



MANCHESTER-BY-THE-SEA

BOARD OF HEALTH

TOWN HALL - 10 CENTRAL STREET

Manchester-by-the-Sea, Massachusetts 01944-1399

Telephone (978) 526-7385

FAX (978) 526-2009

October 16, 2023

Binnabah, LLC
c/o Jeffrey Karpowich
40 Raymond Street
Manchester-by-the-Sea, MA 01944

NOTIFICATION TO OWNER

Upon receipt of the Title 5 Inspection Report for the onsite sewage disposal system at:

Property Address: **1-9 SANDPIPER LANE, MANCHESTER-BY-THE-SEA**

Property Owner: BINNAHAH, LLC

Licensed Title 5 Inspector: Mark Cottrell, D. F. Clark, Inc. SI# 4549

The Title 5 Inspection Report dated 5/8/2023, states the system **PASSES**.

NOTES:

- Due to lack of electricity at the site, the floats and alarms were not tested. Prior to occupancy, visual confirmation by approving authority is required.
- The system is not connected to the dwelling(s). Prior to occupancy, visual confirmation by approving authority is required.
- The laterals were last snaked/flushed 2/1/2021.
- A current Operation and Maintenance Contract is required prior to occupancy.
- The system did not receive normal flows in the two weeks prior to the inspection.
- The property has not been occupied since January 2022.
- The septic tank was not pumped as part of the inspection.

The Board of Health DID NOT find the septic system, as it is now used, to constitute a danger to the public health and subsequently did not order its repair/replacement at this time.

Reviewing Board of Health Agent:

Wendy Hansbury RS, Public Health Director

THIS INSPECTION reflects the **present** condition of the sanitary disposal system and is not any guarantee as to the life or future condition of said system. A passing Title 5 Inspection Report with pump receipts for three years within each calendar year may be used for sale of property. (Explanation: If there is a potential that your home will be sold within three years, you MUST have the septic tank pumped once a year, within a year of the date of the approved Title 5 Inspection Report for each of the three years. This allows the sale to occur with the use of the pumping reports and annual receipts abates the need for a "Title 5 System Inspection" for a property transfer within three years of the passing inspection, otherwise a passing Title 5 Inspection Report is only good for two years.)



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments



1 - 9 Sandpiper Lane

Property Address

Binnabah LLC

Owner's Name

Manchester-by-the-Sea

City/Town

MA
State

01944
Zip Code

September 11, 2023
Date of Inspection

Owner information is required for every page.

Inspection results must be submitted on this form. Inspection forms may not be altered in any way. Please see completeness checklist at the end of the form.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Inspector Information

Mark Cottrell

Name of Inspector

D.F. Clark, Inc.

Company Name

22 Mitchell Road, PO Box 265

Company Address

Ipswich

City/Town

(978) 356-5638

Telephone Number

MA
State

SI4549

License Number

01938

Zip Code

B. Certification

I certify that: I am a DEP approved system inspector in full compliance with Section 15.340 of Title 5 (310 CMR 15.000); I have personally inspected the sewage disposal system at the property address listed above; the information reported below is true, accurate and complete as of the time of my inspection; and the inspection was performed based on my training and experience in the proper function and maintenance of on-site sewage disposal systems. After conducting this inspection I have determined that the system:

- ☒ Passes
- ☐ Conditionally Passes
- ☐ Needs Further Evaluation by the Local Approving Authority
- ☐ Fails

Inspector's Signature

Date

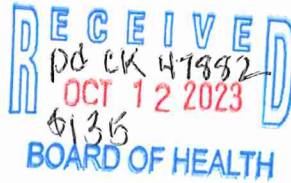
9-11-2023

The system inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP) within 30 days of completing this inspection. If the system has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the DEP. The original form should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

Please note: This report only describes conditions at the time of inspection and under the conditions of use at that time. This inspection does not address how the system will perform in the future under the same or different conditions of use.



D.F. CLARK, INC.



October 9, 2023

Binnabah, LLC
c/o Jeffrey Karpowich
40 Raymond Street
Manchester-by-the-Sea, MA 01944

RE: Title 5 Inspection
1 – 9 Sandpiper Lane, Manchester-by-the-Sea

Dear Binnabah, LLC:

Please find enclosed the Subsurface Sewage Disposal System Inspection Report for the above-referenced property. As noted on Part B (Certification) of the report, the system Passes the inspection criteria. This inspection is good for the next three (3) years.

As part of the inspection, all the building sewer pipes were tested by introducing clean water into the cleanouts. All the sewer lines showed good flow into the septic tank with no blockages observed.

Thank you for allowing us to be of service to you on this project. Please contact us if you have any questions regarding this matter.

Sincerely,
D.F. Clark, Inc.

Mark Cottrell
Title 5 Inspector

Enclosure

cc: ☒ Manchester-by-the-Sea Board of Health w/ review fee
D.F. Clark, Inc. file





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B. Certification

I certify that: I am a **DEP approved system inspector in full compliance with Section 15.340 of Title 5 (310 CMR 15.000)**; I have personally inspected the sewage disposal system at the property address listed above; the information reported below is true, accurate and complete as of the time of my inspection; and the inspection was performed based on my training and experience in the proper function and maintenance of on-site sewage disposal systems. After conducting this inspection I have determined that the system:

1. ☒ Passes
2. ☐ Conditionally Passes
3. ☐ Needs Further Evaluation by the Local Approving Authority
4. ☐ Fails

Inspector's Signature

Date

The system inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP) within 30 days of completing this inspection. If the system has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the DEP. The original form should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

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C. Inspection Summary

Inspection Summary: Complete 1, 2, 3, or 5 and all of 4 and 6.

1) System Passes:

- ☒ I have not found any information which indicates that any of the failure criteria described in 310 CMR 15.303 or in 310 CMR 15.304 exist. Any failure criteria not evaluated are indicated below.

Comments:

System has a maintenance contract with Clear Water Industries.

2) System Conditionally Passes:

- ☐ One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass.

Check the box for "yes", "no" or "not determined" (Y, N, ND) for the following statements. If "not determined," please explain.

The septic tank is metal and over 20 years old* or the septic tank (whether metal or not) is structurally unsound, exhibits substantial infiltration or exfiltration or tank failure is imminent. System will pass inspection if the existing tank is replaced with a complying septic tank as approved by the Board of Health.

* A metal septic tank will pass inspection if it is structurally sound, not leaking and if a Certificate of Compliance indicating that the tank is less than 20 years old is available.

☐ Y ☐ N ☐ ND (Explain below):



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C. Inspection Summary (cont.)

2) System Conditionally Passes (cont.):

☐ Pump Chamber pumps/alarms not operational. System will pass with Board of Health approval if pumps/alarms are repaired.

☐ Observation of sewage backup or break out or high static water level in the distribution box due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. System will pass inspection if (with approval of Board of Health):

☐ broken pipe(s) are replaced ☐ Y ☐ N ☐ ND (Explain below):

☐ obstruction is removed ☐ Y ☐ N ☐ ND (Explain below):

☐ distribution box is leveled or replaced ☐ Y ☐ N ☐ ND (Explain below):

☐ The system required pumping more than 4 times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

☐ broken pipe(s) are replaced ☐ Y ☐ N ☐ ND (Explain below):

☐ obstruction is removed ☐ Y ☐ N ☐ ND (Explain below):

3) Further Evaluation is Required by the Board of Health:

☐ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect public health, safety or the environment.

a. System will pass unless Board of Health determines in accordance with 310 CMR 15.303(1)(b) that the system is not functioning in a manner which will protect public health, safety and the environment:



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C. Inspection Summary (cont.)

- ☐ Cesspool or privy is within 50 feet of a surface water
- ☐ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh

b. System will fail unless the Board of Health (and Public Water Supplier, if any) determines that the system is functioning in a manner that protects the public health, safety and environment:

- ☐ The system has a septic tank and soil absorption system (SAS) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.
- ☐ The system has a septic tank and SAS and the SAS is within a Zone 1 of a public water supply.
- ☐ The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.
- ☐ The system has a septic tank and SAS and the SAS is less than 100 feet but 50 feet or more from a private water supply well**.

Method used to determine distance: _____

** This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.

c. Other:

4) System Failure Criteria Applicable to All Systems:

You must indicate "Yes" or "No" to each of the following for all inspections:

Yes No

☐☒

Backup of sewage into facility or system component due to overloaded or clogged SAS or cesspool

☐☒

Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool



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C. Inspection Summary (cont.)

4) System Failure Criteria Applicable to All Systems: (cont.)

Yes	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Liquid depth in cesspool is less than 6" below invert or available volume is less than ½ day flow
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Required pumping more than 4 times in the last year NOT due to clogged or obstructed pipe(s). Number of times pumped: _____.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any portion of the SAS, cesspool or privy is below high ground water elevation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any portion of cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any portion of a cesspool or privy is within a Zone 1 of a public water supply well.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any portion of a cesspool or privy is within 50 feet of a private water supply well.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. [This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis and chain of custody must be attached to this form.]
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The system is a cesspool serving a facility with a design flow of 2000 gpd-10,000 gpd.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The system fails. I have determined that one or more of the above failure criteria exist as described in 310 CMR 15.303, therefore the system fails. The system owner should contact the Board of Health to determine what will be necessary to correct the failure.

5) Large Systems: To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd.

For large systems, you must indicate either "yes" or "no" to each of the following, in addition to the questions in Section C.4.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	the system is within 400 feet of a surface drinking water supply
<input type="checkbox"/>	<input type="checkbox"/>	the system is within 200 feet of a tributary to a surface drinking water supply
<input type="checkbox"/>	<input type="checkbox"/>	the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area – IWPA) or a mapped Zone II of a public water supply well



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C. Inspection Summary (cont.)

If you have answered "yes" to any question in Section C.5 the system is considered a significant threat, or answered "yes" to any question in Section C.4 above the large system has failed. The owner or operator of any large system considered a significant threat under Section C.5 or failed under Section C.4 shall upgrade the system in accordance with 310 CMR 15.304. The system owner should contact the appropriate regional office of the Department.

6. You must indicate "yes" or "no" for each of the following for *all* inspections:

Yes No

- | | | |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pumping information was provided by the owner, occupant, or Board of Health |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were any of the system components pumped out in the previous two weeks? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Has the system received normal flows in the previous two week period? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Have large volumes of water been introduced to the system recently or as part of this inspection? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were as built plans of the system obtained and examined? (If they were not available note as N/A) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Was the facility or dwelling inspected for signs of sewage back up? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Was the site inspected for signs of break out? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all system components, excluding the SAS, located on site? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were the septic tank manholes uncovered, opened, and the interior of the tank inspected for the condition of the baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge and depth of scum? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Was the facility owner (and occupants if different from owner) provided with information on the proper maintenance of subsurface sewage disposal systems? The size and location of the Soil Absorption System (SAS) on the site has been determined based on: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Existing information. For example, a plan at the Board of Health. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Determined in the field (if any of the failure criteria related to Part C is at issue approximation of distance is unacceptable) [310 CMR 15.302(5)] |



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D. System Information

1. Residential Flow Conditions:

Number of bedrooms (design): 6 Number of bedrooms (actual): 6

DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms): 660 gpd

Description:

As per design plan dated December 4, 2017 by C.G. Johnson Engineering, Inc.

Number of current residents: 0

Does residence have a garbage grinder? ☐ Yes ☒ No

Does residence have a water treatment unit? ☐ Yes ☒ No

If yes, discharges to: _____

Is laundry on a separate sewage system? (Include laundry system inspection information in this report.) ☐ Yes ☒ No

Laundry system inspected? ☐ Yes ☒ No

Seasonal use? ☐ Yes ☒ No

Water meter readings, if available (last 2 years usage (gpd)): _____

Detail:

Sump pump? ☐ Yes ☒ No

Last date of occupancy: January 2022
Date



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D. System Information (cont.)

2. Commercial/Industrial Flow Conditions:

Type of Establishment:

Design flow (based on 310 CMR 15.203):

Gallons per day (gpd)

Basis of design flow (seats/persons/sq.ft., etc.):

Grease trap present?

☐ Yes ☐ No

Water treatment unit present?

☐ Yes ☐ No

If yes, discharges to:

Industrial waste holding tank present?

☐ Yes ☐ No

Non-sanitary waste discharged to the Title 5 system?

☐ Yes ☐ No

Water meter readings, if available:

Last date of occupancy/use:

Date

Other (describe below):

3. Pumping Records:

Source of information:

System has not been pumped since installation in
November 2018.

Was system pumped as part of the inspection?

☐ Yes ☒ No

If yes, volume pumped:

gallons

How was quantity pumped determined?

Reason for pumping:



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D. System Information (cont.)

4. Type of System:

- ☐ Septic tank, distribution box, soil absorption system
- ☐ Single cesspool
- ☐ Overflow cesspool
- ☐ Privy
- ☐ Shared system (yes or no) (if yes, attach previous inspection records, if any)
- ☒ Innovative/Alternative technology. Attach a copy of the current operation and maintenance contract (to be obtained from system owner) and a copy of latest inspection of the I/A system by system operator under contract
- ☐ Tight tank. Attach a copy of the DEP approval.
- ☐ Other (describe):

Approximate age of all components, date installed (if known) and source of information:

Components of system were installed November 2018 as per as-built plan dated November 16, 2018.

Were sewage odors detected when arriving at the site?

☐ Yes ☒ No

5. Building Sewer (locate on site plan):

Depth below grade:

Various depths, 3' at manhole
feet

Material of construction:

☐ cast iron

☒ 40 PVC

☐ other (explain):

Distance from private water supply well or suction line:

N/A
feet

Comments (on condition of joints, venting, evidence of leakage, etc.):

Building sewer pipes were not connected to units. All sewer pipes were tested by introducing clean water into cleanouts, all sewer lines showed good flow into septic tank and no blockages.



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D. System Information (cont.)

6. Septic Tank (locate on site plan):

Depth below grade:

1.5

feet

Material of construction:

☒ concrete

☐ metal

☐ fiberglass

☐ polyethylene

☐ other (explain)

If tank is metal, list age:

years

Is age confirmed by a Certificate of Compliance? (attach a copy of certificate)

☐ Yes

☐ No

Dimensions:

12.5' W x 6.5' L x 5.2' D

Sludge depth:

8"

Distance from top of sludge to bottom of outlet tee or baffle

N/A

Scum thickness

0"

Distance from top of scum to top of outlet tee or baffle

N/A

Distance from bottom of scum to bottom of outlet tee or baffle

N/A

How were dimensions determined?

Tape measure & Sludge Judge

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

Inlet tee is in place. Liquid level is normal. Tank has a divider wall with slot. This is a ProStep tank

with a high head pump. Pumping is not needed at this time. Septic tank is in good condition.



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D. System Information (cont.)

7. Grease Trap (locate on site plan):

Depth below grade:

feet

Material of construction:

☐ concrete

☐ metal

☐ fiberglass

☐ polyethylene

☐ other (explain):

Dimensions:

Scum thickness

Distance from top of scum to top of outlet tee or baffle

Distance from bottom of scum to bottom of outlet tee or baffle

Date of last pumping:

Date

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

8. Tight or Holding Tank (tank must be pumped at time of inspection) (locate on site plan):

Depth below grade:

Material of construction:

☐ concrete

☐ metal

☐ fiberglass

☐ polyethylene

☐ other (explain):

Dimensions:

Capacity:

gallons

Design Flow:

gallons per day



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D. System Information (cont.)

8. Tight or Holding Tank (cont.)

Alarm present:

☐ Yes ☐ No

Alarm level: _____

Alarm in working order: ☐ Yes ☐ No

Date of last pumping:

_____ Date

Comments (condition of alarm and float switches, etc.):

* Attach copy of current pumping contract (required). Is copy attached?

☐ Yes ☐ No

9. Distribution Box (if present must be opened) (locate on site plan):

Depth of liquid level above outlet invert _____

Comments (note if box is level and distribution to outlets equal, any evidence of solids carryover, any evidence of leakage into or out of box, etc.):



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D. System Information (cont.)

10. Pump Chamber (locate on site plan):

Pumps in working order:

☒ Yes ☐ No*

Alarms in working order:

☒ Yes ☐ No*

Comments (note condition of pump chamber, condition of pumps and appurtenances, etc.):

Unable to test pumps in system because there is no power to the site. All pumps and alarms were

working at last maintenance visit. See Clear Water Industries report from June 21, 2022 (attached).

* If pumps or alarms are not in working order, system is a conditional pass.

11. Soil Absorption System (SAS) (locate on site plan, excavation not required):

If SAS not located, explain why:

Type:

- | | | | |
|-------------------------------------|-------------------------------|---------------------|-------|
| <input type="checkbox"/> | leaching pits | number: | _____ |
| <input type="checkbox"/> | leaching chambers | number: | _____ |
| <input type="checkbox"/> | leaching galleries | number: | _____ |
| <input type="checkbox"/> | leaching trenches | number, length: | _____ |
| <input type="checkbox"/> | leaching fields | number, dimensions: | _____ |
| <input type="checkbox"/> | overflow cesspool | number: | _____ |
| <input checked="" type="checkbox"/> | innovative/alternative system | | |

Type/name of technology:

27' x 7' Bottomless Sand Filter SAS with (4) 1.25" laterals



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D. System Information (cont.)

11. Soil Absorption System (SAS) (cont.)

Comments (note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.):

Above-grade bottomless sand filter. No signs of ponding. Inspection port was dry.

12. Cesspools (cesspool must be pumped as part of inspection) (locate on site plan):

Number and configuration

Depth – top of liquid to inlet invert

Depth of solids layer

Depth of scum layer

Dimensions of cesspool

Materials of construction

Indication of groundwater inflow

☐ Yes ☐ No

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

1 - 9 Sandpiper Lane

Property Address

Binnabah LLC

Owner's Name

Manchester-by-the-Sea

MA

01944

September 11, 2023

City/Town

State

Zip Code

Date of Inspection

Owner
information is
required for every
page.

D. System Information (cont.)

13. Privy (locate on site plan):

Materials of construction:

Dimensions

Depth of solids

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):



Commonwealth of Massachusetts

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MA

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01944

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D. System Information (cont.)

14. Sketch Of Sewage Disposal System:

Provide a view of the sewage disposal system, including ties to at least two permanent reference landmarks or benchmarks. Locate all wells within 100 feet. Locate where public water supply enters the building. Check one of the boxes below:

- ☐ hand-sketch in the area below
☒ drawing attached separately





Commonwealth of Massachusetts

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D. System Information (cont.)

15. Site Exam:

☒ Check Slope

☒ Surface water

☒ Check cellar

☒ Shallow wells

Estimated depth to high ground water:

3.0

feet

Please indicate all methods used to determine the high ground water elevation:

☒ Obtained from system design plans on record

If checked, date of design plan reviewed:

December 4, 2017

Date

☐ Observed site (abutting property/observation hole within 150 feet of SAS)

☐ Checked with local Board of Health - explain:

☐ Checked with local excavators, installers - (attach documentation)

☐ Accessed USGS database - explain:

You **must** describe how you established the high ground water elevation:

According to soil testing done by Charles Johnson, PE on December 6, 2016, ESHGW was

determined to be 3.0' below the ground surface at test pit T-2016-1. According to design plan, bottom

of SAS is 4.0' above ESHGW. At time of inspection a site exam was made, site is level, no surface

water was observed, did not check cellars of individual units, and no shallow wells were located.

Before filing this Inspection Report, please see Report Completeness Checklist on next page.



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Owner
information is
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page.

1 - 9 Sandpiper Lane

Property Address

Binnabah LLC

Owner's Name

Manchester-by-the-Sea

MA

State

01944

Zip Code

September 11, 2023

Date of Inspection

E. Report Completeness Checklist

Complete all applicable sections of this form inclusive of:

☒ A. Inspector Information: Complete all fields in this section.

☒ B. Certification: Signed & Dated and 1, 2, 3, or 4 checked

☒ C. Inspection Summary:

1, 2, 3, or 5 completed as appropriate

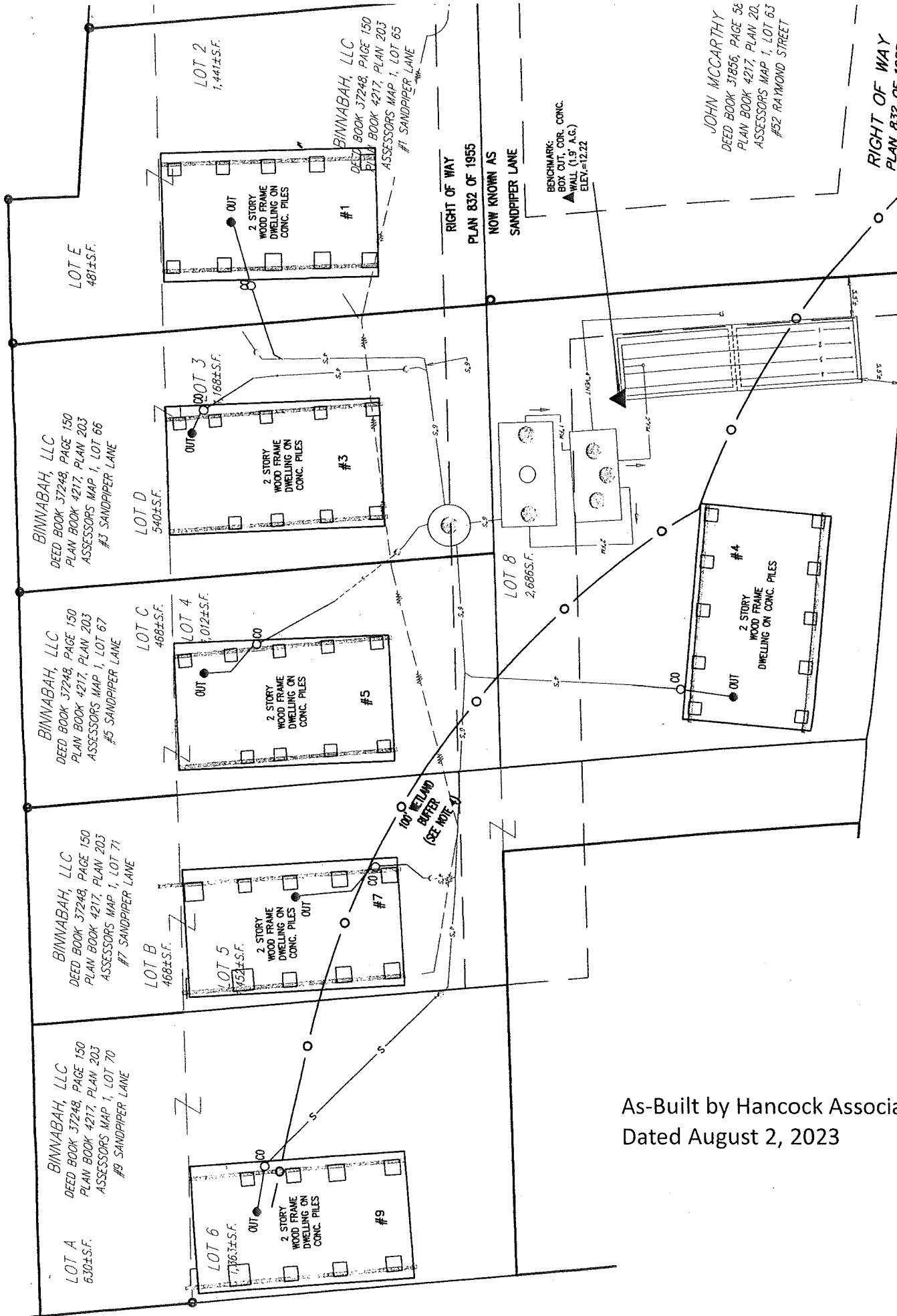
4 (Failure Criteria) and 6 (Checklist) completed

☒ D. System Information:

For 8: Tight/Holding Tank – Pumping contract attached

For 14: Sketch of Sewage Disposal System drawn on pg. 16 or attached

For 15: Explanation of estimated depth to high groundwater included



As-Built by Hancock Associates
Dated August 2, 2023



**WATERLOO BIOFILTER SYSTEM
ROUTINE INSPECTION**

ADDRESS: 1-9 Sandpiper Lane, Manchester-by-the-Sea **OWNER:** Binnabah, LLC

DATE: January 21, 2022 **OPERATOR:** Mario Rosa

SYSTEM STATUS

Septic Tank

Bio-tube Filter:	<u>O.k., clean</u>
Scum Depth:	<u>2"/36"</u>
Sludge Depth:	<u>10"/36"</u>

(Measured on January 21, 2022)

Pump Chamber

Pump H-O-A Setting:	<u>Auto</u>
Pump Cycle Timer:	<u>10 Minutes off, 30 Seconds on</u>
Elapsed Time Meter:	<u>517 hours, 15 minutes</u>
Event Counter:	<u>57,844</u>
Alarm Selector:	<u>On</u>
High Level Alarm:	<u>9</u>
Low Level Alarm:	<u>42</u>
Overrides	<u>813</u>
Exercise Pump:	<u>Yes</u>
Test & Clean Floats:	<u>Yes, clean</u>
Tank Condition:	<u>Good</u>

Waterloo Biofilter Chamber

Pump H-O-A Setting:	<u>Auto</u>
Pump Cycle Timer:	<u>On Demand</u>
Elapsed Time Meter:	<u>114 hours, 1 minute</u>
Event Counter:	<u>5,116</u>
Alarm Selector:	<u>On</u>
High Level Alarm:	<u>10</u>
Exercise Pump:	<u>Yes</u>
Test & Clean Floats:	<u>Yes, cleaned</u>
Tank Condition:	<u>Good</u>
Foam Medium Condition:	<u>Good, tan</u>
Spray Nozzles:	<u>Clear, good spray</u>

Effluent Quality

Visual Inspection: Clear, no odor
Sample: pH = 7.0, Dissolved Oxygen = 6.02, mg/L, Turbidity = 2.98 NTU

Comments: _____

Signature: 

Certificate # 15652

O.k. ✓

Bottomless Sand Filter System Technology Checklist

ADDRESS: 1-9 Sandpiper Lane, Manchester-by-the-Sea OWNER: Binnabah, LLC

INSPECTION DATE: January 21, 2022 OPERATOR: Mario Rosa

Water Meter Reading: See Attached Waterloo Biofilter System Routine Inspection

Septic Tank: See Attached Waterloo Biofilter System Routine Inspection

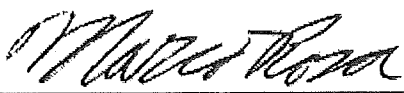
Pump Chamber: See Attached Waterloo Biofilter System Routine Inspection

Waterloo Biofilter Chamber: See Attached Waterloo Biofilter System Routine Inspection

Bottomless Sand Filter:

- ◇ Condition of Retaining Wall: Good
- ◇ Any ponding on surface of peagravel? None
- ◇ Any settling of peagravel or possible animal activity? None
- ◇ Any odor? None
- ◇ Move peagravel down to expose sand interface. Depth of ponding (if any) 0"
- ◇ Check Inspection Well. Depth of ponding at sand/soil interface (if any) 0"
- ◇ Pressure-Distribution Laterals:
 - ◇ Original Distal Head: 9/13/18 – 12'
 - ◇ Check & measure Distal Head from top of cap of Lateral #1: 11.8'
(Note: All other Laterals should remain closed when test is performed.)
 - ◇ Snake & flush all Laterals (req'd min. once/year). Date last done? 2/1/21
 - ◇ Close all Laterals and turn Pump On. Can you hear even distribution? Yes

Comments: _____

Signature: 

Certificate # 15652



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Title 5

**DEP Approved Inspection and O&M Form for Title 5 I/A
Treatment and Disposal Systems**

A. Installation

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Binnabah, LLC

Owner

1-9 Sandpiper Lane

Facility Street Address

Manchester-by-the-Sea

City

01944

Zip

Mailing address of owner, if different:

Jeffrey Karpowich, 40 Raymond St.

Street Address/PO Box:

Manchester-by-the-Sea

City

MA

State

01944

Zip

() - ext.

Telephone Number

B. Authorized Service Provider

Clear Water Industries

O&M Firm

P.O. Box 825

Street Address

Ipswich

City

MA

State

01938

Zip

(978) 356 - 0779 ext.

Telephone Number

Mario Rosa

Certified Operator Name

15652

Certification Number

C. Facility/System Information

DEP ID

August 7, 2018

Installation Date

Manufacturer ID

UG690

Model Number

August 22, 2018

Start of Operation

Approval Type: ☐ General ☐ Provisional ☐ Piloting ☒ Remedial

Seasonal Residence – used less than 6 mo./year: ☐ Yes ☒ No

D. Operating Information

January 21, 2022

Inspection Date

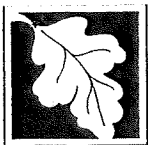
10"

Sludge Depth (to be checked yearly)

August 18, 2021

Previous Inspection Date

Pumping Recommended ☐ Yes ☒ No



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Title 5

**DEP Approved Inspection and O&M Form for Title 5 I/A
Treatment and Disposal Systems**

E. Field Testing

Field Inspection:

Color: ☐ gray ☐ brown ☒ clear ☐ turbid

☐ Other (specify): _____

Odor: ☐ musty ☐ earthy ☐ moldy ☐ offensive ☐ turbid

Effluent Solids: ☐ no ☐ some

pH 7.0 SU DO 6.02 mg/L Turbidity 2.98 NTU
6 to 9 2 or greater 40 or less

Should a Remedial or General Use system fail the Field Testing, effluent samples shall be collected per Standard Methods and analyzed for BOD and TSS.

F. Sampling Information

Samples Taken: ☐ Influent ☐ Effluent

Commercial systems or systems with a design flow of 2000 gpd and greater, and General Use nitrogen reducing systems:

_____ gpd

Parameters sampled: ☐ pH ☐ BOD ☐ CBOD ☐ TSS ☐ TN ☐ Other (list below)

Other 1 _____

Other 2 _____

Other 3 _____

G. Inspection and Maintenance

Description of any maintenance performed since previous inspection & during this inspection:

Notes and Comments:

Field sample was clear with no odor.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Title 5

**DEP Approved Inspection and O&M Form for Title 5 I/A
Treatment and Disposal Systems**

H. Certification

I certify: I have inspected the sewage treatment and disposal system at the address above, have conducted the required Field Testing and/or sample collection in accordance with Standard Methods, have completed this report and the attached technology operation and maintenance checklist, and the information reported is true, accurate, and complete as of the time of the inspection. I am a Massachusetts certified operator in accordance with 257 CMR 2.00.

Operator Signature

January 21, 2022

Date

System owner must submit this report, technology O&M checklist, and any required sampling results to the local board of health and DEP as follows for each inspection performed:

Remedial Use – by January 31st of each year for the previous calendar year

Piloting Use - within 45 days of inspection date

Provisional Use – by March 31th of each year for the previous 12 months

General Use – by September 30th of each year for the previous 12 months

Send to:

Department of Environmental Protection
Attention: Title 5 Program
One Winter Street, 6th Floor
Boston, MA 02108



August 25, 2021

Binnabah, LLC
Mr. Jeffrey Karpowich
40 Raymond Street
Manchester-by-the-Sea, MA 01944

RE: Maintenance and Service Contract for the Waterloo Biofilter System located at
1-9 Sandpiper Lane, Manchester-by-the-Sea, MA

Dear Jeffrey:

Clear Water Industries (CWI) proposes to provide the service and maintenance for the Waterloo Biofilter System located at the above referenced property. The following maintenance and service schedule is for the next two (2) years of operation commencing upon receipt of signed contract and Annual Cost received in full.

Scheduled Annual Service:

Annual Cost: 2 inspections and 2 field effluent tests = \$710.00

(Note: Access cover for all components must be at the ground surface.)

1. Check sludge and scum depth in the septic tank and clean the bio-tube filter as needed.
2. Check panels and alarm system.
3. Check ejector pumps and float switches in both the Filter Vault and the Waterloo Biofilter.
4. Check spray nozzles, fan and foam cubes in Waterloo Biofilter.
5. Maintain Bottomless Sand Filter and inspect for ponding as required.
6. Take effluent sample as required by Massachusetts D.E.P. Sample will be analyzed for the following:
 - *Dissolved Oxygen,
 - *Turbidity,
 - and *pH.
7. Notify Client verbally of any problems encountered.
(Note: There may be instances when the high water alarm will sound. In the event of an alarm condition, you are requested to silence the audible alarm and contact CWI @ (978) 356-0779 for instruction and/or a follow-up field visit by a CWI personnel. See emergency service costs.)

I have read and agree with the above Scope of Work, including the granting of access to the subject property in order to conduct the required maintenance:

CWI's initial DFC

Owner's initial JAK



Page 2
Binnabah, LLC
Mr. Jeffrey Karpowich
August 25, 2021

Emergency service:

1. Emergency service calls will be billed at the following rates for the first two (2) hours & thereafter, with the stated hourly rate:

	<u>1st 2 hrs.</u>	<u>Hourly</u>
*Monday through Friday 7am – 3:30pm:	\$180	\$90
*Monday through Friday 3:30pm – 7am:	\$300	\$150
*Saturday & Sunday:	\$300	\$150.

2. If results of field effluent testing for pH, Dissolved Oxygen or Turbidity do not comply with Massachusetts Department of Environmental Protection limits, additional testing for Total Suspended Solids and Biochemical Oxygen Demand would need to be done at a certified laboratory. Owner would be contacted prior to additional testing. Additional testing of effluent would be \$105.00 per sample.

Certified technician:

The service technician shall be a Massachusetts Certified Operator. The certified operator will be Mark Cottrell, Mario Rosa, or Kevin Conwell.

Reporting requirements:

In accordance with DEP's Title V Regulations, CWI will file an annual report transmitting the data from the annual inspection, as noted above, as well as a review of any unscheduled service. CWI will also file an annual report with the home owner and the local Board of Health.

Sincerely,
Clear Water Industries

David F. Clark /cmb

David F. Clark
Manager

Acceptance by Owner:

Binnabah, LLC
By Jeffrey Karpowich

8/31/21

Date