McKenna Consulting Engineers
Civil & Structural

Project:

Dunlo Hill, Ballinasloe, Co. Galway

Document:

Investigative & Condition Report

Client: Galway County Council

Project No.: 22257 - 4.1

March 2023

tel: 086 8657569 | web: www.mckennaconsultingengineers.com
Company Directors: T.McKenna B.E.Dip.Proj.Mgmt.C.Eng.M.I.E.I C.McKenna B.A.LL.B.
Consultant: J.B.McKenna MBA C.Eng. Eur.Ing. HDipEE AMIEE M.I.E.I

REVISION CONTROL TABLE

User is Responsible for Checking the Revision Status of this Document

Rev. Nr.	Description of Changes:	Prepared by:	Checked by:	Approved by:	Date:
R001	Initial Release	TMcK	SC	CMcK	28.03.23

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1.0 Conditions of Survey and Report

1. The inspection will be a visual one, such as can be made from ground level and from floor levels, of those parts of the property which are readily accessible. We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect. No tests will be made of services.

2. The report is provided for the sole use of the named Client and is confidential to the Client and to his or her professional advisers. The Engineer accepts no responsibility to any person other than the Client. Any such person relies upon this report at his or her own risk.

3. The title of the property will not be investigated and no enquiries will be made regarding uses or potential uses of other property in the area which could adversely affect the value of the property.

4. It will be assumed that no pyrite, mica, high alumina cement, calcium chloride additive or other harmful substance has been used in the construction of the property and therefore that the inspection of those parts not inspected would neither reveal material defects nor cause the Engineer to materially change this report.

5. This report does not make specific reference to electrical wiring or circuitry. For advice on the electrical works in the building, it is recommended that a qualified electrician is consulted.

6. This report does not advise on the compliance of the property with Planning Permission or Building Regulations including sound transfer with adjacent properties.

7. This report does not advise on the compliance of the property with Fire Regulations or Fire Safety Certificates.

8. This report does not advise on levels of sound, radon gas or carbon monoxide within the property

NOTE: In carrying out this inspection, the principal followed is that where suspicious signs exist they are noted in this report. However, it is not the duty of the Engineer to have these areas opened up unless the Client requests it and then only with the owner's permission.

No guarantee or assurance can be given that any timbers are free from rot, woodworm or other infestations, or as to the construction and condition of hidden elements of the structure.

It is always advisable to engage a specialist timber treatment and damp proofing specialist to carry out an inspection and this can be arranged if requested.

2.0 Introduction:

We were engaged by Galway County Council (GCC) via OBFA Architects to carry out an investigative and condition survey of the properties at **Dunlo Hill, Ballinasloe, Co. Galway** with a view to establishing the current condition of the underlying structural elements and components and in order for GCC to carry out upgrade and renovation works at the properties. In order to assess the property and provide an accurate opinion on the condition of the structure and nature of same, investigative opening works were commissioned and completed.

We carried out a number of inspections at the properties, with the most recent and encompassing the investigative works we had requested, taking place on Friday the 10th of March 2023.

A selection of the photographs taken on the day of survey are included within this report. The additional photographs are available for review should this be required.

Reference to locations within the property are taken assuming that an individual is standing at the front door, facing the property.

The weather at the time of the inspection was overcast but dry.

3.0 Site Location:

The properties subject of this report are at **Dunlo Hill, Ballinasloe, Co. Galway.**

The Eircode for the first residential property on the street is H53 V2T0.

4.0 Property Description:

There are a number of properties associated with this proposed development, namely; 7No. domestic derelict properties on Dunlo Hill and which are adjacent to the former 2 storey, over basement, domestic and public House property on the corner of Dunlo Hill and Dunlo Street.

5.0 Investigations:

Prior to attendance at the property, we issued a marked up drawing to the appointed Contractor, **C&N Construction Ltd.**, advising where we required the investigative opening up works to be carried out.

We have included a copy of these sketch drawings within **Appendix A** of this report.

5.1 'Foundations':

A number of trial holes were excavated adjacent to the external walls of the properties to establish the formation depths of the foundations, where applicable, or 'bearing pad' stones under the stone constructed walls.

Photograph 1: Locations of trial holes at rear right side of the site

Photograph 2: Typical external ground conditions with good ground encountered at 1m to 1.5m below existing ground level. Note the shallow depth of the bearing pad stones under the stone wall

Photograph 3: Note the filled ground and debris overlying the solid layer at 1.3m below existing ground level

Photograph 4: Shallow depth of bearing stones under external / party walls of the existing dwellings (Unit 01). Typically, formation level is at 700mm below existing FFL

Photograph 5: Shallow depth of bearing stones under external / party walls of the existing dwellings (Unit 02)

Photograph 6: Shallow depth of bearing stones under external / party walls of residential property adjacent to the Public House. Formation at 600mm below FFL

Photograph 7: Shallow depth of bearing stones under external walls of the Basement Area. Formation at 600mm below FFL

5.1.1 Findings:

- Any new foundations associated with extensions or new structures to the rear of the existing residential properties will be formed at between 1m and 1.5m below existing ground level
- There is a substantial volume of fill material to be removed from the site with a number of old stone walls to be 'grubbed' out
- Bearing stone / pad type 'foundations' were noted under the stone walls of the residential properties at approximately 700mm below existing ground level
- The stone walls have been formed at a very shallow depth with very few larger bearing stone type 'foundations' under same

5.2 External Walls:

There were no obvious structural cracks noted to the front elevations of the properties following our initial structural inspection.

The external render was removed in a number of areas to the front elevations to establish the nature and condition of the underlying structure and lintels/

The photographs below, with accompanying description, illustrate the findings.

Photograph 8: Condition of Timber Lintels in Unit 01

Photograph 9: Condition of Timber Lintels in Unit 03

Photograph 10: Concrete & stone lintels were also noted in places within the residential properties

Photograph 11: Example of rotted and dilapidated timber lintel

Photograph 12: Timber lintel within the public house part of the property

Photograph 13: Woodworm noted in a timber lintel within the public house part of the property

Photograph 14: Woodworm noted in timber lintels within the public house part of the property

Photograph 15: Typical example of the dilapidated nature of the timber lintels

Photograph 16: Typical example of the nature and condition of the timber lintels and beams in the public house area

Photograph 17: Typical example of the nature and condition of the timber lintels in the public house area, 1st floor

Photograph 18: Cracked and hollow sounding render noted on the left side gable end of the residential properties

Photograph 19: Nature of the render and substrate in explorative hole at the front left side. The render is 30mm on average in thickness and well bonded to the stone

Photograph 20: Note the water damaged timber lintel on the front elevation

Photograph 21: Examples of the explorative holes in the render on the front elevations of the residential properties

Photograph 22: Example of well bonded render and dilapidated timber lintel

Photograph 23: Spalled render from public house section

5.2.1 Findings:

- The external walls are in predominantly in good structural condition
- The condition of the timber lintels varies but it should be assumed that all timber lintels within the properties should be removed and replaced. The lintels can be assessed on a case by case basis once works commence
- The external render is approximately 30mm in thickness on the residential properties and varies in condition. The render is relatively intact and in good condition to the front elevation but in very poor condition to the left side and rear
- A new render finish is required to the public house section
- It is likely that the render is sand cement type but this would need to be confirmed by sampling and testing
- Large sections of cracked and hollow sounding render were noted on the left side gable end and on the rear elevations

5.3 Internal Walls & Ceilings:

Explorative holes were taken from the majority of internal walls or the internal face of external walls where cracks and defects were noted in a given room.

The photographs below, with accompanying description, illustrate the findings.

Photograph 24: Typical condition of the ceilings within the residential properties

Photograph 25: Typical condition of the internal walls and ceilings within the residential properties

Photograph 26: Cracked and dilapidated nature of the ceilings within the public house area

Photograph 27: Dilapidated nature of the walls and ceilings within the public house area

Photograph 28: Dilapidated nature of the walls and ceilings within the public house area

Photograph 29: Dilapidated nature of the walls and ceilings within the public house area

5.3.1 Findings:

- The internal walls and ceilings are in a very dilapidated condition within the residential properties and within the public house area and will need to be removed and replaced

5.4 Ground, First & Second Floors:

Sections of the concrete floors and timber floors boards were removed in the rooms on the ground, first and second floors to establish the nature and condition of these floors in both the residential areas and the public house area.

Photograph 30: Example of suspended timber floor within one of the residential units

Photograph 31: Example of first floor timber joists abutting a stone wall. The joists were found to be in good condition

Photograph 32: First floor joists were found to be in this dilapidated condition within a number of the residential units

Photograph 33: Brittle condition of the floorboards and floor joists in the property adjacent to the archway

Photograph 34: Woodworm attack noted in the floor joists at the location above

Photograph 35: Dilapidated condition of the timber floors and floor joists on the ground floor of the public house area

Photograph 36: Close up of the defects noted above

Photograph 37: Condition of the timber first floor joists in the public house area

Photograph 38: Good condition of the timber second floor joists in the public house area

Photograph 39: Dilapidated condition of the timber floors and floor joists on the ground floor of the public house area

5.4.1 Findings:

- Within the residential properties there is a combination of suspended timber floors and concrete floors which will need to be removed and upgraded
- The condition of the first floor joists within the residential properties varies but all should be removed and replaced
- Within the public house section, the timber floors vary in condition also with sections in a very dilapidated condition. Significant falls were noted within a number of the rooms. The floors within these areas should be removed and replaced also.

5.5 Roof & Attic:

The roofs have a slate finish and which varies in condition, depending on the property.

We carried out a visual inspection of the attic areas, where possible.

Photograph 40: Dilapidated condition of the roof and attic spaces in the residential properties

Photograph 41: Example of water damaged ends of rafters in the residential properties and where same abut the external walls

Photograph 42: Dilapidated nature of rear roofs of the residential properties

Photograph 43: Good condition of the attic space and timbers in the property adjacent to the public house

Photograph 44: Good condition of the attic space and timbers in the property adjacent to the public house

Photograph 45: Dilapidated and water damaged timber purlins in the residential property adjacent to the public house, left side

Photograph 46: Dilapidated and water damaged timber rafters in the residential property adjacent to the public house, left side

Photograph 47: Good condition of the rafters in the roof over the public house area

Photograph 47: Good condition of the rafters in the roof over the residential property to the right side of the public house

5.5.1 Findings:

- The roofs of the residential properties will need to be removed and upgraded
- With the exception of isolated rafters adjacent to the gable walls and chimneys, the roof rafters in the public house section and right side residential property were found to be in good condition
- All of the chimneys will need to be further assessed. Upgrade works will likely be required to the render, flashings, linings and cappings of the chimneys throughout the property
- Any timbers which it is proposed to retain should be sprayed and treated for woodworm and rot

5.6 Miscellaneous:

The properties require a full upgrade and to include the following;

- All new plumbing and electrics are required
- New foul and surface water sewers will be required
- External windows and doors will need to be upgraded
- Insulation upgrade to compliment the age of the properties and methods of construction

6.0 Summary:

The main findings from our investigative survey were as follows;

- Any new foundations associated with extensions or new structures to the rear of the existing residential properties will be formed at between 1m and 1.5m below existing ground level
- There is a substantial volume of fill material to be removed from the site with a number of old stone walls to be 'grubbed' out
- Bearing stone / pad type 'foundations' were noted under the stone walls of the residential properties at approximately 700mm below existing ground level
- The stone walls have been formed at a very shallow depth with very few larger bearing stone type 'foundations' under same
- The condition of the timber lintels varies but it should be assumed that all timber lintels within the properties should be removed and replaced. They can be assessed on a case by case basis once works commence
- The external render is approximately 30mm in thickness on the residential properties and varies in condition. The render is relatively intact and in good condition to the front elevation but in very poor condition to the left side and rear
- A new render finish is required to the public house section
- It is likely that the render is sand cement type but this would need to be confirmed by sampling and testing
- Large sections of cracked and hollow sounding render were noted on the left side gable end and on the rear elevations
- Within the residential properties there is a combination of suspended timber floors and concrete floors which will need to be removed and upgraded
- The condition of the first floor joists within the residential properties varies but all should be removed and replaced
- Within the public house section, the timber floors vary in condition also with sections in a very dilapidated condition. Significant falls were noted within a number of the rooms. The floors within these areas should be removed and replaced also.
- The roofs of the residential properties will need to be removed and upgraded
- With the exception of isolated rafters adjacent to the gable walls and chimneys, the roof rafters in the public house section and right side residential property were found to be in good condition

- All of the chimneys will need to be further assessed. Upgrade works will likely be required to the render, flashings, linings and cappings of the chimneys throughout the property

- Any timbers which it is proposed to retain should be sprayed and treated for woodworm and rot

7.0 Conclusions:

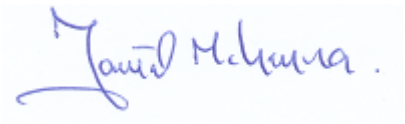
At a minimum, the internal walls, floors and roofs of the residential properties should be removed and replaced. The feasibility of retaining the external walls would require further cost comparisons, versus demolition of same.

We would consider that the timber floors should be removed and replaced within all of the properties.

The roofs of the public house area and residential property to the right hand side can likely be retained but the timbers should be spray treated to prolong their lifespan.

If you have any further queries do not hesitate to contact me.

Yours Sincerely,



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Tomás McKenna
Chartered Engineer

Appendix A

Floor Plans & Investigation Schedule

McKenna Consulting Engineers
Civil & Structural Engineering Services
Miltown Malbay
Co.Clare
Tel: 086-8657569
Email: mckennaconsultingengineers@gmail.com

Job No. 22257
Dunlo Hill Investigations
Date: 10.01.23

Received: 19/05/23

TH Denotes Trial Hole to expose depth of existing 'Pad Stone' Foundations + depth required to Good Ground.

*TH : Denote Trial Holes @ Basement Level

Ground Floor Plan Scale 1:100

McKenna Consulting Engineers
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Co.Clare
Tel: 086-8657569
Email: mckennaconsultingengineers@gmail.com

JOB No. 22257
DYNLO HILL INVEST'S
DATE: 16.02.'23

Received: 19/05/23

○ : DENOTES REMOVAL OF FLOORBOARDS + EXPOSURE OF JOISTS UNDER INCL. WHERE SAME REST ON WALLS

○ : DENOTES EXPOSURE OF ENDS OF RAFTERS + WHERE SAME REST ON EXT. WALLS

FIRST FLOOR PLAN SCALE 1:200

McKenna Consulting Engineers
Civil & Structural Engineering Services
Miltown Malbay
Co.Clare
Tel: 086-8657569
Email: mckennaconsultingengineers@gmail.com

Job no. 11257
Dunlo Hill Incest's
Date: 10.02.'23

O : Removal of floorboards + exposure of joists under.

Second Floor Plan Scale 1:100

McKenna Consulting Engineers
Civil & Structural Engineering Services
Miltown Malbay
Co.Clare
Tel: 086-8657569
Email: mckennaconsultingengineers@gmail.com

JOB NO. 22257
DUNLO HILL INVEST'S
DATE: 10.02.'23

Received: 19/05/23

○ DENOTES REMOVAL OF FLOORBOARDS + EXPOSURE OF JOISTS UNDER.

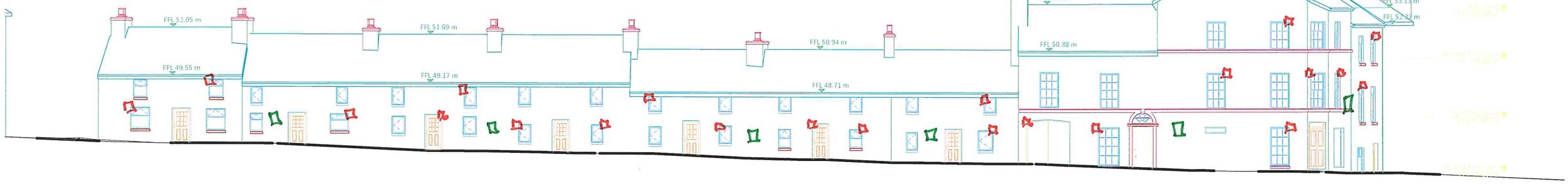
○ : DENOTES EXPOSURE OF ENDS OF RAFTERS + WHERE SAME REST ON WALLS

ATTIC PLAN SCALE 1:100.

McKenna Consulting Engineers
Civil & Structural Engineering Services
Miltown Malbay
Co.Clare
Tel: 086-8657569
Email: mckennaconsultingengineers@gmail.com

Job No. 22257
Duplo Hill Invest's
Date : 10.02.'23

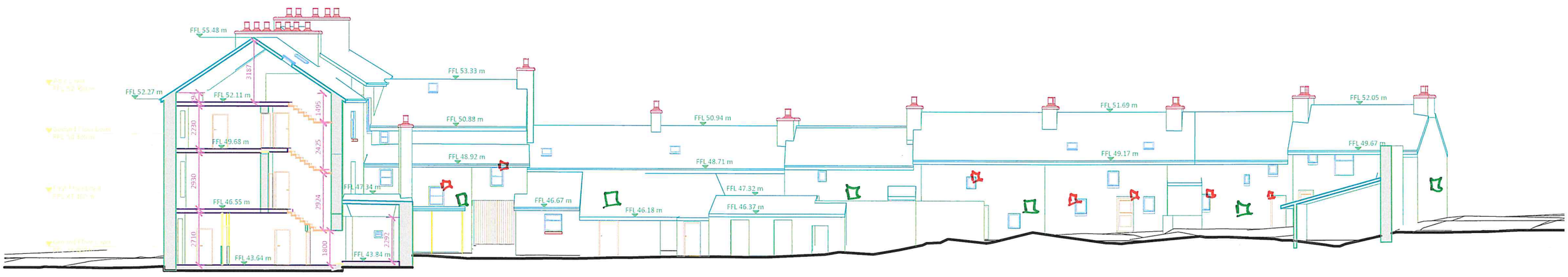
Received: 19/05/23



1 Existing_SW Street Elevation
1 : 100

□: Denotes Exposure of Lintels

□: Denotes 450x450 Removal of Render to expose Stone.



2 Existing_NE Rear Elevation
1 : 100

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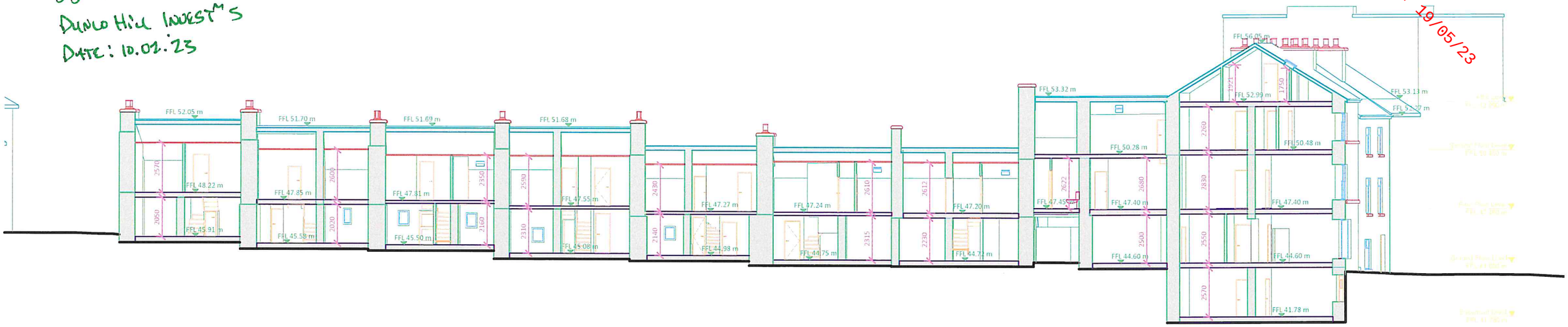
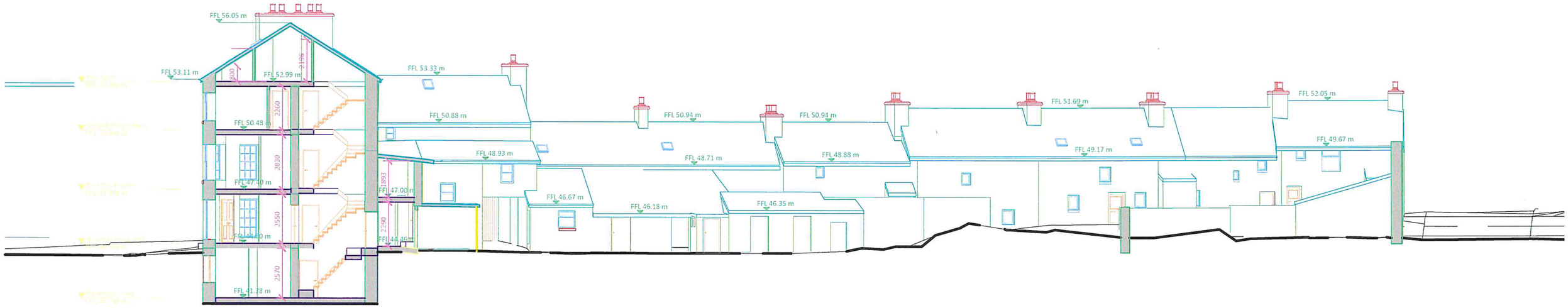


1 Existing_Longitudinal Section A
1 : 100



3 Existing_Longitudinal Section B