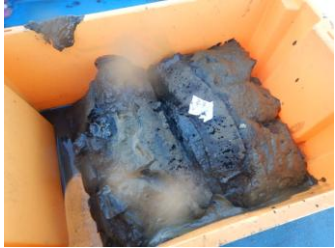
## 7.2 Images of samples at Haganes

| <i>St</i>   | <i>Image before sieving</i>                                                         | <i>Image after sieving</i>                                                           |
|-------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <i>St 1</i> |    |    |
| <i>St 2</i> |    |    |
| <i>St 3</i> |   |   |
| <i>St 4</i> |  |  |
| <i>St 5</i> |  |  |

|              |                                                                                     |                                                                                      |
|--------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>St 6</b>  |    |    |
| <b>St 7</b>  |    |    |
| <b>St 8</b>  |   |   |
| <b>St 9</b>  |  |  |
| <b>St 10</b> |  |  |

|              |                                                                                     |                                                                                      |
|--------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>St 11</b> | NA (hard bottom)                                                                    | NA (hard bottom)                                                                     |
| <b>St 12</b> |    |    |
| <b>St 13</b> |   |   |
| <b>St 14</b> |  |  |
| <b>St 15</b> |  |  |

|              |                                                                                     |                                                                                      |
|--------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>St 16</b> |    |    |
| <b>St 17</b> |    |    |
| <b>St 18</b> |   |   |
| <b>St 19</b> |  |  |
| <b>St 20</b> |  |  |

|              |                                                                                    |                                                                                     |
|--------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>St 21</b> |   |   |
| <b>St 22</b> |   |   |
| <b>St 23</b> |  |  |

## 7.3 3D-bathymetry

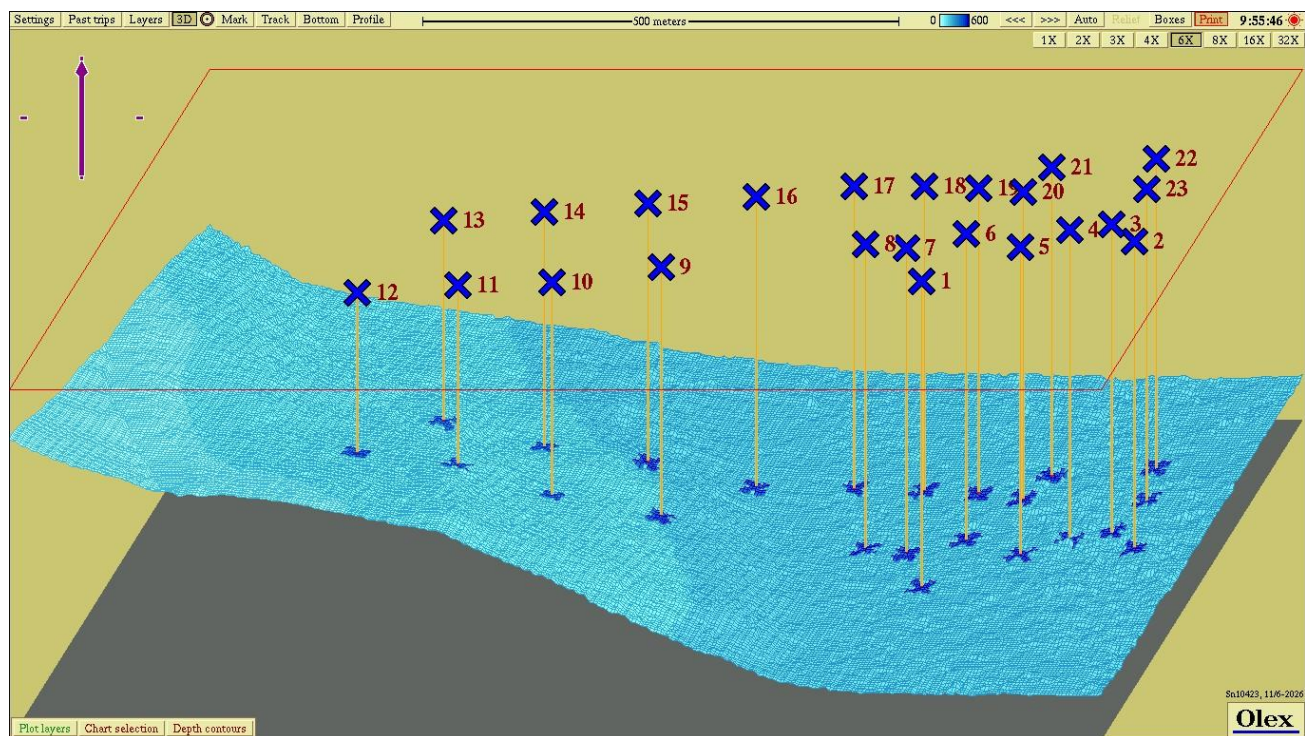


Figure 3. 3D-view of bathymetry at Haganes with stations as shown in Figure 2 and Table 4. The map is oriented towards the north.