

Interior Educators 2021 National Writing Award.

Course Director/Programme leader's overview.

Candidate: 181.W.CS.2021a.pdf

This work is an extensive illustrated research and analysis report, which presents specific knowledge, understanding and arguments, based upon critical analysis of primary and secondary sources to inform an individually negotiated Design Project.

Due to the Covid19 implications to teaching and university guidelines, students on this programme of study have an amended submission deadline of June 24th 2021. As such, this work is not considered fully complete, and will be marked upon submission of the physically crafted submission.

Invest In Rest - Gibson Mills, Hebden Bridge

Statistics show that almost half of adults in the UK suffer from poor sleep (The Sleep Council, 2017). Due to the busy nature of our lives, a healthy lifestyle balance is often neglected, and resulting anxiety can lead to poor mental health, impacting significantly on the quality of our sleep. Whilst Corona Virus is providing constant mutations, it has also bred 'coronasomnia' leaving a legacy of individuals with sleep issues to add to the current worrying statistics.

Here, the student explores how health and well-being in terms of sleep and rest can increase resilience and improve our response to today's mental health risks. Set in an off-grid national trust building 'Gibson Mill', it explores the opportunity to design an education and sleep retreat facility.



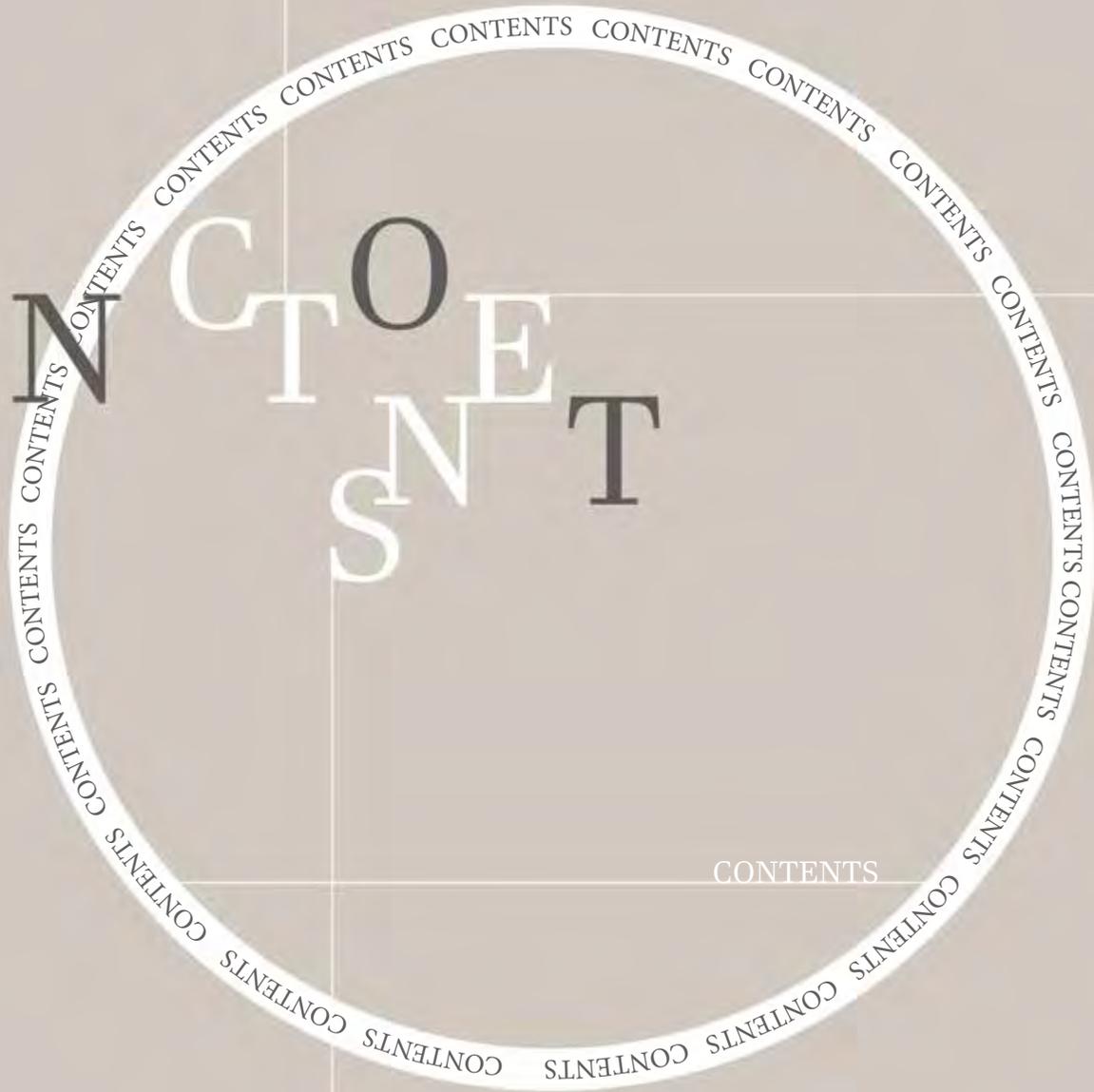


Fig. 1.

GIBSON MILL

Cotton Mill
1800
Grade II listed

Heptonstall Road
Hebden Bridge
HX7 6AZ



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INTRODUCTION

'Twelve years ago, at the age of ten, I was diagnosed with Post Viral Chronic Fatigue Syndrome following a bout of Glandular Fever. Extremely weak for the next year, I gradually returned to my normal self although this is an affliction I will have to manage for the rest of my life. At its worst, I experience symptoms including extreme fatigue, chill blains, brain fog, dizziness, fainting and heart palpitations. Consequently, health and wellbeing has become an integral part of my life in an effort to keep these symptoms at bay. Throughout this journey, I have gained a clear understanding of how our lifestyle impacts the way we think and feel. This knowledge has largely come through self-imposed trial and error. In fact,

the lack of educational and treatment facilities available to the public became glaringly obvious to me when I, myself, needed such support. I therefore aim to provide a treatment facility that caters to a variety of needs in relation to sleep, providing both clinical and therapeutic treatment. Underpinning this, I also want to take the opportunity to educate the public on the importance of a healthy lifestyle and the ways in which it contributes to us individually and as a society. There are numerous areas of our lives that we neglect that have substantial impact on our wellbeing; education on this topic is something that I would have benefited greatly from, had it been available.'



Fig. 2. View of Toll House from Second Floor Mill Window



Fig. 3. Gibson Mill North Facade

Arguably the most significant area is sleep. A lack of education on this topic means the general population are largely ignorant to the profound impacts a lack of sleep can have on a person's wellbeing. Sleep is an essential function to recharge the body and mind and, despite the fact it is such a vital process, it is rarely discussed. Sleep deprivation can cause minor symptoms such as drowsiness and inability to concentrate. Over time, however, these symptoms can increase in severity, linking to potentially life-threatening complications and health conditions. Intervention within the first six months should be offered to prevent sleep issues escalating as sleep issues can develop into sleeping disorders within this timeframe. (The Sleep Council, 2017)

An increase in the number and quality of educational facilities and treatment centres will highlight the importance of adequate sleep and support those who struggle with associated health disadvantages. The aim of the project 'Invest in Rest' is to provide a place where people can receive the professional help and support they need through a range of specialist services such as clinical treatment and holistic therapies. Its secondary purpose will be to create an understanding and recognition of the impact which sleep has on individuals, families and society. A greater understanding of sleep will ensure a healthier society and in turn, save money. (The Sleep Council, 2017)

Currently, the resources available to those who suffer with sleep issues are inadequate or non-existent. It is for this reason that a project surrounding these issues needs to be promoted. A recently released Sleep Manifesto - 'A Wake-Up Call' by The Sleep Council and The Sleep Charity - urges the government and the public to recognise the profile of sleep as a major health and wellbeing contributor and ensure sleep is a key issue on the Public Health Agenda. Both The Sleep Council and The Sleep Charity will be key stakeholders in this project and set a precedent for other facilities of this nature.

BRIEF

Almost half of all adults in the UK suffer from poor sleep (The Sleep Council, 2017), yet despite overwhelming evidence to underline its importance, there remains inadequate support. Continued sleep deprivation can lead to immediate irritability, forgetfulness and slowed reaction time and, if left unabated, the risk of developing more serious long-term issues increases (Buysse, 2014, p. 10). However, given the fact that roughly one third of a person's life is spent asleep, the full extent of its impacts on overall health are relatively unexplored. The harmful effects of sleep deprivation can be seen from an early age. Lack of sleep can weaken a child's learning and cognitive development and, without intervention, can lead to poor health choices and overall wellbeing later in life (Dahl, 1996, p. 44). As a person grows older, studies suggest a third of all adults get less than six hours sleep per night (The Sleep Council, 2017).



**‘A THIRD OF ALL ADULTS
GET LESS THAN SIX HOURS
SLEEP PER NIGHT’**



Sleep deprivation can have profound consequences on physical, mental and emotional health (Institute of Medicine, 2006, p. 2) and can reduce life expectancy by causing depression, obesity and risk of stroke and heart disease (American Heart Association, 2019). Furthermore, research indicates sleep deprivation increases the body's 'fight or flight' stress response, causing the body to secrete hormones that speed up heart rate and raise blood pressure (American Heart Association, 2000). The positive influence of adequate sleep and resultant effect on health and wellbeing will have direct and measurable impact on health and societal care costs in the UK. Specifically, research indicates that:

'If levels of obesity could be reduced by 1% every year from the predicted trend between 2015 and 2035, £300 million could be saved in direct health and social care costs in the year 2035 alone.' (Obesity Health Alliance, 2017, p. 1)



Fig. 4. Cottages

‘ONE
IN
FIVE
ACCIDENTS
ON
MAJOR
ROADS
ARE
SLEEP
RELATED’



Additionally, according to The Sleep Council, 'Tiredness and fatigue are the primary cause of one in five (21%) GP consultations in the UK' and can have serious consequences with research suggesting that 'one in five accidents on major roads are sleep related'. Not only is sleep deprivation having a detrimental impact on health, its effects are also felt in the economy. Indeed, sleep deprivation in the UK workforce can attribute to a £40.2 billion loss in productivity and a loss of 200,000 working days to insufficient sleep (Hafner, et al., 2016).

Due to the importance of adequate sleep and the role it plays in a person's health, educating the population holistically on what constitutes a good night's sleep is a viable way to deal with some of the bigger issues at play in society. Located within 400 acres of unspoilt woodland, Gibson Mill's tranquil environment will play a significant role in the outlook and development of the user, while research suggests nature plays a pivotal role in the way we think, feel and behave. (Chowdhury, 2020).

The sustainable, off grid building allows visitors to focus on the matter at hand and become enveloped in the sanctuary of wellbeing, whilst providing the user with the knowledge and tools to make healthy lifestyle choices. Gibson Mill will therefore be the host to an ecosystem of products and services that facilitate better sleep.



Fig. 6. Gibson Mill West Facade

'Invest in Rest' will transform Gibson Mill into a specialist treatment centre for sleep, providing specialist clinical treatment, psychological therapy, and holistic therapy to those in need. The project will also focus on engaging visitors within a variety of alternative therapies including yoga and meditation in order to help ease stress and anxiety which experts cite as a major factor in sleep deprivation (Sharma, 2015). Gibson Mill will feature consultation rooms and a functional gym where trained health care professionals such as dieticians, psychologists and physiotherapists can oversee patients' health and wellbeing by offering one to one treatment. Gibson Mill will also play host to a dedicated area for group based educational sessions in which health care professionals will hold lectures for patients, their family and friends and other healthcare professionals. The facility will also feature designated indoor and outdoor recreation areas, allowing visitors to relax, take in their surroundings and unwind from the chaotic world we live in.



The Sleep Council is an independent authority focusing on sleep health and has been sharing views surrounding sleep as a vital component of health and wellbeing through sharing tips and tools, supporting research and raising awareness in the public health agenda. Their mission is to provide access to effective, consistent, evidence-based support to people living with sleep issues (The Sleep Council, 2021).

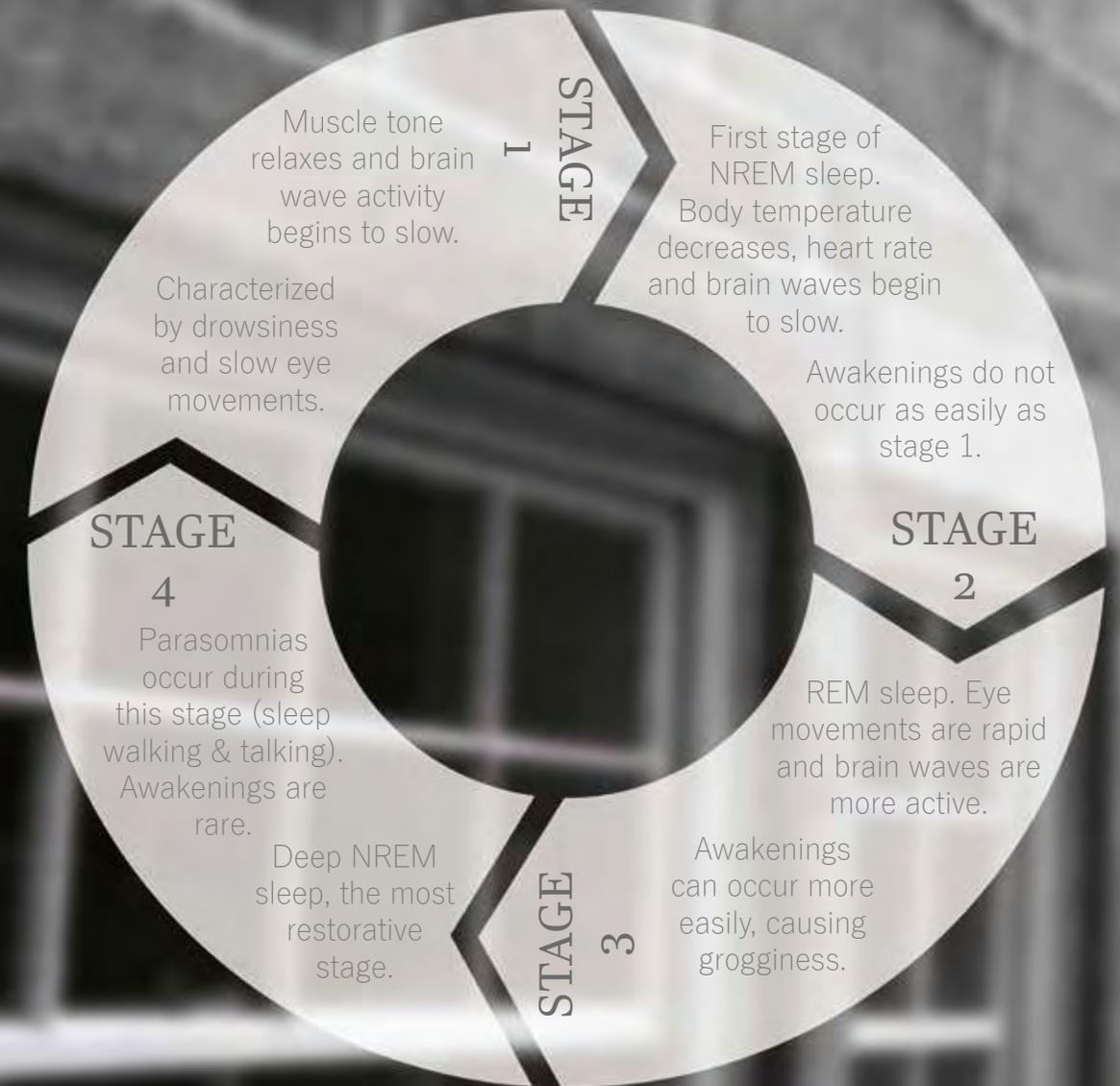
The Sleep Charity is a national award-winning charity that provides advice and support to the nation. They raise awareness and campaign to improve sleep support and promote a better understanding around the complexities of sleep. It provides accredited training for professionals and families and aims to raise awareness of the importance of sleep in younger people to help prevent sleep issues escalating into bigger problems later in life (The Sleep Charity, 2021).



SLEEP CYCLE

There are two types of sleep, rapid eye movement (REM) and non-rapid eye movement (NREM). Sleep is divided into 4 stages which occurs cyclically. A complete cycle takes 90 – 120 minutes and each stage last 5 – 15 minutes. The body undergoes a series of physiological changes that enable rest to occur that is vital to health and wellbeing (Institute of Medicine, 2006). A variety of internal and external factors can dramatically influence length and quality of sleep. Some of these factors include:

- Stress & Anxiety
- Medical Conditions (Chronic Pain)
- Medication
- Substances (Caffeine, Alcohol & Nicotine)
- Nutrition
- Environmental Factors (Temperature, Light and Noise)
- Lifestyle Factors (Exercise & Weight Gain)



HEALTH & WELLBEING IMPACT

Sleep is a complex process which helps us to build and repair our bodies. It is an essential and involuntary process, without which the body and mind cannot function effectively. Sleep issues are among the most common yet frequently overlooked and readily treatable health problems (Colten & Altevogt, 2006). Sleep effects our ability to sustain attention, read, use language, and summarise our senses. Sleep deprivation leads to a compromise on performance, mood and interpersonal relationships and research suggests it has links to protecting the immune system (Robotham, et al., 2011).

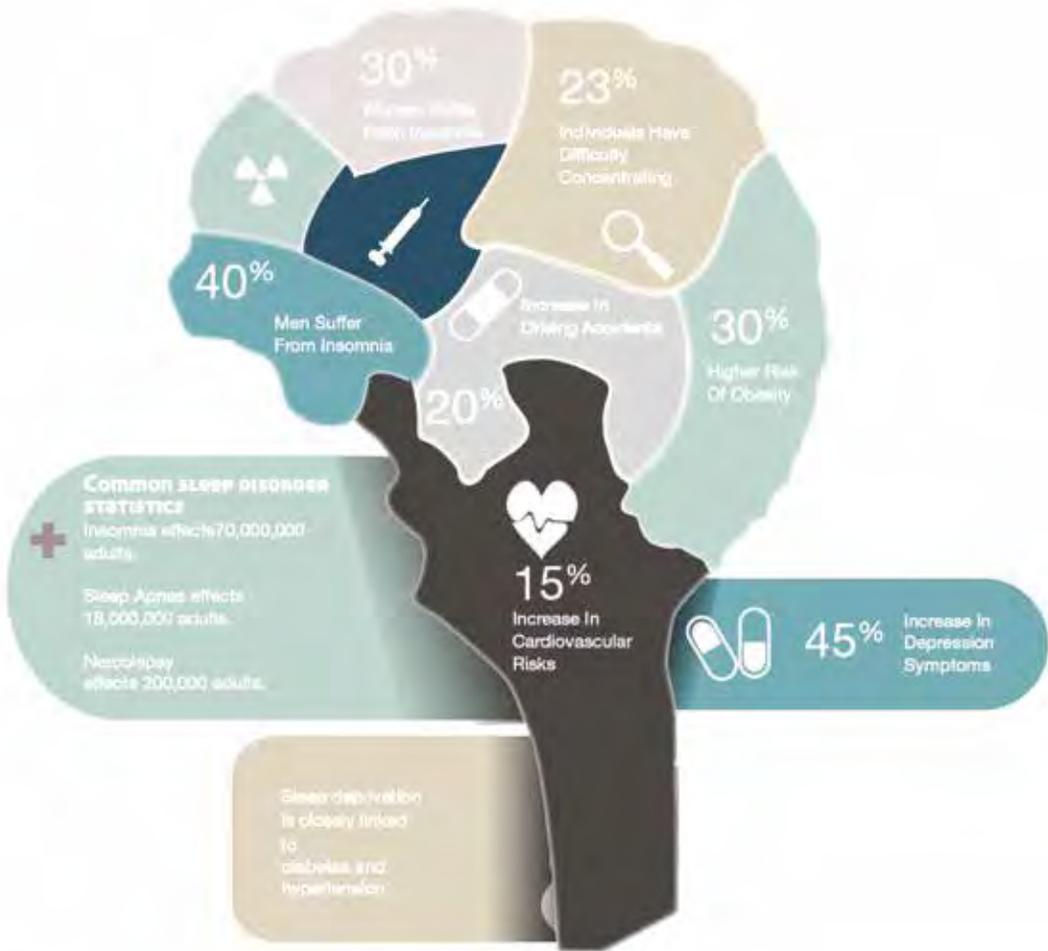


Fig. 8. Sleep Statistics

SHORT TERM

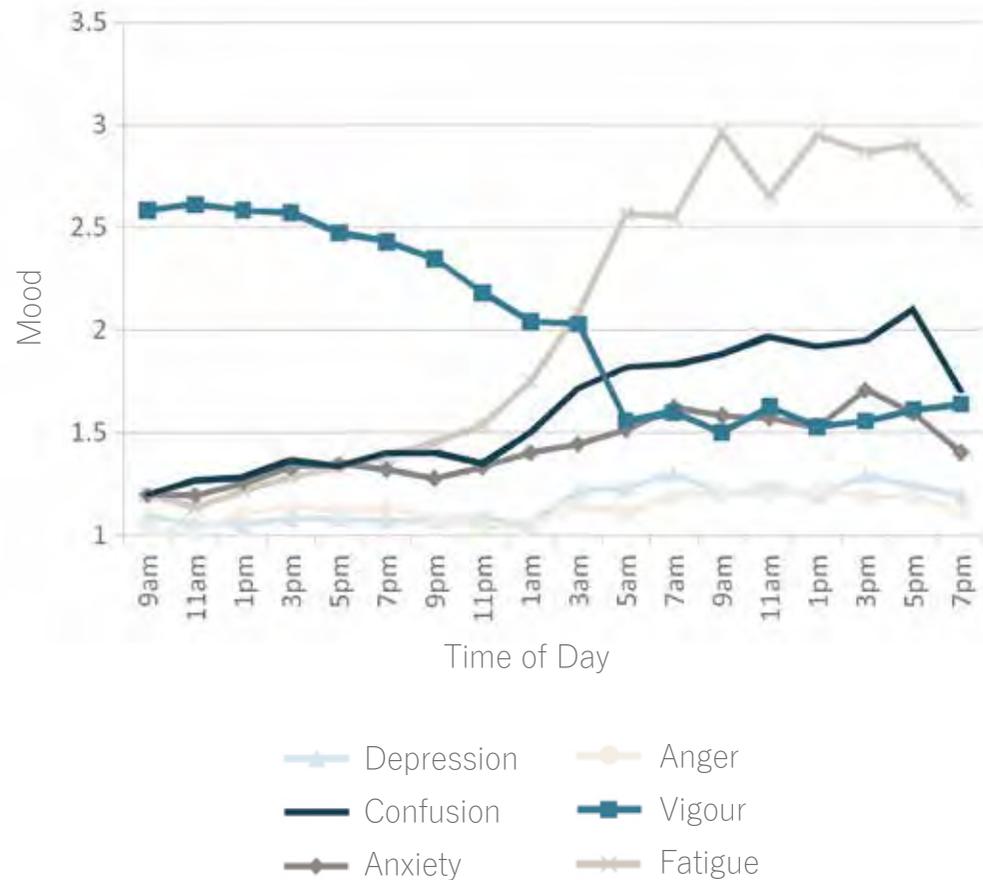
- Increased Stress Responsivity
- Emotional Distress
- Cognitive and Memory issues
- Performance Deficit
- Somatic Problems

LONG TERM

- Weight Related issues
- Depression & Anxiety
- Increased Risk of Heart Attack & Stroke
- Diabetes
- Hypertension
- Cancer

HEALTH & WELLBEING IMPACT

The Effect of Sleep Deprivation on Mood



Mood scores were recorded after 1 night of 8hrs sleep and after 1 night after no sleep. Results showed more feelings of depression, anxiety, confusion, anger, fatigue, and less vigour. Leading to a conclusion that sleep deprivation can lead to changes in cognitive development and a heightened risk of mood dysregulation. (Short & Louca, 2015)

Chronic Health Conditions by Sleep Duration

Chronic condition	Short sleep (<7 hours)		Sufficient sleep (≥7 hours)	
	%	95% CI	%	95% CI
Heart attack	4.8	(4.6-5.0)	3.4	(3.3-3.5)
Coronary heart disease	4.7	(4.5-4.9)	3.4	(3.3-3.5)
Stroke	3.6	(3.4-3.8)	2.4	(2.3-2.5)
Asthma	16.5	(16.1-16.9)	11.8	(11.5-12.0)
COPD (chronic obstructive pulmonary disease)	8.6	(8.3-8.9)	4.7	(4.6-4.8)
Cancer	10.2	(10.0-10.5)	9.8	(9.7-10.0)
Arthritis	28.8	(28.4-29.2)	20.5	(20.2-20.7)
Depression	22.9	(22.5-23.3)	14.6	(14.3-14.8)
Chronic kidney disease	3.3	(3.1-3.5)	2.2	(2.1-2.3)
Diabetes	11.1	(10.8-11.4)	8.6	(8.4-8.8)

Fig. 9. (Opposite) Fig. 10.

Adults reported more cases of 10 chronic health conditions who were short sleepers (less than 7 hrs in a 24hr period) compared to those who got the daily recommended amount of sleep (more than 7 hrs in a 24hr period). (Data for Disease Control and Prevention, 2017)

THE PATIENT

The patient will receive an appointment with a General Practitioner to determine whether a referral to the sleep clinic would be required or benefitted from.

Upon arrival the Somnologists (sleep experts) will provide an in-depth assessment to categorize the level of risk (Low, Medium, High) depending on symptoms the patient is showing. An appropriate questionnaire will be used to aid this decision. Depending on the level of risk and professional opinion, the patient will begin an educational programme (see page. 38-41) or may require further investigation (see page. 34-37).

From there, an individualised treatment plan will be developed in order to address problems highlighted in the initial assessment process.

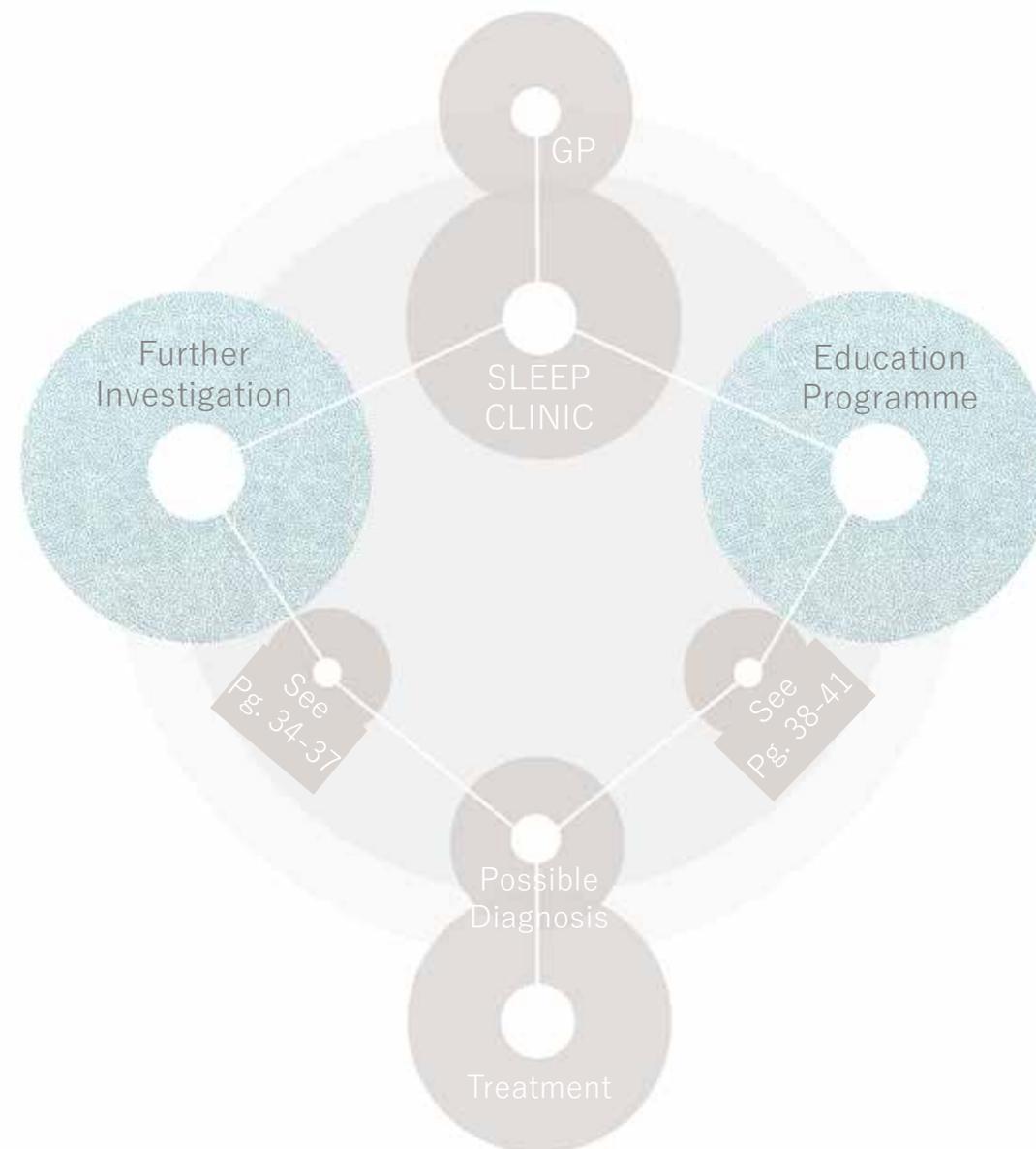


Fig. 11. Patient Process Experience

POLYSOMNOGRAPHY

Polysomnography (PSG) - a multi parametric test used in the study of sleep and as a diagnostic tool. (Healthline, 2020)

If symptoms of sleep apnoea were causing a decrease in quality of life or raising safety issues, it may be necessary to take part in a sleep study, if left unabated, the risk of developing more serious long term issues increases.

PROCESS

During a sleep study, electrodes will be put on the face and scalp and will send recorded electrical signals to the measuring equipment. These signals, which are generated by the brain and muscle activity, are then recorded digitally. To measure respiratory airflow, belts are placed around the abdomen and chest. An Oximeter probe will be placed on the finger to measure the oxygen levels in the blood. (Healthline, 2020)

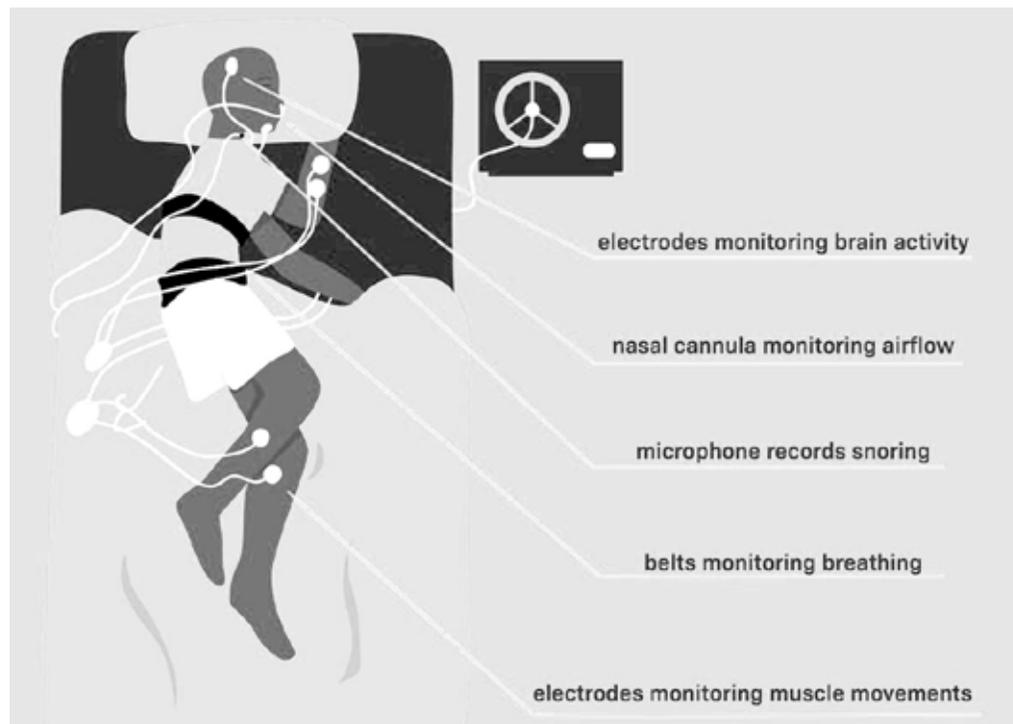


Fig. 12. Sleep Study Setup

Diagnostic Overnight PSG -

Monitors sleep and body functions, including oxygen levels, limb movements, breathing and heart rhythms.

Diagnostic daytime multiple sleep latency test (MSLT) -

Follows the diagnostic overnight PSG and helps to diagnose narcolepsy. It monitors how often and how quickly REM sleep is achieved.

Two-night evaluation PSG and CPAP titration -

If the medical team finds or suspects sleep apnoea, the second night will be needed to figure out the right air pressure for CPAP (continuous positive airway pressure) treatment. This delivers air into your airways through a specially designed nasal mask.

MEASUREMENTS TAKEN

- Heart rate
- 3 Leads ECG
- Pulse Oximetry
- Respiratory Airflow
- RIP Respiratory Effort Belt
- Second RIP Respiratory Effort Belt
- Snore (derived from airflow)
- Body Position
- Skin Temperature

(Healthline, 2020)

SLEEP DISORDERS

INSOMNIA

Individual finds it difficult to sleep, stay asleep or both, it is the most common sleep disorder.

SYMPTOMS

- Waking up too early
- Unrefreshing Sleep
- Trouble falling and/or staying asleep

CAUSES

Acute Insomnia:

- Stress
- Trauma
- Pain
- Medications

Chronic Insomnia:

- Medical Conditions
- Anxiety & Depression
- Diabetes
- Substance Abuse

(Healthline, 2020)

OBSTRUCTIVE SLEEP APNOEA

The walls of the throat relax during sleep, narrowing the passageway and interrupting normal breathing.

SYMPTOMS

During Sleep:

- Breathing Stopping & Starting
- Gaspings, Snorting or Choking
- Waking Up
- Loud Snoring

Daytime:

- Headaches
- Fatigue
- Inability to Concentrate
- Mood Swings

CAUSES

- Obesity
- Narrow Airway
- Substance Abuse
- Smoking

(Mayoclinic, 2020)

CENTRAL SLEEP APNOEA

The brain fails to transmit signals to the breathing muscles leading to disruptive or absent breathing.

SYMPTOMS

- Abnormal Breathing Pattern
- Shortness of Breath
- Chest Pain
- Abrupt Awakenings

CAUSES

- Heart Failure/Stroke
- High Altitude
- Medical Conditions eg. Parkinson's Disease
- Opioid Medications

RISK FACTORS

- Age
- Being Male
- Heart Disorders

(Mayoclinic, 2020)

PARASOMNIA

Sleep disorder that causes abnormal behaviours while sleeping.

SYMPTOMS

- Sleep Walking
- Sleep Terrors
- Hallucinations
- Sleep Paralysis
- Sleep Talking

CAUSES

- Genetics
- Stress
- Post-Traumatic Stress Disorder
- Medications
- Substance Abuse

(Sleep Education, 2021)

NARCOLEPSY

Rare long term brain condition characterized by sudden attacks of sleep and daytime drowsiness. Sometimes triggered by strong emotional outbursts.

SYMPTOMS

- Excessive Daytime Sleepiness
- Cataplexy (sudden loss of muscle tone)
- Sleep Paralysis
- Changes in REM sleep
- Hallucinations

TYPE 1

Due to low levels of a protein called hypocretin which causes cataplexy, Triggered by a strong emotional outburst.

TYPE 2

Continuous excessive sleepiness but no cataplexy.

(Sleep Education, 2021)

RESTLESS LEG SYNDROME

Uncomfortable sensations in the legs causing the urge to move them.

SYMPTOMS

- Painful Cramping
- Tingling and itching sensations in the legs
- Periodic Limb Movements in Sleep

CAUSES

- Drop in Dopamine levels
- Iron Deficiency
- Pregnancy
- Health Conditions e.g. Chronic Kidney Disease
- Lack of Exercise
- Obesity
- Stress

(NHS, 2018)

EDUCATION PROGRAMME



Opposite shows both a stress and chronic pain education programme example. These education programmes will be recommended for patients who score a low-medium level of risk via the questionnaire carried out before arrival. Anyone who is categorized as a high-risk patient will be admitted to both the educational programme plus an overnight stay at the sleep clinic pending further investigation (see page. 34 - 35). These education programmes can vary in content and intensity due to patient demand and need.

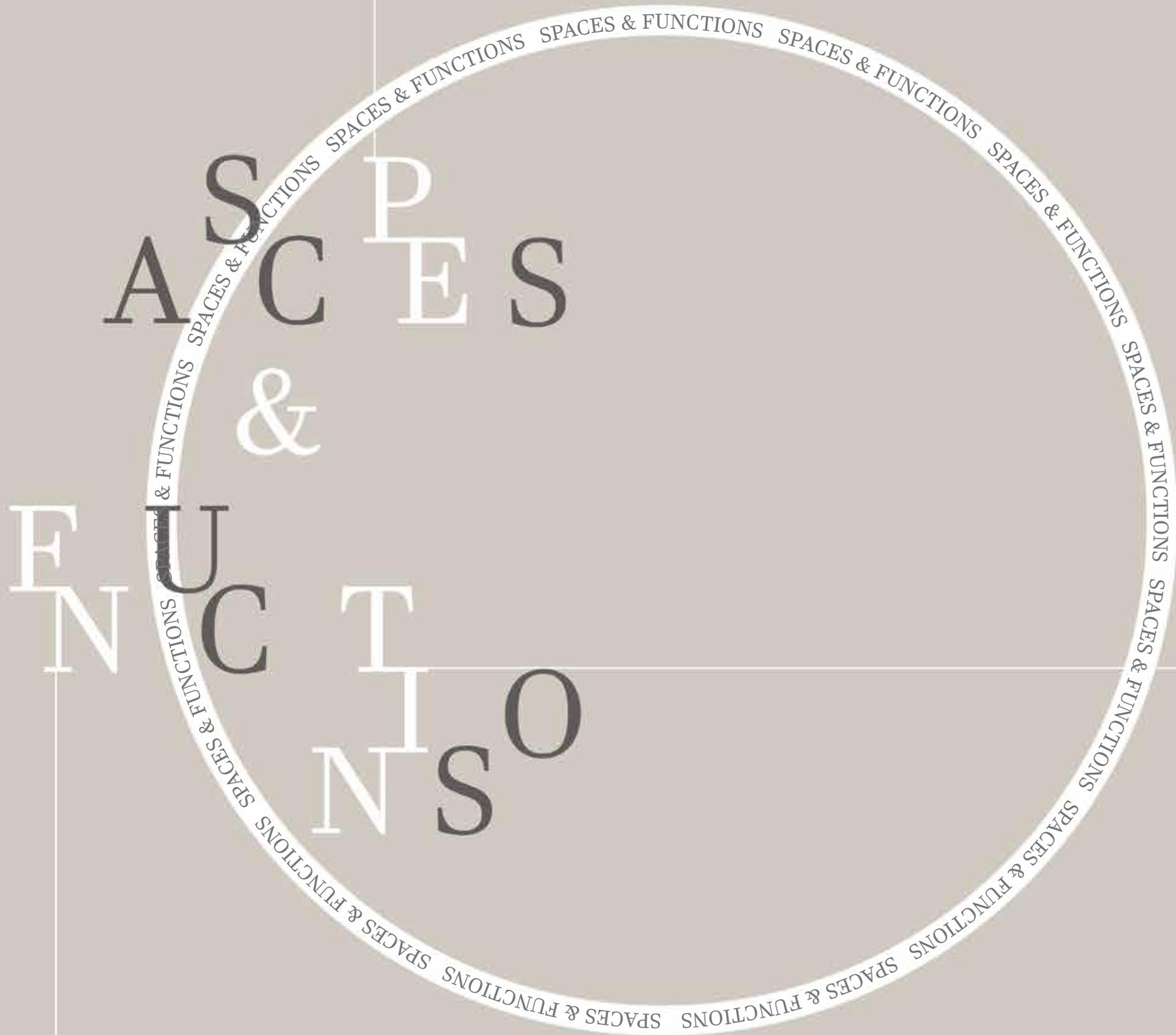
Fig. 13. (Opposite) Education Programme Experience Example

TABLE OF SPECIALIST SERVICES

Listed opposite are some of the services which could be offered at Gibson Mill, the table shows what spaces the services will require to use. Depending on the visitors needs, different services can be available on different days to allow the patient to receive a well rounded healthcare experience.

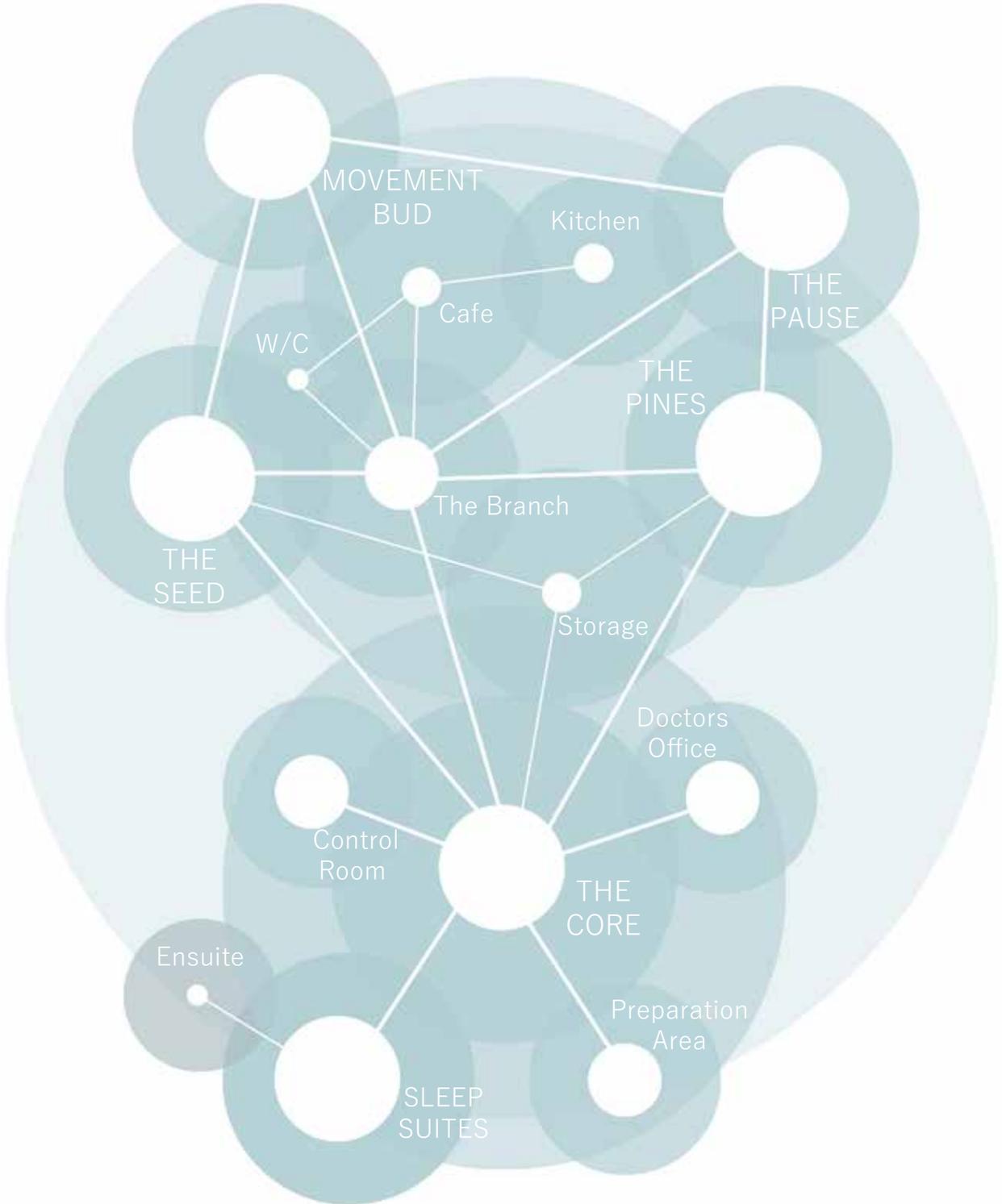
Service	Movement Bud - Fitness	The Pines - Consultations	The Pause - Relaxation	The Seed - Education
Aromatherapy		X	X	X
Hypnotherapy		X	X	X
Complementary Therapy		X	X	X
Occupational Therapy		X	X	X
Yoga	X		X	X
Meditation	X		X	X
Counselling		X		X
Nutrition		X		X
Reflexology		X		X
Psychology		X		X
Sophrology			X	X
Holistic Therapy			X	X
Personal Training	X	X		X
Physiotherapy	X	X		X

Fig. 14. Table of Specialist Services



SPACES & FUNCTIONS

SPACES



Opposite shows the different spaces within the mill and how they interlink with each other, the complexity and web-like structure represents the factors contributing to a good nights sleep.

Fig. 15. Spaces Diagram

APPROXIMATE SPACES

Due to the rurality of the building location, patients will be invited to visit the sleep centre for a whole day experience or an overnight stay, this will ensure the patients receive the best quality treatment within a specific time frame. The building will be accessed from Midgehole Car Park, a 20-minute walk away, this walk will become apart of the transitional phase between the outside world and the sleep centre, offering a chance for patients to unwind and relax.

The cottages have been chosen to host The Core as these were previously used as accommodation for the workers of the mill. Additionally, as each cottage is separate, they can be used as self-contained sleep suites. Some spaces within the main mill building will be multifunctional and could provide different uses at different times of the day. These spaces are approximate and may change due to more in-depth analysis and through design development.

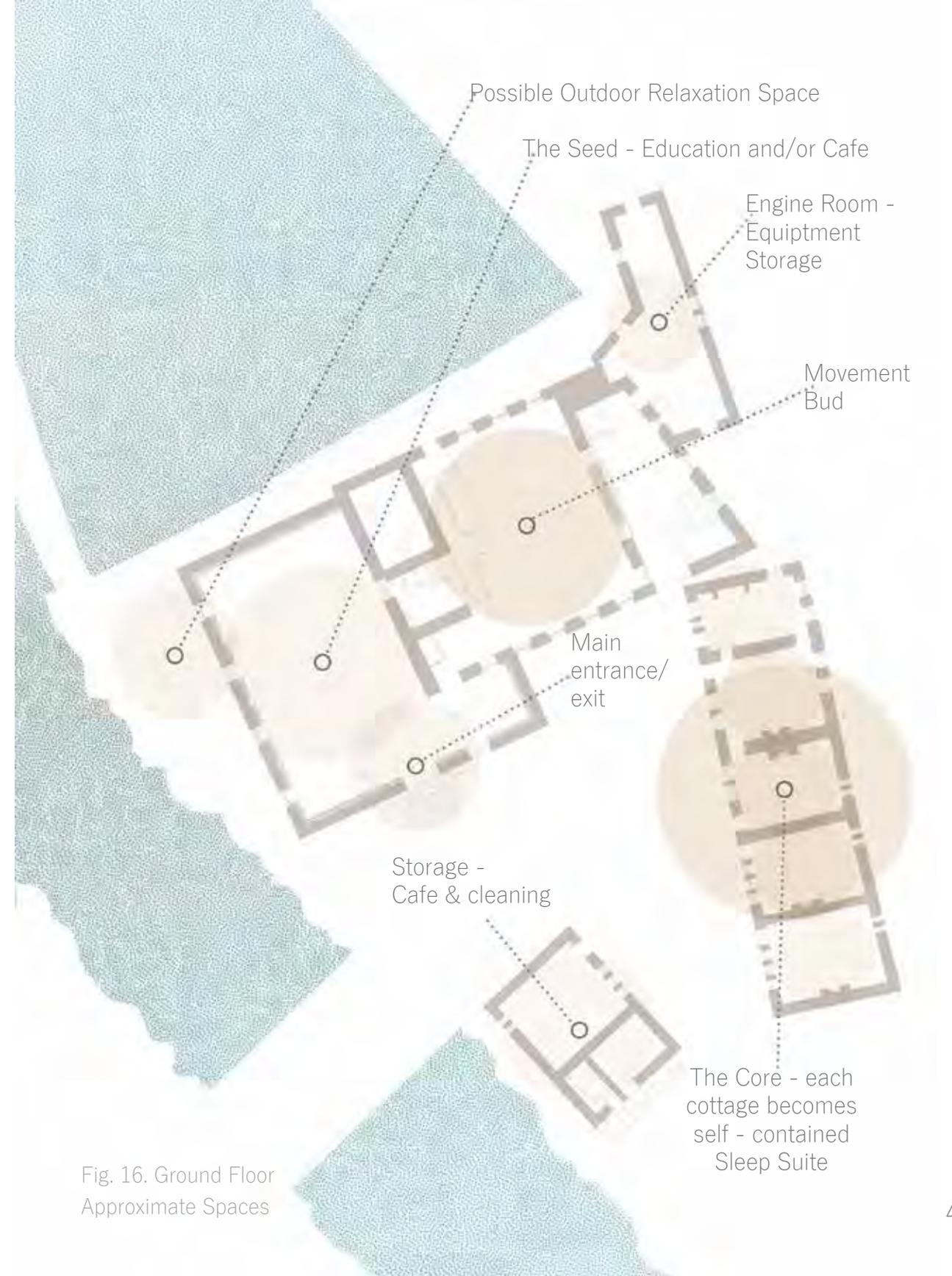


Fig. 16. Ground Floor
Approximate Spaces



Fig. 17. First Floor
Approximate Spaces

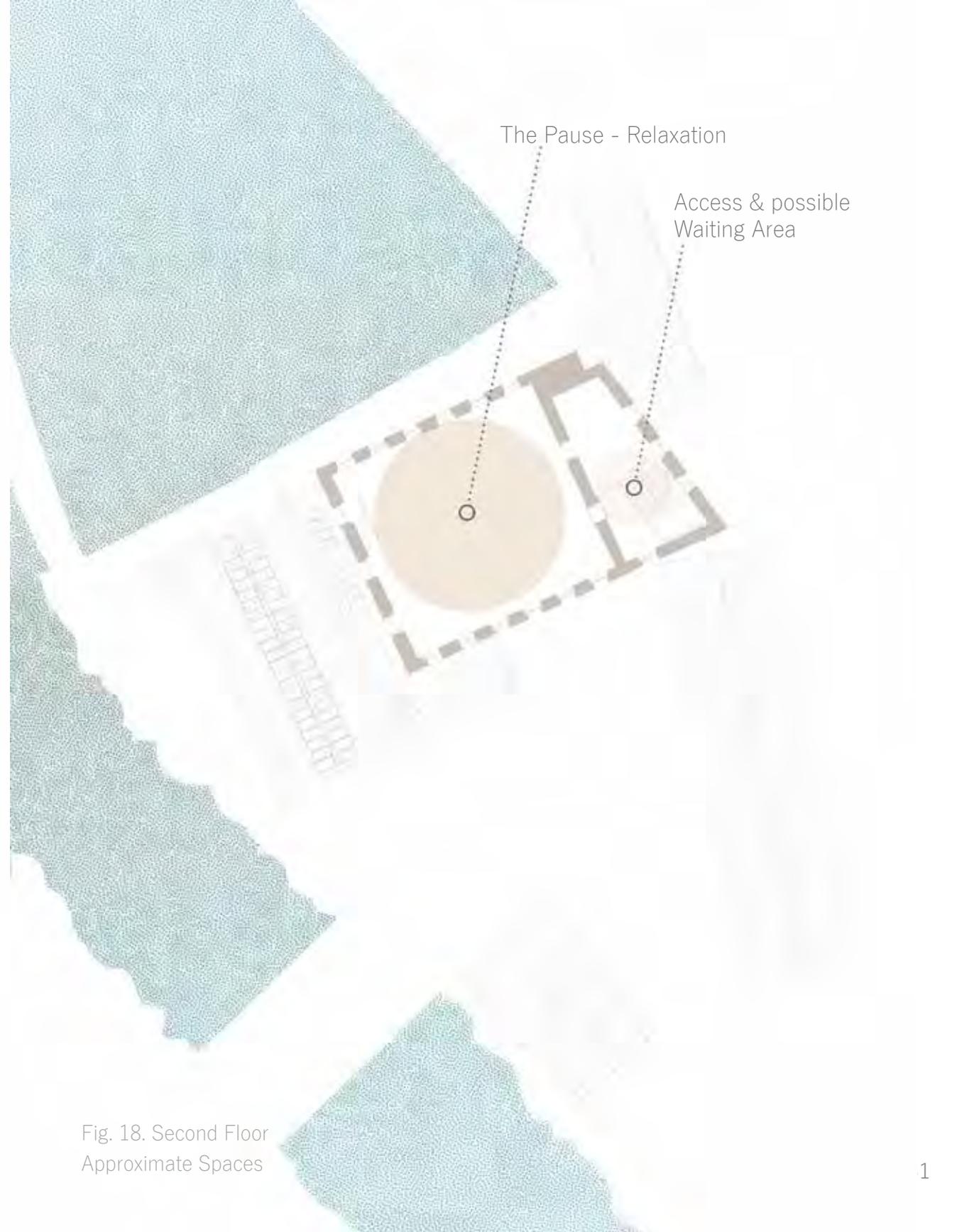


Fig. 18. Second Floor
Approximate Spaces

THE CORE

SLEEP SUITES

Visitors of the clinic will spend their evenings in the rooms which are specifically designed for the comprehensive testing of sleep disorders. These rooms will need to be located in a quiet location and have a comfortable and homely feeling to them to assist the user in feeling relaxed. Additionally, the rooms must be en-suite and hold at least a king size bed as the user needs privacy and usually experiences a lot of movement during sleep. The rooms also require a two-way system of communication to the centre personnel and a visual monitoring mechanism linked directly to the control room.

Total Space required – 15m² +

Equipment required (mm):

King Size Bed – 1050 x 2140 x 1620

Bedside Table – 680 x 630.5

Bedside Lamp – 300 x 440 x 230

Armchair – 850 x 450 x 800

Drawers – 800 x 450 x 800

Wardrobe – 1900 x 700 x 500

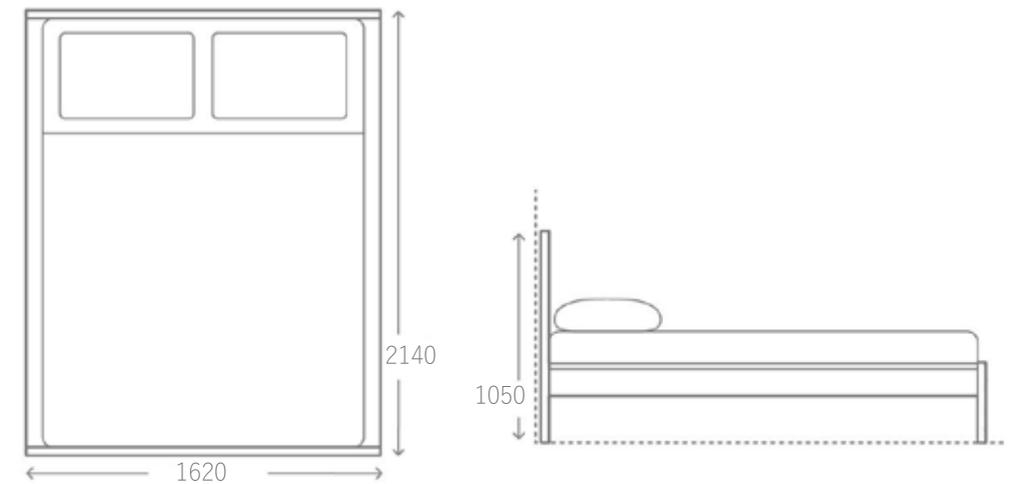


Fig. 20. King Size Bed

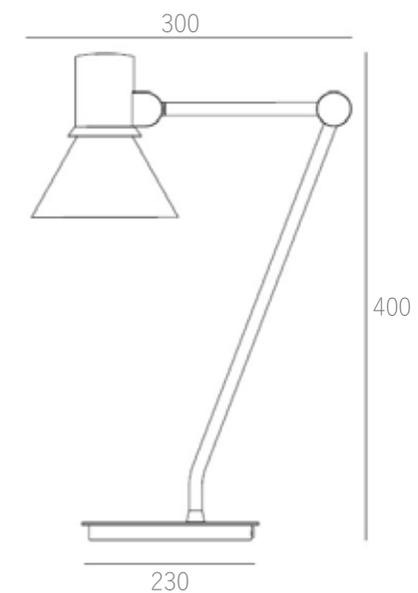


Fig. 21. Bedside Lamp

SPECIALIST CONSIDERATIONS

HEATING, VENTILATION & AIRCONDITIONING

The rooms must be centrally air conditioned with total circulated air quantity. A temperature monitoring panel must be accessible in each room, with an ambient temperature of 23-25° C maintained at all times (Patnaik, et al., 2014).

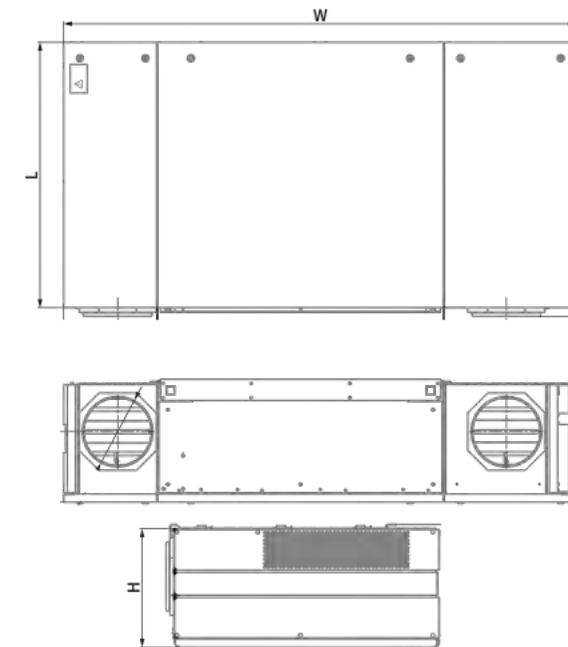
ROOM ACOUSTICS

The ideal decibel level within the rooms is between 15 – 20dB. Most patients spend their time within the light sleep NREM stage and therefore show the greatest vulnerability to acoustic disruption. Protection from operational noise sources needs to be isolated and is best achieved by the use of private cubicles that have solid doors and good seals. Additionally, any equipment used within the rooms should be placed away from the bed and in a housing, which absorbs the condenser noise or built specifically to produce little noise.

In order to achieve the specific decibel level required, a combination of acoustic isolation is needed. This includes key principles such as Deflection, Absorption, Decoupling, Thermal Conversion and Constrained Layer Damping. The sufficient level of acoustic isolation will be tailored to the building and space in which the rooms occupy. (Patnaik, et al., 2014)

LIGHTING

The intensity of light should be controllable and have the ability to be completely blocked out. A reading light should be provided, and 150 to 200 lux is recommended. The lighting should be conducive to rest and relaxation. (Patnaik, et al., 2014)



Blauberg CIVIC EC DBE 1000 S21
1201.5 x 1900 x 538
Fig. 22.

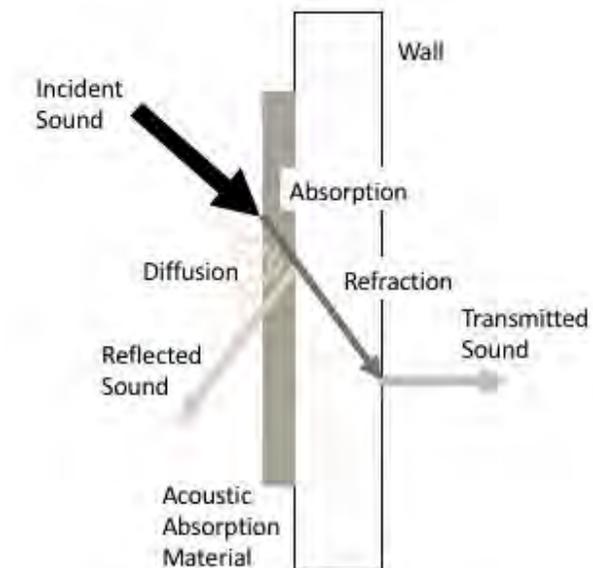
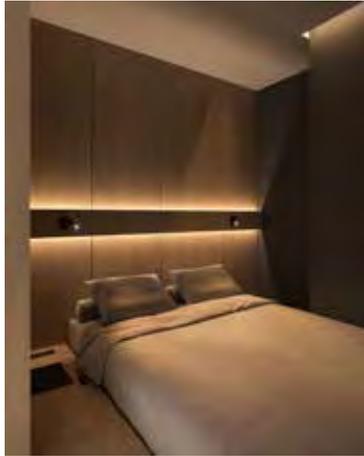


Fig. 23. Sound Absorption Diagram

EQUIPMENT

WITHIN SPACE



KEY (mm):

-  1 x Bed
1050 x 2140 x 1620
-  1 x Armchair
850 x 450 x 800
-  1/2 x Bedside Table
680 x 630.5
-  1 x Wardrobe
1900 x 700 x 500
-  Possible ensuite location



Cottages - Ground Floor



Fig. 24 - 26. Precedent

Fig. 27. Ground Floor Cottages

CONTROL ROOM

A space where the technologists will reside for data collection. Needs to be located close to the patient's rooms for safety and efficiency. Must allow for effective function and comfort of technologists.

Total space required – 8m² +

Equipment Required (mm):

Desktop Computer Tower – 558 x 508 x 152

Monitor – 299 x 532

Adjustable Ergonomic Chair – 565 x (450 – 560)

Universal Pedal Bin – 350 x 410 x 750

Standard Desk – 1830 x 1520 x 1220

Circular Meeting Table - (Diameter) 1400 x 750

Meeting Chair - 750 x 690 x 680

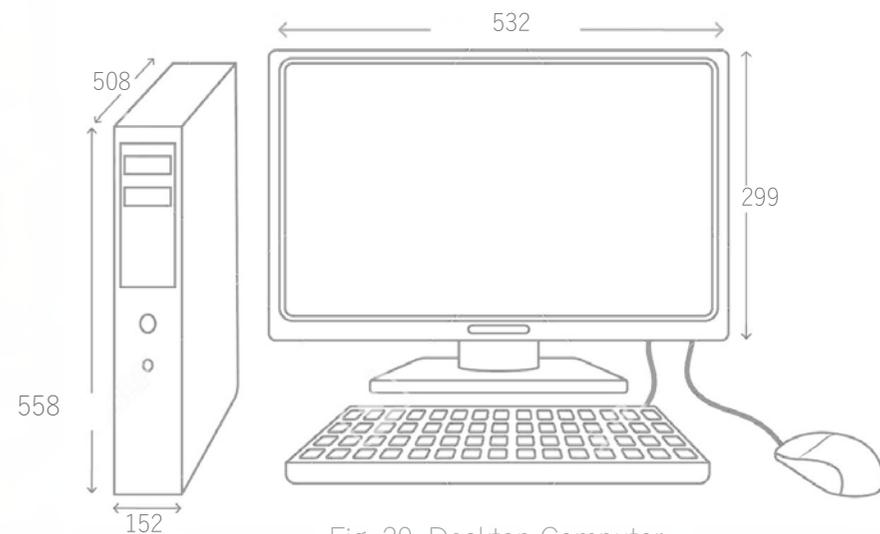


Fig. 29. Desktop Computer

PREPARATION AREA

A room where patients are briefed and prepared for their stay in the sleep clinic. A signal check on equipment will be carried out and technical staff will reside here in case of emergency.

Total space required – 12m² +

Equipment Required (mm):

Desktop Computer Tower – 558 x 508 x 152

Monitor – 299 x 532

Adjustable Ergonomic Chair – 565 x (450 – 560)

Universal Pedal Bin – 350 x 410 x 750

Standard Desk – 1830 x 1520 x 1220

Lounge Chair – 610 x 780 x 820

Possible built in seating - min depth 457.2

Coffee table – 1238 x 600 x 490

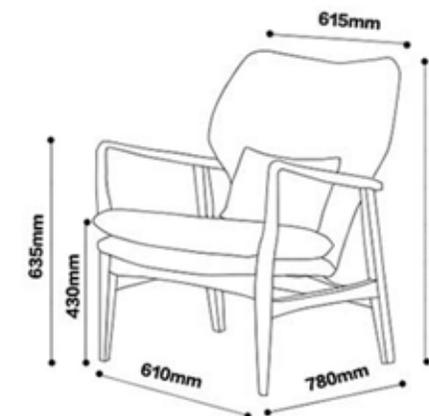


Fig. 30. Lounge Chair

EQUIPMENT

CONTROL ROOM

Cottages - First Floor

KEY (mm):

-  Possible WC
1751 x 1000
-  6 x Desk
1830 x 1520 x 1220
-  6 x Adjustable Ergonomic Chair
565 x (450 – 560)
-  1 x Circular Meeting Table
(Diameter) 1400 x 750
-  4 x Meeting Chair
750 x 690 x 680

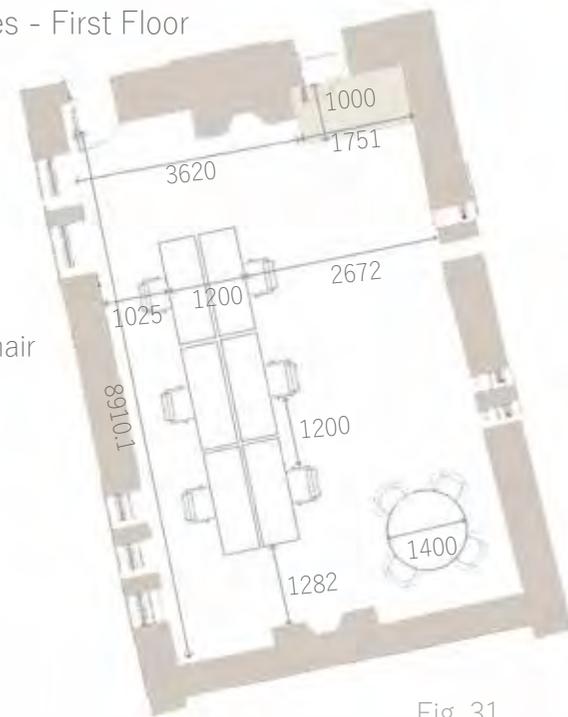


Fig. 31.

WITHIN SPACE

PREPARATION AREA

Cottages - First Floor

KEY (mm):

-  2 x Coffee Table
1238 x 600 x 490
-  2 x Lounge Chair
610 x 780 x 820
-  2 x Adjustable Ergonomic Chair
565 x (450 – 560)
-  2 x Desk
1830 x 1520 x 1220
-  Built in Seating
Min Depth - 457.2

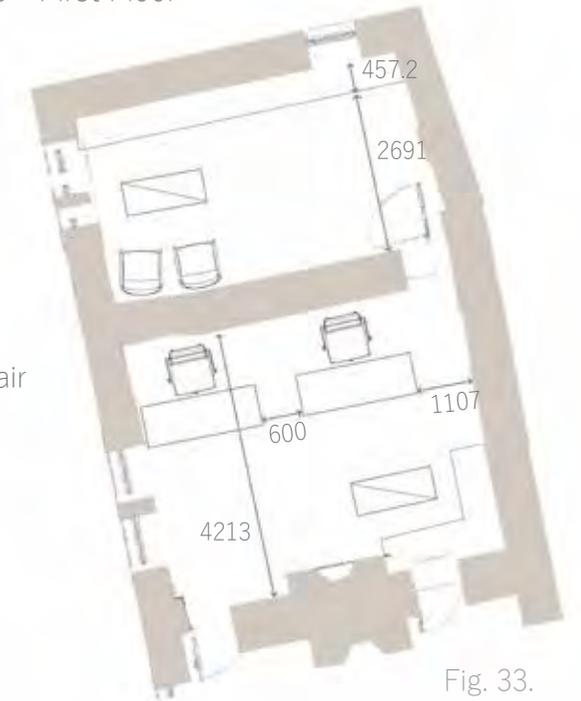


Fig. 33.

Remove existing wall



Fig. 32.



Fig. 34.

THE PINES

Private consultation rooms where health care professionals examine and talk to patients. Each consultation room will be named after the native trees surrounding site e.g. Hazel, Alder & Beech

All surfaces and finishes must be impermeable, wipeable and easy to clean. Each room must offer speech privacy, have a lockable door, and have a call system in place.

Total space required – 14m² +

Equipment Required (mm):

Desktop computer tower – 558 x 508 x 152

Monitor – 299 x 532

Adjustable Ergonomic Chair – 565 x (450 – 560)

Universal Pedal Bin – 350 x 410 x 750

Clinical waste bin – 485 x 360 x 320

Lockable storage – 915 x 459 x 1815

Moveable task lighting – 510 x 8 x 585

Standard Desk – 1830 x 1520 x 1220

Lounge Chair – 610 x 780 x 820

Clinical hand wash basin (elbow action or hands-free taps) – 500 x 400 x 185

Wall mounted soap dispenser – 115 x 115 x 250

Wall mounted disposable paper towel dispenser – 265 x 290 x 145

Adjustable examination couch – 1955 x 700 x 910

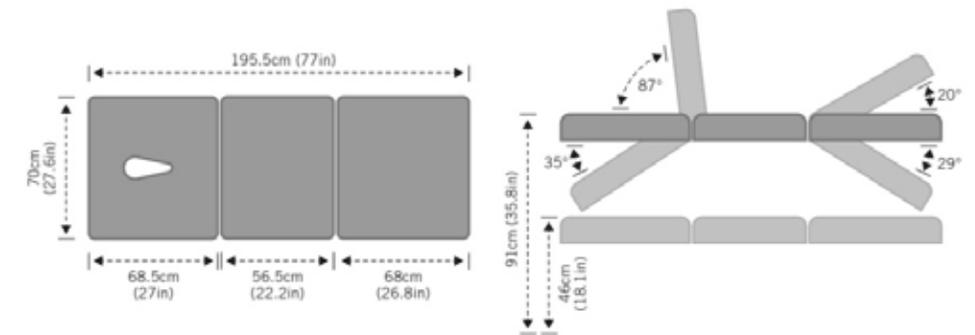


Fig. 36. Adjustable Examination Couch

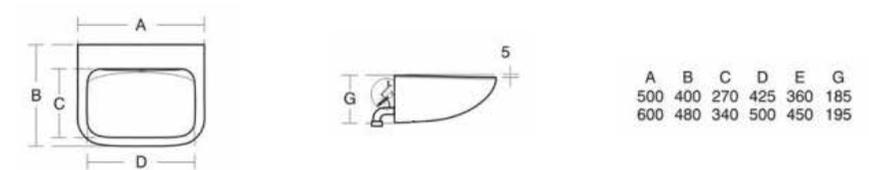


Fig. 37. Clinical Hand Wash Basin

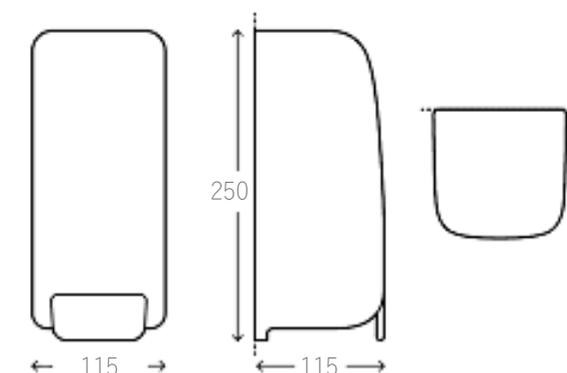


Fig. 38. Wall Mounted Soap Dispenser

EQUIPMENT

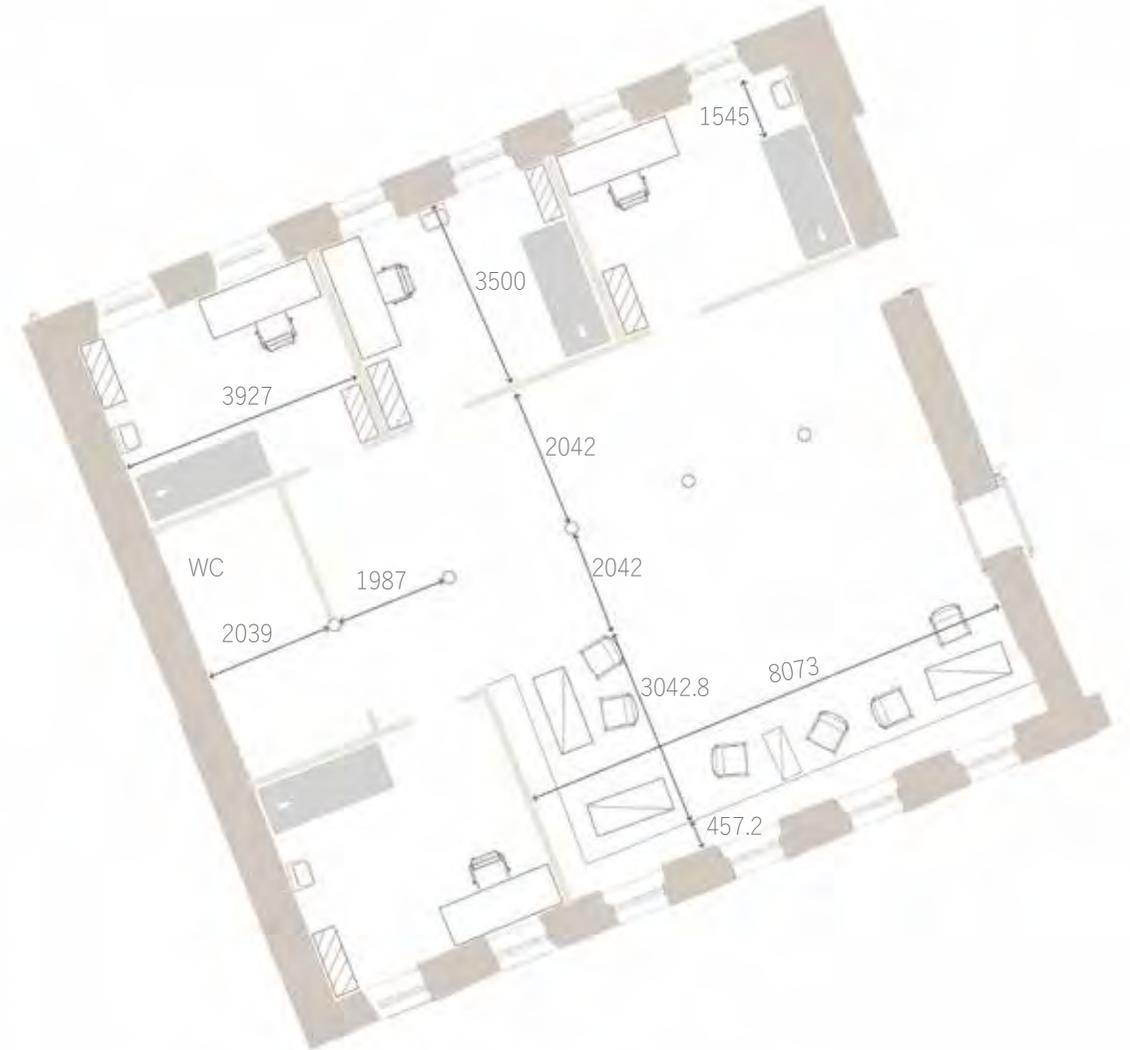
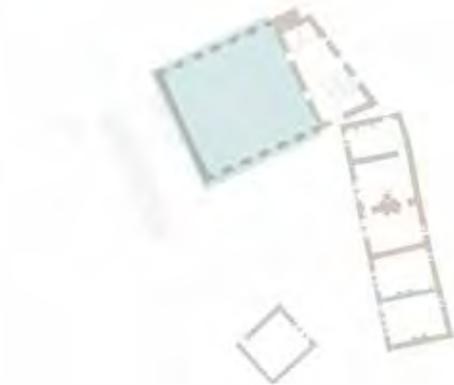
WITHIN SPACE



Fig. 39 - 41 Precedent

KEY (mm):

-  New Walls
-  4 x Desk
1830 x 1520 x 1220
-  4 x Adjustable Ergonomic Chair
565 x (450 – 560)
-  4 x Adjustable Examination Couch
1955 x 700 x 910
-  4 x Clinical Hand Wash Basin
500 x 400 x 185
-  4 x Coffee Table
1238 x 600 x 490
-  Lockable Storage
915 x 459 x 1815



Main Mill - First Floor
Fig. 42

THE SEED

Education space used by trained health care professionals to teach and inform patients of a holistic approach to health and wellbeing. This space can be multifunctional and provide other uses at other times if necessary.

Total space required – 57m² +

Equipment Required (mm):

Desktop Computer Tower – 558 x 508 x 152

Monitor – 299 x 532

Adjustable Ergonomic Chair – 565 x (450 – 560)

Universal Pedal Bin – 350 x 410 x 750

Standard Desk – 1830 x 1520 x 1220

Projector – 210 x 230 x 90

Electric Projector screen – 2440 x 1830

Seating – could be multifunctional and/or adjustable

Circular Meeting Table - (Diameter) 1400 x 750

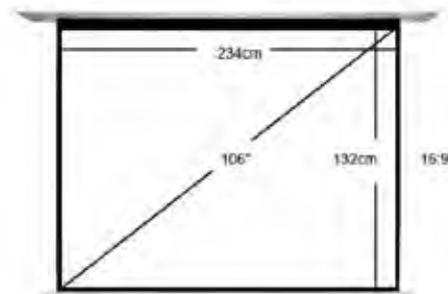


Fig. 44. Electric Projector Screen

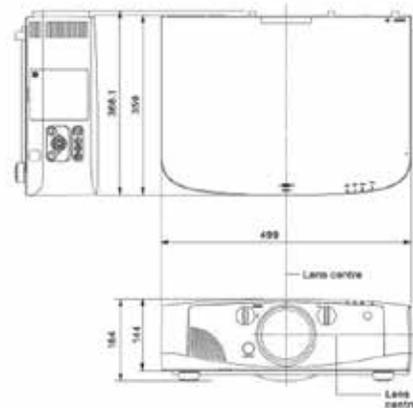
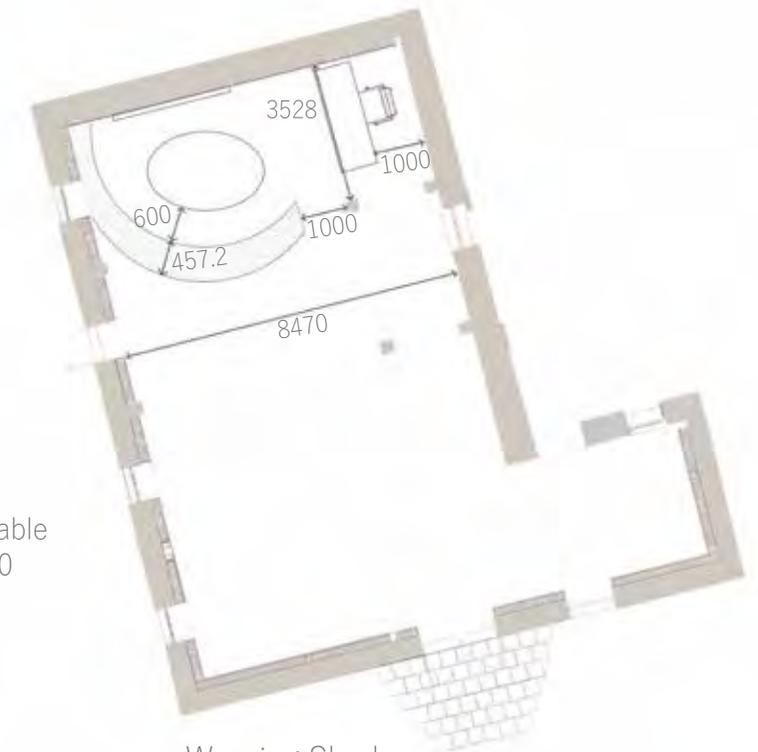


Fig. 45. Projector

EQUIPMENT WITHIN SPACE

KEY (mm):

-  1 x Projector Screen
2440 x 1830
-  1 x Desk
1830 x 1520 x 1220
-  4 x Adjustable Ergonomic Chair
565 x (450 – 560)
-  1 x Circular Meeting Table
(Diameter) 1400 x 750
-  Built in Seating
Min Depth - 457.2



Weaving Shed
Fig. 46.



Fig. 47. Precedent

MOVEMENT BUD

Functional gym used to help patients prepare their body for real-life movements and activities, emphasize core stability and aid with weight loss/gain. Trained professionals will use this space alongside patients for both movement and education.

Total space required – 57m² +

Minimum Height - 2300mm +

Rubber flooring and mirrored walls will ensure safety and help to focus while performing exercise.

Equipment Required (mm):

Treadmill – 2013 x 800 x 1465

Rowing Machine – 2435 x 629 x 1280

Exercise Bike – 1530 x 590 x 1360

Exercise Mat – 1800 x 660

Swiss Ball – 650mm

Bosu Ball – 650 x 254

Dumbbells – (1-20kg)

Free weights rack – 409 x 426 x 1099

Adjustable Bench – 1198 x 697 x 1312

Aerobic Step – 800 x 300 x 200

Slam Balls – (4 – 10kg)

Medicine Balls – (4 – 10kg)

Skipping Rope

Kettlebells (4-20kg)

Universal Storage Unit – Varies in sizes

Resistance Bands – (X Light – X Heavy)

Therapy Bars (Standing & Wall Mounted) - 104 x 3110 x 685.8+

Fig. 48.

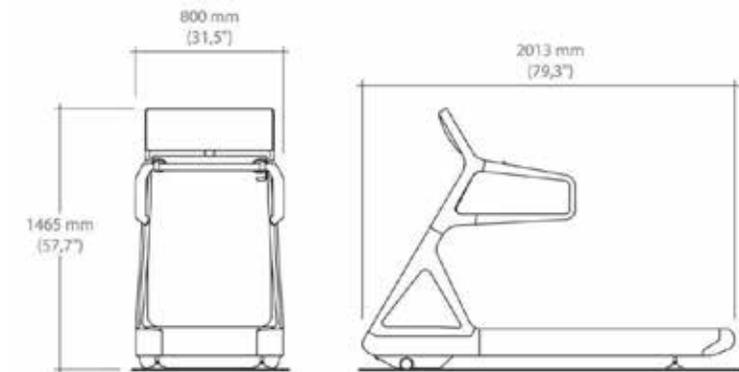


Fig. 49. Treadmill

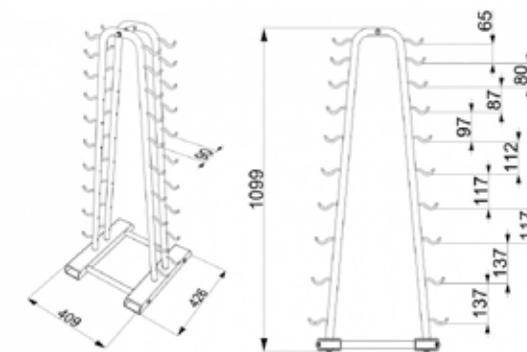


Fig. 50. Free Weights Rack

EQUIPMENT WITHIN SPACE

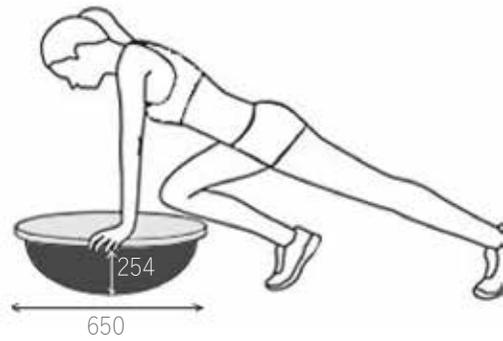
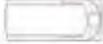


Fig. 51. Bosu Ball



Fig. 52. Swiss Ball

KEY (mm):

-  New Walls
-  Mirrors
-  1 x Treadmill
2013 x 800 x 1465
-  1 x Rowing Machine
2435 x 629 x 1280
-  1 x Exercise Bike
1530 x 590 x 1360
-  Wall Therapy Bars
-  Standing Therapy Bars
3110 x 104 x 685.8 +
-  Storage & small equipment

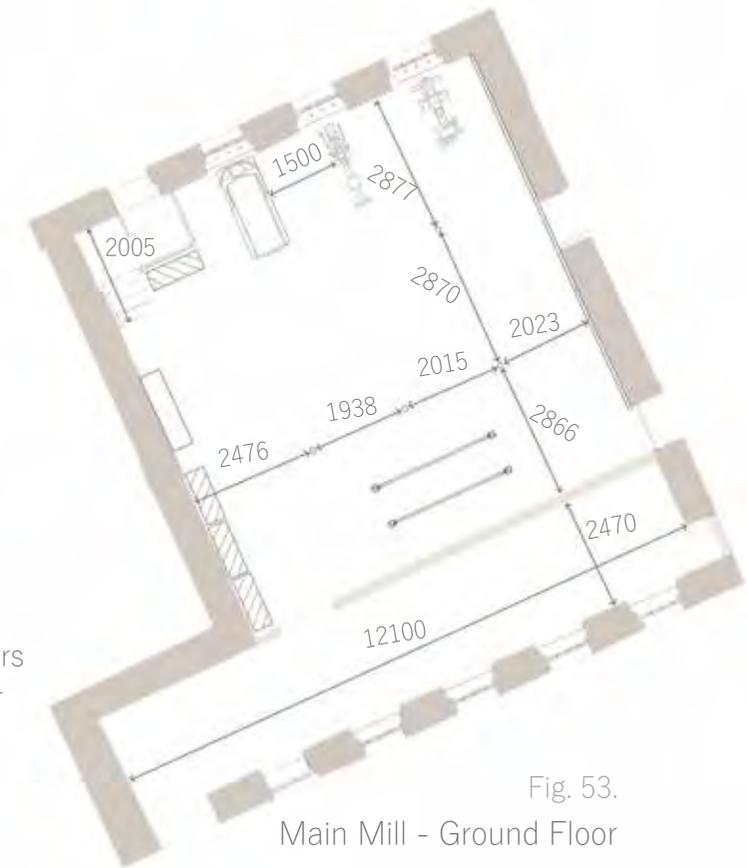


Fig. 53.
Main Mill - Ground Floor

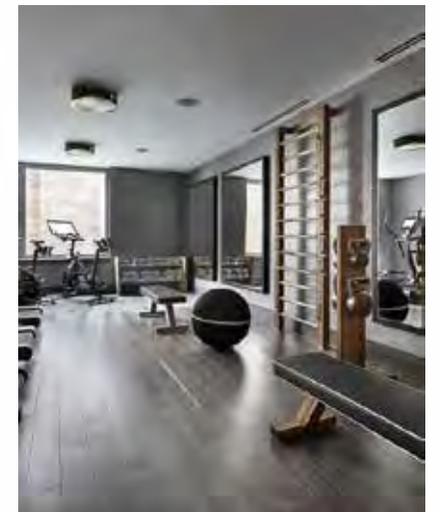


Fig. 54. Precedent

THE PAUSE

Relaxation space where staff and visitors can relax and unwind from their busy lives, benefitting and learning from focused rest periods, group activities such as yoga and meditation can also take place here.

Total Space Required - no specific requirements, however, the space needs to be large enough for group activities but also provide smaller intimate spaces for private meditation/rest.

Connection to nature is vital to enhance the visitors physical and emotional wellbeing.

Storage will be needed for equipment listed below (no specific measurements).

Equipment Required (mm):

Yoga Mat - 1800 x 610 x 20

Adjustable Lounge Chair – 1650 x 950 x 690

Adjustable Lounge Chair Cushions – Water-repellent & UV resistant

Zafu Cushion – 457.2 x 152.4

Zabuton Mat – 812.8 x 660.4 x 76.2

Fig. 55.

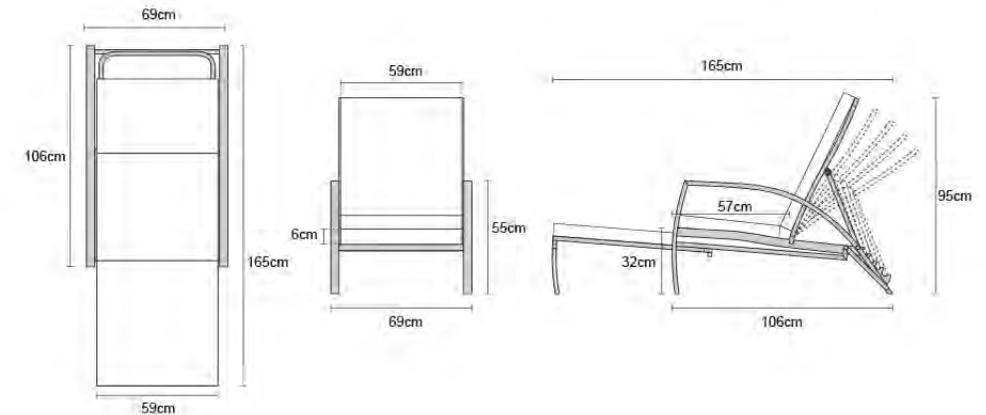


Fig. 56. Adjustable Lounge Chair

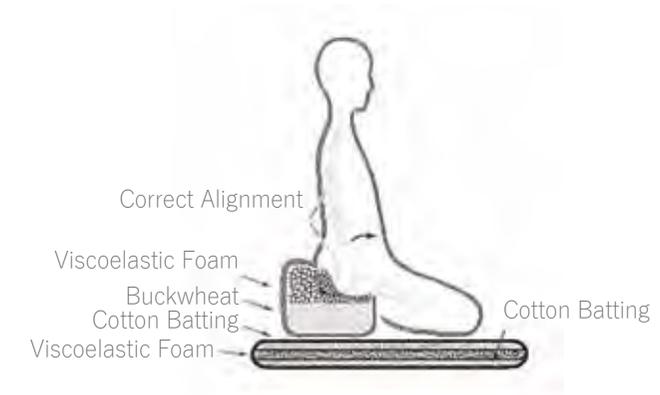


Fig. 57. Zabuton Mat

SPECIALIST CONSIDERATIONS

LIGHTING

Daylight affects our circadian rhythm; these systems are sensitively balanced and can have a substantial impact on our wellbeing. Therefore, the quantity and quality of light entering the space needs to be carefully considered; no direct sunlight but enough daylight to connect with nature. Views can be exaggerated but heat gain and loss must be considered due to glazing. Artificial lighting is key to providing the right atmosphere, up lighting and reflected light as well as dimmers can help with this. (Channon, 2018, pp. 6-25)

TEMPERATURE

Temperature can vary due to many factors, the most important to consider within Gibson Mill will be glazing, insulation and heat emitted from artificial lighting. Physical temperature changes in our surroundings and body can trigger emotional responses, Therefore, temperature must be kept at a constant within The Pause in order to avoid any emotional stress. (Channon, 2018, pp. 22, 32)

NOISE

Noise disruption due to impact and flanking must be avoided, ensuring a space which feels calming. Soft furnishings and good acoustic insulation can help mitigate this. (Channon, 2018, p. 36)

NATURE

Connection to nature has been proven to improve happiness and mental wellbeing hence the importance of introducing elements such as biophilic design, views and relation to water within the pause. This element is important throughout the whole of Gibson Mill. (Channon, 2018, pp. 52-67)

ATMOSPHERE

The atmosphere of The Pause needs to be calm, relaxing, and quiet. In order to achieve this, the elements listed above must be integrated into the design, additionally, The Pause is a place for quiet thinking and reflection and any impact on the senses will be heightened and must be carefully considered.

EQUIPMENT WITHIN SPACE

Main Mill - Second Floor
Fig. 58.

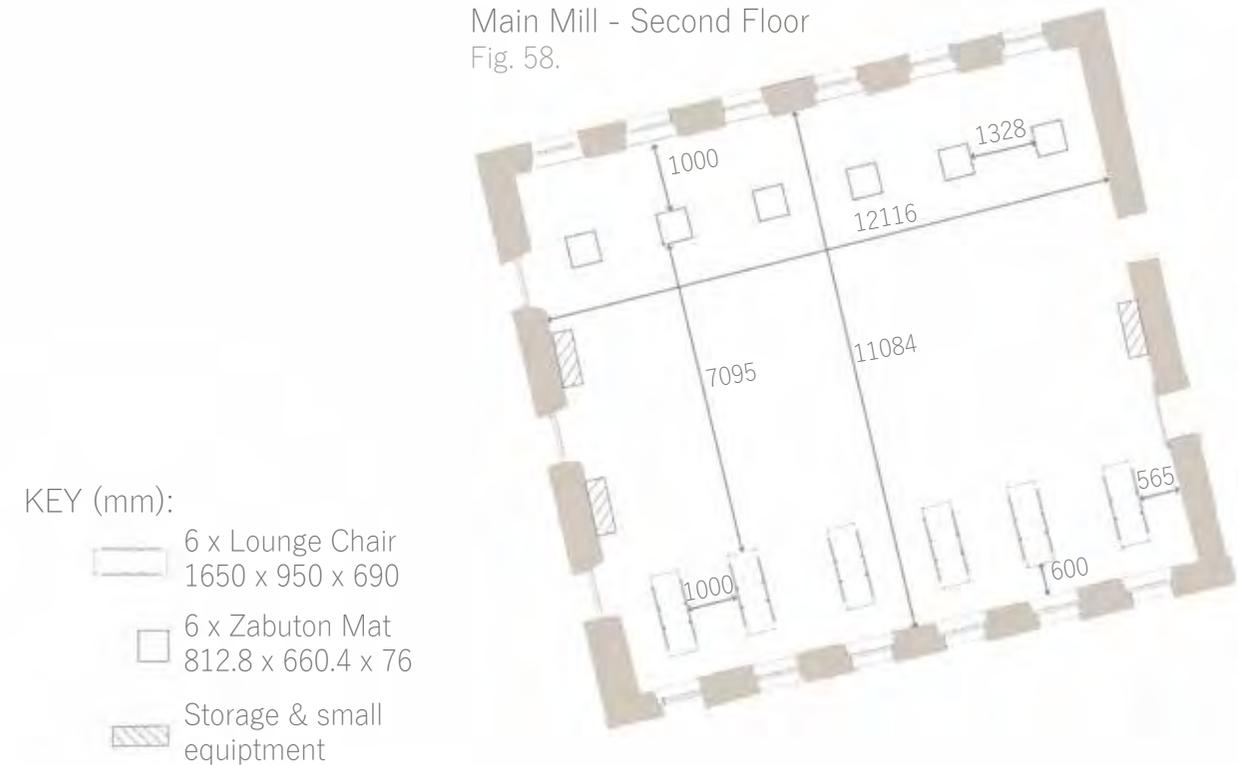


Fig. 59. Precedent

THE BRANCH

The welcoming area/cafeteria, which is the first place a patient will arrive, from here, patients will be guided towards the correct service or choose to relax in this area.

Total Space Required - No specific requirements, however, the space needs to be large enough to allow patients and visitors to interact socially and be able to eat/relax. The space will be multifunctional and should have a flexible arrangement to accommodate all.

Equipment Required (mm):

Adjustable Ergonomic Chair – 1020 x 700 x 440

Dining Chair – 810 x 450 x 430

Lounge Chair – 820 x 780 x 615

Armchair – 970 x 830 x 690

Dining table – 1193.8 x 635 x 533.4

Coffee table – 1238 x 600 x 490

Waste Bin – 520 x 365 x 245

Circular Table - Vary in size H (750)

Couch - 1630 x 760 x 710

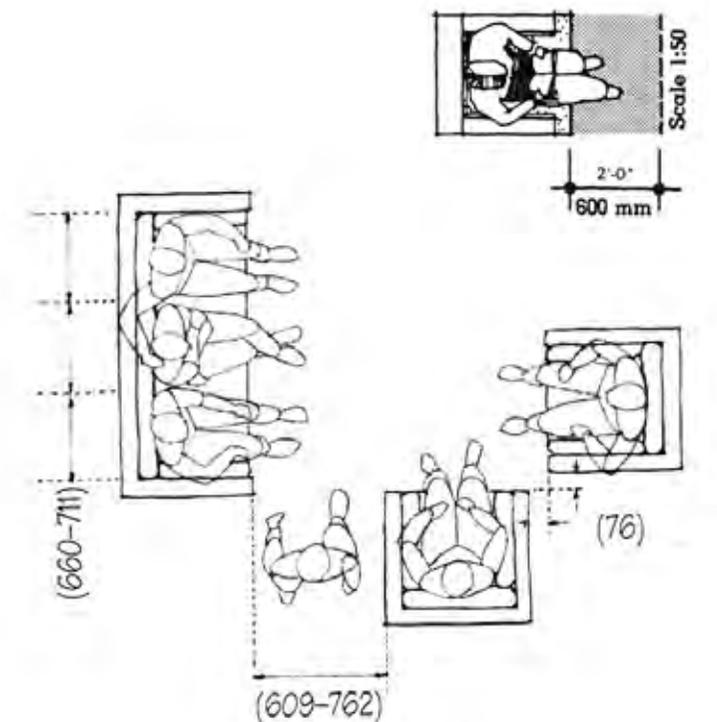
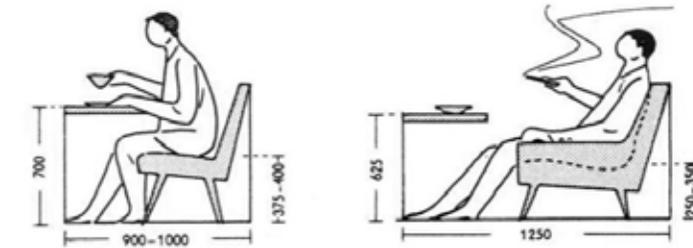
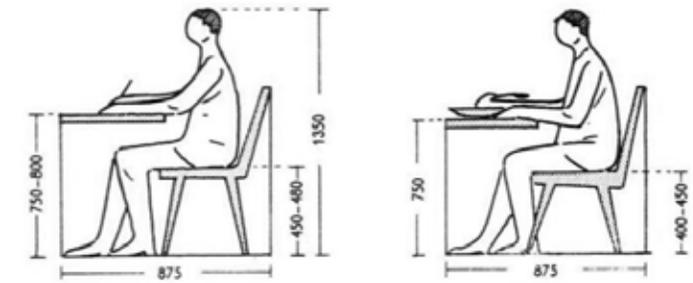


Fig. 60.

Fig. 61-63 Seating Ergonomics



Fig. 68. Gibson Mill North Facade

GIBSON MILL

Heptonstall Road
Hebden Bridge
HX7 6AZ

1800
N/A
Grade II listed
Approximately 766.84 m²

THE HISTORY OF

GIBSON

MILL

1800

Gibson Mill
was built by
Abraham
Gibson.

1840

The Weaving
Shed was built
to accompany
Gibson Mill.

1890

Driven by a
water wheel,
The Mill
produced
cotton until
1890.

1900

The Mill
became
host to an
Entertainment
Emporium.

1945

The National
Trust acquired
The Mill when
it fell into
disuse.

1990

The Mill was
fully restored
and became
the first
building to
be 100% self
sufficient.

2005

The Mill
reopened as
a visitor and
education
centre.

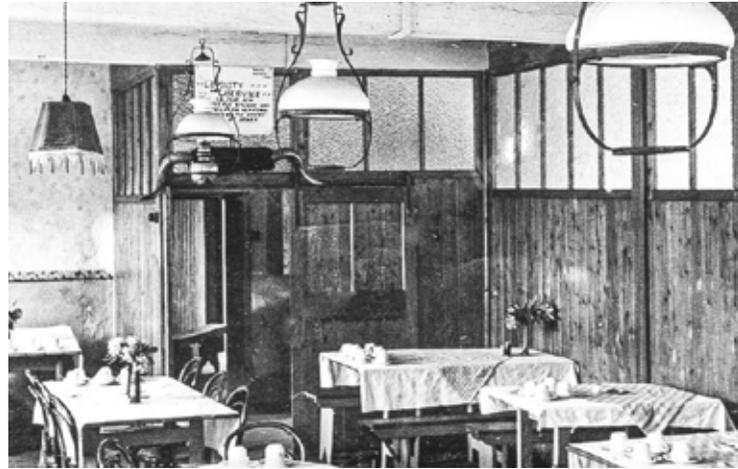


Fig. 69. Gibson Mill Tea Rooms Interior

HISTORY



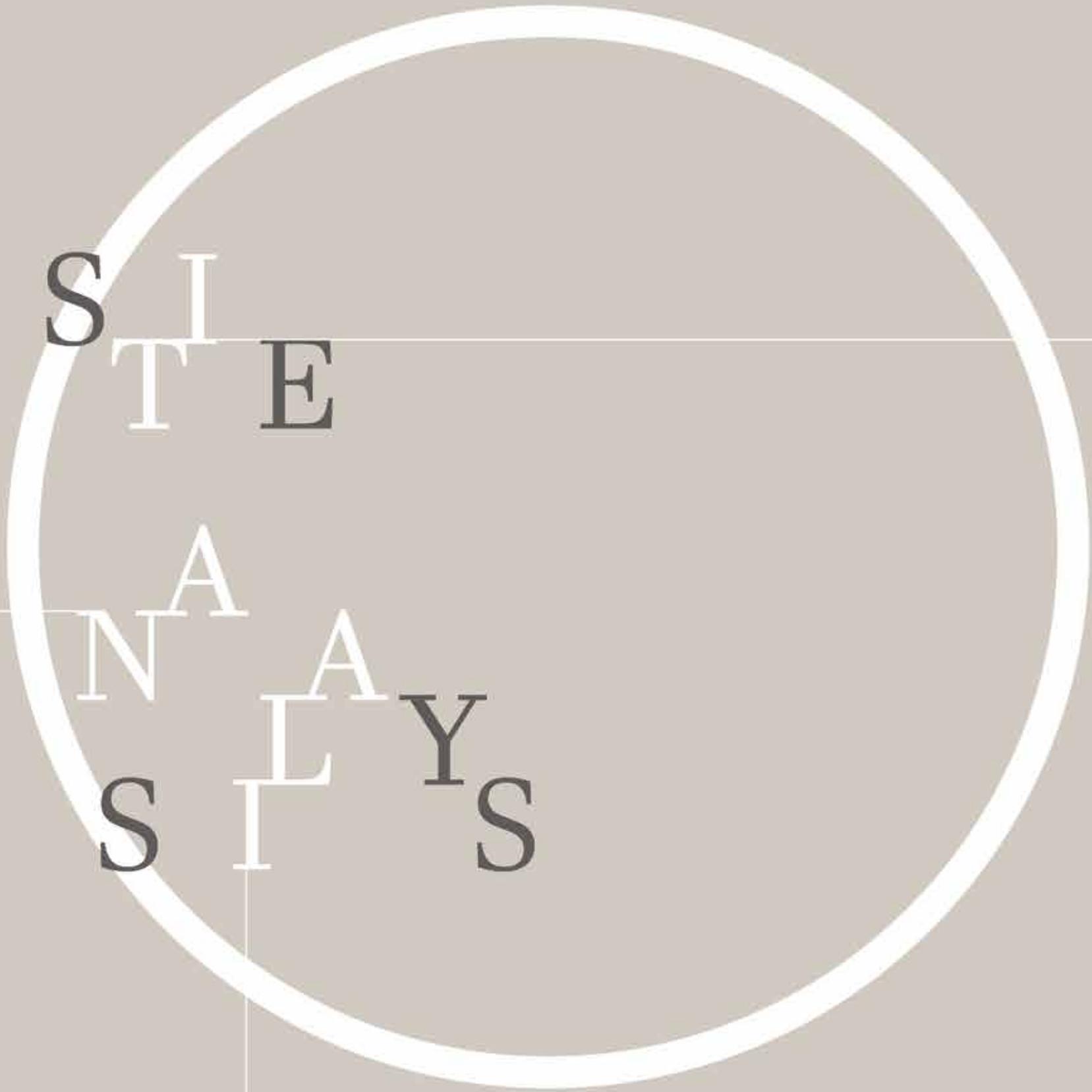
Fig. 69. Gibson Mill Tea Rooms Exterior

Fig. 70. (Opposite) Workers Cottages



Gibson Mill was one of the first mills of the industrial revolution, Abraham Gibson saw the mill built in 1800 and produced cloth there until 1890. The adjacent mill cottages were inhabited by 21 workers who worked 72 hours per week. This included Lister Hollinrake and 5 of his family members who worked as a cotton warp dresser and later went on to become the proprietor of the Pavilion Restaurant. The mill became host to a variety of entertainments in the early 1900's with attractions such as roller skating, dancing, and dining taking place here. After WWII, the mill slipped into disuse and The National trust acquired the mill. Until 1990, the mill remained unused and later was restored to a working visitor and education attraction.

The mill was developed on making the best use of the available resources and is now completely independent of mains services, this was achieved by a grant from the National Lottery Heritage Fund and with help from EcoArc. Local labour and the use of recycled materials shows how Gibson Mill uses a wide range of renewable sources to meet its energy needs including solar panels, a restored 1926 turbine and a smaller turbine when water levels are low. The hydro energy output is integrated into the buildings energy management system (National Trust, 2020).



SITE ANALYSIS

LOCATION

The building is surrounded by nature, adjacent to Hebden Water and is situated in the middle of Hardcastle crags, each one of the walking routes leads to the mill. The number of visitors at site assured that the area is not too rural. In the evenings, the area becomes quieter, a benefit for sleep conditions, however in the winter when it becomes darker earlier visitors would need to leave site before it got too dark and becomes dangerous.



Fig. 72.

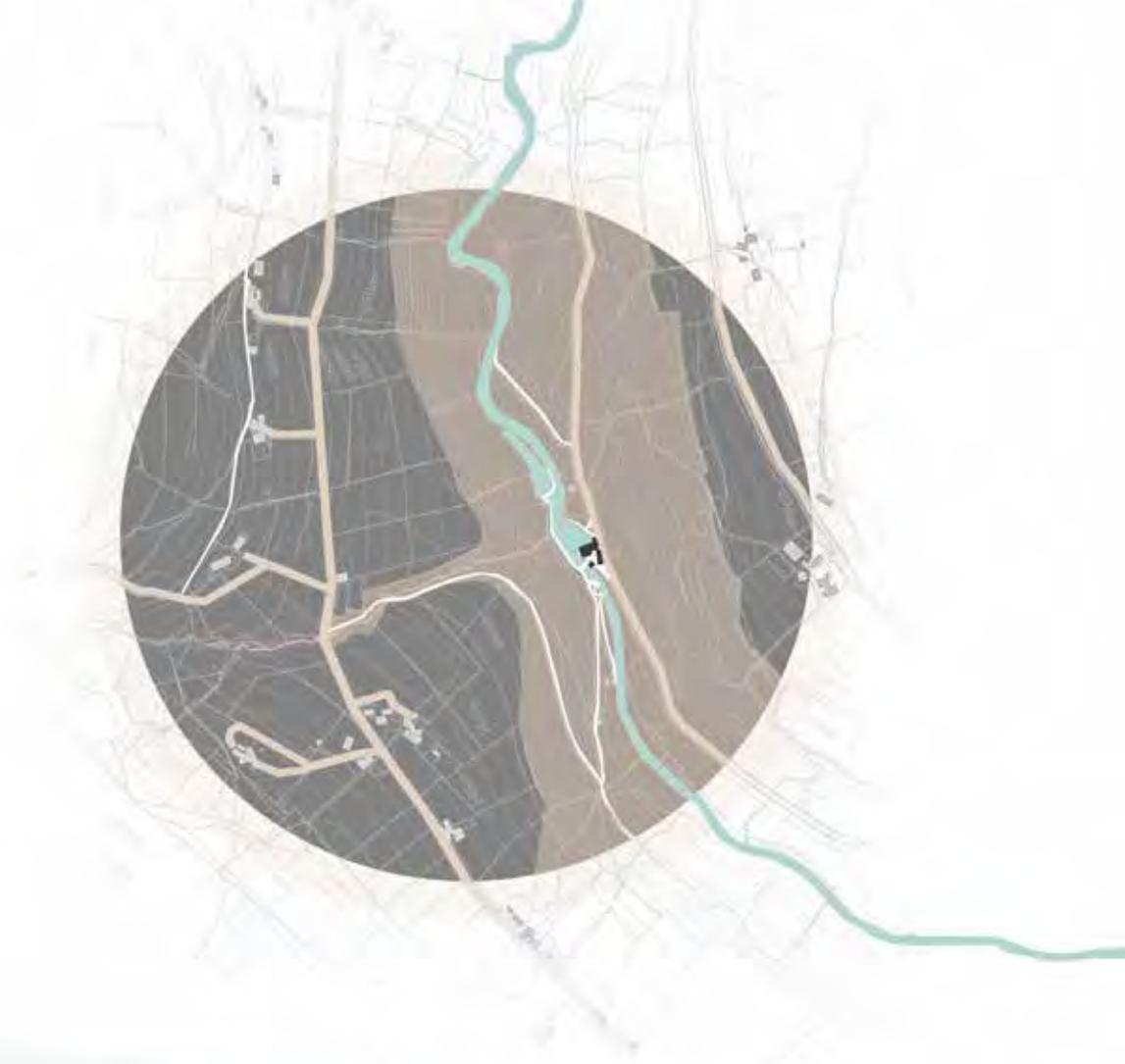


Fig. 73.

- Walking Routes
- Roads
- Gibson Mill
- Hardcastle Crags
- Hebden Water



Scale 1:10000
0 50 100 150 200 250 300 350 400 450 500 m

TRANSPORT & CONNECTIVITY

The main method of arrival is by car. The site is within 1 hour of 3 major cities, these including Manchester, Bradford and Leeds all accessed by the M62 and the A646, upon arrival there is a choice of 2 car parks, and each have different routes to get to the building taking from 15 minutes – 1 hour to walk. Limited disability car parking is available on site and there is an access route directly to the building. It takes 30 minutes to walk from Hebden Bridge Train Station to Gibson mill. The NCN68 passes close by for cycle access. Pennine Way and Bridleway both pass by the property for anyone wanting for walk from neighbouring areas. Visiting both in the morning and the afternoon, the site was very busy with a few hundred people there. Visiting during the school half term, many young families were around. The car park can become full very fast during these times.



Fig. 74.

- Gibson Mill
- Hebden Water
- Estate Track
- Minor Roads
- A6033
- A646

Scale 1:20000
0 100 200 300 400 500 600 700 800 900 1000 m
Projection: British National Grid

IMMEDIATE REACTIONS

The walk allows for a transitional journey to be made, passing features such as stepping stones and signposts to intrigue and emphasize the ritual of wellbeing. The atmosphere was charismatic, charming the visitor with its magic, secluded sanctuary of nature. This connection only grew as more time was spent on site. The venue is currently aimed at families and adults with a love of the outdoors, picnic tables suggested that people enjoyed spending their time in the environment.

GENIUS LOCI

The area is full of memories from different era's, the mill and surrounding areas are full of information about the site and its history. The energy at the site is something never experienced before, the fact the site is fully off grid and surrounded in nature causes a mystical aura full of emotion and feeling. Being within nature allows the visitor to fully appreciate the benefits and beauty of the area, urging for return.

SENSES

The rumble of the river builds on the approach to the building, like a drumroll. The textures around site mimic the rough textures of the surrounding site and are very tactile, giving rhythm to the building and surrounding context.



Fig.75 Surrounding Nature



Fig. 76. Stile



Fig. 77. Signpost from Carpark



Fig. 78. Stepping Stones



Fig. 79. Estate Track

Fig. 81.



Fig. 80.



PRIVATE ROAD
TOLL CHARGES
ADULTS 10¢ CHILDREN 5¢
CASH ONLY
NO CREDIT CARDS
NO CHECKS

ICE CREAM
HOT & COLD

JOURNEY FROM CLOUGH HILL CAR PARK

Gibson Mill is situated at the heart of Hardcastle Crag within a valley. From Clough Hill car park, it is a 15-minute journey down a steep path which is unsuitable for a person with accessibility issues. The area was populated with people enjoying walks within the natural environment.

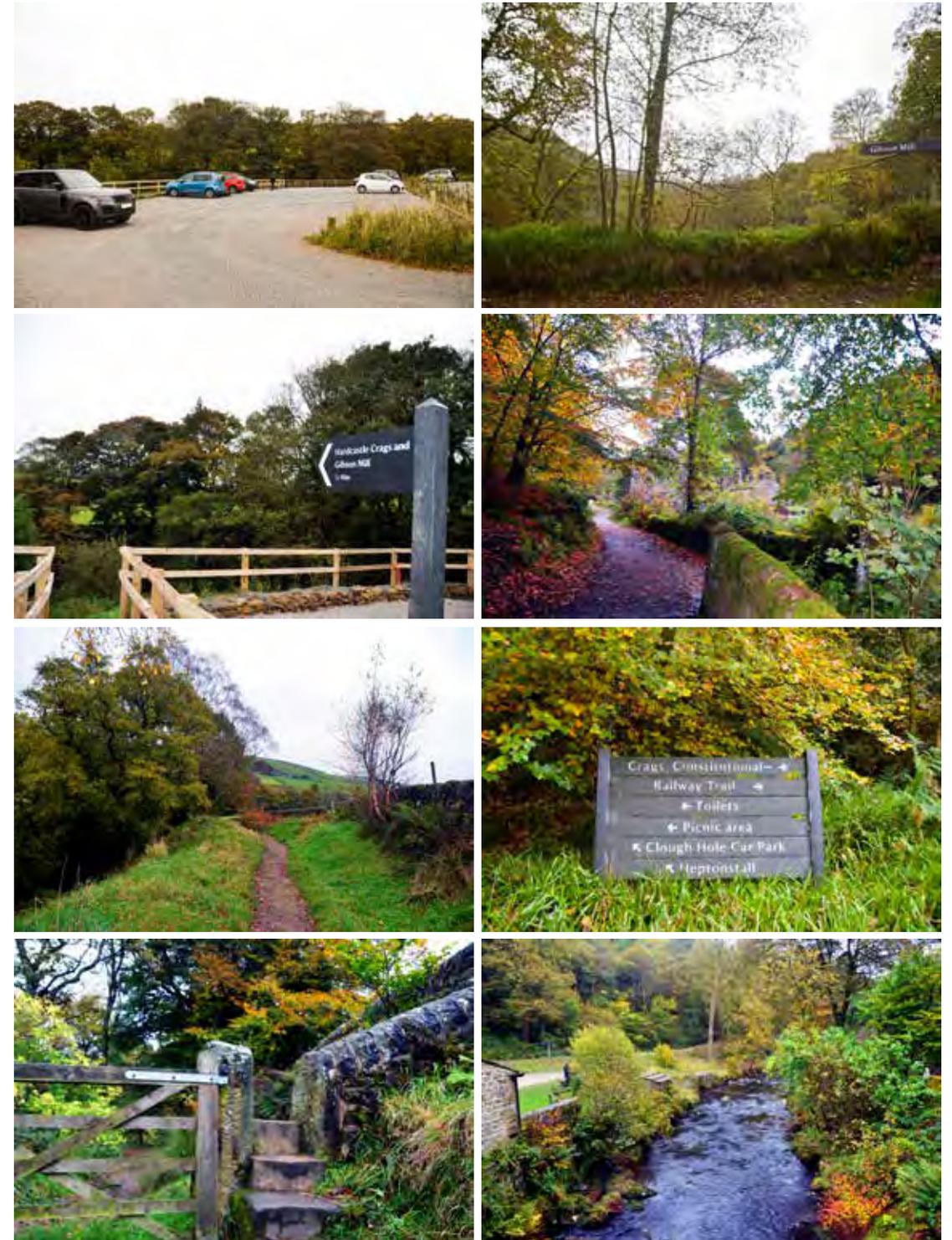


Fig. 97 - 104

JOURNEY FROM MIDGEHOLE ROAD CAR PARK

From Midgehole Road car park it is a 20-30 -minute walk along the estate track, which is suitable for pushchairs, wheelchair access is more restricted, however there is limited disabled parking on site. This car park seemed to be favoured by the public, it was busier and had better access routes to and from. There are 5 marked trails through the woodland which pass Gibson Mill, giving the visitor options, meaning that the building can be accessed from many different angles. Both journeys allow the visitor to be emersed in nature, contributing to both physical and mental wellbeing.

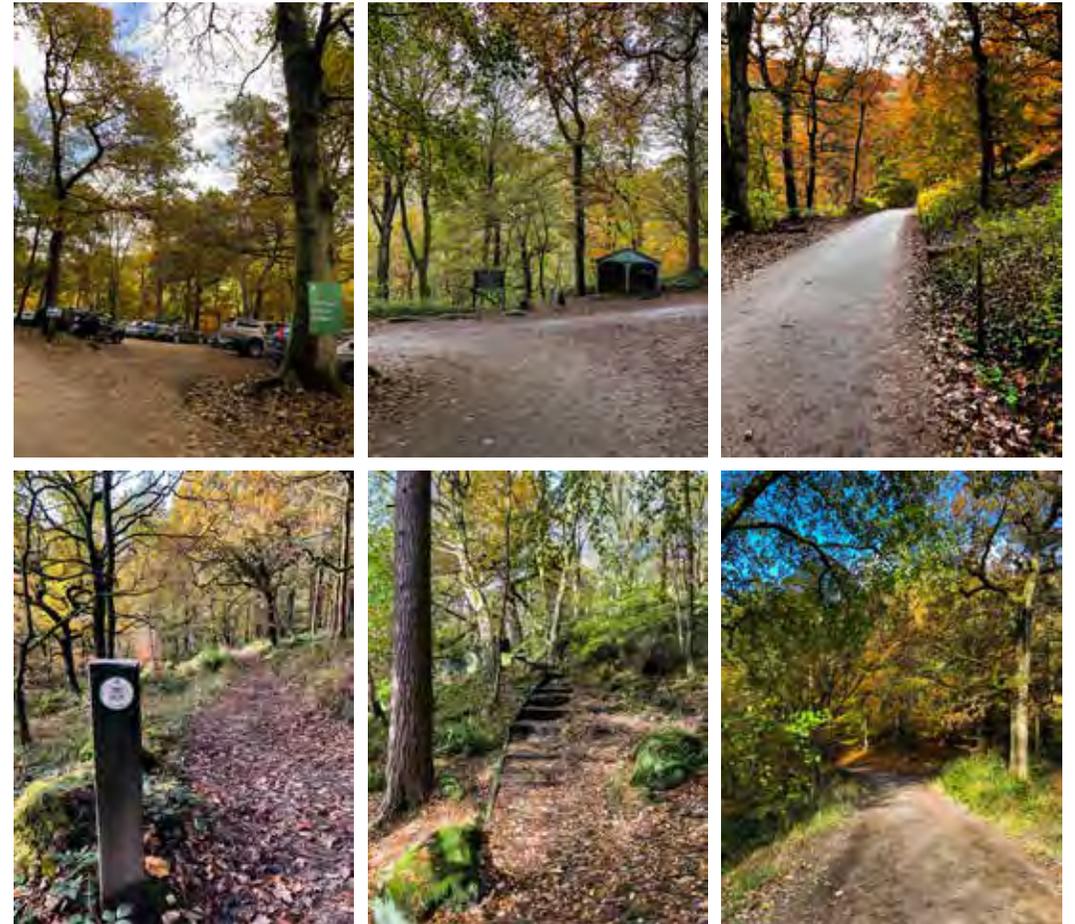


Fig. 104 - 110

HARDCASTLE CRAGS WALKING ROUTES

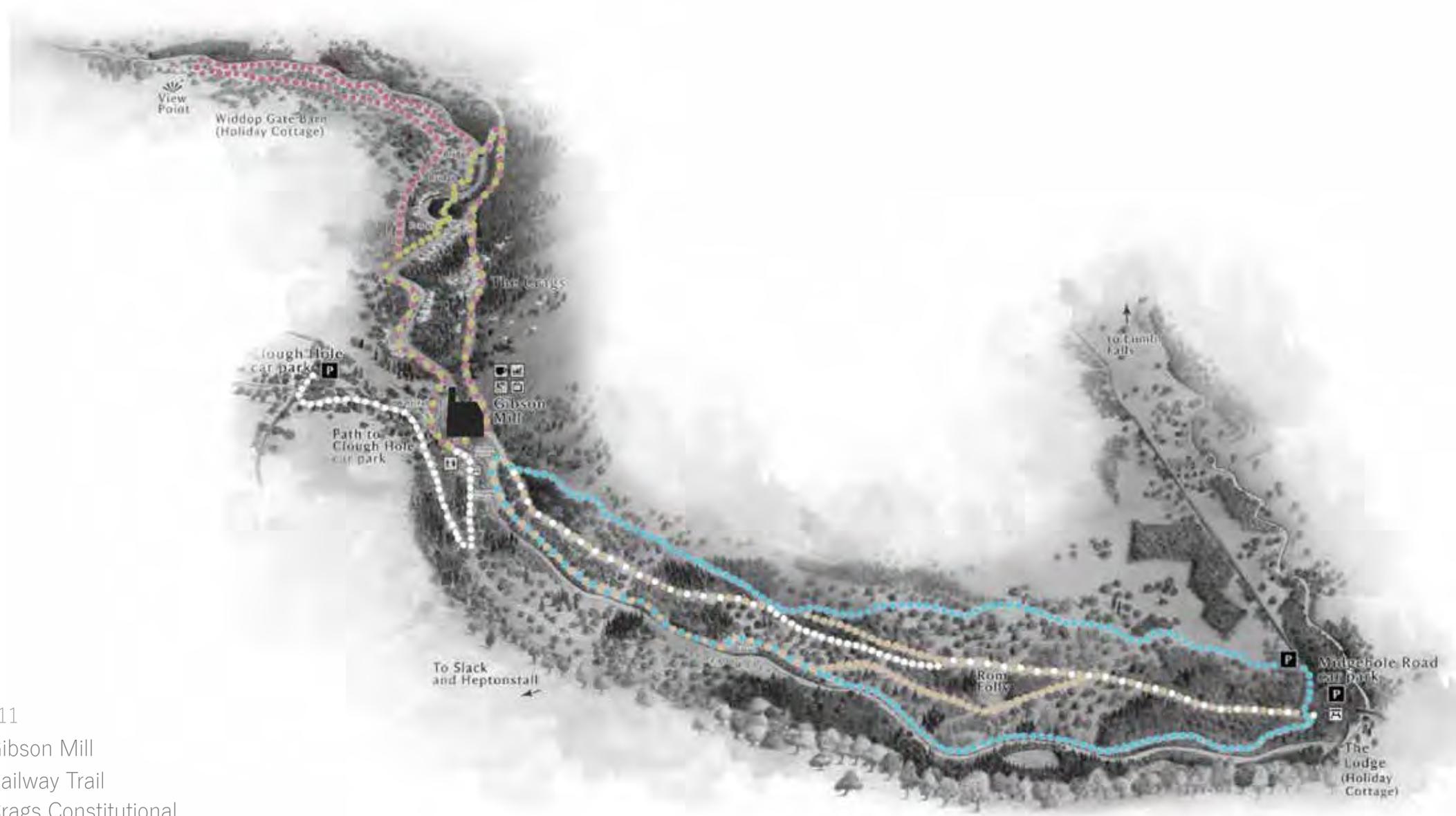


Fig. 111

- Gibson Mill
- Railway Trail
- Craggs Constitutional
- Estate Track
- Mill Walk
- Tree Trail



BUILDING IN CONTEXT

RELATIONSHIP TO NATURE



Fig. 112

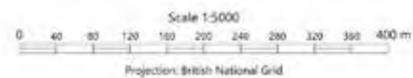


Fig. 113



Fig. 114

<https://www.youtube.com/watch?v=kebNDk6jk7w>

RELATIONSHIP TO WATER



Fig. 115.

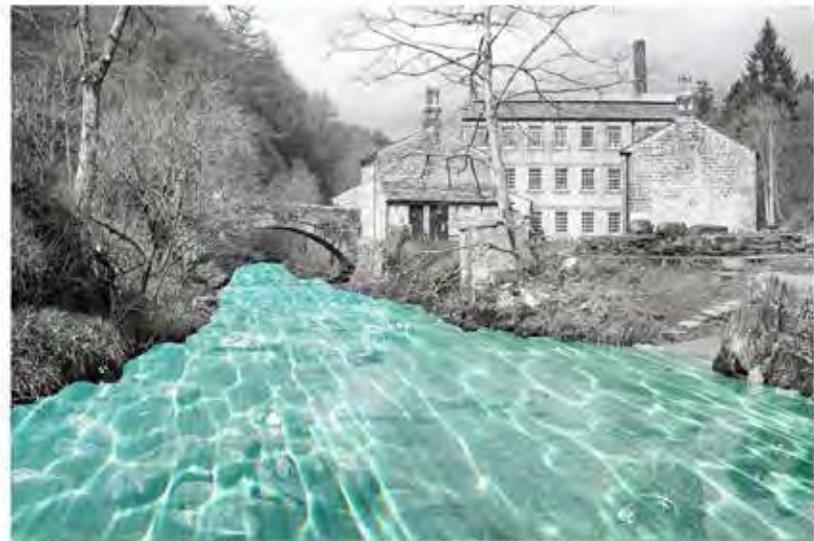
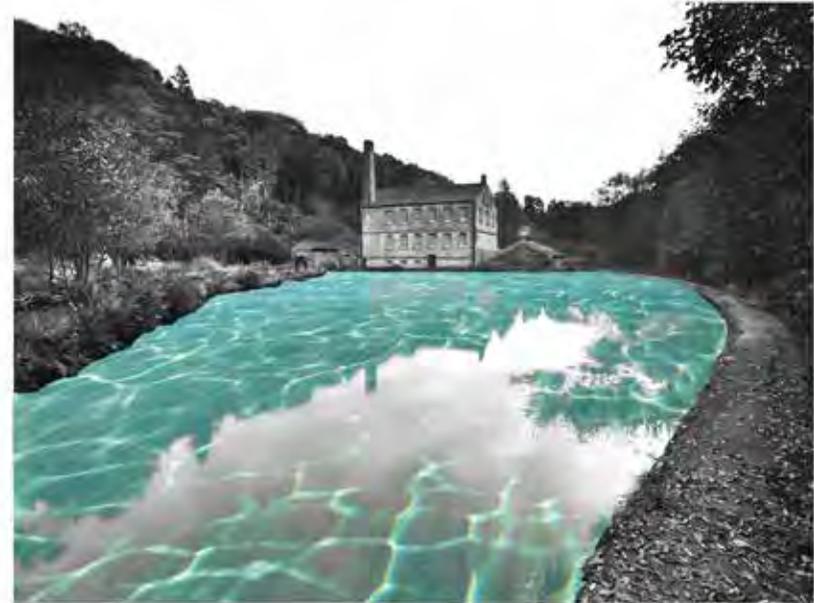
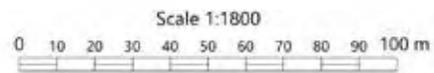


Fig. 116 & 117

SOUND ANALYSIS



Fig. 118.

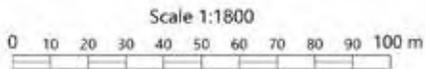


Fig. 119 Surrounding Nature - Animals, Weather (Rain & Wind) and People



<https://www.youtube.com/watch?v=TMhU9LKL4G>



Fig. 120. Hebden Water - Main noise source on site, acts as white noise

THE SOUNDING VALLEY



Fig. 121

Inspired by the soothing sounds surrounding site, the circular resin disks represent the continuous flowing water of Hebden River. Encased within these disks are organic natural elements gathered from around site, embodying the buildings incredible location within the deep valley of Hardcastle Crag. These forms rest within a plaster base, solid and textured, portraying the substantial, heavy stone of the building. Shadows cast on the smooth plaster surface represent how the building relies on water to give it life and purpose. Together, these elements come together to represent a sound wave of noises which are only experienced at Gibson Mill.



SITE TEXTURE

A site texture map showing a building layout with various textures highlighted by circular callouts. The callouts are connected to the map by dotted lines. The textures include a mill pond, moss, concrete slabs, cobblestones, a stone wall, and a gravel/dirt path.

Mill Pond - The dark mill pond has a reflective surface which allows the building and surrounding nature to be highlighted.

Moss - Green moss covers the surrounding landscape in darker and damper areas, creating a spongy texture underfoot.

Concrete Slab - Due to poor maintenance, weeds and other greenery have protruded through the slabs, this can be easily rectified with an increase in maintenance.

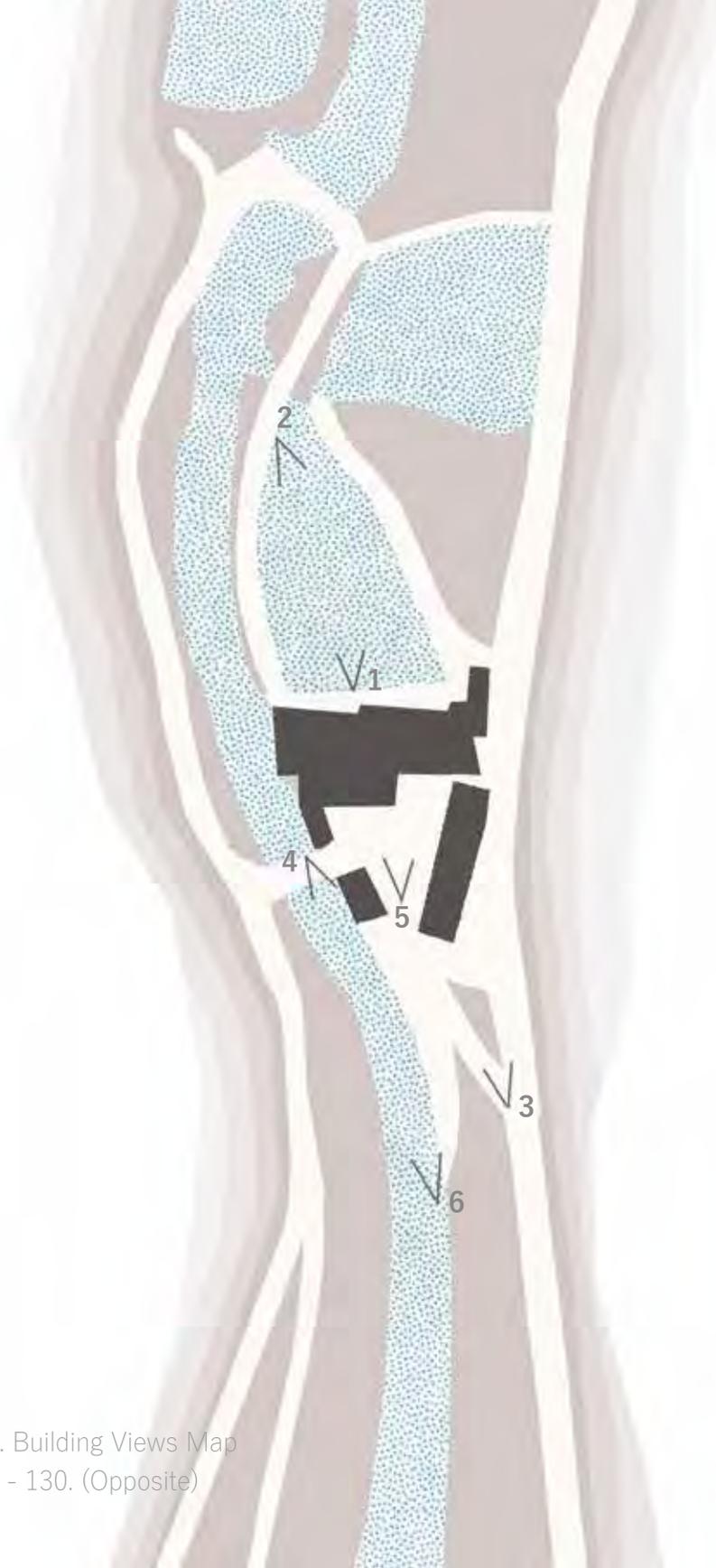
Cobbles - The floor surface alternates from an uneven gravel and dirt path to cobbles outside of the cottage entrances, this alternation makes it easy to trip. A continuous ground surface would be more practical and reduce the hazard.

Stone Wall - The irregular pattern of the stone wall highlights the age of site and contributes to the atmosphere of the building.

Gravel & Dirt Path - The path continues from the access routes at the car park to the entrance of the building, this path is very uneven and requires maintenance from The National Trust to ensure it doesn't become too dangerous to walk/drive on.

Fig. 123. Site Texture Map

SITE VIEWS



1. Mill Pond



2. West Facade



3. Estate Track



4. Hebden Water



5. Courtyard & South Facade



6. Bridge

Fig. 124. Building Views Map
Fig. 125 - 130. (Opposite)

SUN PATH

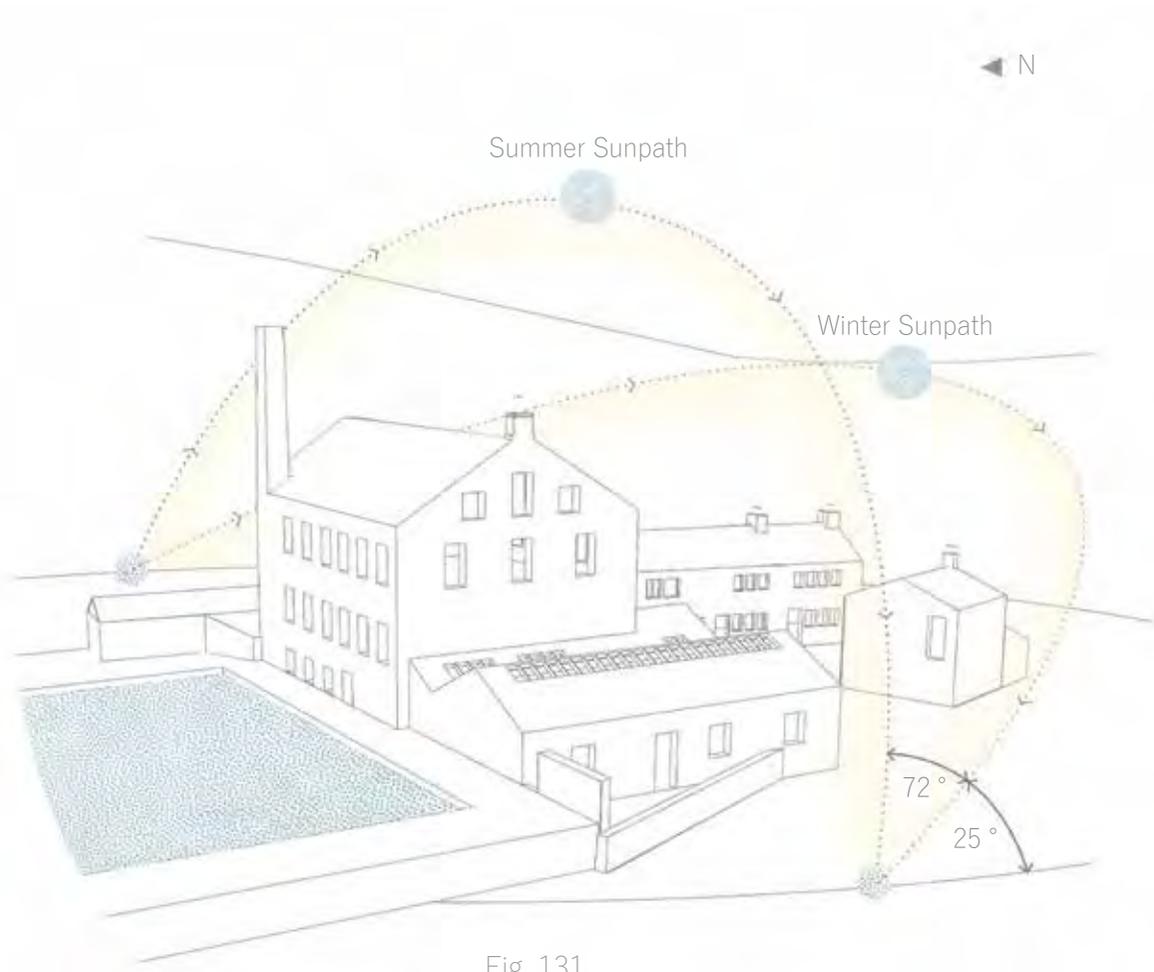
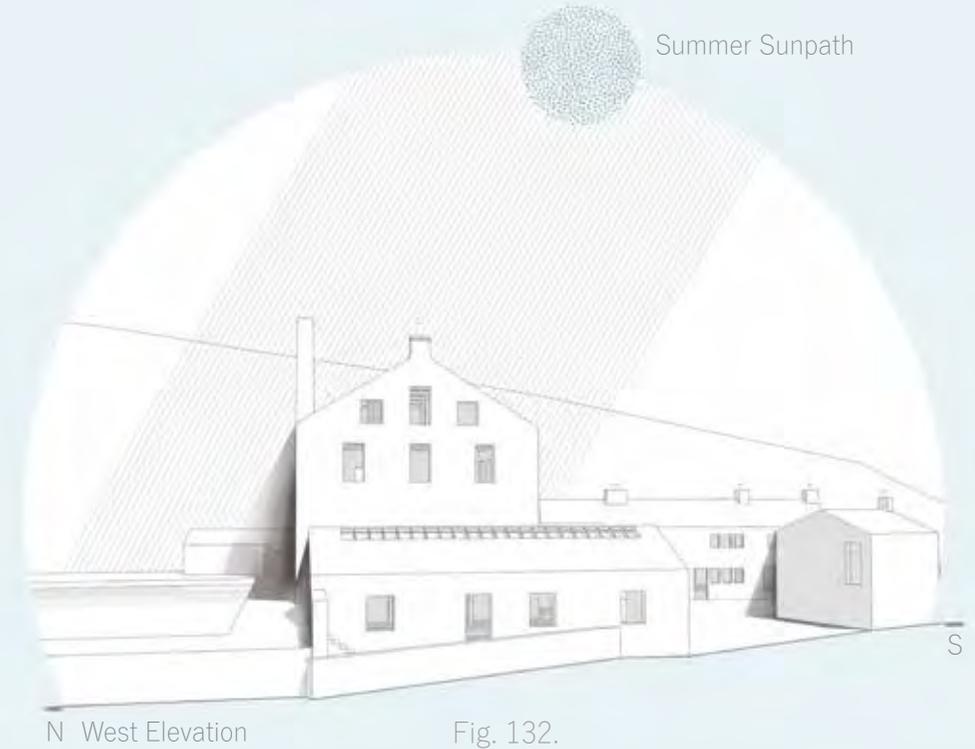


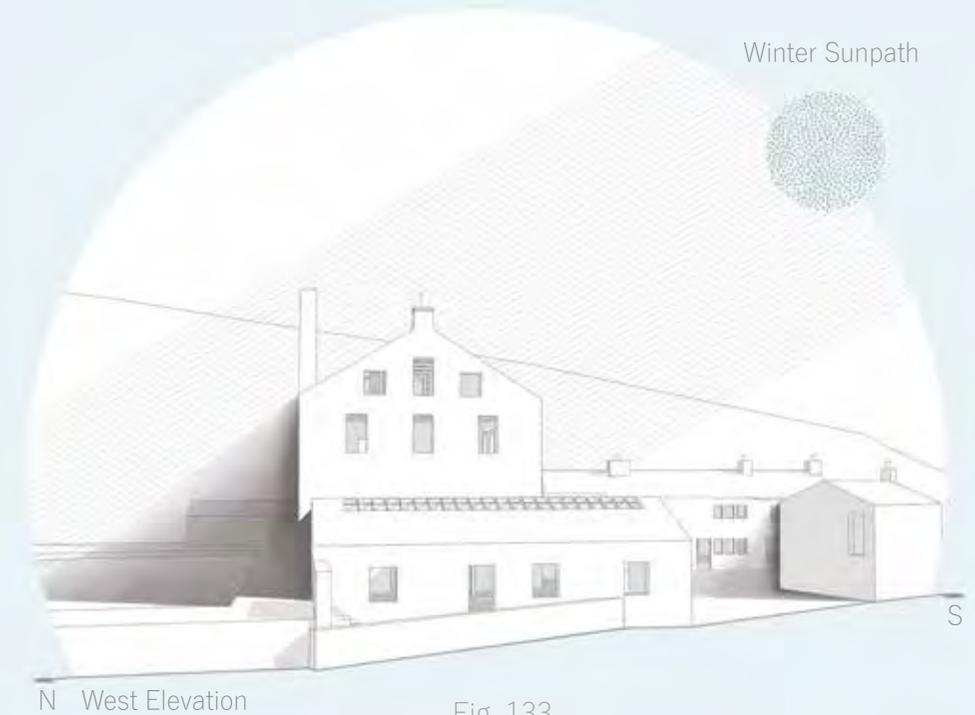
Fig. 131.

The sun rises in the east, sets in the west and travels in a southerly direction. During the summer months, the sun is higher in the sky, casting a shallow shadow. These shadows become deeper in the winter months when the sun is lower in the sky. This causes shadows to be cast over the Mill Pond and a varying degree over the courtyard area. The building is situated in a heavily wooded valley around 240m deep (Digimap, 2021) this causes some obstruction of sunlight during the early hours and evenings, especially during the winter months.



N West Elevation

Fig. 132.



N West Elevation

Fig. 133.

EXTERNAL

SUMMER

Early morning, the sun warms the east façade and casts shadows onto the courtyard. Through the day, the sun passes high in the sky warming the upper levels of the building and casting minimal shadows. Later, the sun casts shadows towards the east, covering the estate track.

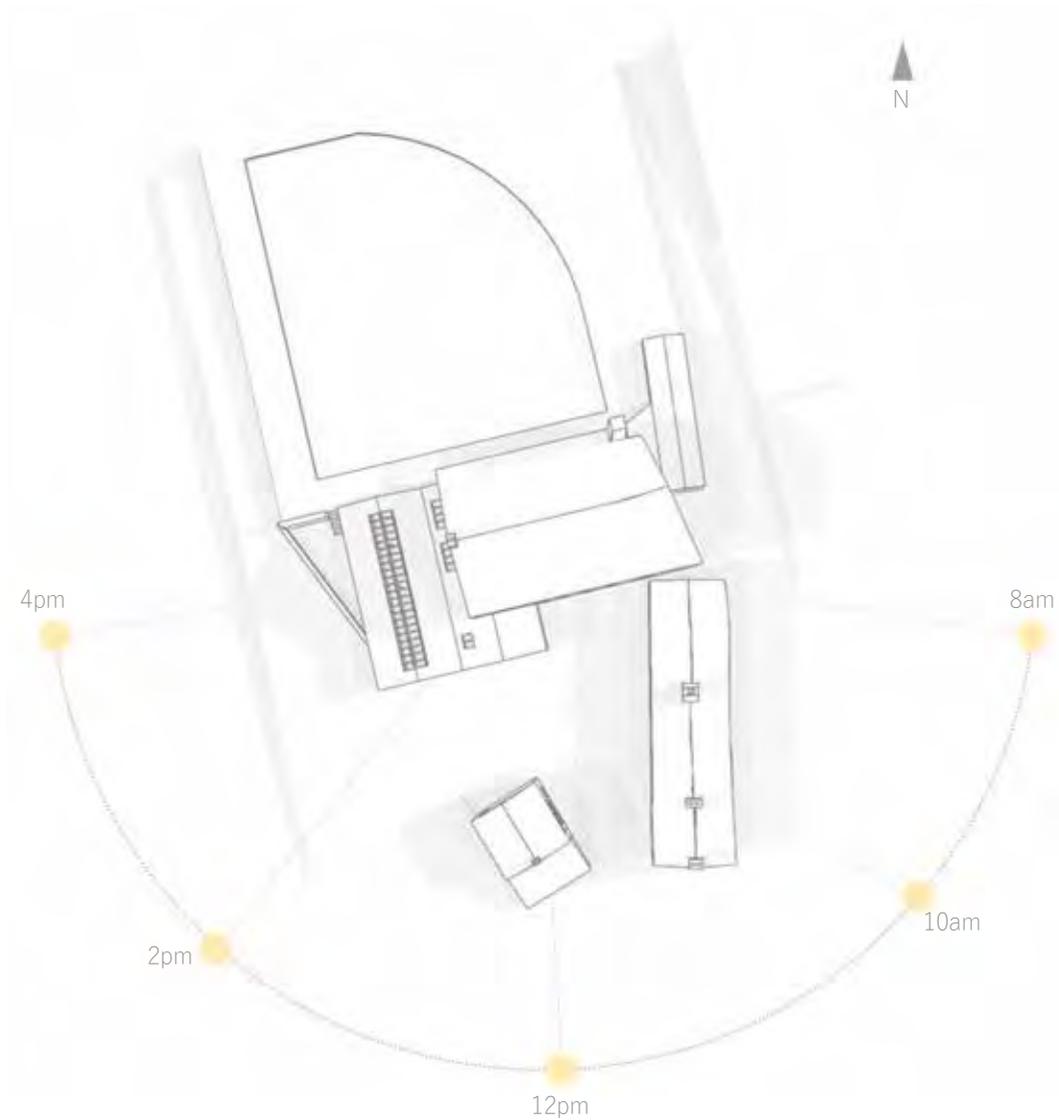


Fig. 134.

SHADOWS

WINTER

Early morning, the sun still sits behind the ridge of the valley, the sun finally hits the building around 9:30am casting deep shadows across the courtyard and Mill pond, this continues throughout the day, warming the south and west facing facades until around 4pm when the sun dips below the valley ridge.

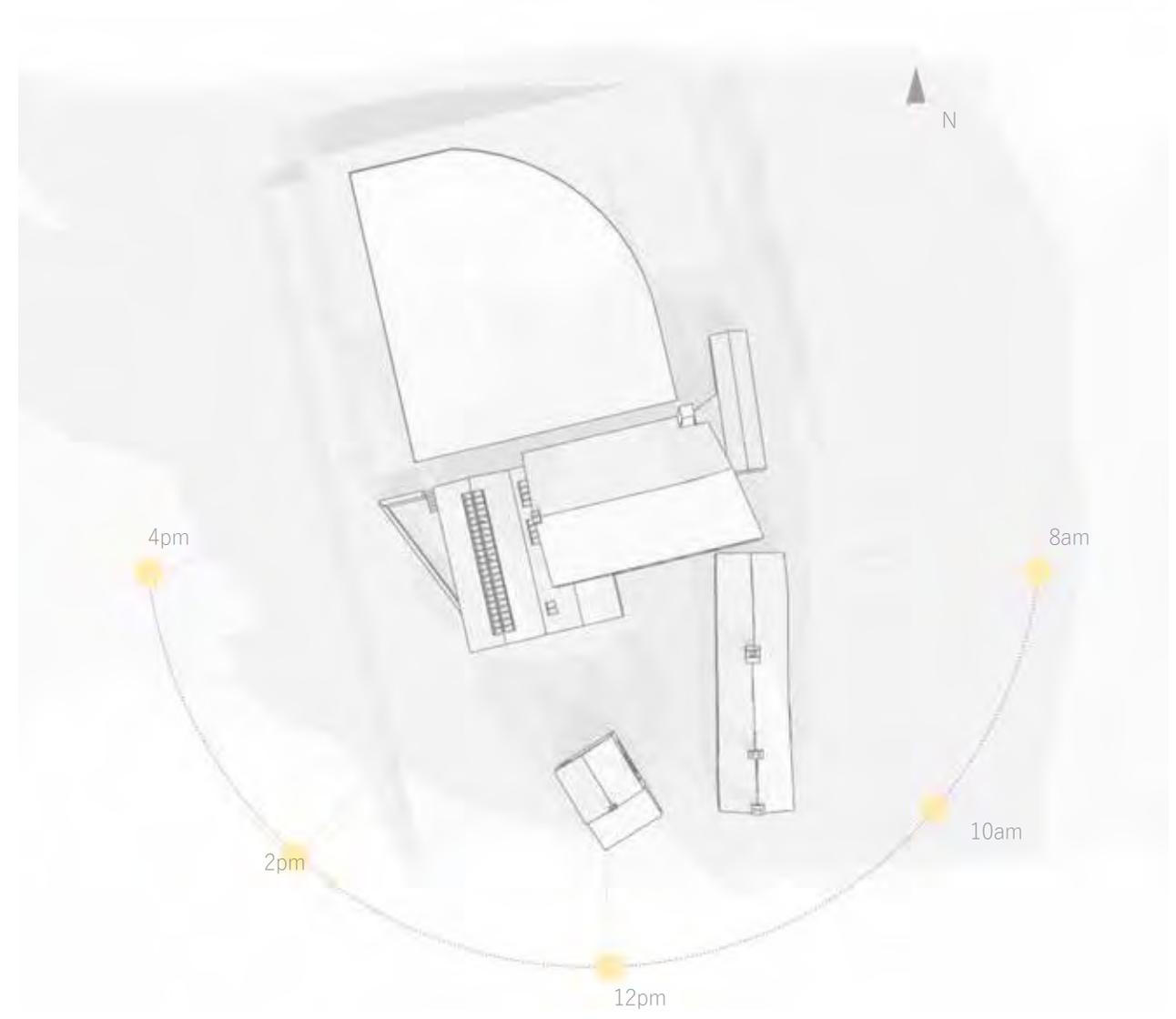


Fig. 135.

WIND ANALYSIS

Annual (5 Year Average)

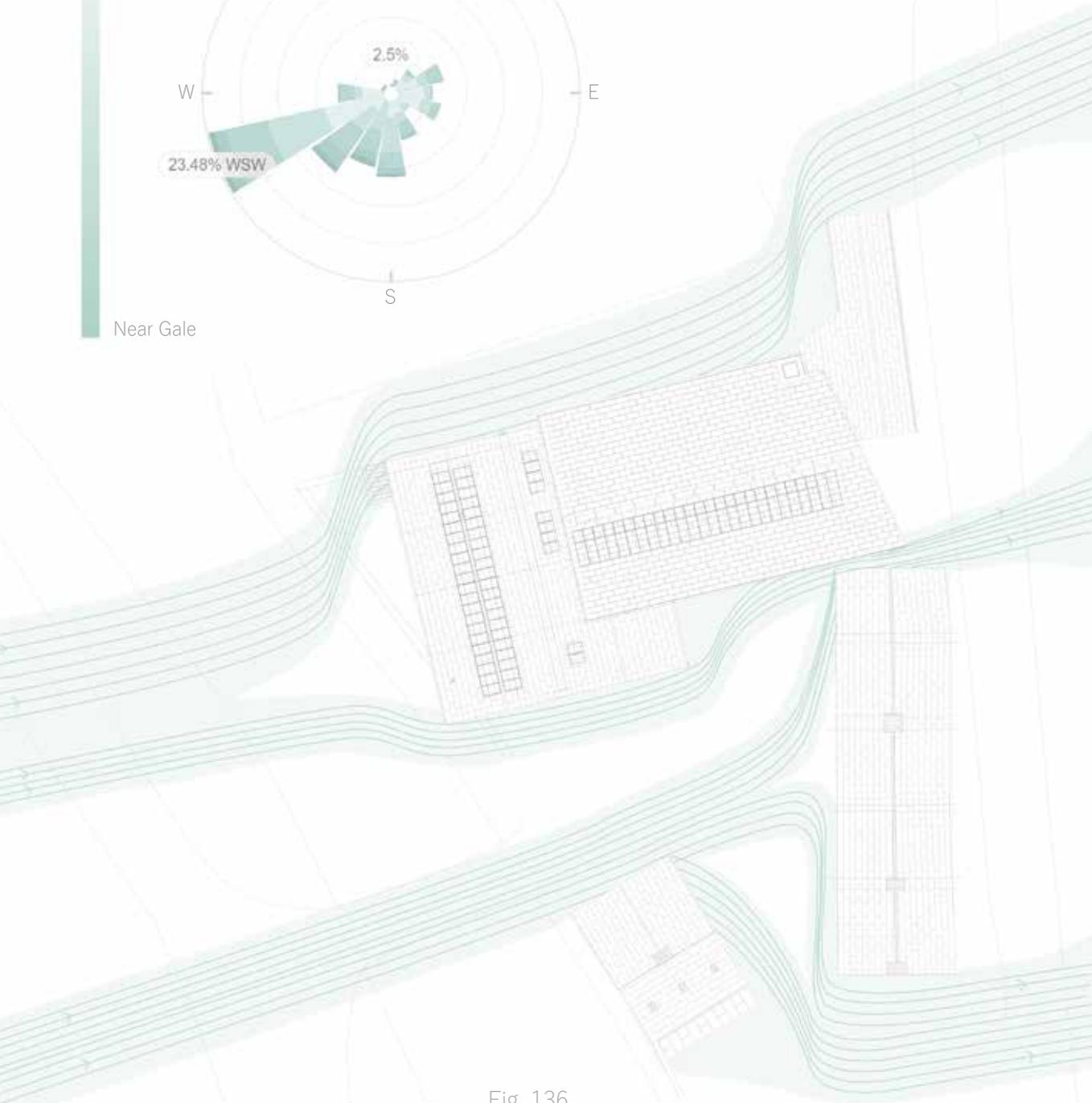
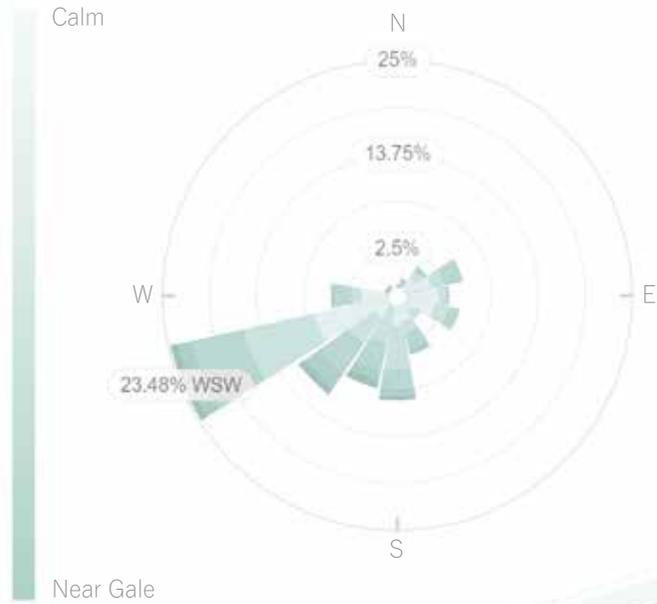


Fig. 136.

PRECIPITATION



Fig. 137.

TEMPERATURE

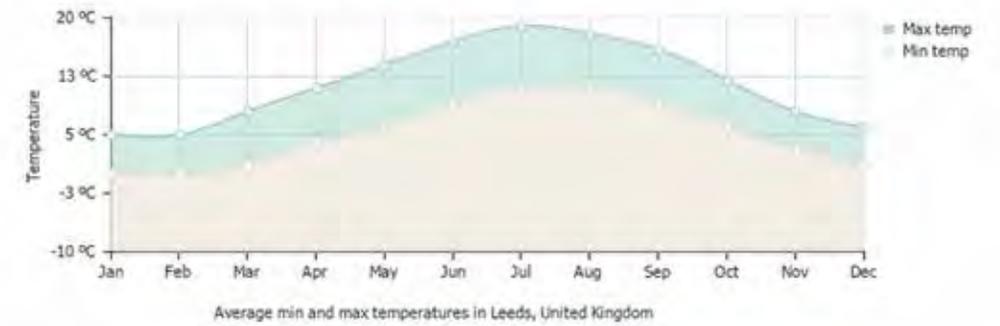
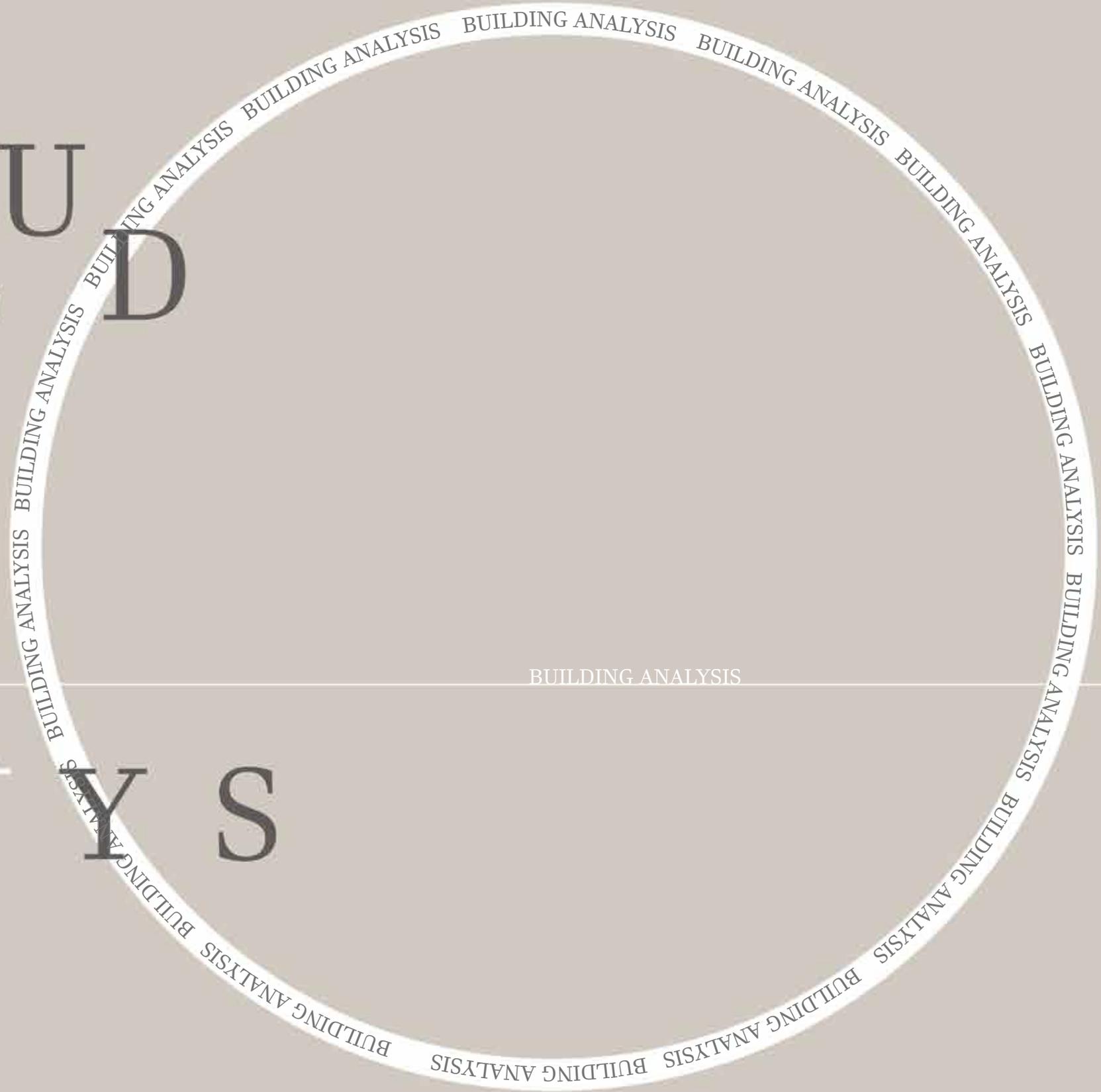


Fig. 138.

The wind is strongest from a south-westerly direction and the average wind speed is 6.4mph (W Weather, 2021) meaning there are more external pressures on the west facing facades.

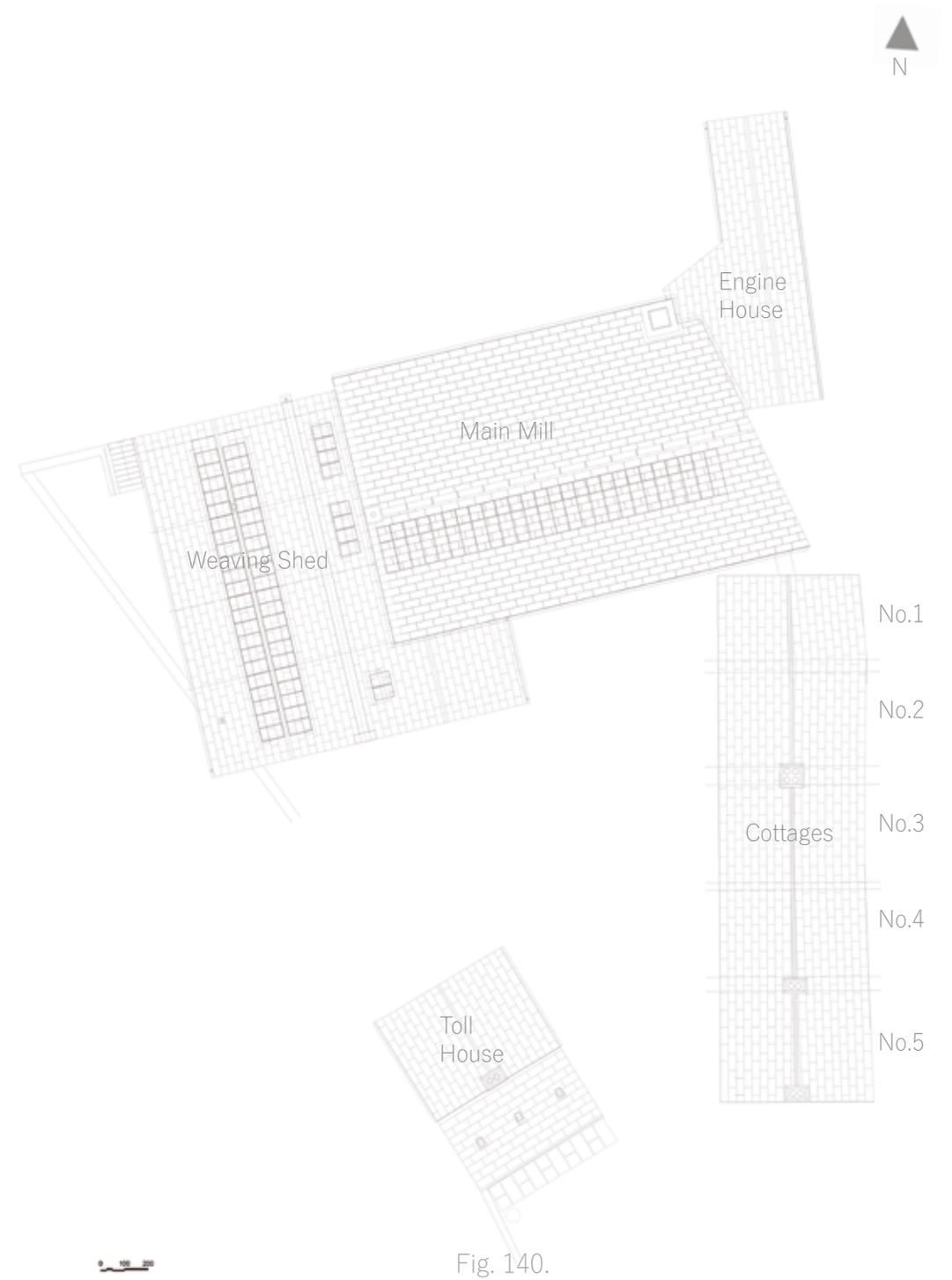
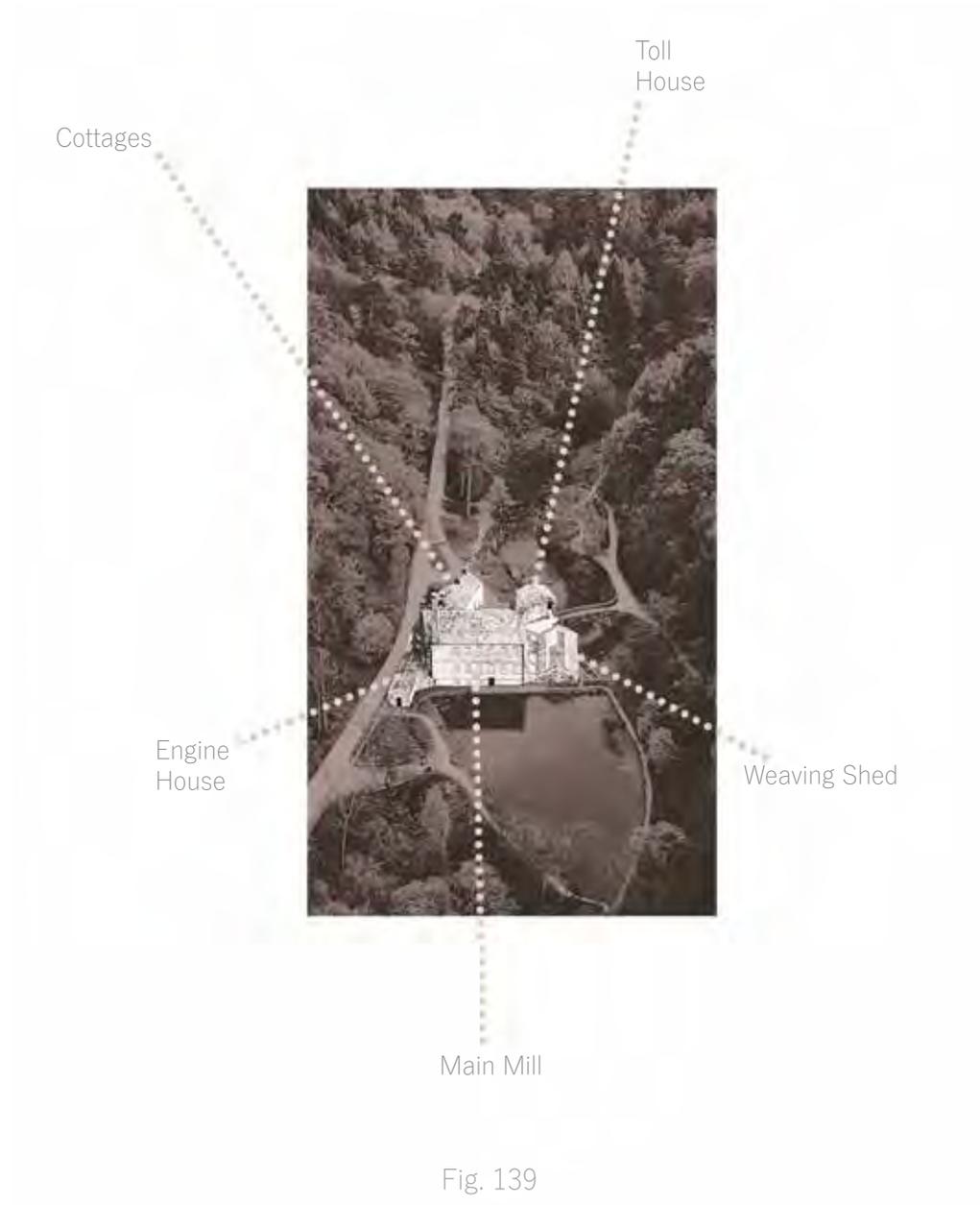
On average, the temperature varies from -2° to 19° with the warmest month being July and coldest January. The driest month is March and wettest is November (Weather & Climate, 2021). Efforts should be made to encourage outdoor activities during the warmest and driest months of the year (April – October) as this has a positive impact on a person's wellbeing.

I
G N I B L U
A N A
I S L Y S



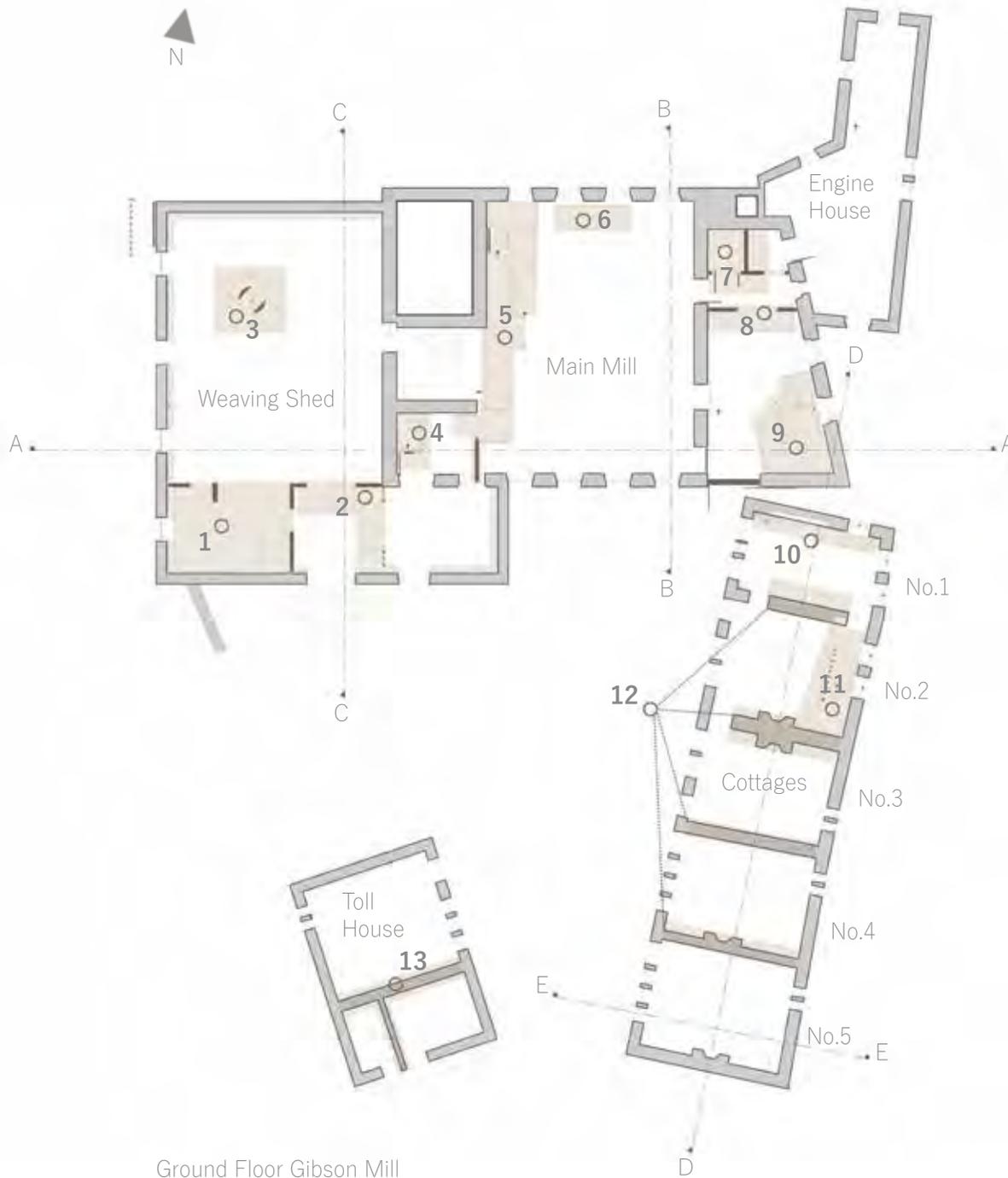
BUILDING ANALYSIS

LOCATION PLAN



ORIGINAL PLANS

STAY & GO



Ground Floor Gibson Mill

Fig. 141.

WEAVING SHED

1. Kitchen – can be removed, not structural.
2. Partitioned walls – can be removed, not structural.
3. Thermal mass wood stove with wood hearth – used to heat the building, can be relocated into a different area of the building, the engine house could be the most appropriate, however it does make a nice feature.

MAIN MILL

4. Internal Staircase – Very steep, can be removed, not structural.
5. Screening & Switch Gear Display Panel – screening can be removed not structural and the Switch Display can be relocated into the engine house.
6. Batteries – Can be relocated into the engine house.
7. Lift – Essential for circulation & access, however, could be positioned elsewhere in the building.
8. Clay Block Walls – Can be removed, not structural.
9. Staircase – Most practical use of the angled space, however, could be redesigned to be more aesthetic. Could be removed, not structural.

COTTAGES

10. Kitchen – can be removed, not structural.
11. Staircase – only access to 1st floor, can be removed, not structural.
12. Interior Walls – Possible to be removed, however they are structural, and the walls would need support with steels in place, this can be investigated further in the design process.

TOLL HOUSE

13. Interior Walls – Possible to be removed, however they are structural, and the walls would need support with steels in place, this can be investigated further in the design process.

3. Thermal Mass Wood Stove with Wood Hearth



Fig. 142.

4. Internal Staircase



Fig. 143.

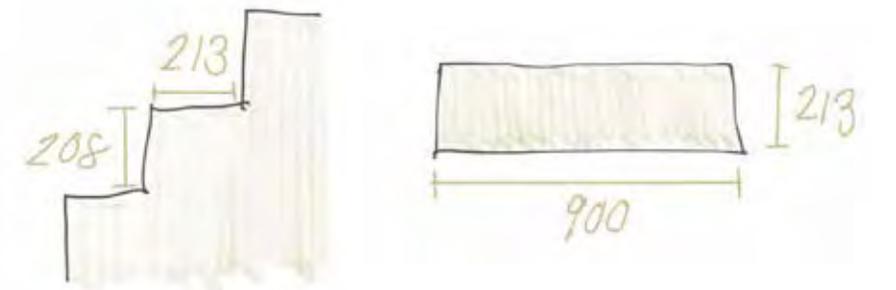
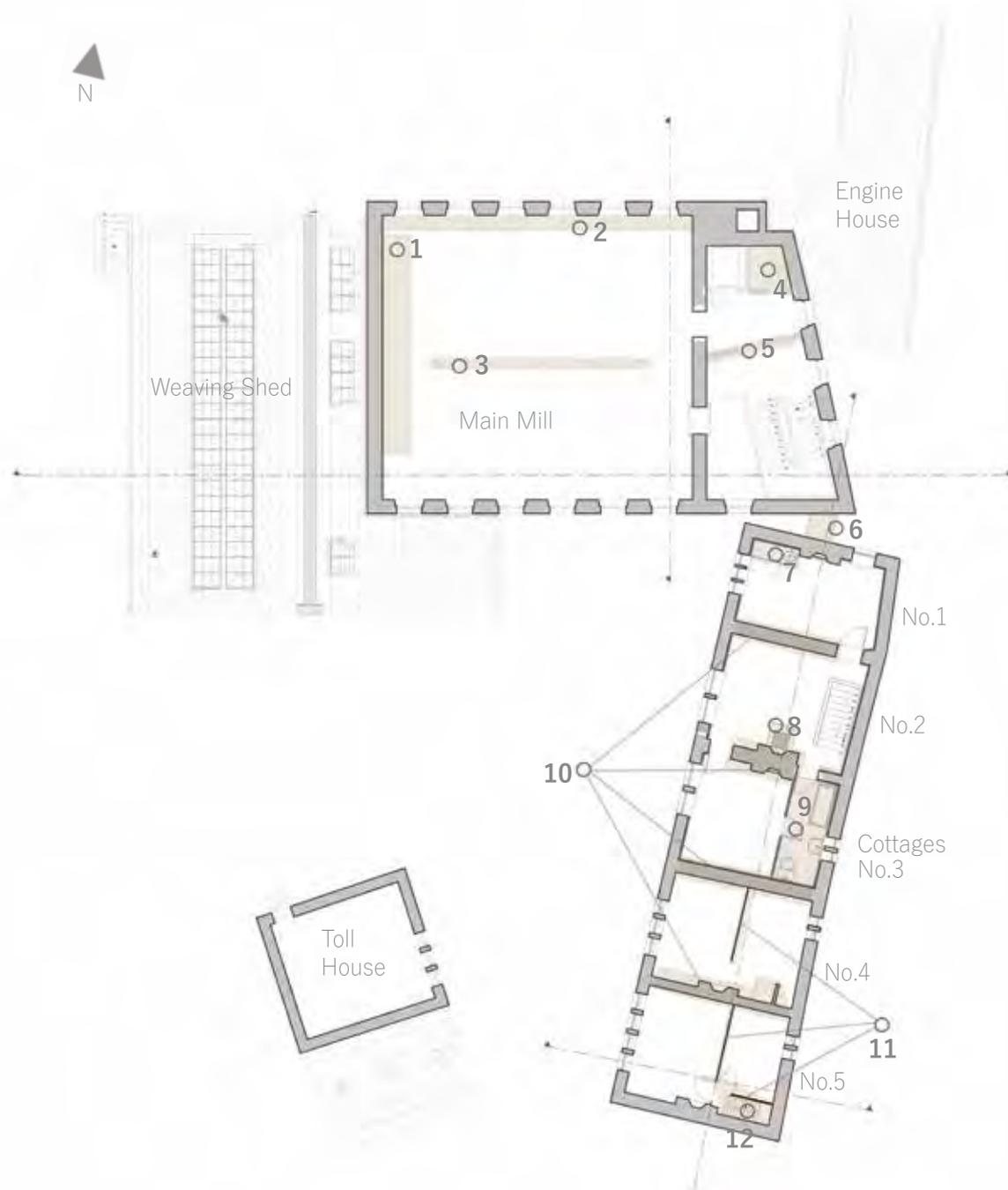


Fig. 144. (All measurements in mm)

ORIGINAL PLANS

STAY & GO



First Floor Gibson Mill



MAIN MILL

1. Staircase access from ground floor to 2nd floor – can be removed, not structural.
2. Bench – can be removed, not structural.
3. Cast Iron Columns – Provide additional structural support, can be removed but steel joists would need to be put in place to compensate.
4. Storage – walls can be removed, not structural.
5. Wall partitions – can be removed, not structural.
6. Sloping Flue – Allows ventilation from the kitchen of the cottages.

COTTAGES

7. Storage – can be removed, not structural.
8. Clearview Vision Stove with Stone Flag Hearth – can be removed, not structural.
9. Bathroom – only bathroom within the buildings, can be removed, not structural.
10. Interior Walls - Possible to be removed, however they are structural, and the walls would need support with steels in place, this can be investigated further in the design process.
11. Wall partitions – can be removed, not structural.
12. Staircase – only access to cottage no.5 1st floor, can be removed, not structural.

3. Cast Iron Columns



Fig. 146.

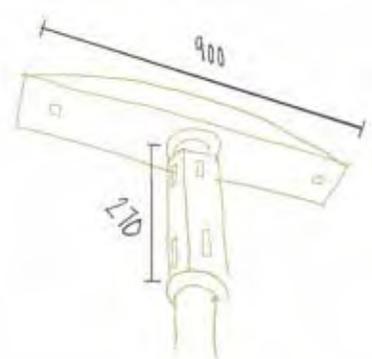


Fig. 147. (All measurements in mm)

6. Sloping Flue



Fig. 148.



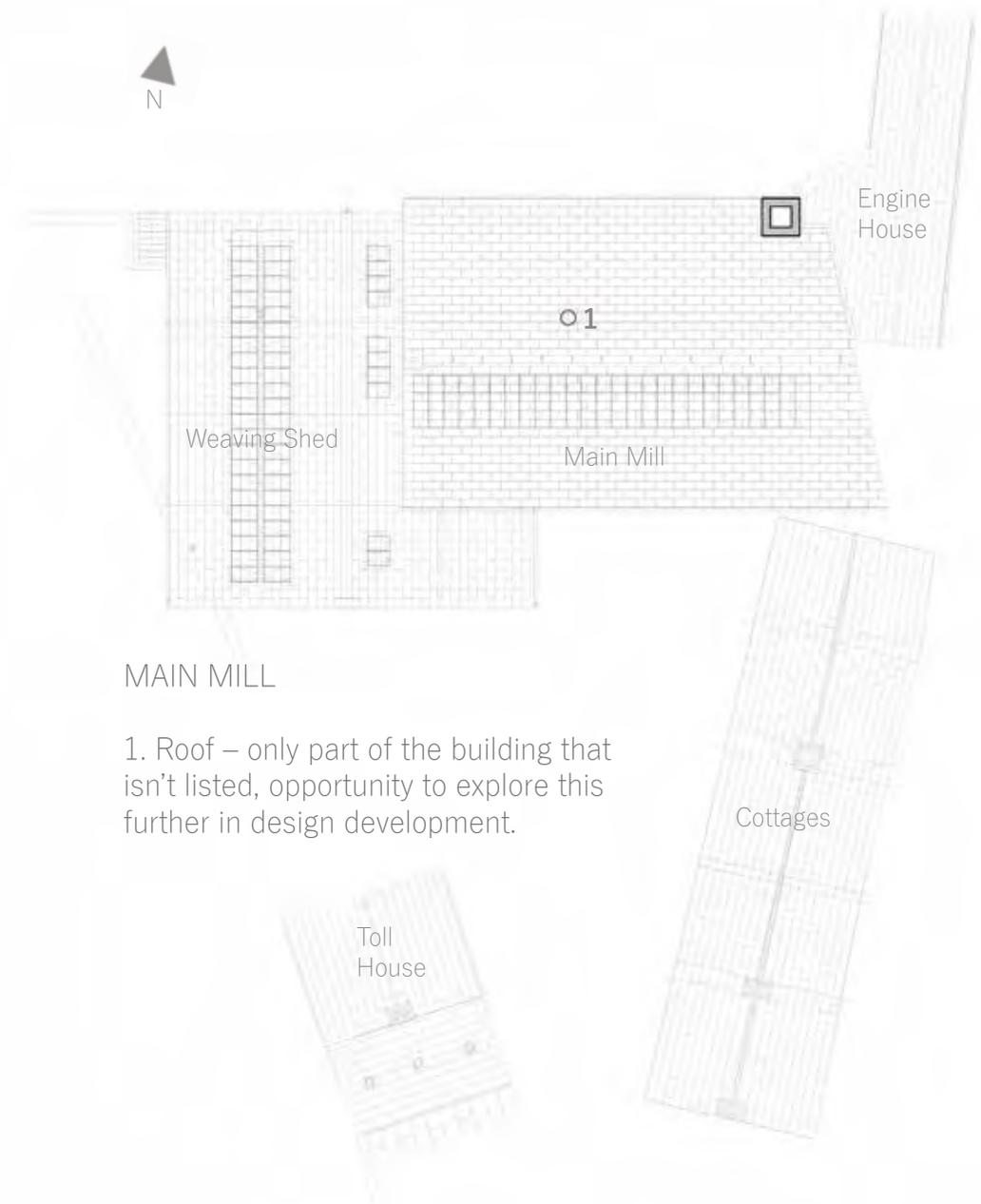
Fig. 149. (All measurements in mm)

ORIGINAL PLANS

1. Roof



Fig. 150.



MAIN MILL

1. Roof – only part of the building that isn't listed, opportunity to explore this further in design development.

Roof Plan Gibson Mill



ORIGINAL PLANS

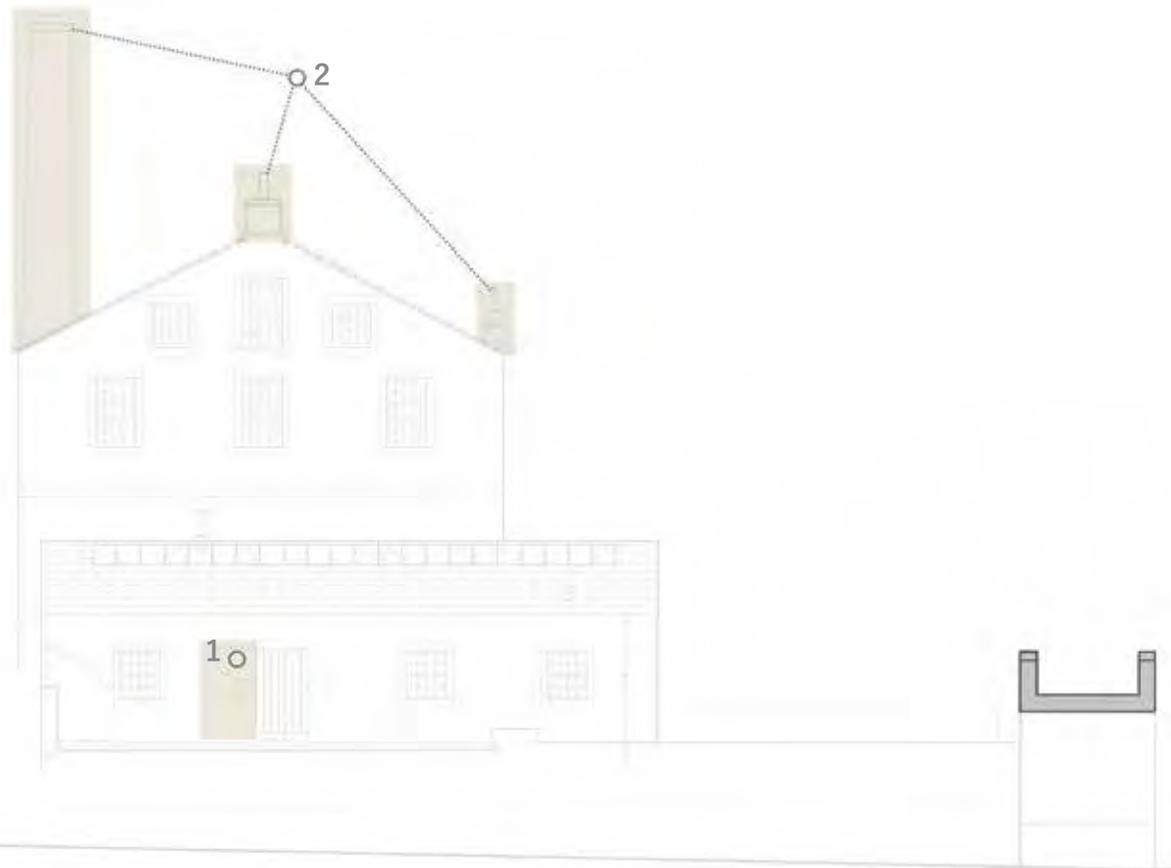
STAY & GO

WEAVING SHED

1. Entranceway - recent repairs were carried out to fill in the entranceway, opportunity to open this back up to its original size.

MAIN MILL

2. Gable Stacks – listed Elements, must remain.



West Elevation Gibson Mill

1. Entranceway



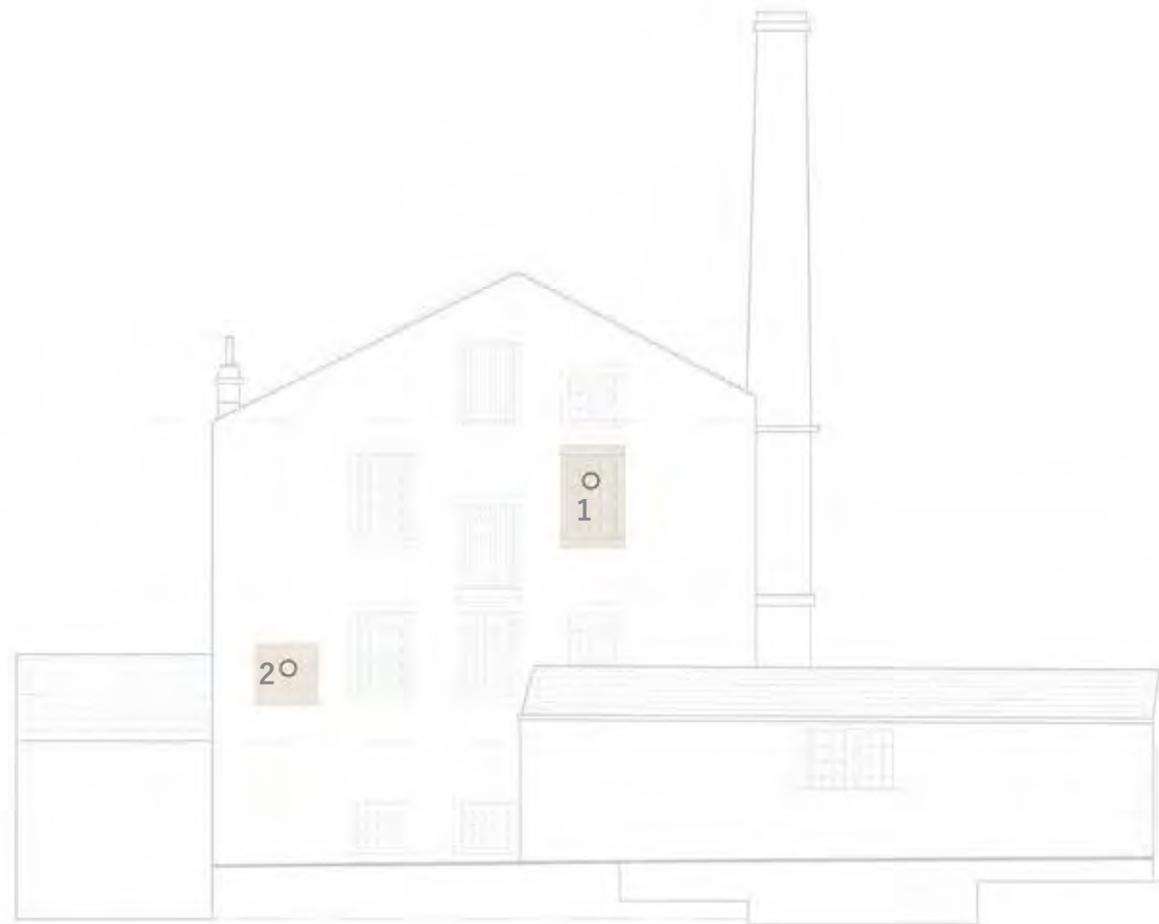
Fig. 153.

ORIGINAL PLANS

STAY & GO

ALL BUILDINGS

1. Windows – Grade 2 Listed, must remain.
2. External Walls - Grade 2 Listed, must remain.



East Elevation Gibson Mill

Fig. 154.

1 & 2. Windows and External Walls



Fig. 155.

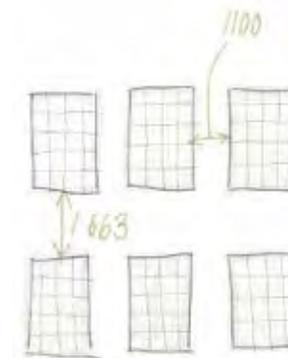


Fig. 156. (All measurements in mm)

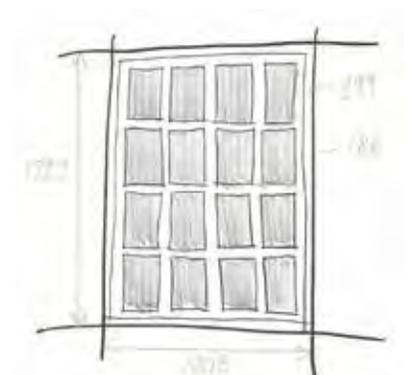


Fig. 157. (All measurements in mm)

ORIGINAL PLANS

1. Existing Entranceway



Fig. 158. showing existing size of original entrance

STAY & GO

WEAVING SHED

1. Existing Entranceway - recent repairs were carried out to fill the entranceway. Opportunity to open this back up to its original size.
2. Existing Door - Locked shut currently but could be opened back up.

MAIN MILL

3. Arched Cart Entry - Grade 2 Listed, must remain.



Fig. 159.

ORIGINAL PLANS

1. Existing Door



Fig. 160.

STAY & GO

MAIN MILL

1. Existing door – sealed & not in use, however this could be opened back up.
2. Machinery – Including the water turbine, Grade 2 Listed, must remain.

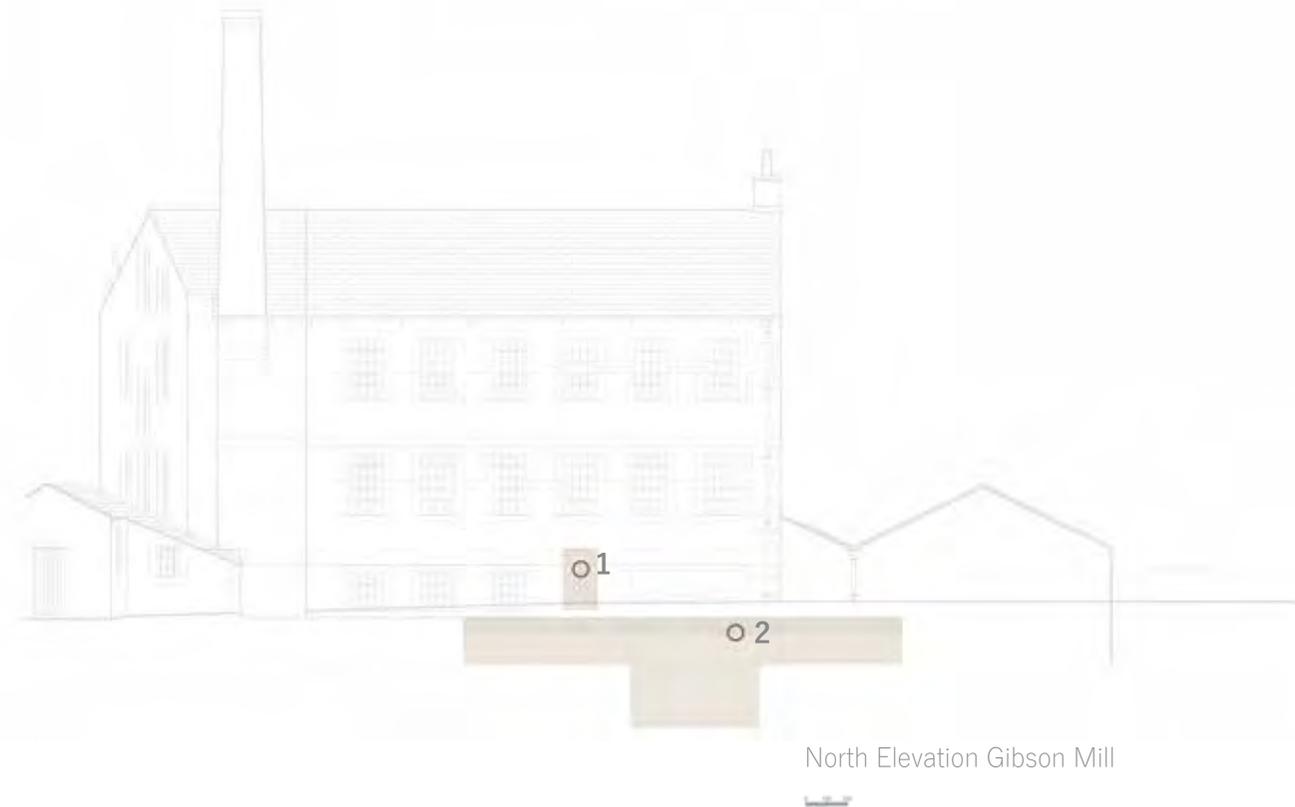


Fig. 161.

ORIGINAL PLANS

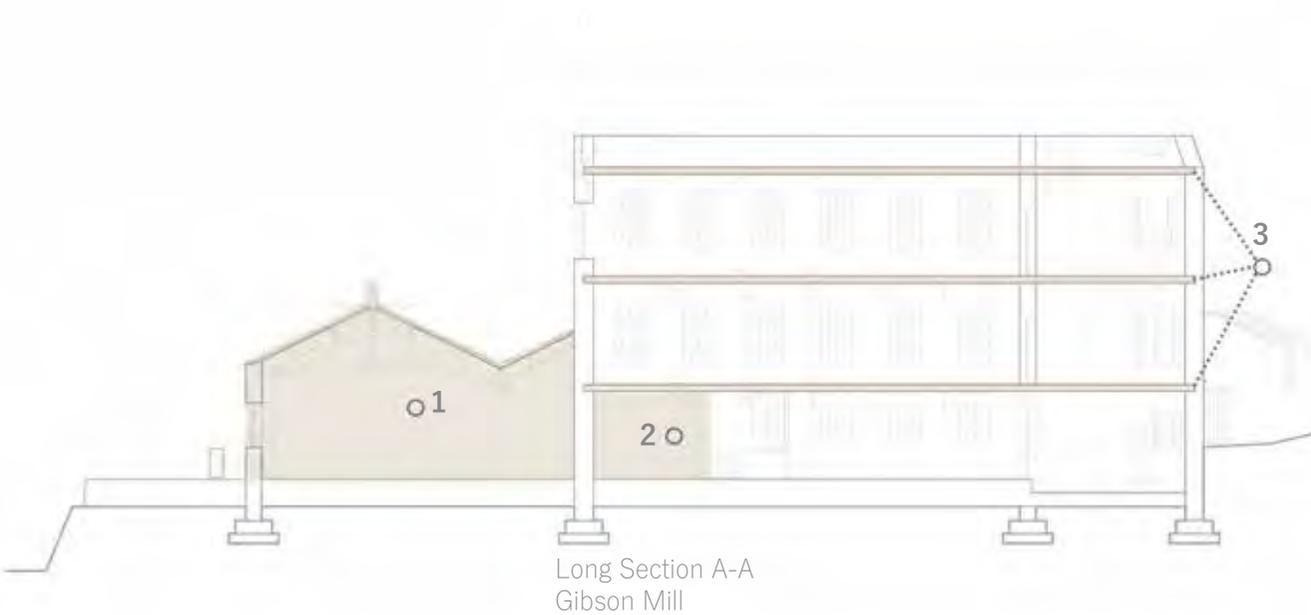
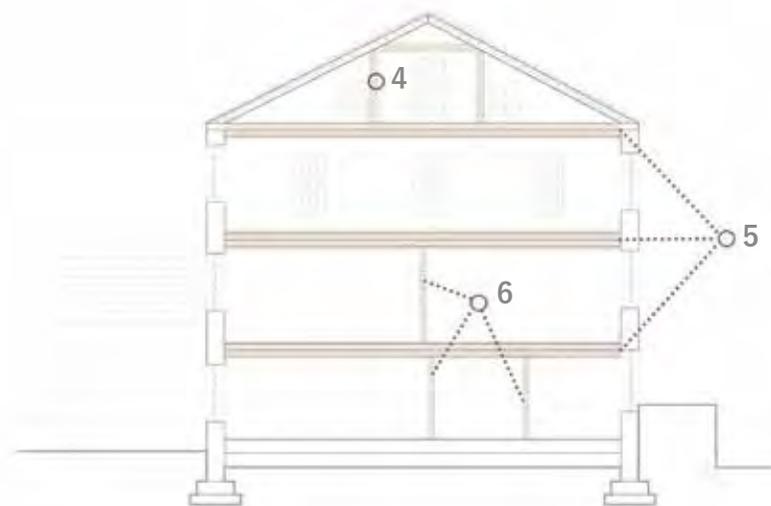


Fig. 162.



Short Section B-B
Gibson Mill

Fig. 163.

STAY & GO

WEAVING SHED

1. Weaving Shed – Possibility of changing the structure depending on restrictions.

MAIN MILL

2. Engine Room – all equipment & machinery must remain.
3. Floors – Not Structural, can be removed.
4. Queen Post Roof Truss Structure – Can be removed, however an alternative structure would need to be introduced to support the weight of the roof.
5. Floor – Not Structural, can be removed. Beams need to remain to support the walls.
6. Cast Iron Columns – Can be removed or relocated, but an alternative structure would need to be introduced to support the floors above.

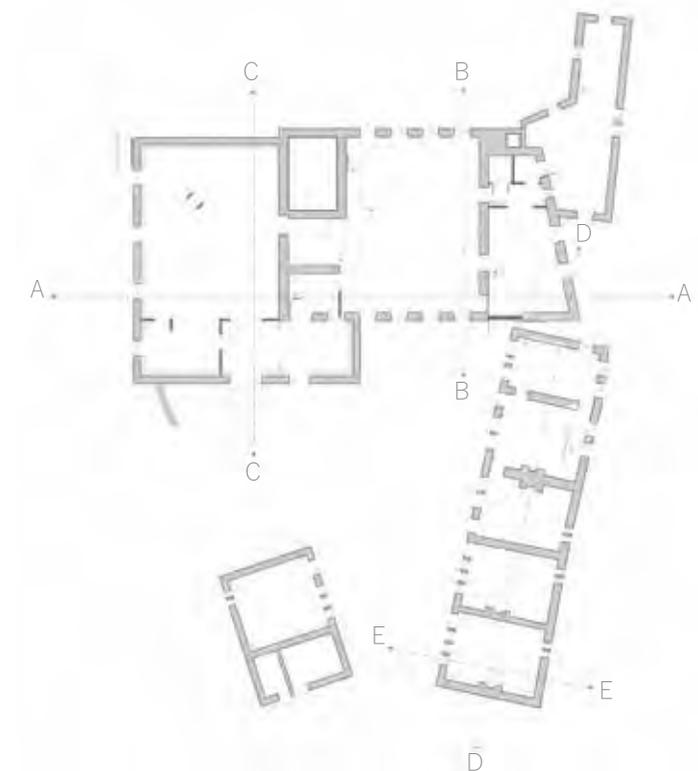


Fig. 164.

3 & 5. Floor/Beams



Fig. 165.

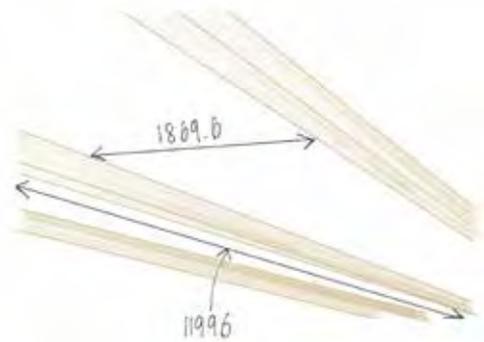


Fig. 166. (All measurements in mm)

6. Cast-Iron Columns



Fig. 167.

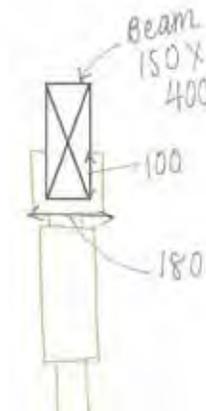


Fig. 168. (All measurements in mm)

ORIGINAL PLANS

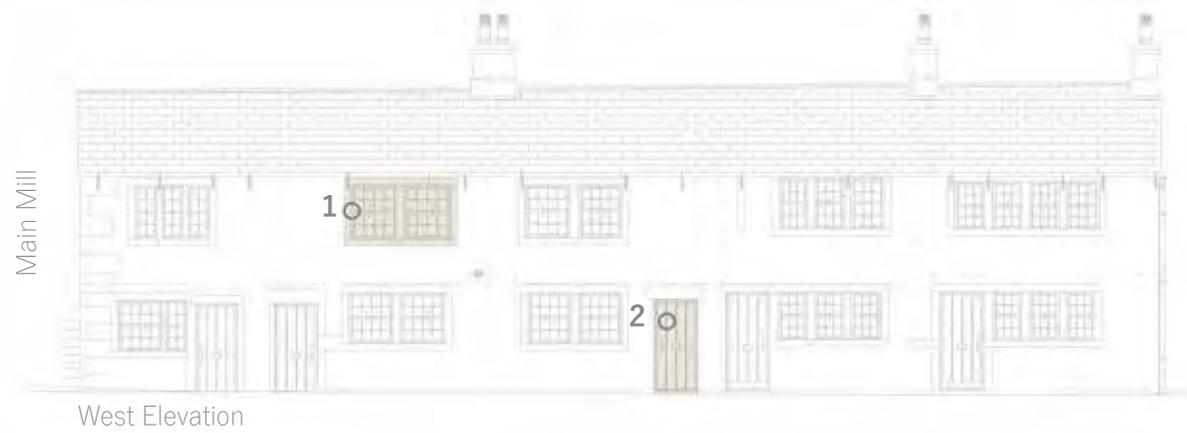


Fig. 169.



Fig. 171.

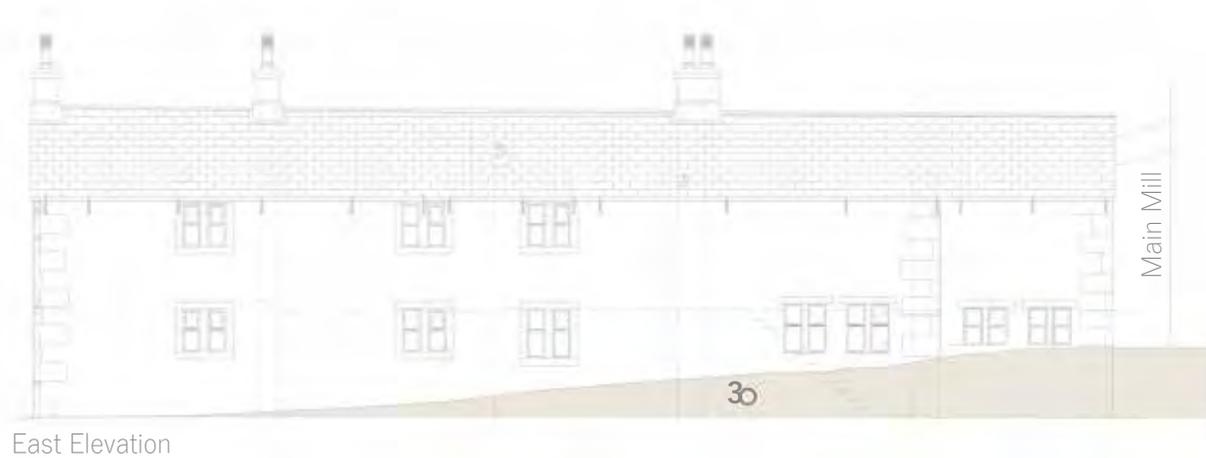


Fig. 170.

STAY & GO

1. Windows – Grade 2 Listed, must remain.
2. Entranceway – small openings into the cottages, alternative routes for wheelchair accessibility may be required.
3. Landscaping – the earth on the east elevation rises on a small incline in line with the bottom of the windows nearest the main mill.
4. External Walls - Grade 2 Listed, must remain.

2. Existing Door



Fig. 172.

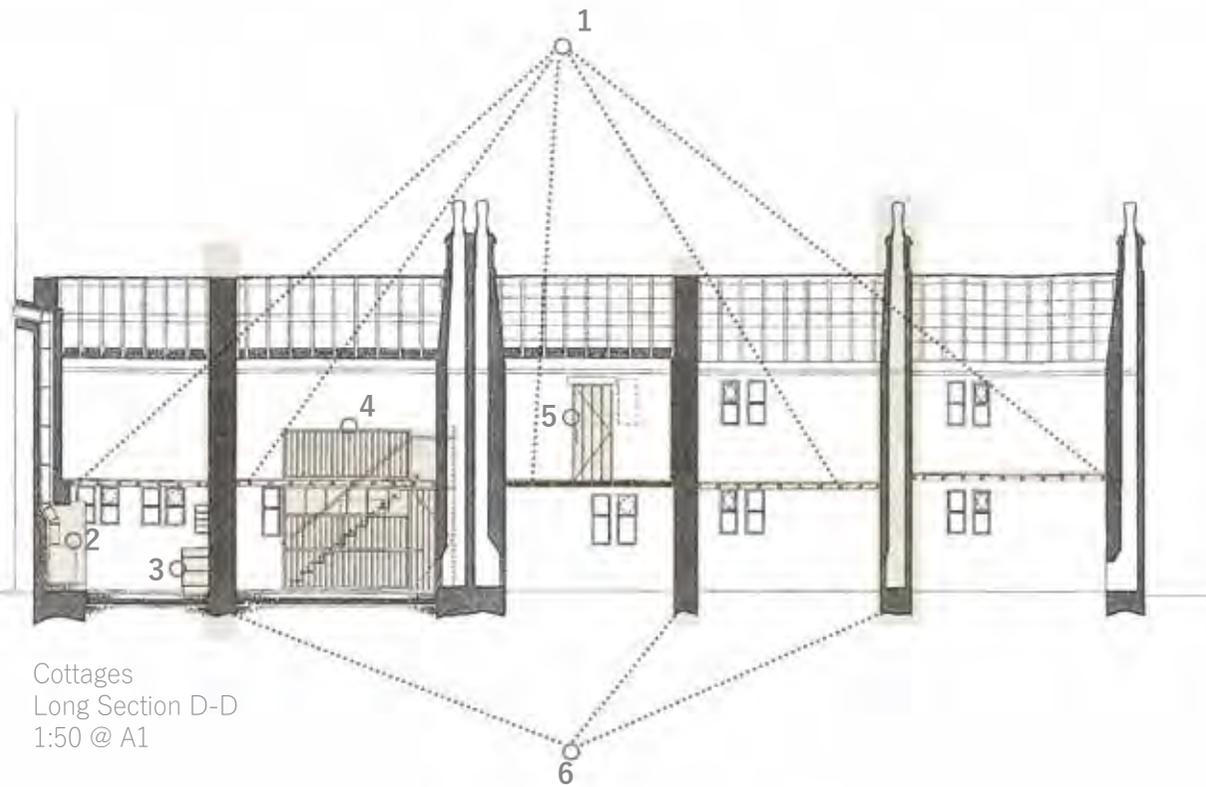
1 & 4. Windows and External Walls



Fig. 173.

ORIGINAL PLANS

STAY & GO



Cottages
Long Section D-D
1:50 @ A1

Fig. 174.



Cottages
Short Section E-E
1:50 @ A1

Fig. 175.

LONG SECTION

1. Internal Floors – Not structural, can be removed.
2. Stove – can be removed and flue blocked up.
3. Kitchen – can be removed.
4. Staircase – only access to 1st floor currently, not structural, can be removed.
5. Bathroom – Only bathroom in the cottages, can be removed, not structural.
6. Internal Walls – possibility of removing 3 of the internal walls, would need to add extra support with steel beams.

SHORT SECTION

7. Internal Floors – Not structural, can be removed.

STRIPPED

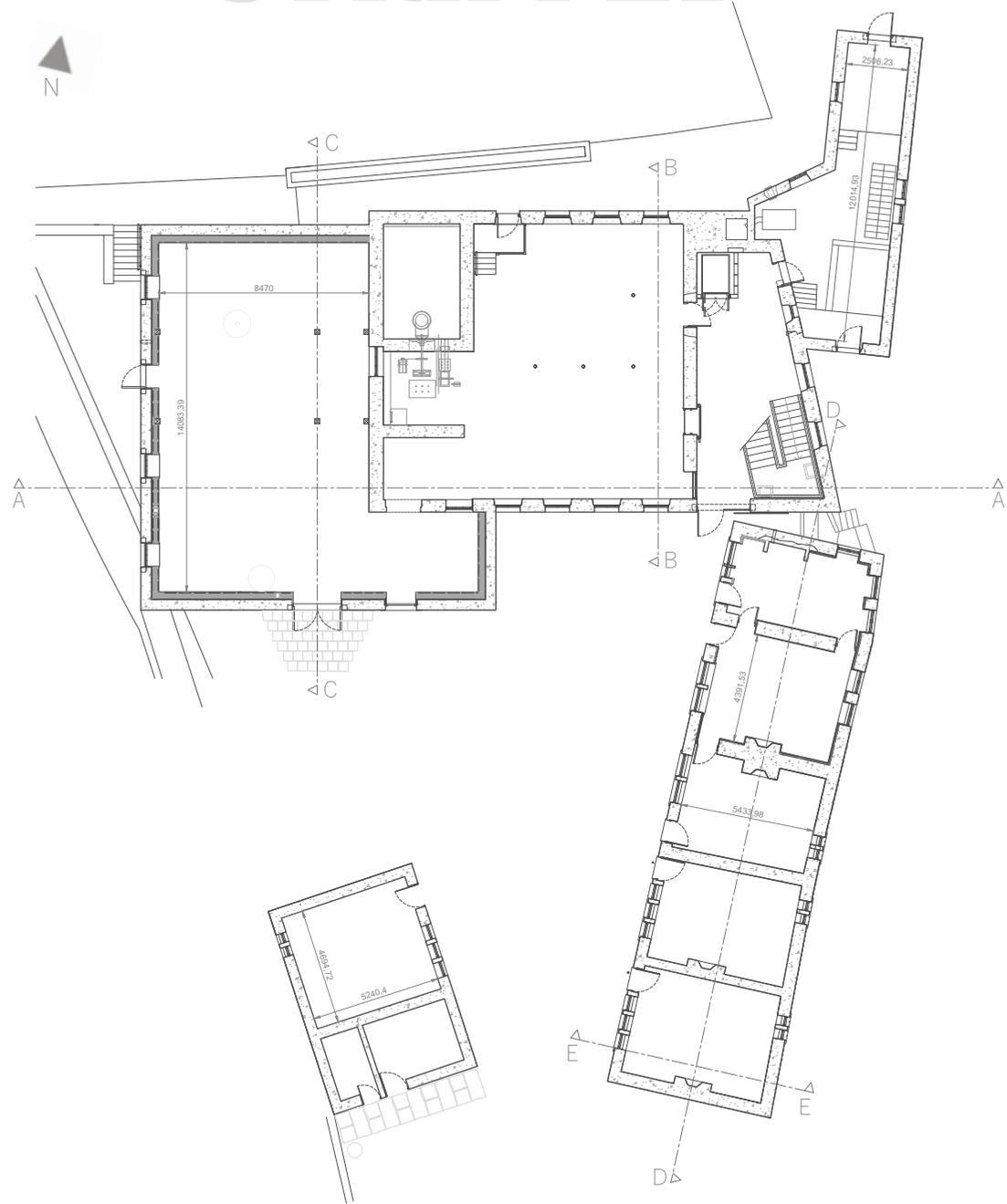


Fig. 176.

Gibson Mill
Ground Floor Plan



PLANS

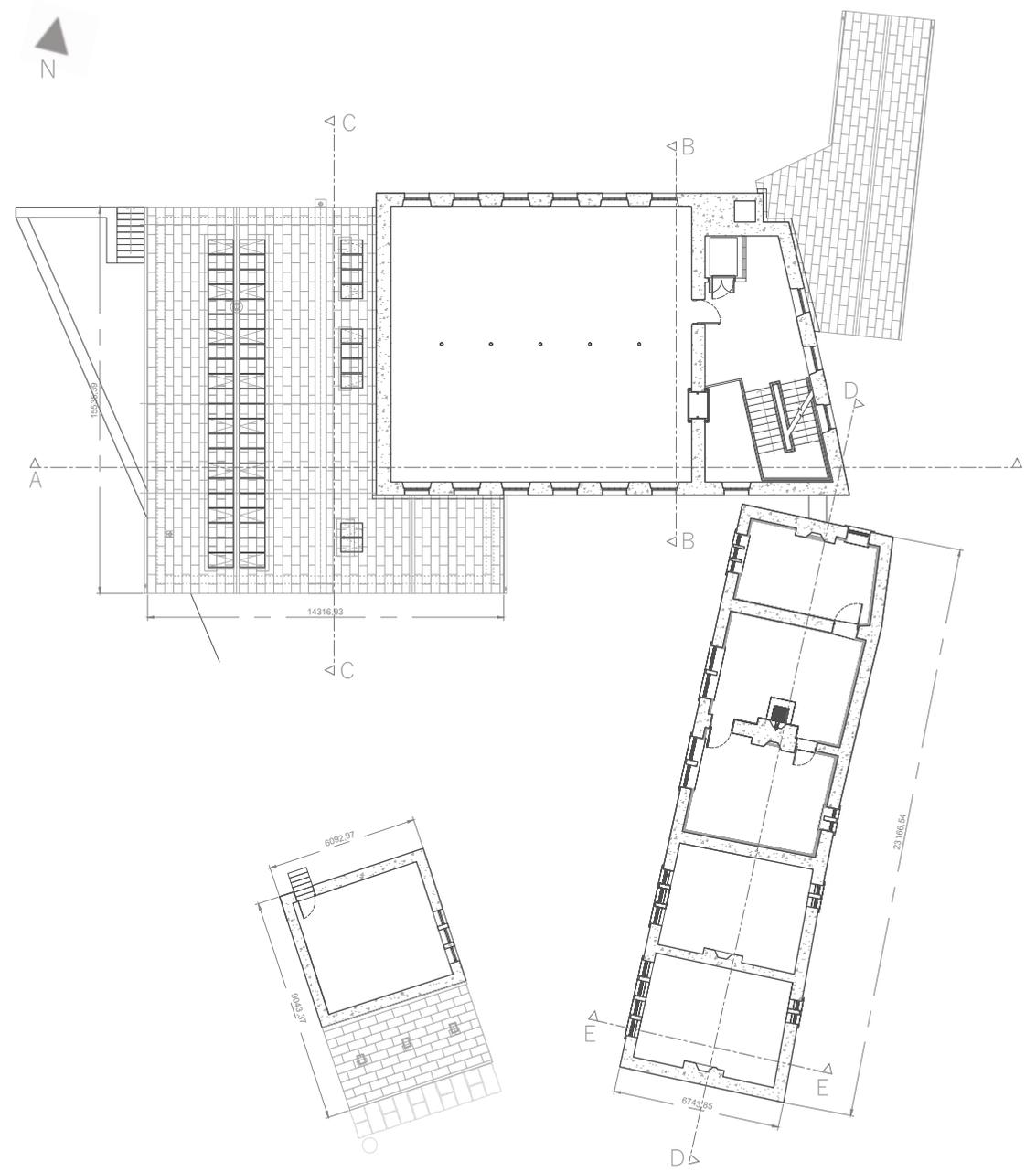


Fig. 177.

Gibson Mill
First Floor Plan



STRIPPED

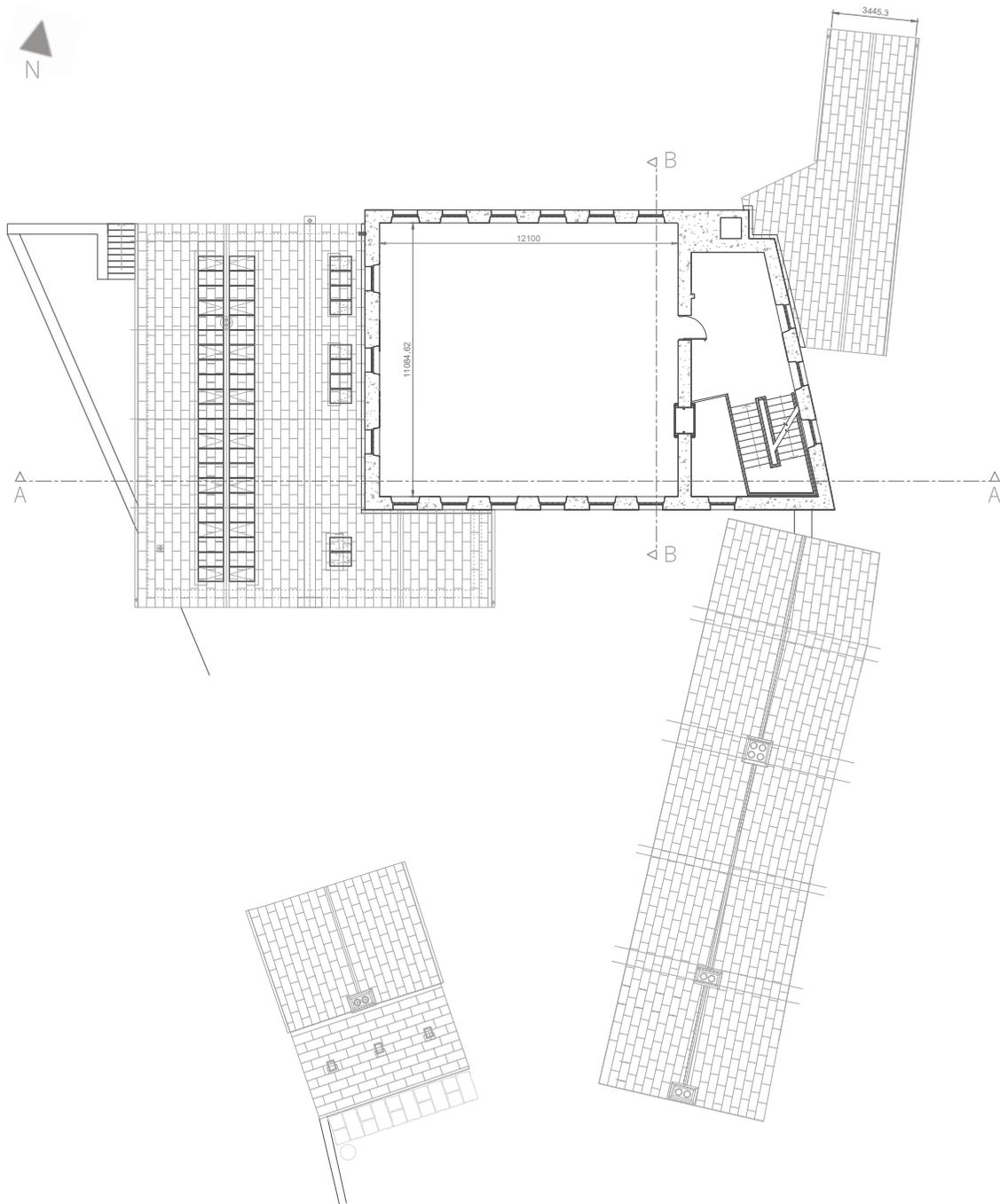


Fig. 178.

Gibson Mill
Second Floor Plan

PLANS

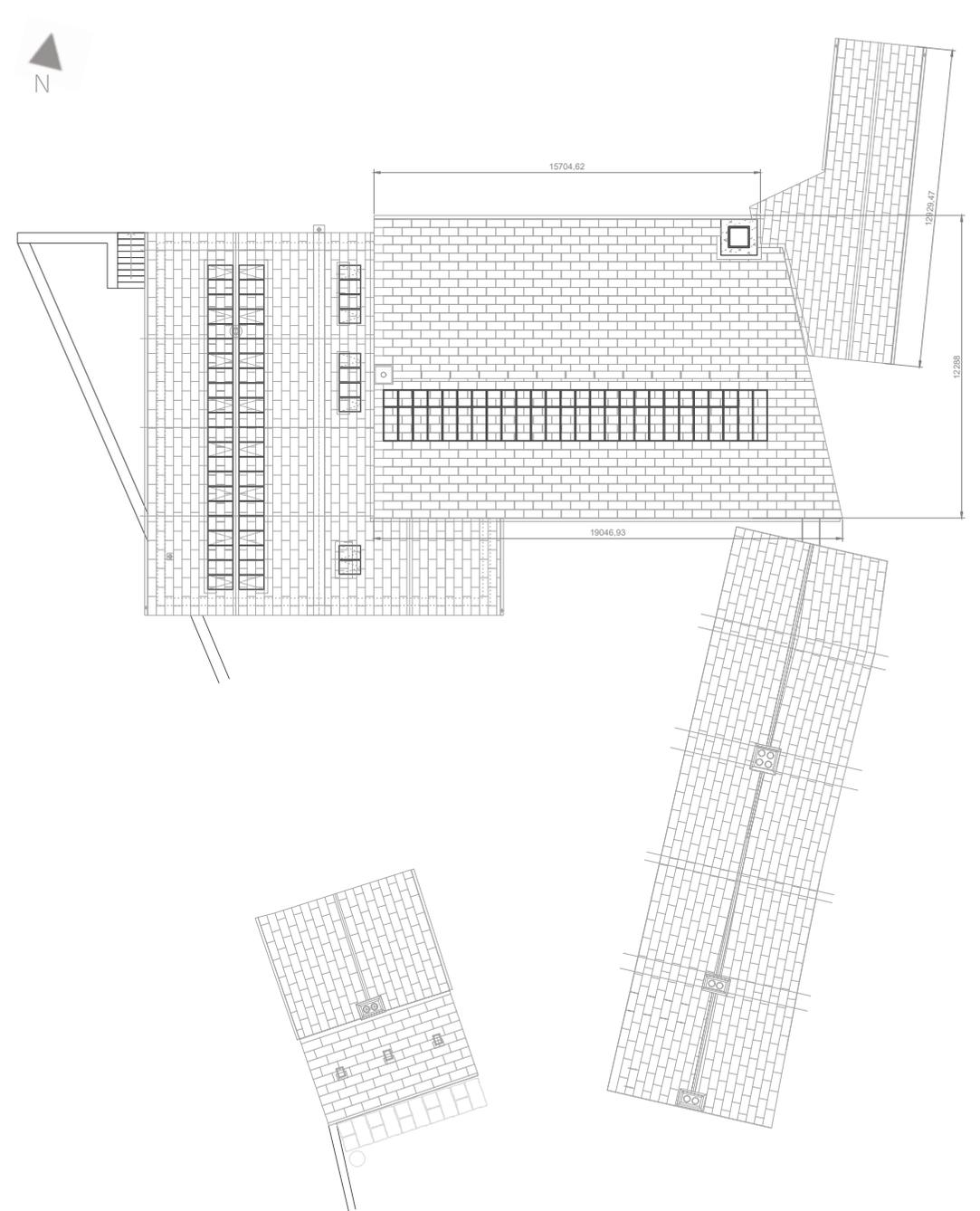


Fig. 179.

Gibson Mill
Roof Plan

STRIPPED

SECTIONS

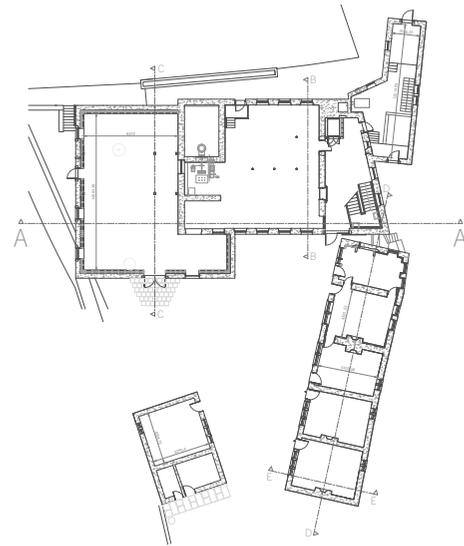
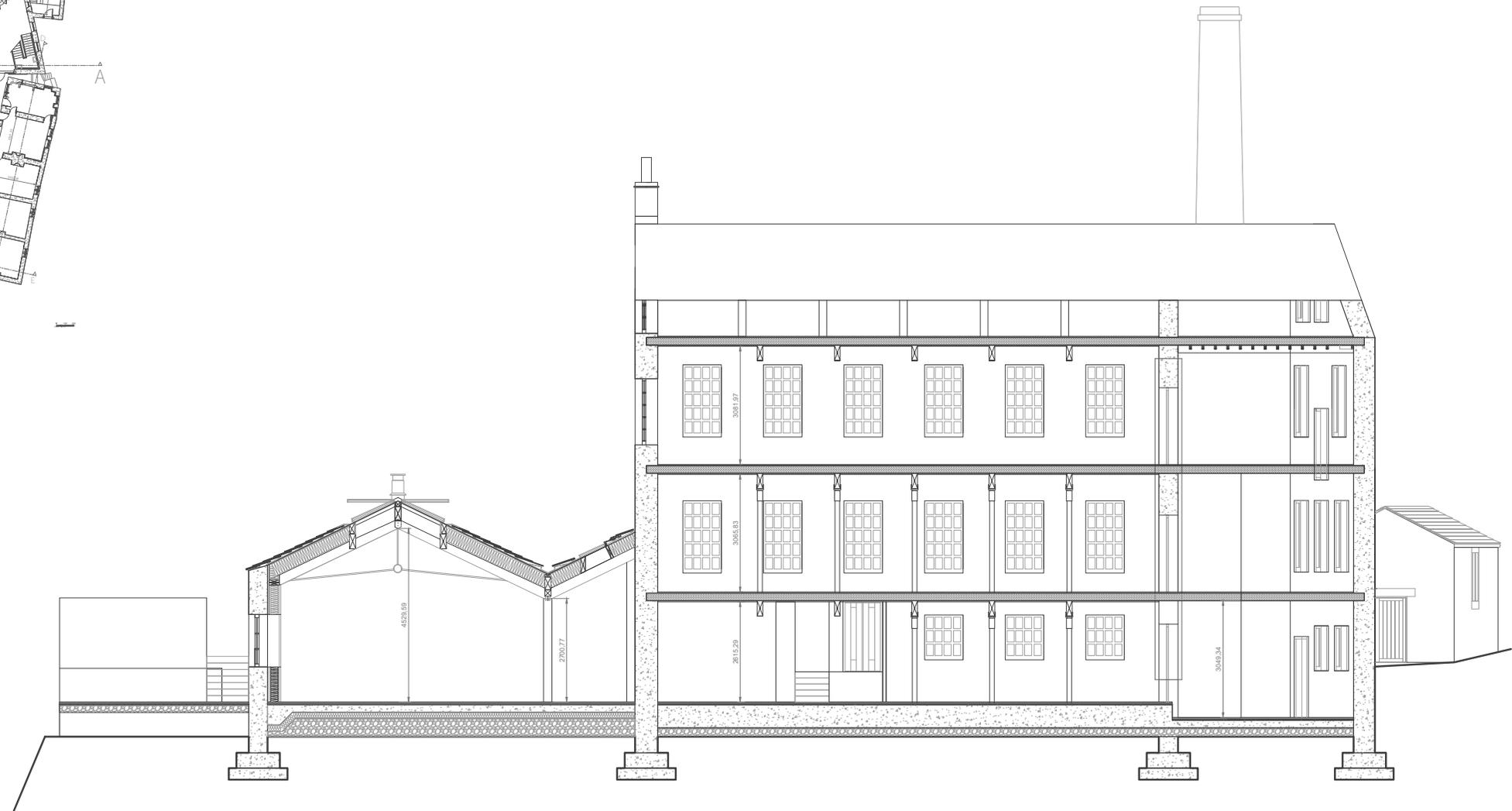


Fig. 180.



Gibson Mill
A-A Long Section

STRIPPED

SECTIONS



0 50 100

Gibson Mill
B-B Short Section

Fig. 182.

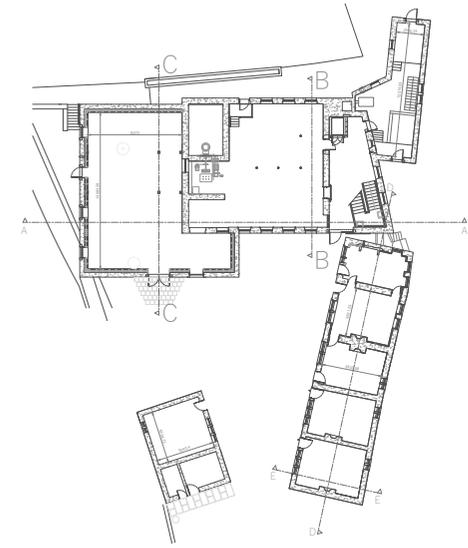
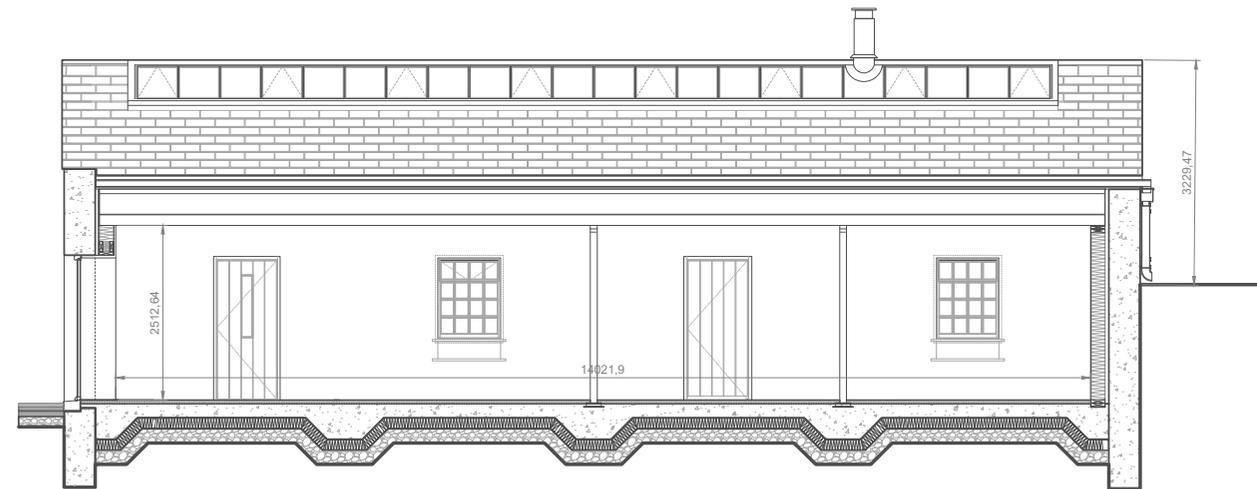


Fig. 183.



0 50 100

Weaving Shed
C-C Long Section

Fig. 184.

STRIPPED

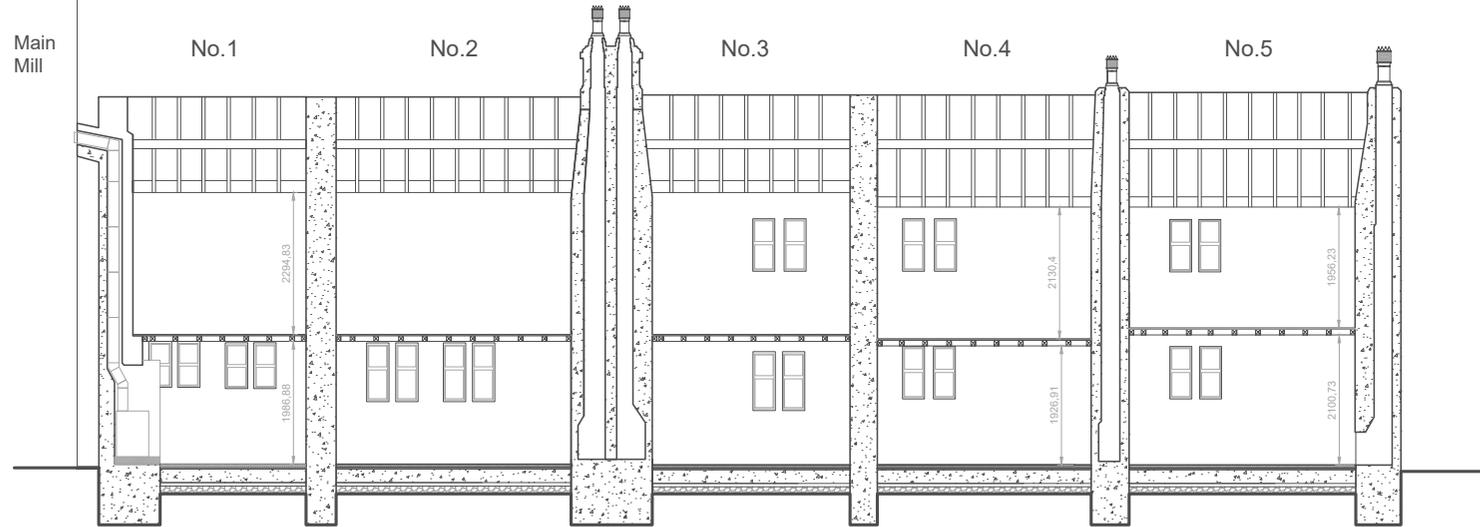


Fig. 185.

SECTIONS

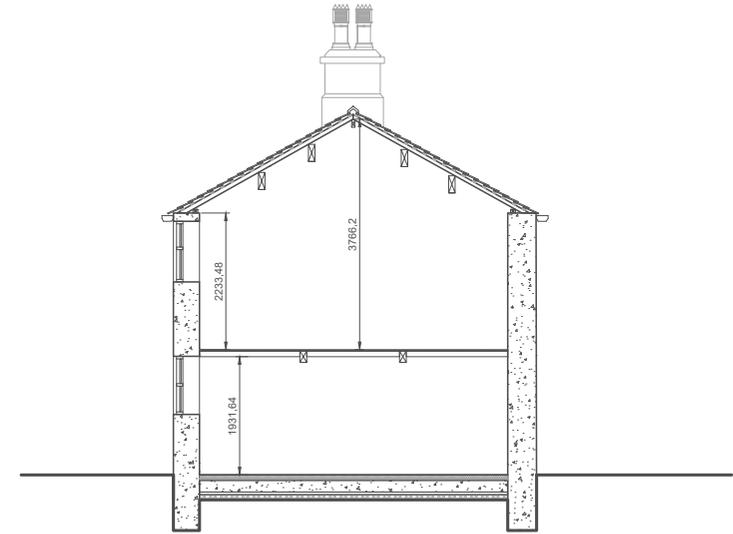


Fig. 186.

0 50 100
Cottages
D-D Long Section

0 50 100
Cottages
E-E Short Section

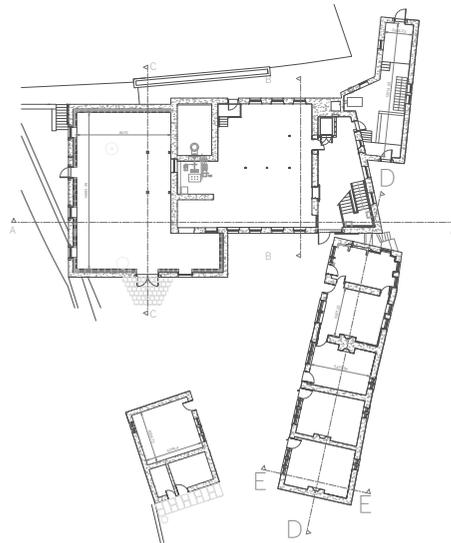


Fig. 187.

RECONSTRUCTION

The existing masonry walls are made from well coursed hammer dressed stone and dressed quoins. The existing walls have been retrofitted with a ventilated cavity panel to retain heat. Any obtrusive brick or metal work has been removed due to safety hazards and replaced or left unfilled. All gutting and pipes have been cleaned and refitted. The windows are surrounded by plain stone and all glass has been replaced with toughened safety glass. The existing stone floor has been newly repointed and insulated. The roof is insulated with recycled newspaper between the Masonite rafters and is covered with reclaimed stone slates. (The National Trust, 2005)

Gibson Mill was granted Grade II listed status on the 12th of December 1984 and includes these elements:

- Exterior Walls
- Windows
- Sills
- Gable Stacks
- Arched Cart Entry
- Water Turbine
- Cast-Iron Columns

(Historic England, 2006)



Fig. 188 - 191.

SUSTAINABILITY AT GIBSON MILL

In order to preserve the historic quality of the mill, Gibson mill is completely self-sufficient and does not require any mains services except for a phone line. Necessary repairs took place during the restoration of the building to ensure the facilities were fit for visitors and staff. All materials were either recycled or obtained from sustainable, local sources. The mill's turbine is used to provide electricity and solar thermal panels and solar photovoltaic panels combine to provide hot water and electricity. The natural spring supply's the mill's water demand and fuel for the stove is sourced from the estate. Dry composting lavatories allow for waste to be recycled as fertiliser (The National Trust, 2019). Ensuring that the building remains sustainable is important to ensure a healthy and environmentally friendly environment.



Fig. 192.



Fig. 193.



Fig. 194.

WINTER INTERIOR SHADOWS

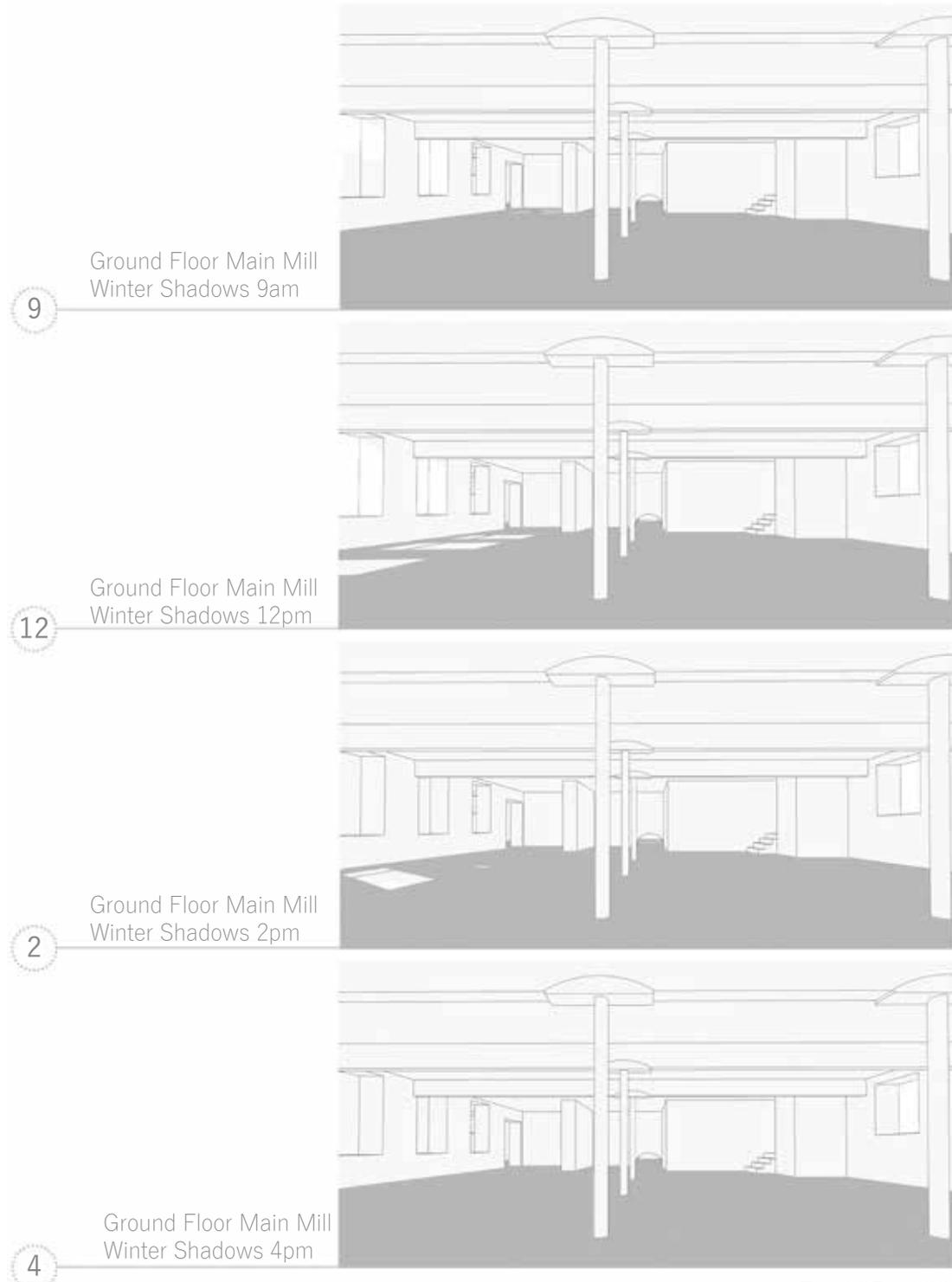


Fig. 195 - 198.

SUMMER INTERIOR SHADOWS



Fig. 199 - 202.

WINTER INTERIOR SHADOWS



Fig. 203 - 206

SUMMER INTERIOR SHADOWS



Fig. 207 - 210

WINTER INTERIOR SHADOWS

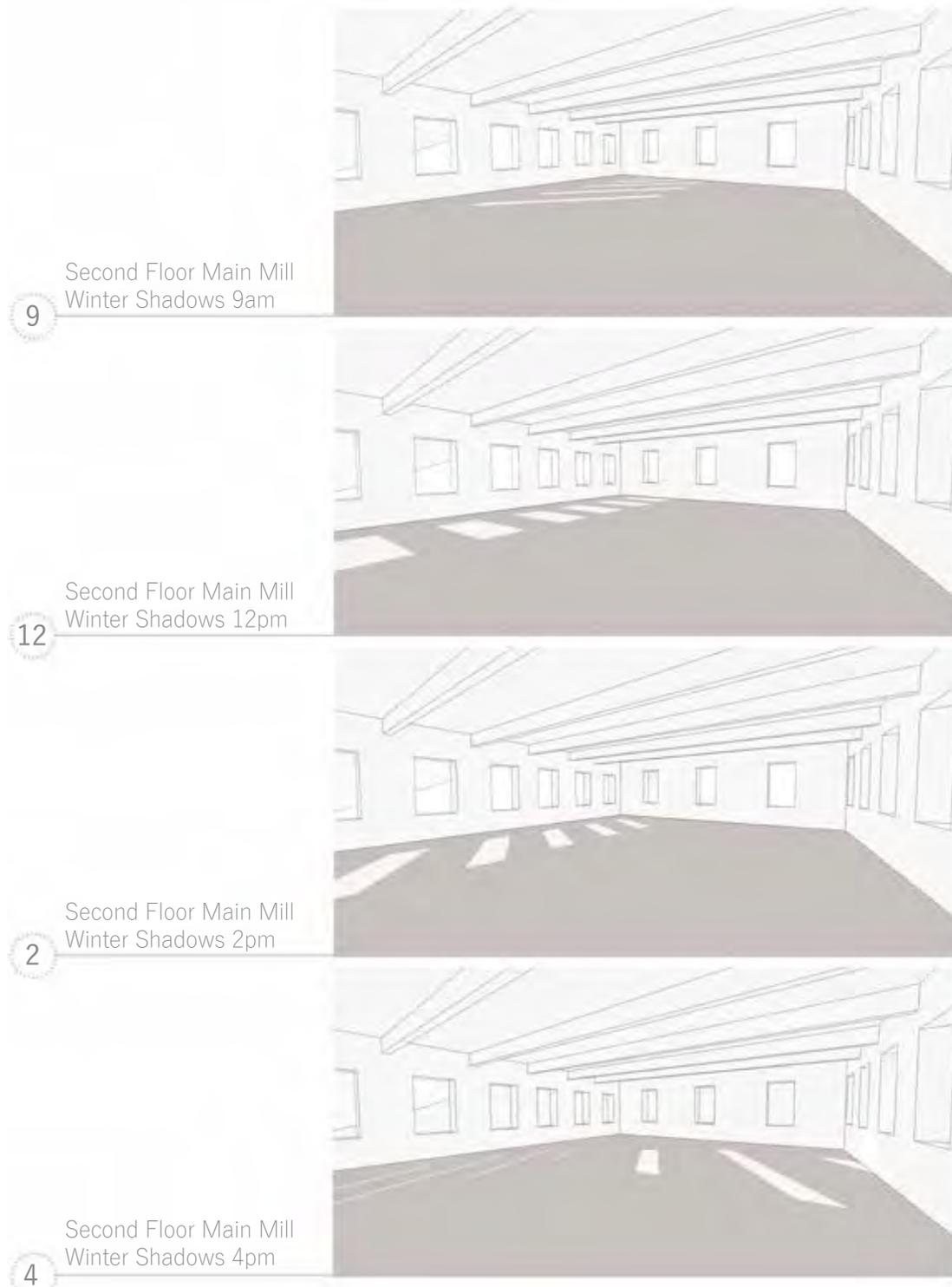


Fig. 211 - 214.

SUMMER INTERIOR SHADOWS

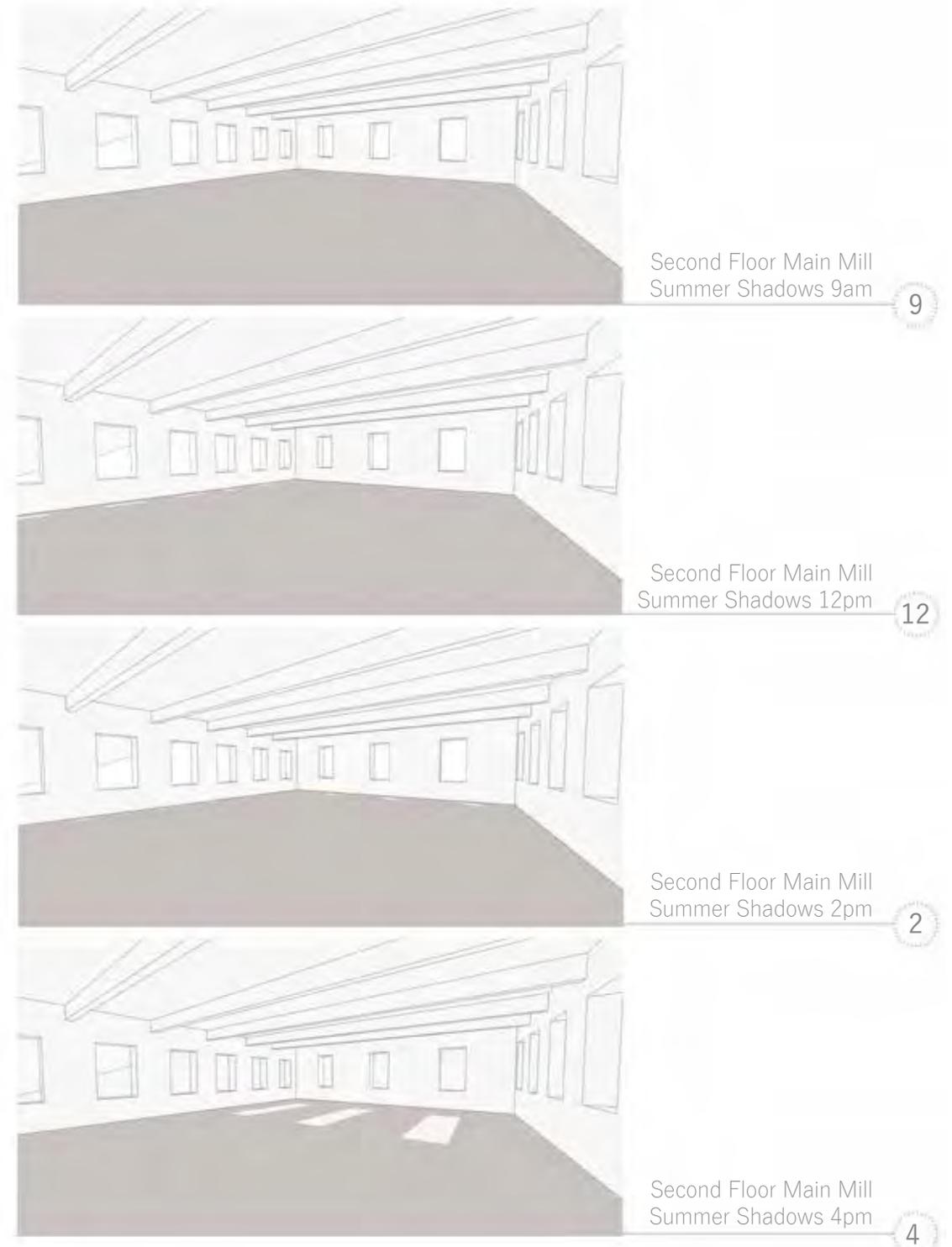


Fig. 215 - 218.

WINTER INTERIOR SHADOWS

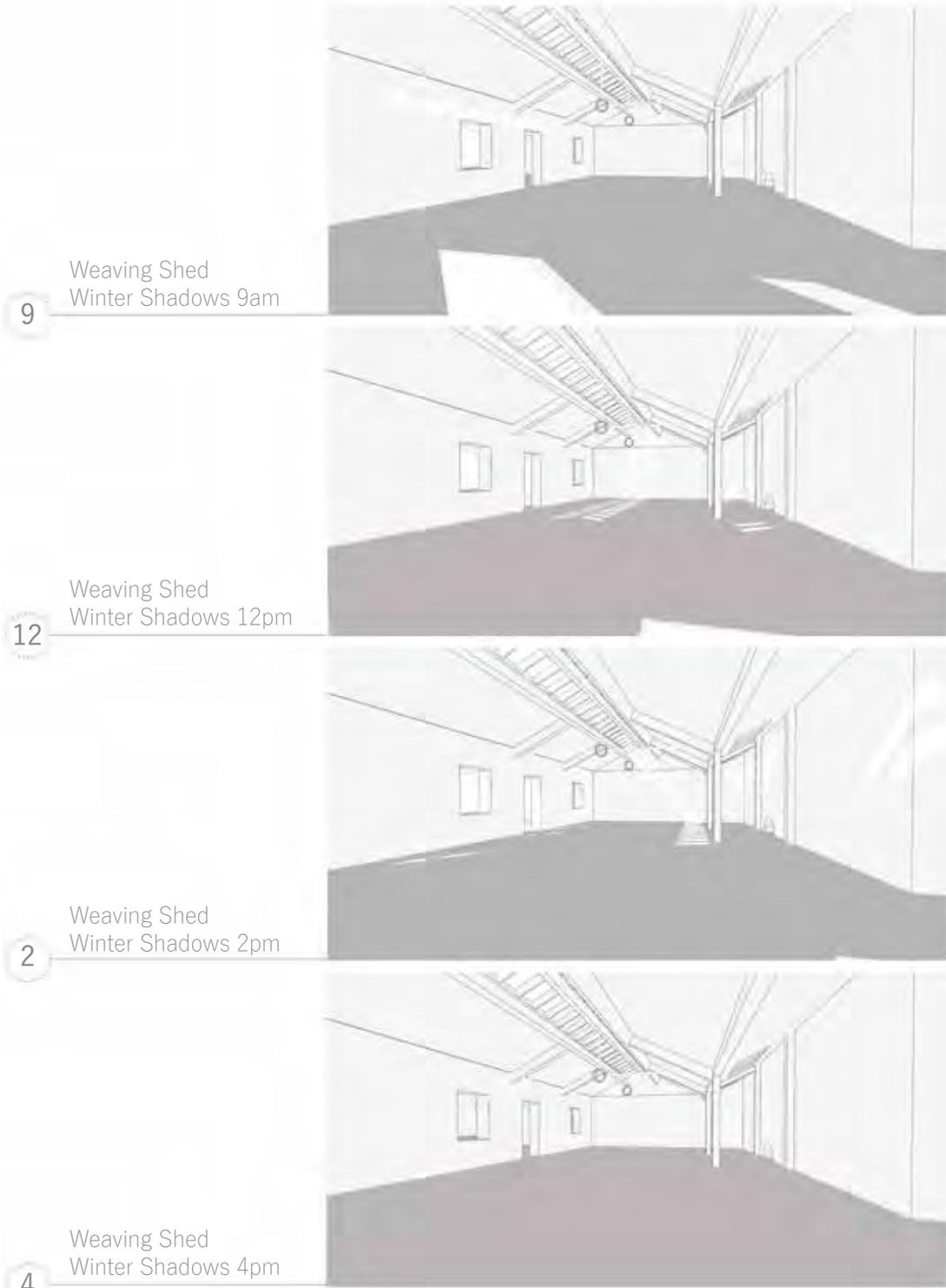


Fig. 219 - 222.

SUMMER INTERIOR SHADOWS

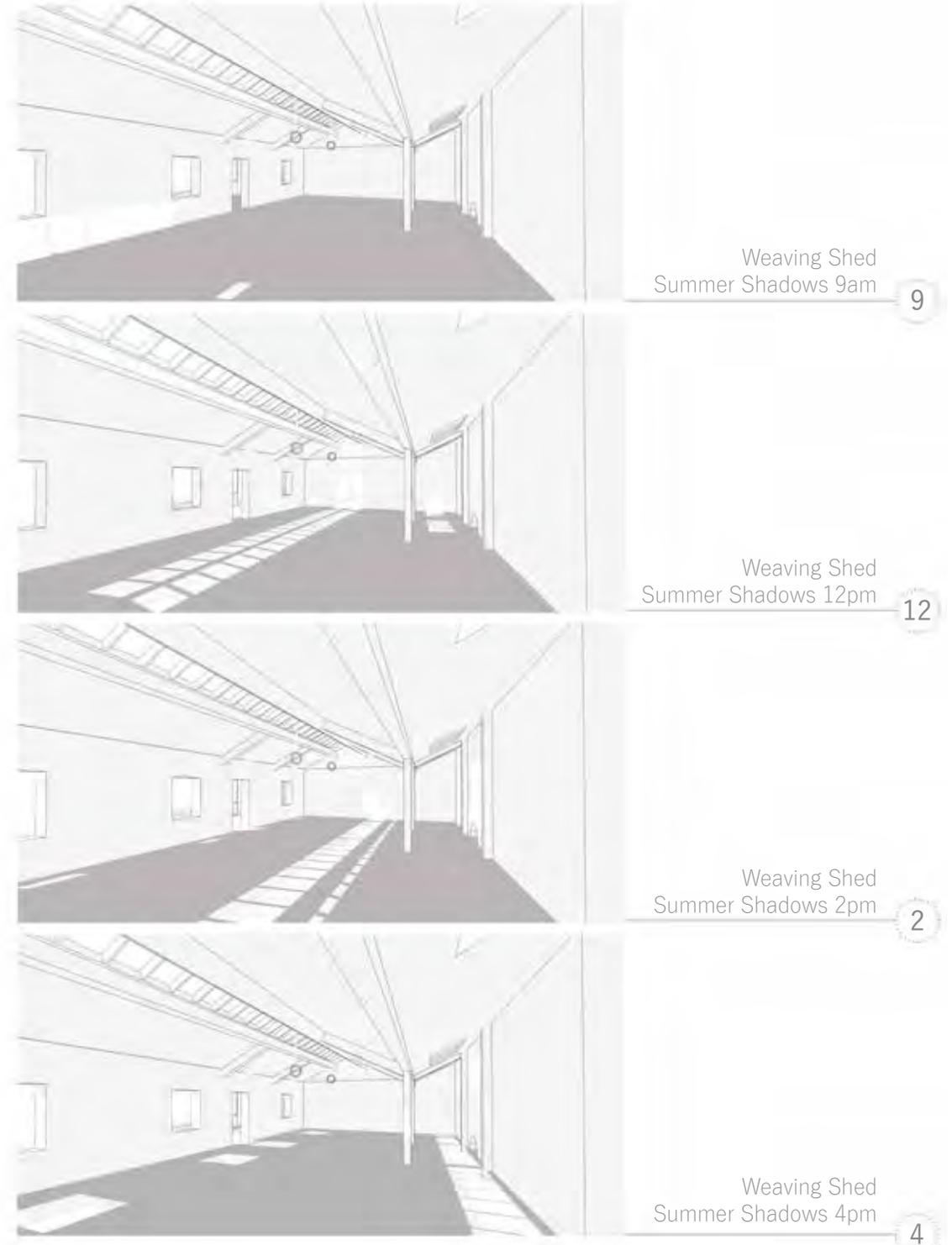


Fig. 223 - 226.

WINTER INTERIOR SHADOWS



Fig. 227 - 230.

SUMMER INTERIOR SHADOWS



Fig. 231 - 234.

WINTER INTERIOR SHADOWS



Fig. 235 - 238.

SUMMER INTERIOR SHADOWS

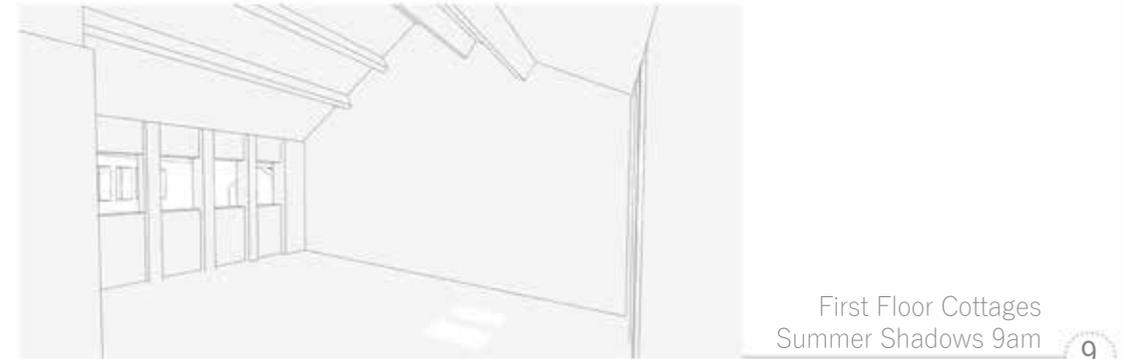


Fig. 239 - 242.



CONTEXT

The building is surrounded by nature and sits adjacent to Hebden water. The building is situated in the valley of Hardcastle Crag. The building stands alone, which is highlighted with the contrast between structure and nature.

PROPORTIONS & SIZE

The main mill is 3 ½ storeys high. The weaving mill is a single storey. The cottages and toll house are double storey. Currently, the site is not being used to its full potential as many of the areas are cut off to the public. The building has large open spaces, while carrying some smaller secluded areas towards the back of the building. The cottages are for staff use only, they are smaller in size and have a 'cosy' feeling to them.

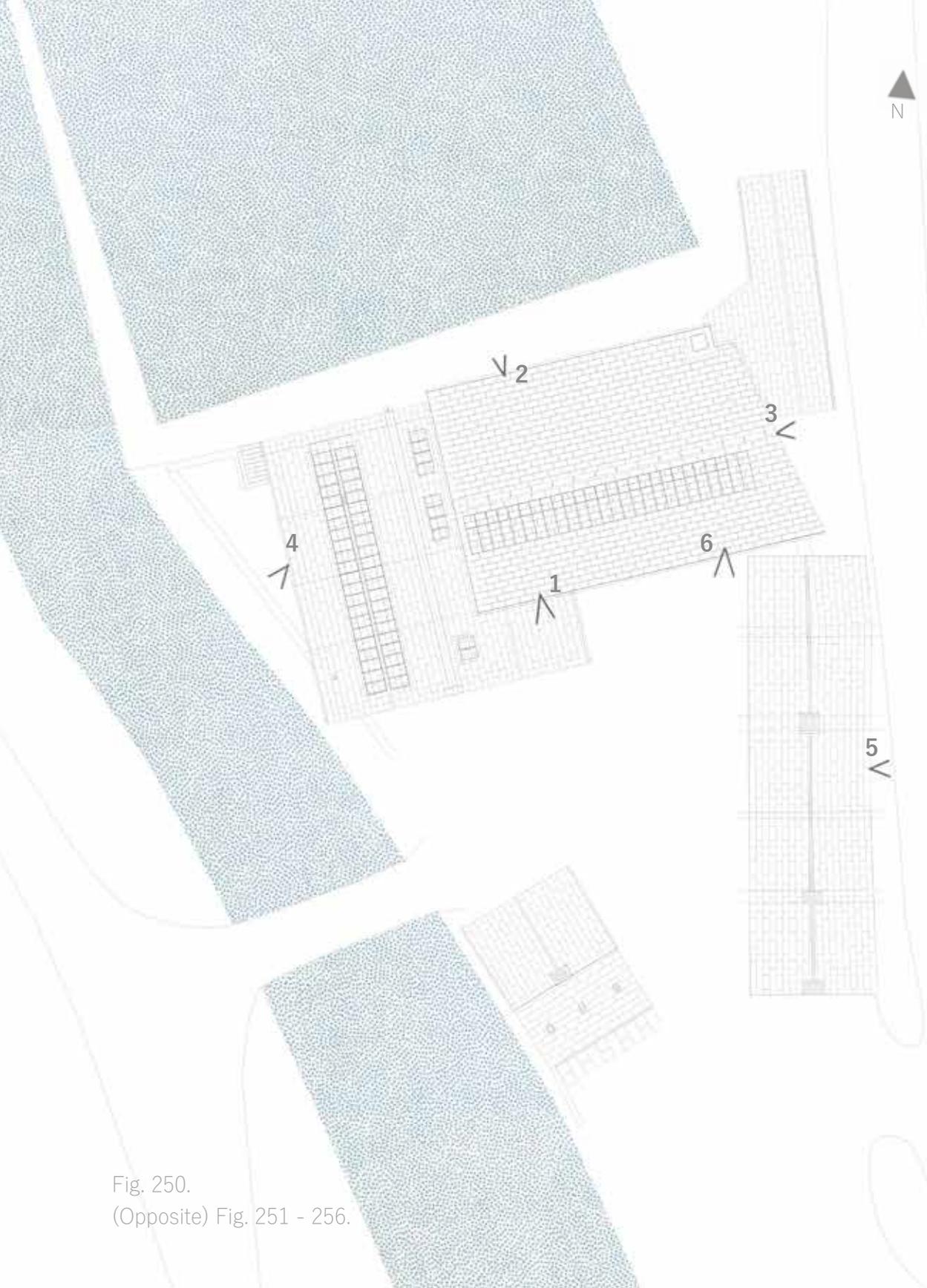
ACCESS

Each one of the cottages has a separate entrance/exit. The Mill has 2 main double doors opening out onto the courtyard of the building. There are many entrances/exits which currently are not being used but have the potential to be. There is a lift situated at the back of the building, allowing access to the 1st floor, there is no lift for the 2nd or 3rd floor or in the cottages. The toilets are located in a separate building a short walk away, the disabled toilet is located in one of the storage buildings on the courtyard.

EXTERNAL SPACE

The central courtyard is a pivotal space that links the different buildings together, all users must use this space. The pond area is less visited and could be made into more of a feature.

BUILDING VIEWS



1. 1st Floor Courtyard



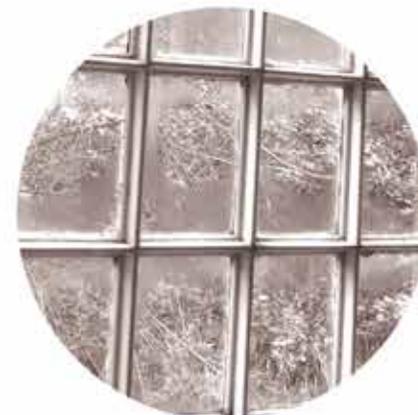
2. 1st Floor Mill Pond



3. Ground Floor Estate Track



4. Ground Floor Bridge



5. Ground Floor Estate Track



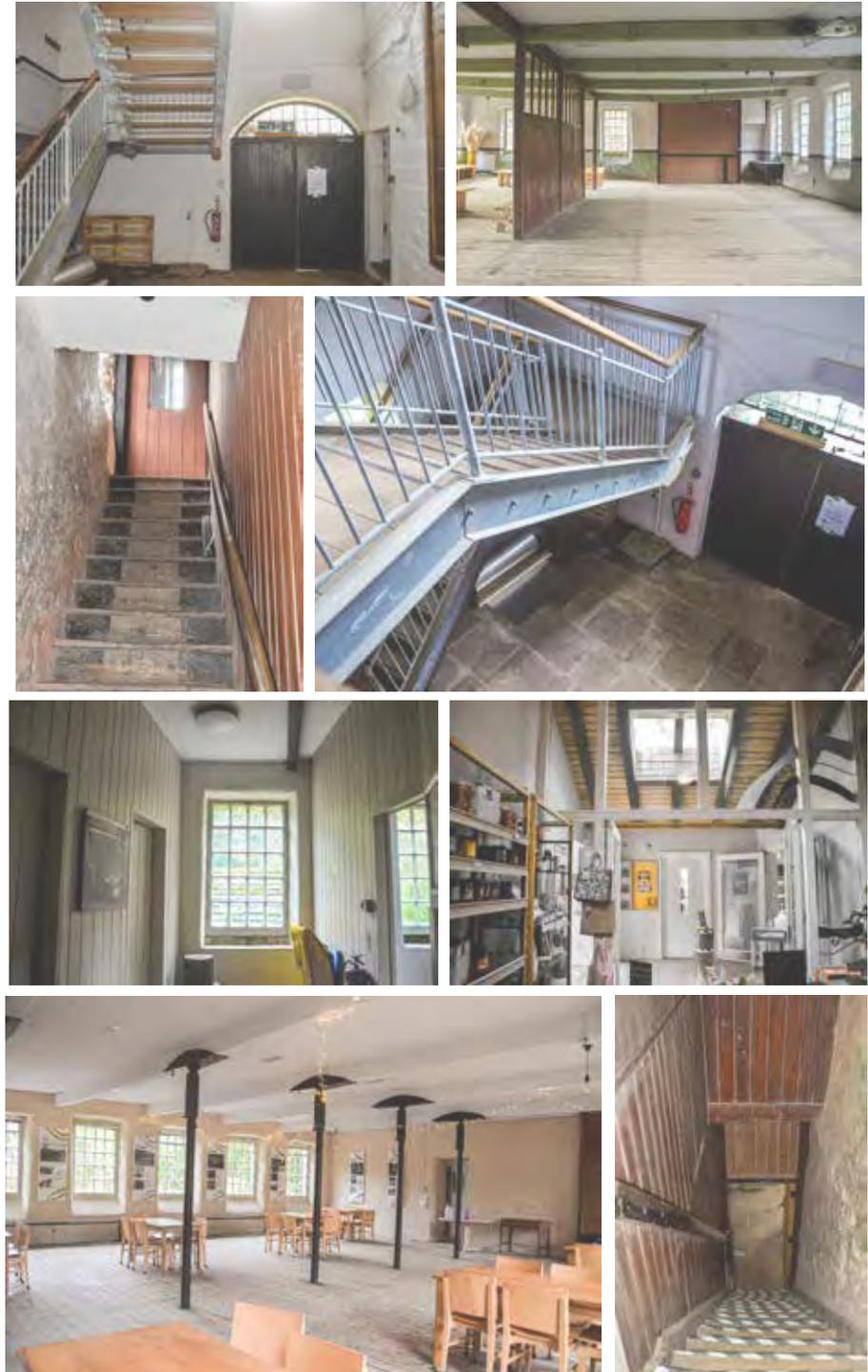
6. 2nd Floor Courtyard

Fig. 250.
(Opposite) Fig. 251 - 256.

THRESHOLDS & INTERNAL SENSES

Thresholds currently defined by doorways and thick masonry walls. Stone flag floor continues throughout the ground floor of the weaving shed and main mill. Most important is the threshold between people's busy chaotic lives and the site itself, this transitional period is elongated due to the journey from the car park, allowing visitors to unwind and become ready for the treatment and education they are about to receive.

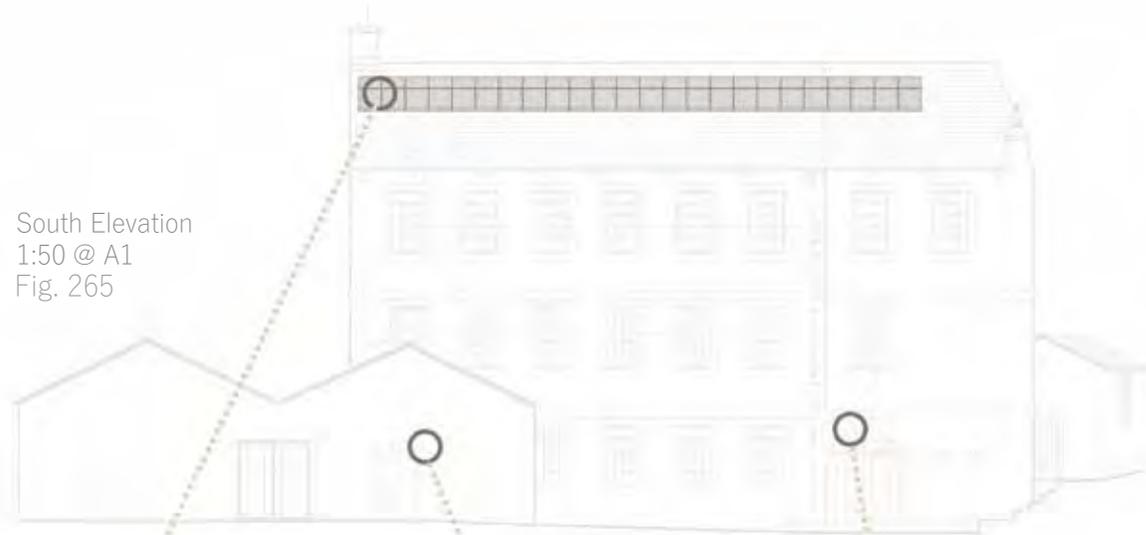
The smell of the building is musty and damp, something to be expected with so much water on site, as the spaces are in use more often, this will subside. The internal rendering mimics the original plaster work that would have been done when originally built, leaving the walls heavily textured. Due to the large size of the rooms and lack of furniture/finishing's, the spaces feel empty and sad, this is heightened by the echoes of visitor's voices and footsteps.



(Opposite) Fig. 257 - 264.

EXTERNAL

MATERIALITY



South Elevation
1:50 @ A1
Fig. 265



Removable Solar Panels - 150mm stand off above stone slate roof.

Fig. 266



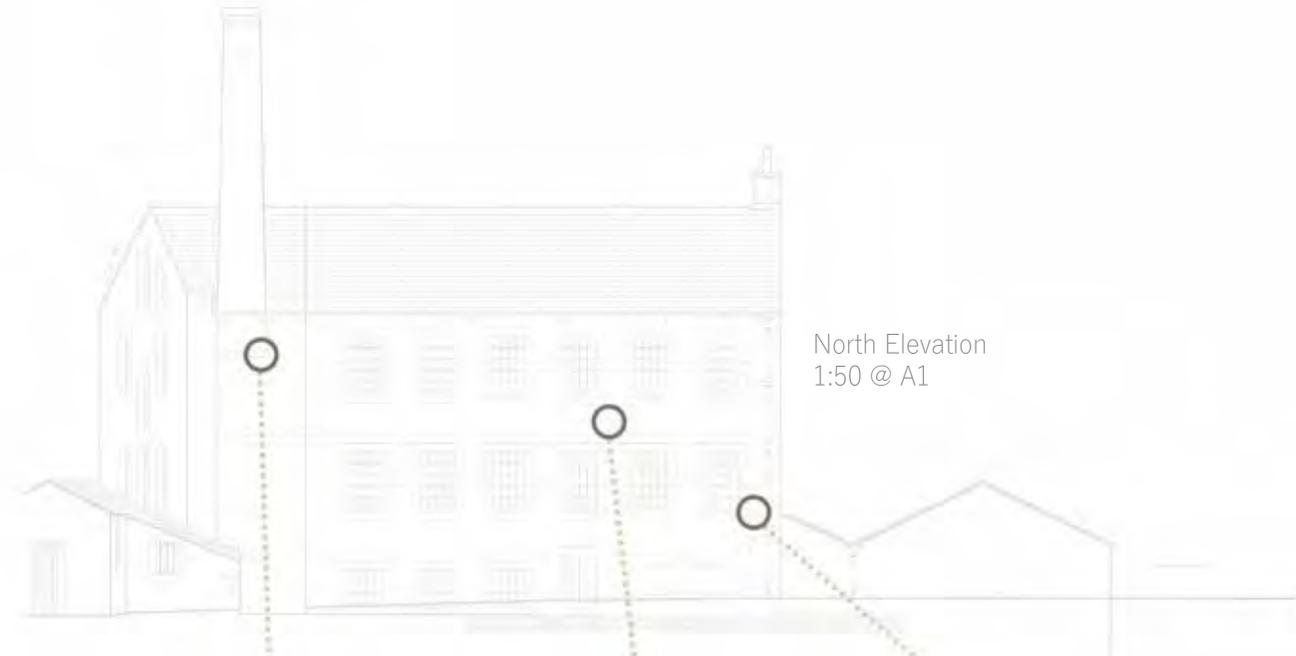
Existing entrance - all doors made of timber painted matt black.

Fig. 267



Lunette Window - surrounded by arched stone casing.

Fig. 268.



North Elevation
1:50 @ A1



Discolouration of stone around bottom of tallest gable stack.

Fig. 269.



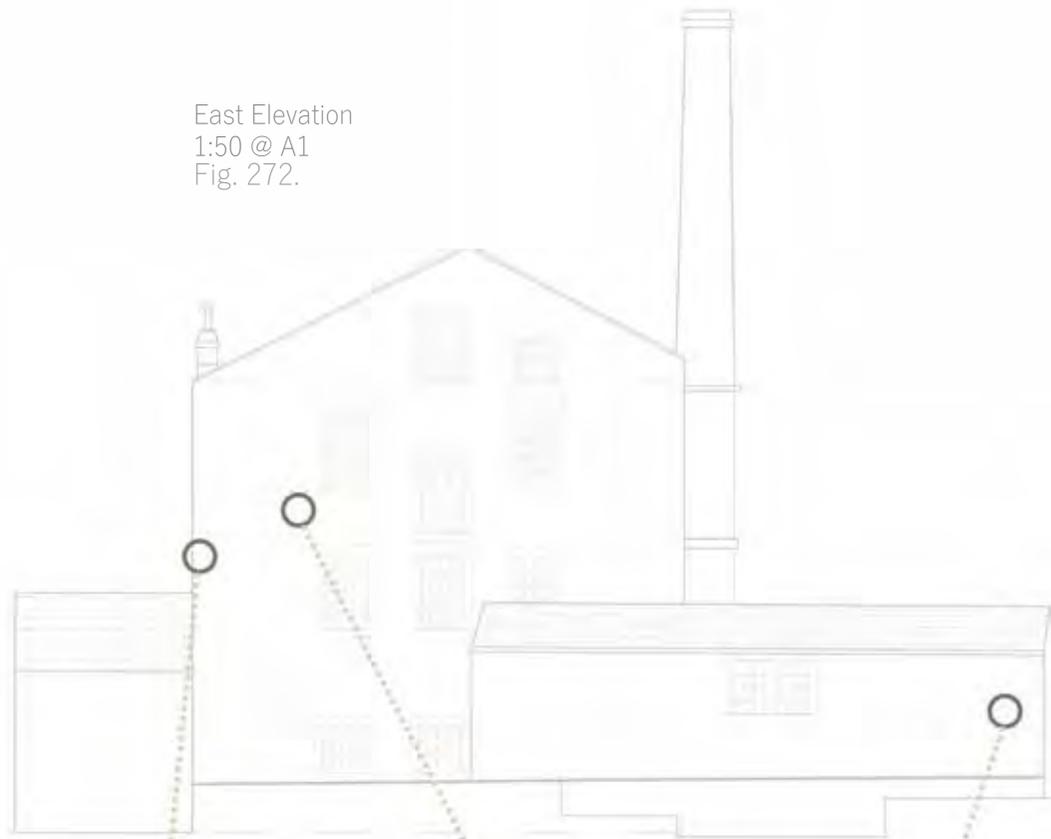
Lime Mortar - Colour variation due to repair work throughout exterior.

Fig. 270.



Quoins - load bearing and adds detail & accentuates corners of the building.
Fig. 271.

East Elevation
1:50 @ A1
Fig. 272.



Stone Sloping Flue - only connecting point between mill & cottages.
Fig. 273.

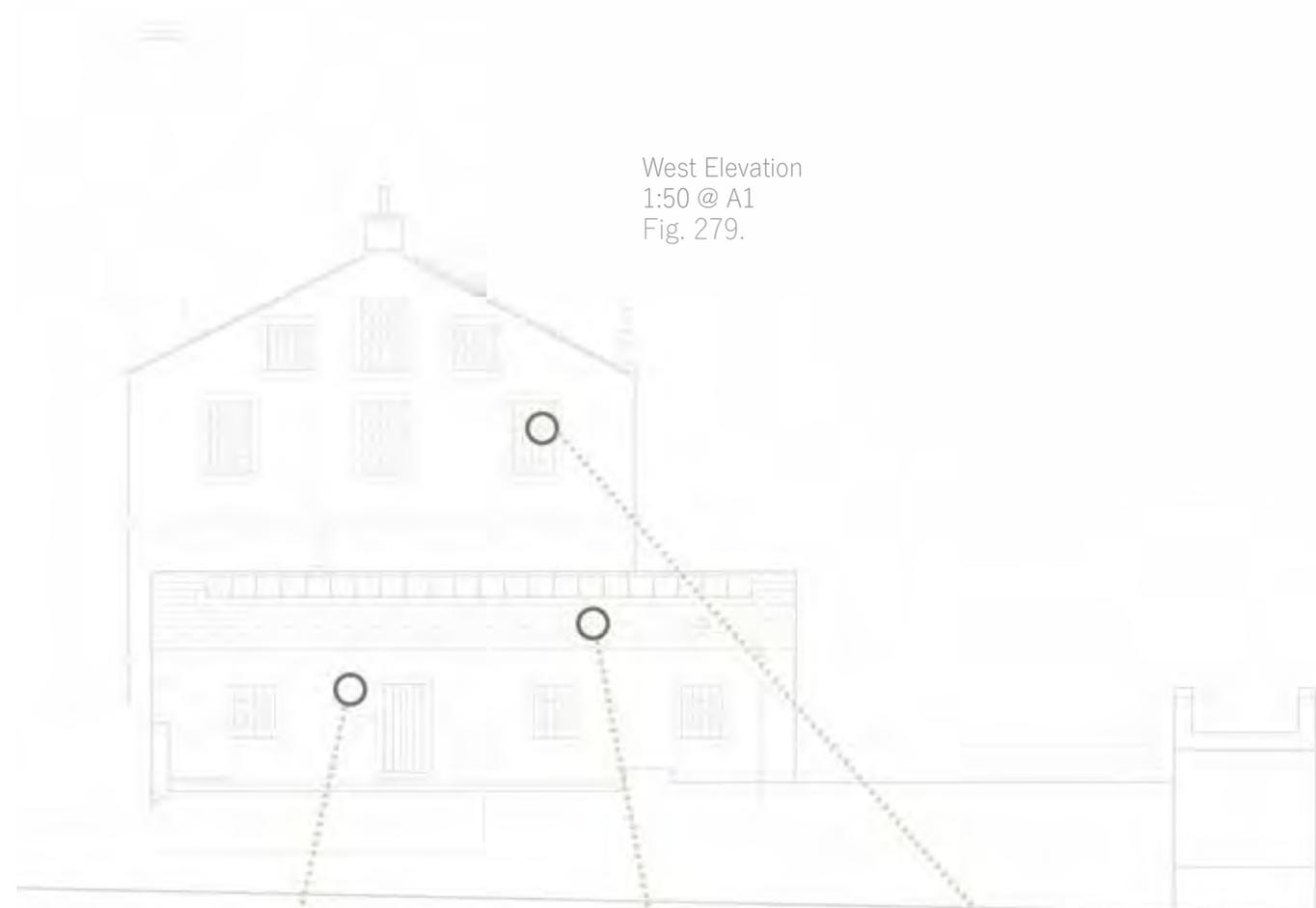


Recessed windows surrounded by stone casings.
Fig. 274.



Stone Walls & lime mortar in a semi-regular running bond pattern.
Fig. 275.

West Elevation
1:50 @ A1
Fig. 279.



Different stone has been used to repair entrance into weaving shed.
Fig. 276.



All buildings have the same stone slate roof.
Fig. 277.



Sash windows painted white, some are sliding & some are tilt openings.
Fig. 278.

INTERNAL

MATERIALITY



1. Lime render - cracking in many places.



2. Timber Structure - present in Weaving Shed only, Made from locally sourced oak from the National Trusts Woodland.



3. Natural Casein Distemper Paint - Weaving Shed only.



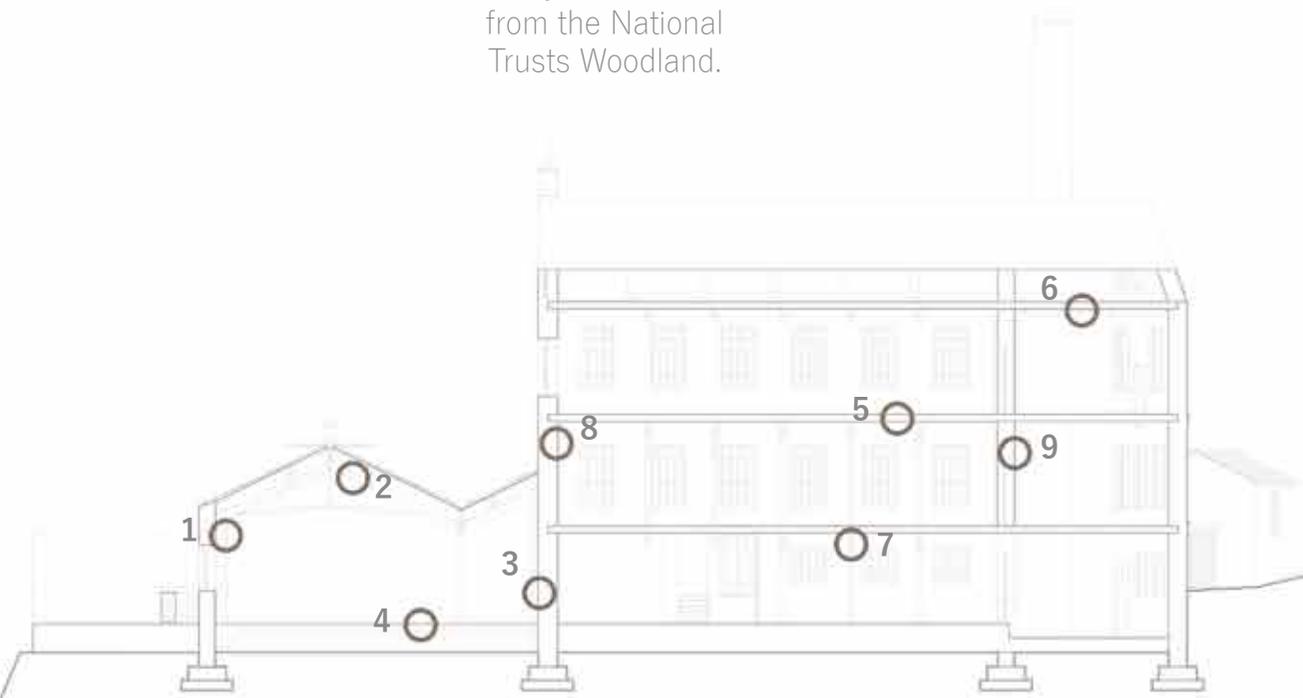
4. Stone Flag Floor - newly insulated & re-pointed on a lime mortar bed.



5. Timber Flooring on the first and second floor only.



6. Change in ceiling - exposed beams, joists and timber floorboards above.



7. Cast-Iron Columns - Used as structural support for floor above.



8. Traditional Lime Render - peeling and cracking due to age and sun exposure through windows & openings.



9. Timber & glass casing around hoist.

EXTERIOR CIRCULATION

The site is in the centre of woodland trails, meaning the site can be approached from any angle. There are 4 separate buildings, each must come outside to enter another one, meaning there are many different exits/ entrances. The central courtyard is a pivotal space that links the different buildings together, all users must use this space. The pond area is less visited and could be made into more of a feature.

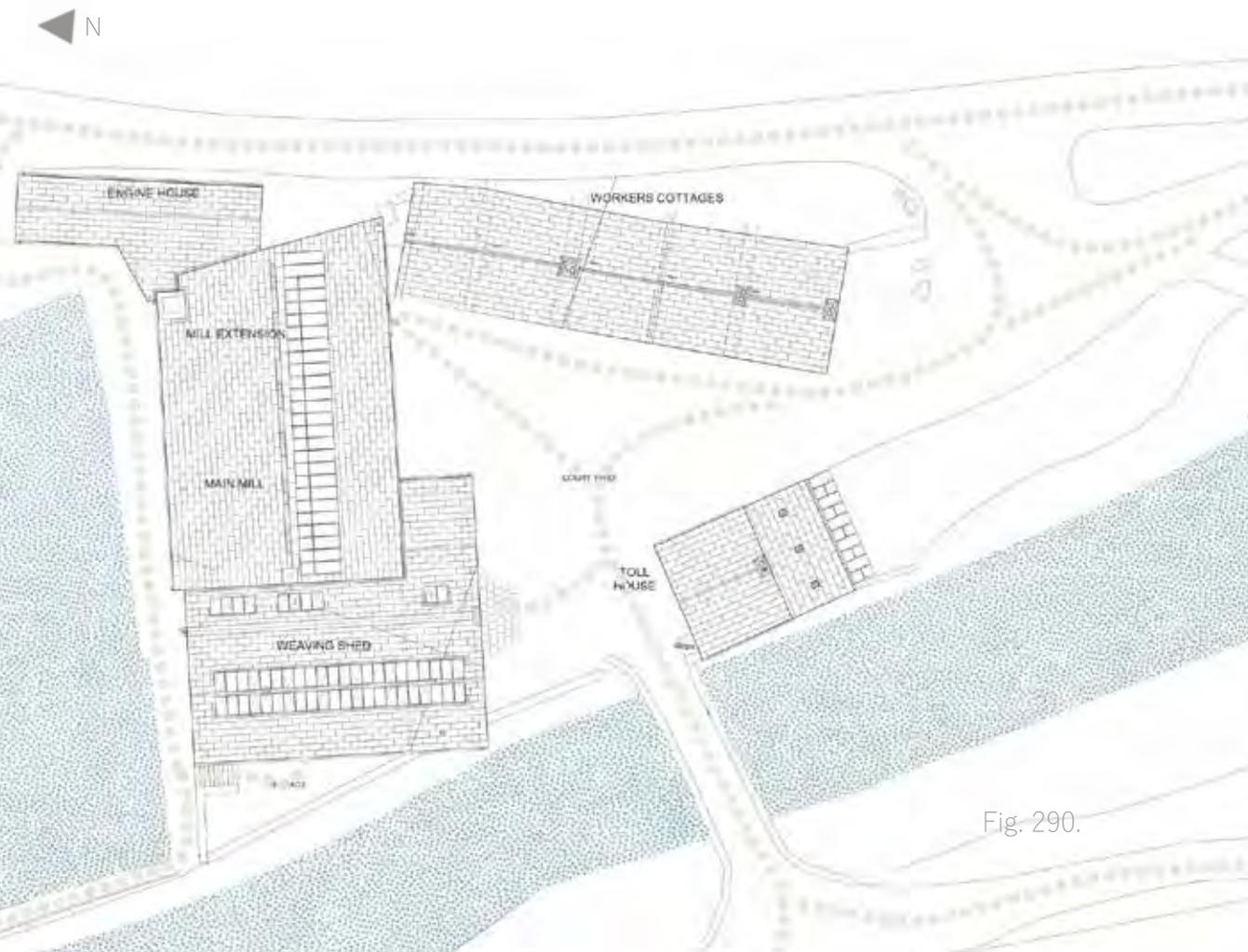


Fig. 290.

INTERIOR CIRCULATION

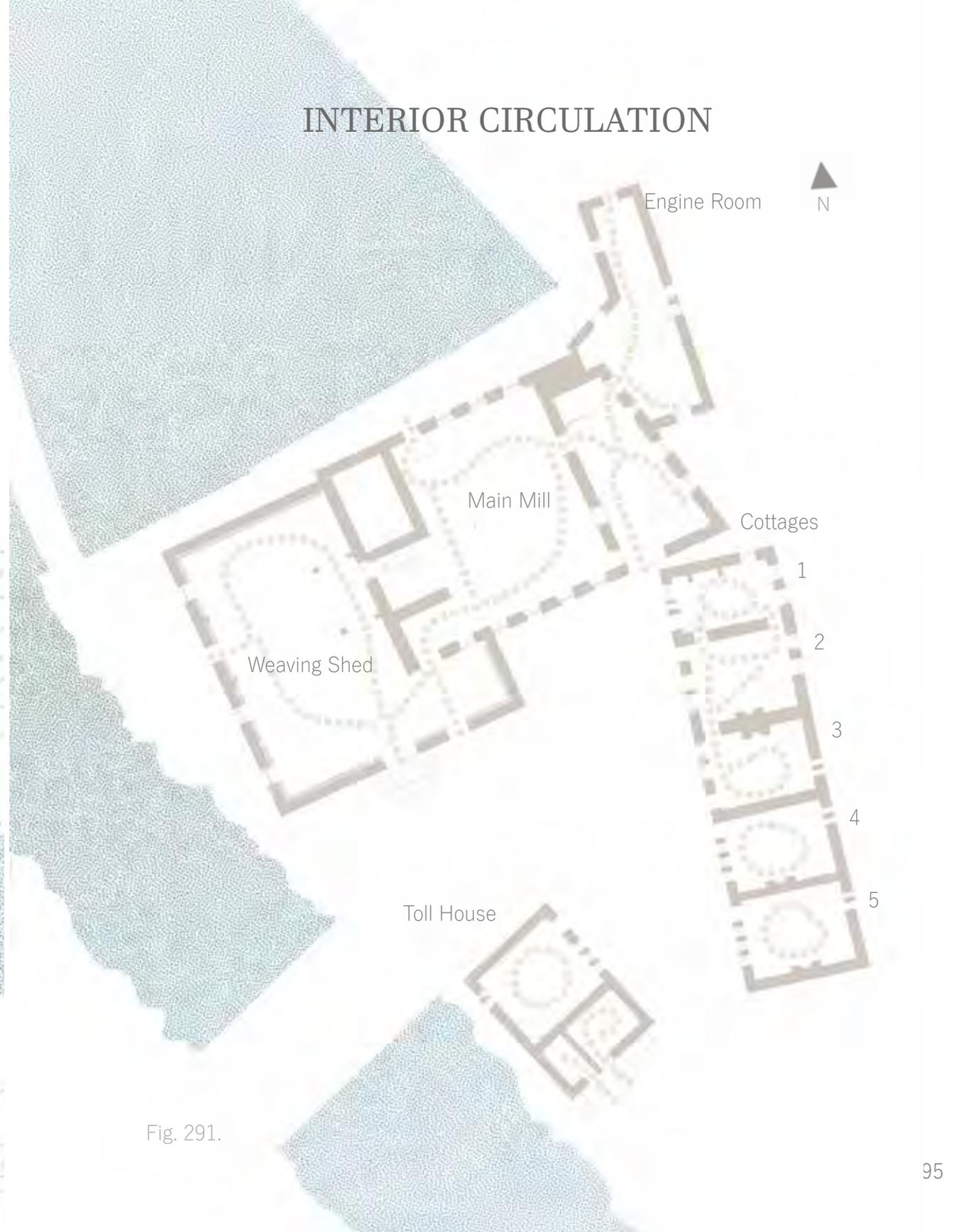


Fig. 291.

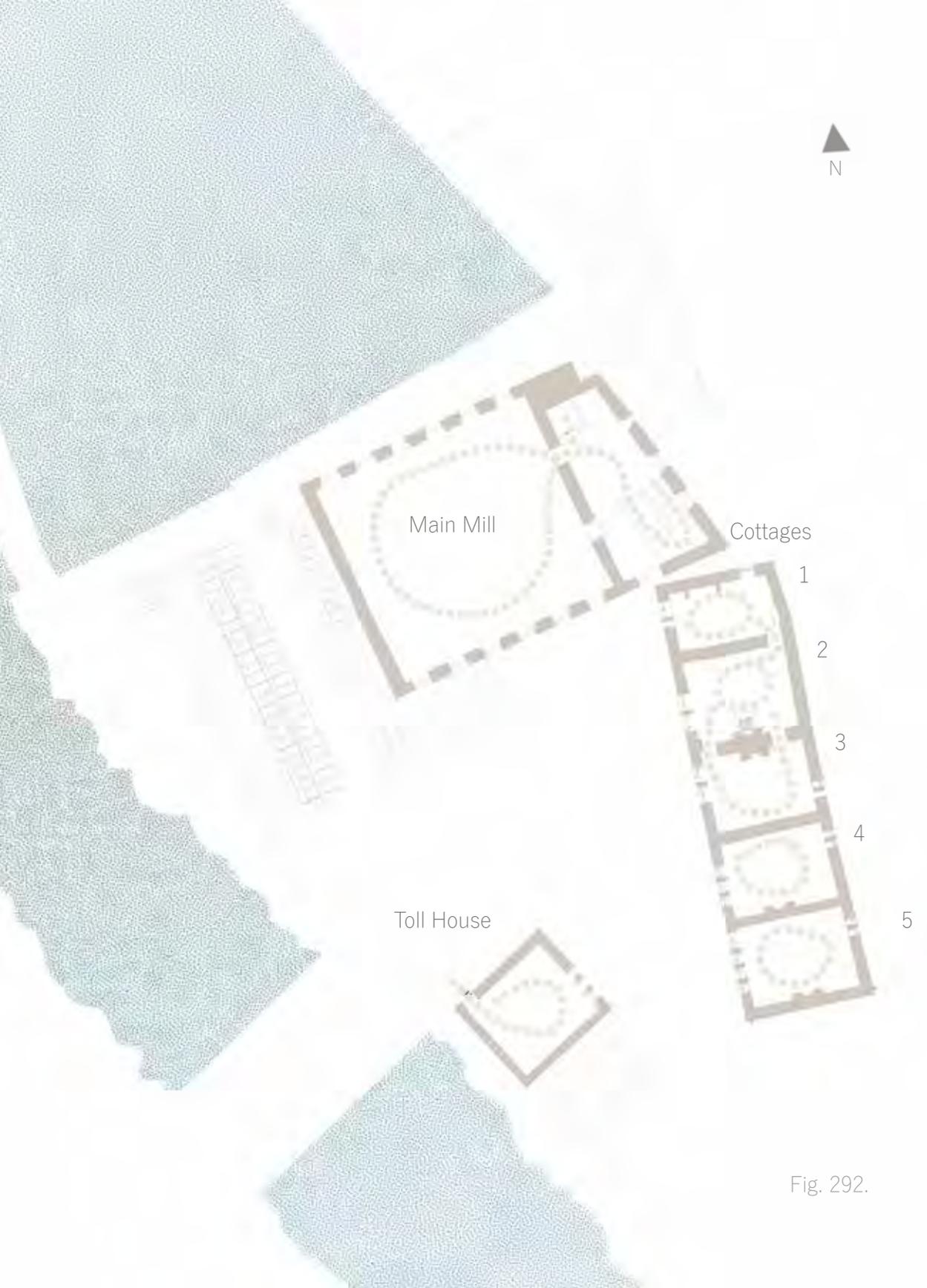


Fig. 292.

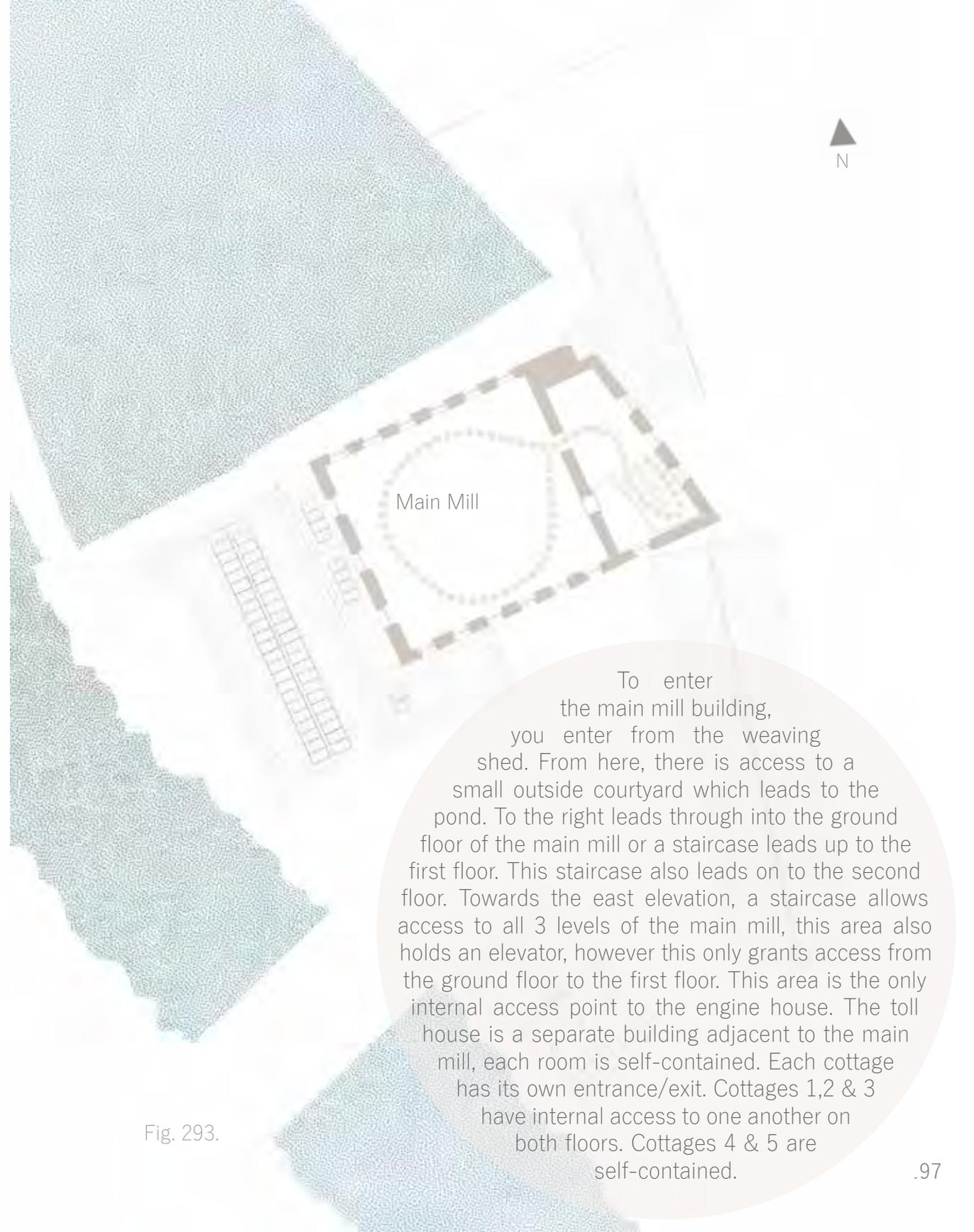
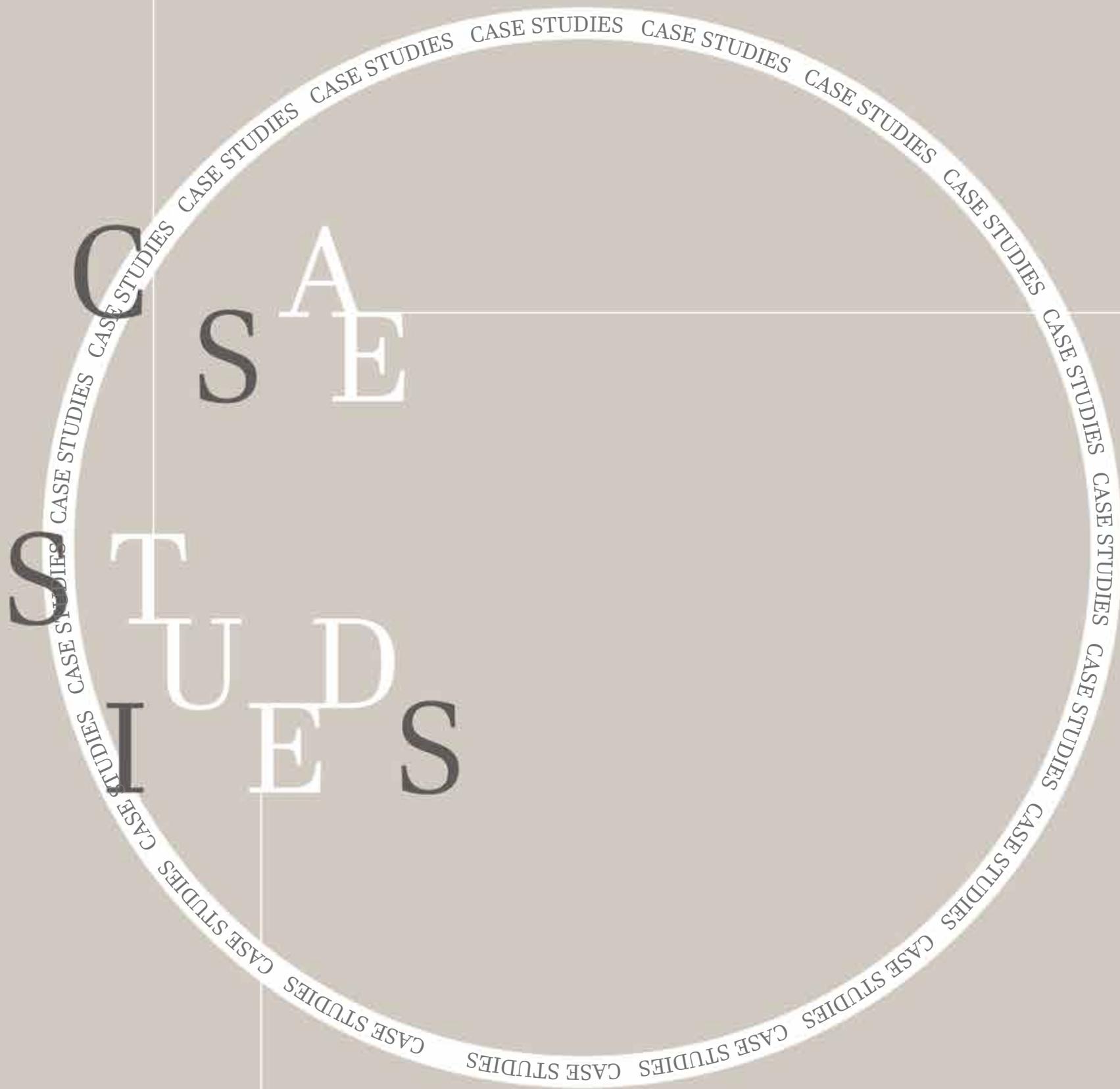


Fig. 293.

To enter the main mill building, you enter from the weaving shed. From here, there is access to a small outside courtyard which leads to the pond. To the right leads through into the ground floor of the main mill or a staircase leads up to the first floor. This staircase also leads on to the second floor. Towards the east elevation, a staircase allows access to all 3 levels of the main mill, this area also holds an elevator, however this only grants access from the ground floor to the first floor. This area is the only internal access point to the engine house. The toll house is a separate building adjacent to the main mill, each room is self-contained. Each cottage has its own entrance/exit. Cottages 1,2 & 3 have internal access to one another on both floors. Cottages 4 & 5 are self-contained.



CASE STUDIES

ACORN WELLNESS RETREAT



Fig. 294.

Acorn Wellness Retreat
Brimham Rocks Road
Hartwith
Harrogate
North Yorkshire
HG3 3HB

‘IT WAS MY DREAM TO CREATE A SAFE SPACE FOR PEOPLE TO BE INSPIRED, NURTURED AND NOURISHED AND ULTIMATELY, TO FIND A PATH TO WELLNESS...I HAVE COME TO SEE THE ACORN AS A PLACE TO EMPOWER INDIVIDUALS TO EMBRACE THEIR LIFE FULLY AND OPTIMISE THEIR HEALTH WITH A HOLISTIC APPROACH TO MIND, BODY AND SOUL’

Katie Kavanagh, Founder of Acorn Wellness Retreat

LOCATION & ACCESS

The retreat is most easily accessed by car as the rurality of the site means that any bus or train stations are over an hour walk away. This accessibility issue has not affected the business; however, if the building was located in an area with better transport links, the retreat could be enjoyed by a wider audience. The visitors were to arrive at 9:30, ready to begin their treatments at 10:00 and there would be no other people to enter/exit throughout the day to avoid disturbance.

EXTERNAL CONDITIONS

The Retreat sits on 7 acres of land with a stream running through the middle. Various outdoor seating areas have been made, although the upkeep has failed to be maintained meaning these areas have become tired. The sun is undisturbed due to the rurality of the location, meaning that the sunlight pierces through the southern facing windows keeping the building light throughout the year.

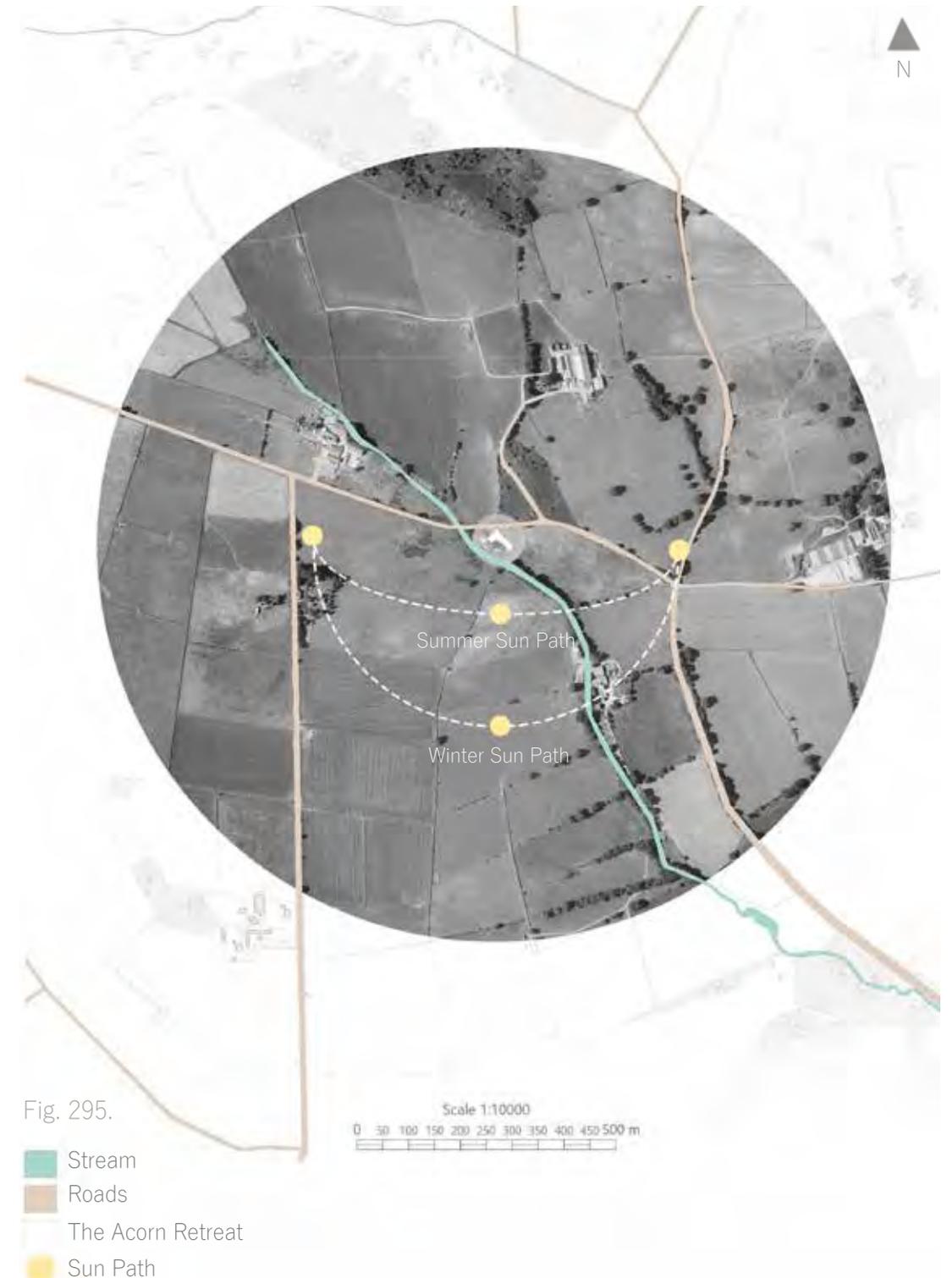




Fig. 296. Dining Room

Acorn offers a space where people can relax and unwind from their busy lives which is one of the goals the sleep centre aims to achieve. The relationship to nature is what drove the design of the retreat, blurring the lines between interior and exterior allowed for the space to become a healthy healing environment.

IMMEDIATE REACTIONS

The site is peaceful and tranquil, this is echoed throughout the building with the use of warm earthy materials and an emphasis of healing in which the staff promote. The building felt warm and safe with a spiritual atmosphere, filled with items which allowed the visitor to feel at home in this new environment. The retreat is open to adults of all ages, with any background, looking for assistance in healing and wellness.

GENIUS LOCI

The space feels alive, full of energy, a space that can aid healing because its healthy within itself. Links with nature and objects which promote healing are pivotal to the way this building makes you feel.

CIRCULATION

Each of the doors is clearly signed upon entry and each of the spaces lead from the initial entrance/reception space. The visitors have freedom to move around the building as they wish, but must remain quiet as not to disturb any ongoing treatments. One of the negatives about the building is the location of the treatment rooms, being positioned off the main reception and welcoming area means they are more at risk of being disturbed and therefore not receive the full effect of the treatment.

ENTRANCES/ EXITS

The main entrance is covered by a small canopy, protecting from the weather. The doors are standard 1981 x 762mm width and could not be widened for disability access due to the structure of the building. Large bi-folding doors feature along of the south-westerly facing façade allowing natural light to flood into the building, smaller interior bi-fold doors mean that the view is carried through to the back of the building, enhancing the connection to nature. The door which connects the relaxation areas to the kitchen is a double egress reducing the possibility of interruption. An entrance off the kitchen leads to an outdoor seating area and to the separate yoga studio, accessed by a small set of stairs and path unsuitable for disability access.



Fig. 297 - 299.



Fig. 300. Bedroom



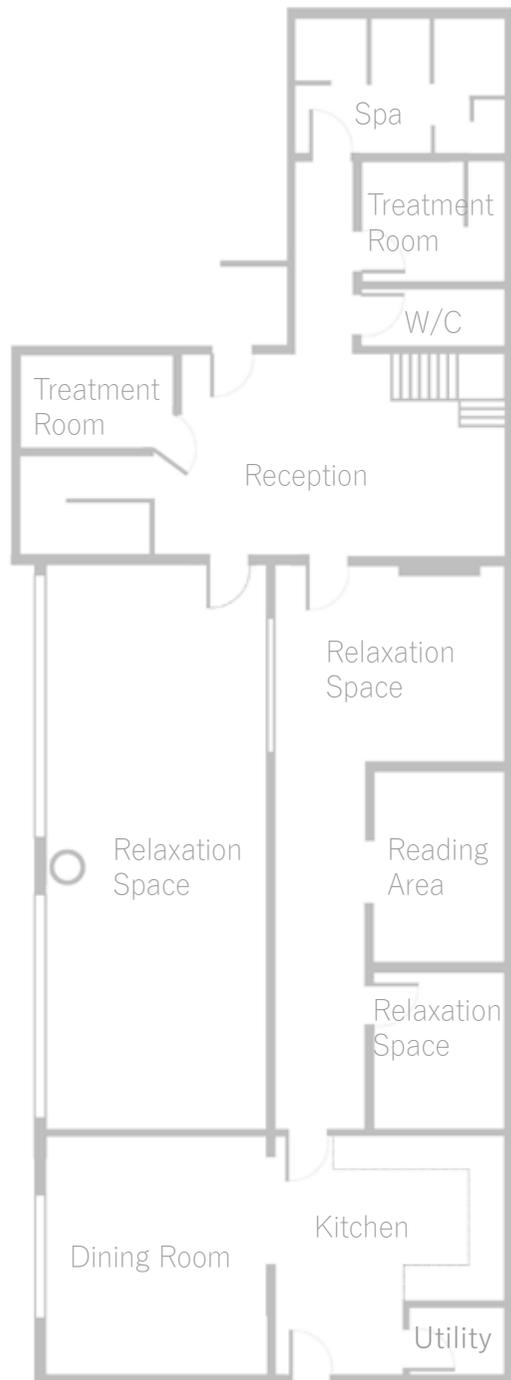
Fig. 302. Bedroom



Fig. 301. Treatment Room

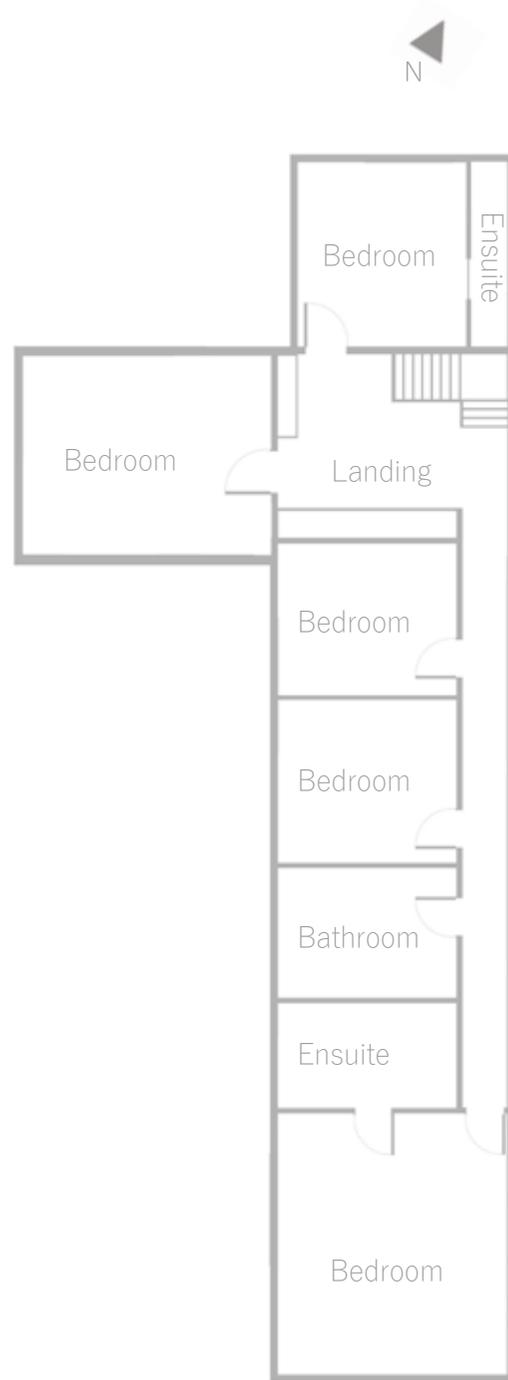


Fig. 303. Kitchen



Ground Floor NTS

Fig. 304.



First Floor NTS

Fig. 305.



Fig. 306. Relaxation Space

PROPORTIONS & SIZE

The size of the building allows for a maximum of 10 visitors at 1 time and each space serves specific functions, there are 2 treatment rooms and a spa room which lead off a entrance/reception area including a W/C and reception desk. There are 5 bedrooms located upstairs accessed from this reception space. 4 relaxation spaces lead to the kitchen and dining area which is predominantly used by staff. Separate to the main building, there is a large yoga studio which allows visitors to come and go without disturbance.

HISTORY & CONTEXT

The retreat is located on a ley line along with Ripon Cathedral and Fountains Abbey and is said to supposedly demarcate earth energies and in turn create the best place for healing.

PROPORTIONS

TREATMENT ROOMS : NTS

Approximate Size (m²): 6 - 9
Approximate Height: 2.4m
1 x Treatment Bed
1 x Chair
The Pines - Consultation Rooms
- similar size, maybe slightly larger for specialist equipment.



Fig. 307.

RECEPTION AREA: NTS

Approximate Size (m²): 34
Approximate Height: 2.4m
1 x Reception Desk
1 x Shoe Rack/Bench
Stairs lead to 1st floor
Only downstairs W/C
The Branch - Bigger space needed as it connects many spaces and will be occupied by more people.

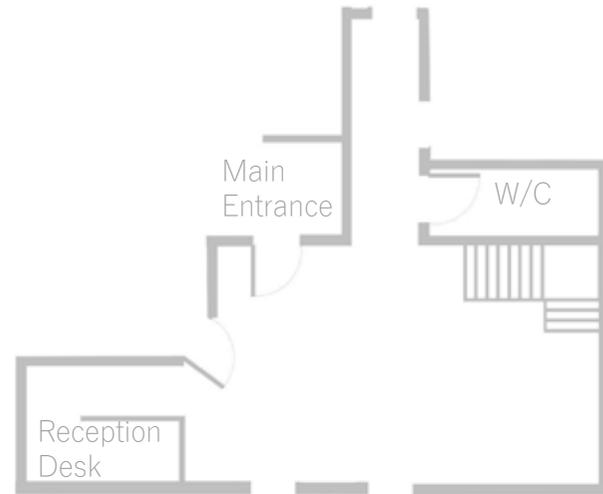


Fig. 308.

KITCHEN: NTS

Approximate Size (m²): 25
Approximate Height: 3.5m
Kitchen Utilities & Cleaning Facilities
1 x Breakfast Bar
Kitchen is used as a communal space where nutrition classes take place.



Fig. 309..

SIZE

RELAXATION ROOMS: NTS

Approximate Size (m²): 6 - 70
Approximate Height: 2.6m
8 x Lounge Chair
Various seating arrangements
Rooms vary in size depending on what experience is needed - some private and some communal.
The Pause - open spaces could be made into various sized spaces to achieve the same experiences.

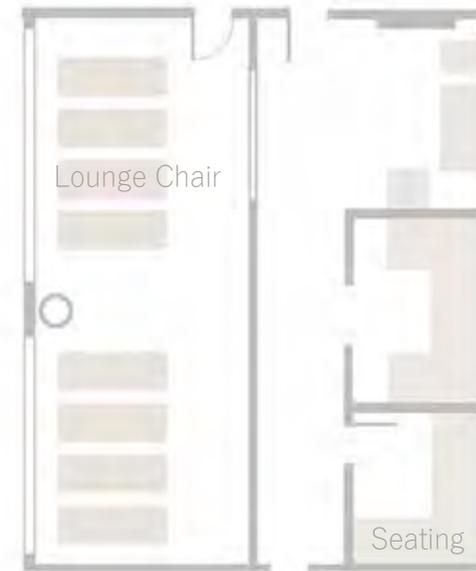


Fig. 310.

BEDROOMS: NTS

Approximate Size (m²): 12 - 30
Approximate Height: 2.4 - 2.6m
Single Beds, Bunkbeds and Doubles vary
2 x Ensuite
Each rooms has space to store personal items eg. wardrobe, drawers etc.
Sleep Suites - Similar sized rooms in the cottages of Gibson Mill, however, king sized beds needed. Ensuite rooms had the least disruption & allowed more privacy.

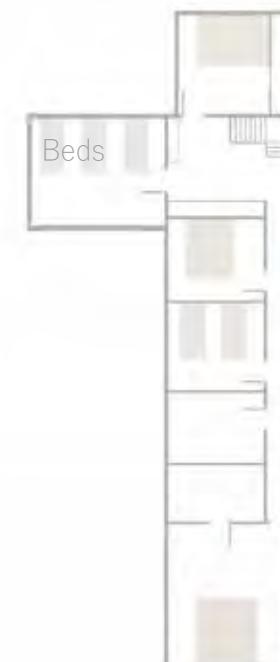


Fig. 311.

MOVEMENT

The shaded spaces on the diagram show where the most used/busiest areas are within the building, these spaces are essential to the daily workings in The Acorn. These spaces are separate within the building, meaning that visitors and staff must walk through the relaxation areas to get there. This disturbs ongoing treatment/relaxation processes taking place, especially in the treatment rooms as these are located next to the main entrance/exit. In order for the movement to become more fluid and relaxed, these shaded areas could be grouped together, limiting disruption.



Fig. 312.



LIGHTING & SENSES

In the day the spaces are mainly lit by natural light (windows & skylights) with small features such as strip lights and corner up lights to highlight elements such as walkways and small seating areas. LED lights have been incorporated into the log chandeliers which emit soft light as it gets darker. Throughout the building soft meditative music plays and salt lamps cleanse the air along with essential oils. This engagement of senses allows the visitor to transition into a state of relaxation quickly with ease. Each of the bedrooms have a individually controlled thermostat which allows you to control the room temperature, this is a key design aspect which allows an optimum temperature for sleep to be reached quickly and comfortably.



VIEWS

Due to the location of the building, each window has a view of the surrounding country side, highlighting the importance of a connection with nature. Some of the original windows of the house are small and offer a picture frame size view of the picturesque surrounding landscape.



Fig. 313 - 318.



Fig. 319. Bespoke Bunkbeds

COLOUR & MATERIALITY

The colours and materials mimic the surrounding landscape, using earthy tones and textures allows the relationship between interior and exterior to be blurred and the clever reuse of existing natural materials for furnishings and fittings again extends this connection with nature. Within the treatment rooms, cross sections of tree branches have been used to create wall façade's, this creates a warm and rustic environment, somewhere which is easy to relax.

FURNITURE & EQUIPMENT

Nearly all of the timber structures were bespoke pieces made from tree's which had to be cut in the restoration of the building. These include, wall dividers, wall facades, lighting pieces, benches, and the main acorn-shaped table in the dining room. The main piece of equipment used is the treatment beds measuring 1955 x 700 x 910 (mm). They are adjustable, can be easily cleaned after each use and have a built-in heater on the underside of the bed, keeping clients warm as they undergo treatment. Additionally, the reception desk allows for a focal point upon entry, however this could have been more central in the reception space to achieve a more welcoming and concentrated first meeting point.

Sun Light -
SW facing windows
allows for light and heat
to penetrate the room
- blinds could be used
to ensure no direct
sunlight in the visitors
faces

Users line of sight -
angled lounge chair
allows for optimum
views for the user

Angled Lounge Chair -
User can adjust for
comfort & views

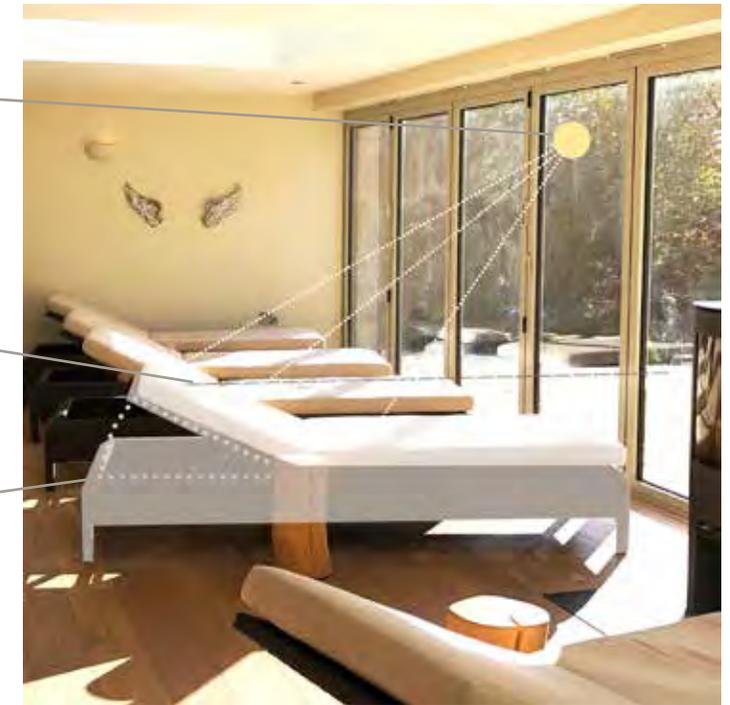


Fig. 320. Sun Diagram

Storage needed -
objects currently
stacked on top of
speaker

Treatment Bed -
heating to keep visitor
warm while receiving
treatment

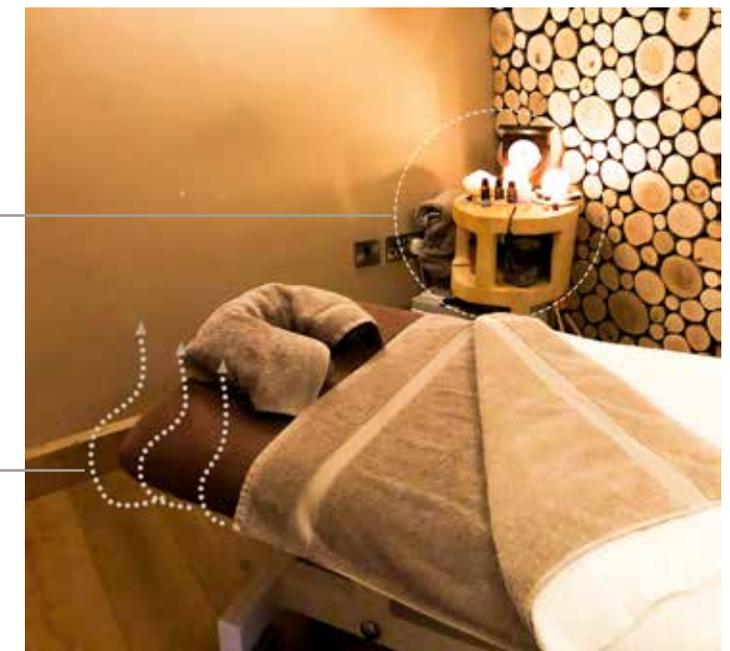


Fig. 321. Treatment Room Diagram

MAGGIES CENTRE BARTS



Fig. 322.

Maggies Centre Barts
London
EC1A 7BE
Stephen Holl Architects
2017
6,534 sq. feet

‘MAGGIES IS A PLACE FOR PATIENTS, CARERS AND FAMILIES TO BREATHE AND GAIN CONTROL, WITH A TEAM DEDICATED TO PROVIDING PRACTICAL SUPPORT AND PSYCHOLOGICAL COMFORT. IT’S A SANCTUARY IN THE MIDST OF CANCER DIAGNOSIS’

Dr Sarah Slater, Consultant Medical Oncology

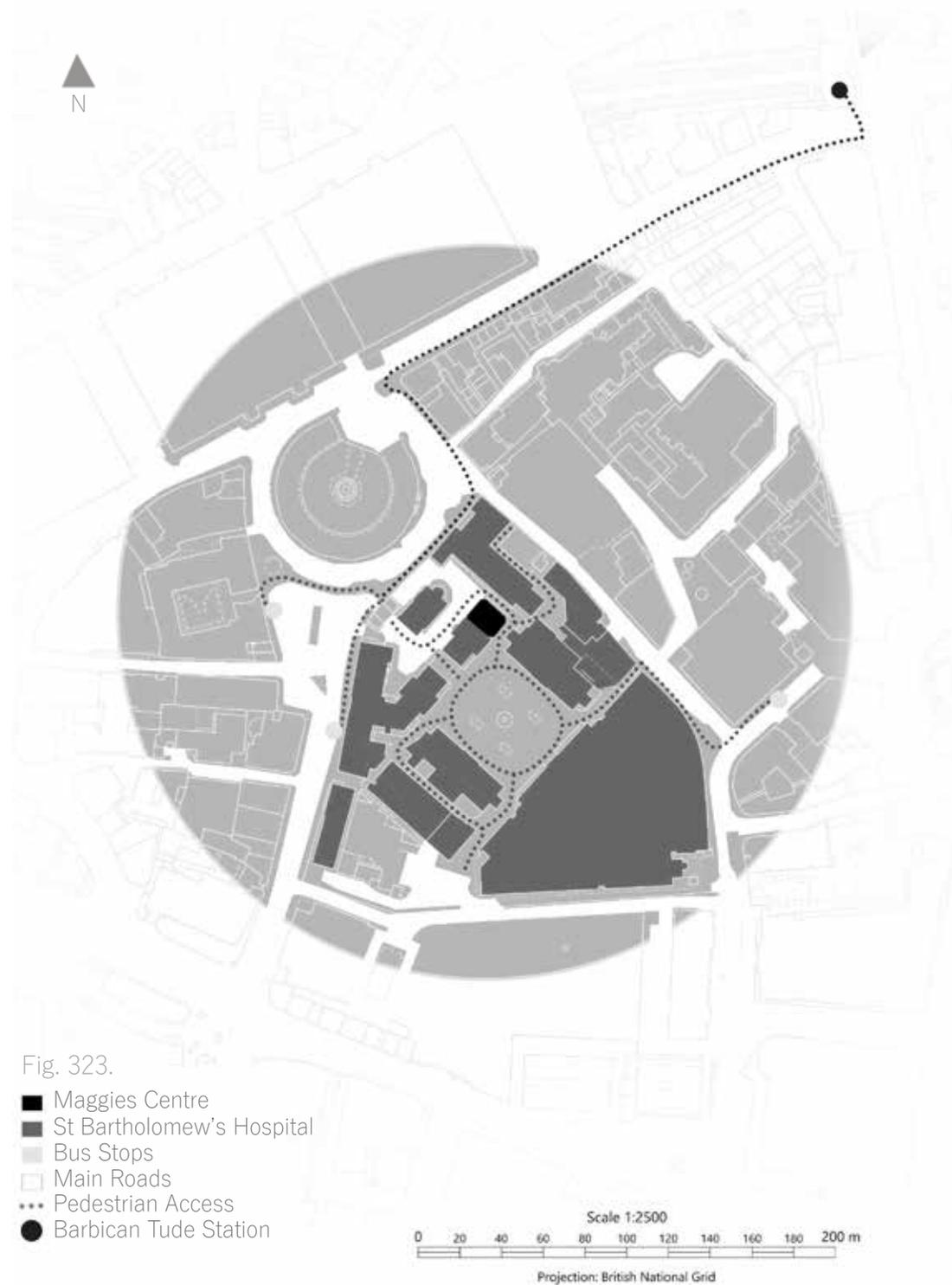


Fig. 323.

- Maggie's Centre
- St Bartholomew's Hospital
- Bus Stops
- Main Roads
- ⋯ Pedestrian Access
- Barbican Tube Station

LOCATION & ACCESS

Located in central London, Maggie's is adjacent to the courtyard of St Bartholomew's Hospital. The site is most easily accessed by tube, train, and bus, all of which are a 5–10-minute walk away. Car parking is heavily restricted. Due to its location within the hospital grounds, many visitors have easy access to the facility, furthermore, due to the high population of the nation's capital, the centre is constantly busy. Maggie's can be accessed from the courtyard of Bartholomew's Hospital and to the rear, via St Bartholomew's Church. Additionally, the facility can be accessed internally via the hospital museum.

Maggie's centres are a series of facilities across the UK where people who are affected by cancer can drop in and receive free emotional, practical, and social support. They act as a caring centre that can provide information and advice.

Maggie's provides an environment that crosses over healthcare, education and support, the types of spaces and services offered will be similar to the specialist sleep clinic and education centre within Gibson Mill. Maggie's will also offer opportunity to explore materials, proportion and form and provide vital information from a holistic facility to aid in the development of Gibson Mill.

HISTORY

Layers of history connect the building to its site; Bartholomew's Hospital was founded in the 12th century and was the first hospital in London. The structure replaced a 1960's brick building, the last remaining wing of the hospital's 17th century buildings. Construction was halted in 2012 when medieval buildings and five roman burial sites were discovered when the foundations were dug (Steven Holl Architects, 2017).

Fig. 324. St Bartholomew's Courtyard



Fig. 325. Courtyard Access



Fig. 326. Church Access

APPROACH

The building can be approached via the hospital's courtyard or via the church, each entrance has a space to pause and sit before entering the building.

CONTEXT

Maggie's Barts sits adjacent to St Bartholomew's Hospital and St Bartholomew's Church, allowing visitors attending the healthcare services to access the facility with ease. The site is also within close proximity to many of the capital's famous attractions and landmarks such as St Paul's Cathedral and The Museum of London. Excellent transport links and pedestrian access routes makes the site easy to access from across the capital.

EXTERNAL CONDITIONS

The central courtyard of the hospital allows natural sunlight to flood the buildings south-easterly facing façade during both winter and summer months. The matte white glass façade allows the natural light to illuminate the interior of the building but not allow for direct sunlight to enter. The rooftop courtyard is located on the north side of the building, shielded from direct sunlight but enclosed by the wrap around glass structure (Steven Holl Architects, 2017).



(Opposite) Fig. 327
Rooftop
Fig. 328. Sun Path

DESIGN CONCEPT

The building was designed to resemble a nest or a 'vessel within a vessel' and pays tribute to the building's medieval heritage. The façade of the building contains coloured glass which is modelled on 'neume notation' a way of writing down music in the 13th century, originating from Greek Pnevma meaning 'vital force'. The structure is the first of the series of Maggie's centres to be arranged with a vertical circulation/layout than a horizontal one due to the nature of the site. (ArchDaily, 2017)

<https://vimeo.com/65395492>

GENIUS LOCI

The link between music and architecture can be seen throughout the building's façade, this adds small elements of colour and energy to the building. The warm interior, coupled with the curvature of the building allows the space to feel calm and safe, the perfect place to relax. The atmosphere is peaceful, gentle, and composed, this has been achieved by use of materiality and form. The sensitivity of the building's placement heightens the link between historical and contemporary architecture, allowing visitors to create emotional links beyond the space (ArchDaily, 2017).

VIEWS

The building's façade limits the views to the exterior, except on the rooftop garden where views can be seen over St Bartholomew's Church and the surrounding area. This makes the internal views far more important; the building contains lots of contrasting forms and shapes keeping the eye busy and draws attention to the vertical circulation (Steven Holl Architects, 2017).



Fig. 329. Design Concept

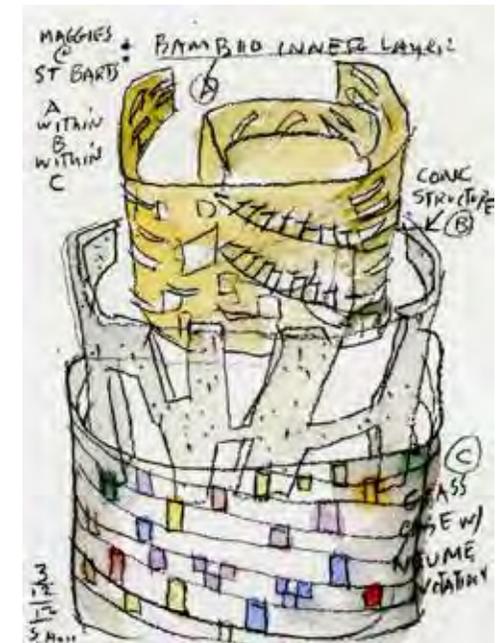


Fig. 330. Design Concept



Fig. 331. - Facade

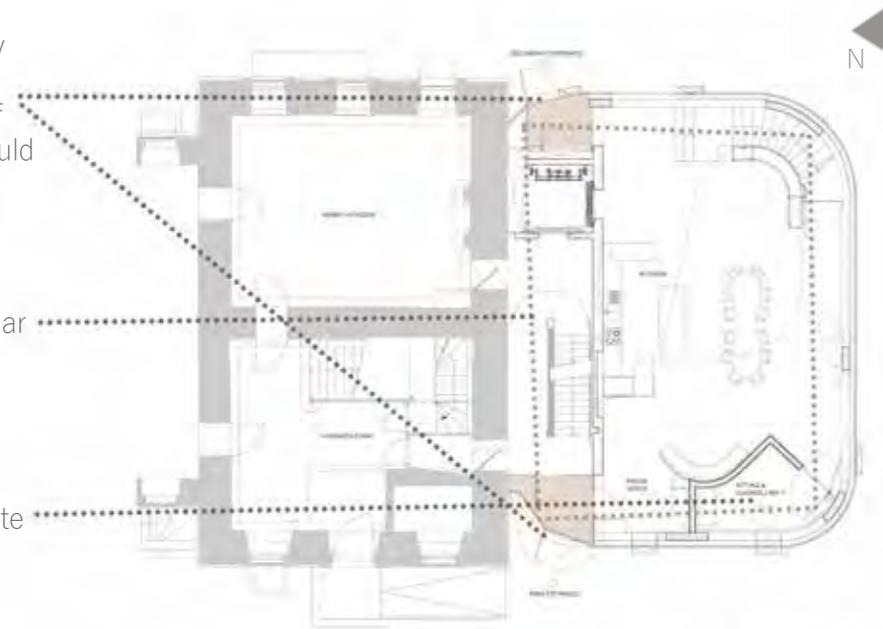


Fig. 332. Vertical Circulation

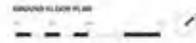
2 entrances - easily accessible. Gibson Mill has a variety of entrances/exits, could be kept to benefit the circulation and accessibility.

Square rooms similar to Gibson Mill.

Divided spaces to ensure smaller private areas can be used.

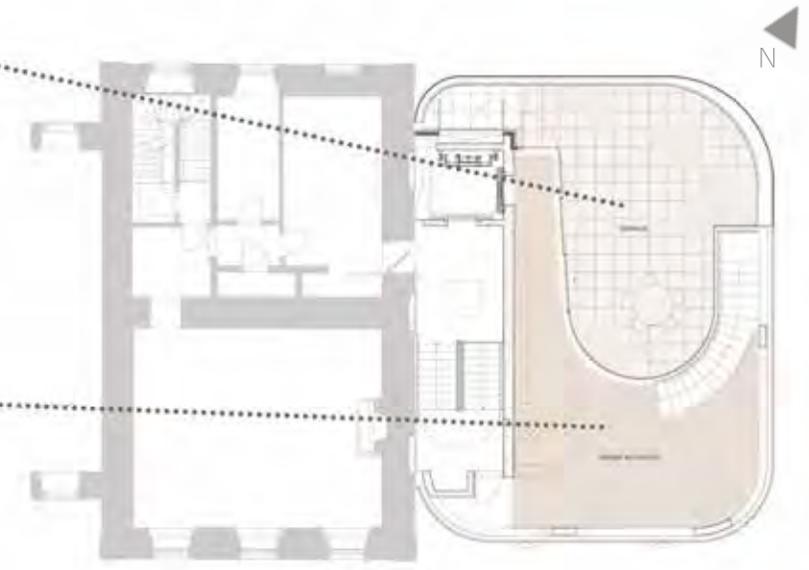


GROUND FLOOR PLAN NTS
Fig. 333.



External Space - the design promotes the importance of a connection with nature - this connection should be extenuated within Gibson Mill.

Group Space - smaller than expected, also multifunctional and acts as an extended corridor space.



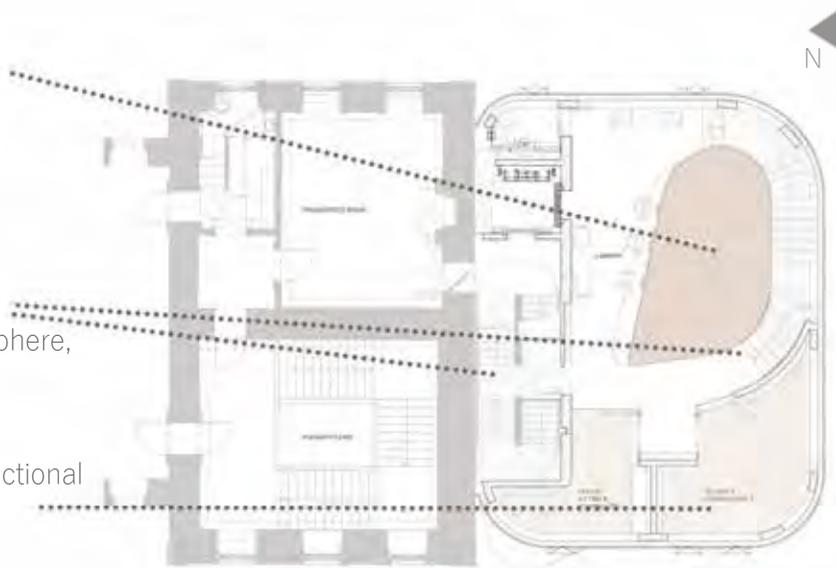
SECOND FLOOR PLAN NTS
Fig. 335.



2 storey void in centre of building, Gibson Mill has the height to consider a key move such as this.

2 staircases - 1 sculptural & contributes to buildings atmosphere, 1 - practical and hidden away.

Smaller multifunctional rooms - could some spaces be multifunctional in Gibson Mill.

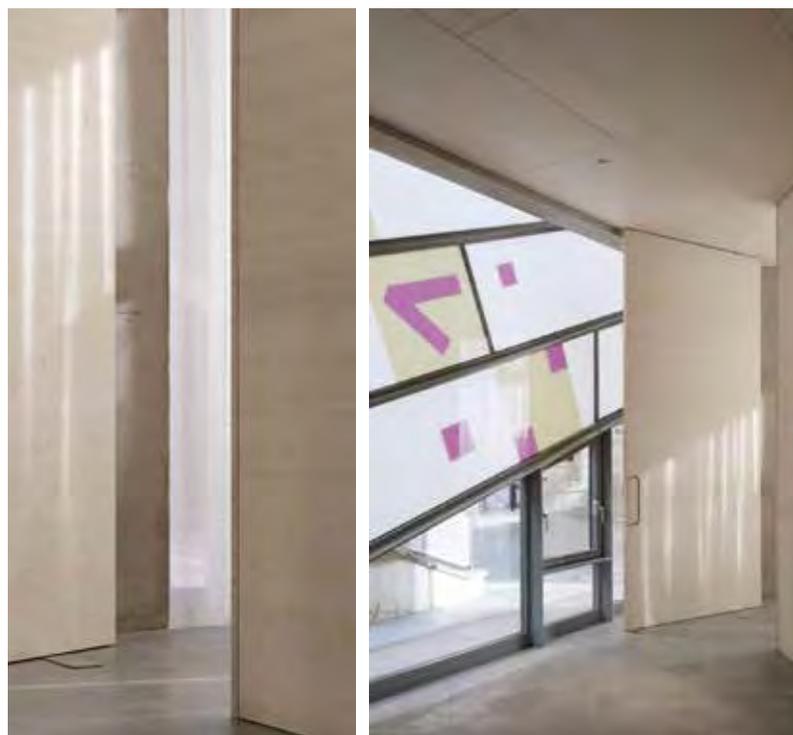


FIRST FLOOR PLAN NTS
Fig. 334.



PROPORTIONS & SIZE

The building is 3 storeys high, measures just over 150sqm on the ground floor and is seamlessly integrated with the existing structures. The building is a compact rectangular shape with rounded corners and the glass façade is organised in horizontal bands like a musical staff. In the centre there is an open curved staircase supported by a concrete structure which branches like a hand. Smaller spaces have been carved from the central void to create smaller, private areas for activities such as therapy, office work and relaxation spaces. (Architectural Record, 2018)



LIGHTING

During daytime, the matte white exterior blends in with its surroundings and protects the privacy of its visitors. During the evening, the façade begins to glow, illuminating the building and inviting visitors inside. The white glass walls act like Japanese shoji screens, transmitting a soft light throughout the building's interior. Light pools in significant areas, such as the kitchen and stairways. Subtle, downlighting highlights the bamboo's grain and texture. Within the consultation areas, lamps are used to create intimate and inviting areas to sit and relax, all lighting fixtures and fittings have been carefully integrated into the building to ensure it reinforces the character of the architecture. (Architectural Record, 2018)

COLOUR

Integrated between panels of matte white glass, pops of colour recalling 'neume notation' cover both the internal and external facades, acting as 21st century stained-glass windows. This colour adds character and a hint of playfulness to the building. A neutral colour scheme has been adopted throughout the interior, making the façade more of a statement element of design. (ArchDaily, 2017)

MATERIALITY

The three main materials used are bamboo, concrete and glass. Concrete is used on the floors, staircases and for the structure of the building. Vertical strips of bamboo clad the interior of the building, forming the central void and characterising the entire interior. This natural material allows the visitor to connect with nature and be invited into an interior which is warm and caring. Ecological Okalux insulating glass has been used to clad both the interior and exterior of the building, it allows light to pass through while still offering privacy to visitors inside. (Steven Holl Architects, 2017)

(Opposite) Fig. 336 - 341.

CIRCULATION & MOVEMENT

The central void carved by the internal staircase immediately draws the eyes upwards upon entry. The ground floor is where most of the communal activities take place with a lift giving access to the upper floors. The circular circulation path makes the space seem like it flows naturally, like on a journey. Smaller private consultation rooms are separate to the main 1st floor space and many of the spaces are multifunctional making them useful throughout the day. The top floor houses the rooftop garden and larger space for communal activities such as yoga and meditation, light floods into this area due to it being on the top floor.

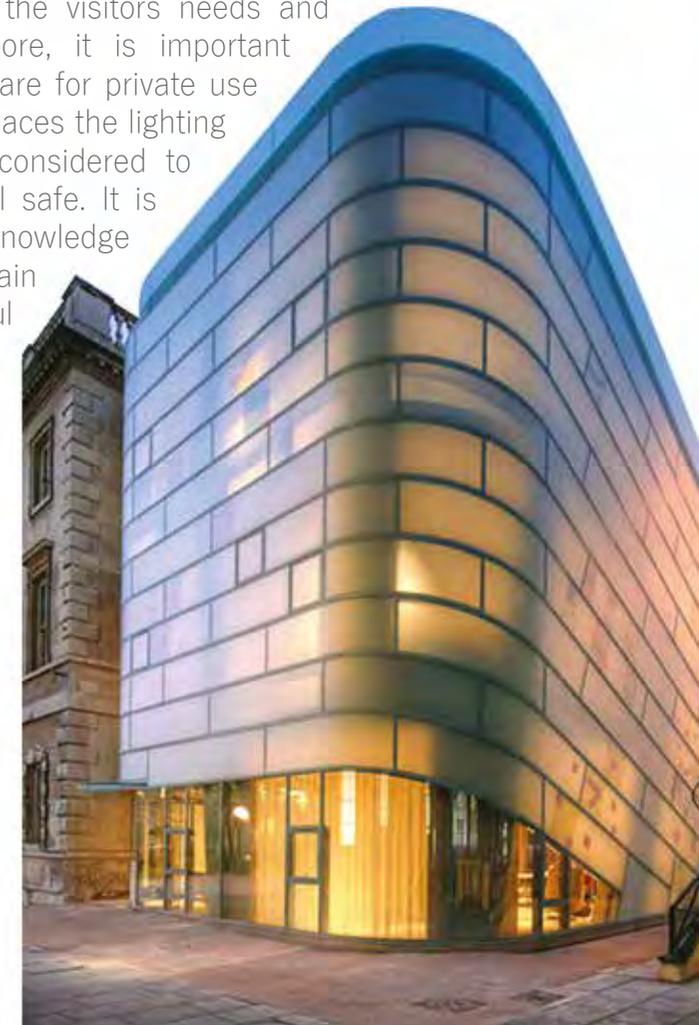


Fig. 342. Section

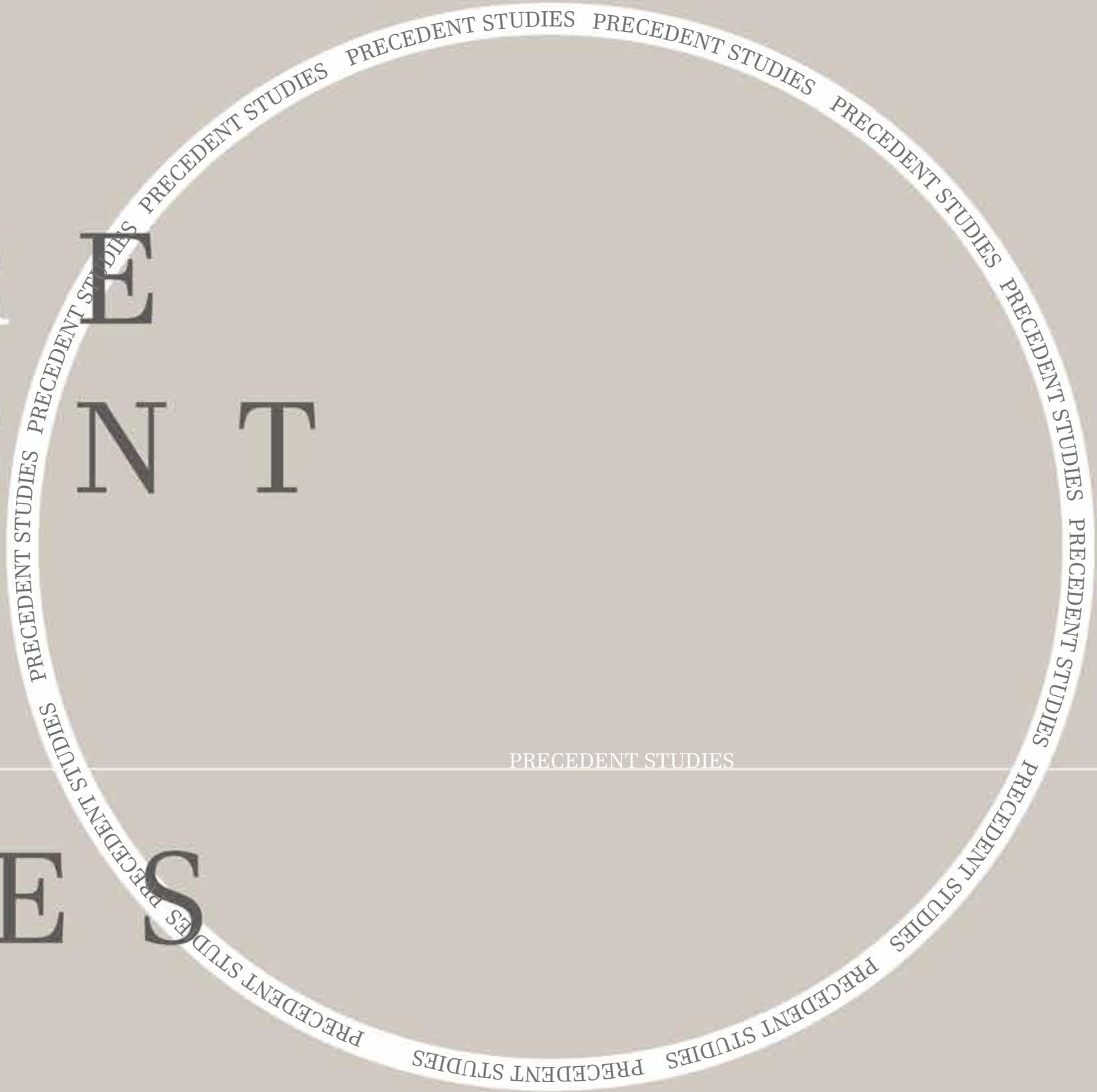
REFLECTION

It is important to retain parts of the sites history by ensuring element of the original design are kept intact, any new additions need to be sensitive and complement the existing structure. This ensures that the atmosphere and genius loci of the building remains, telling the buildings history through the architecture. Keeping the circulation fluid allows movement to flow freely throughout the building, additionally, offering visitors different entrances/exits enhances this further. Communal spaces may not need to be large to fulfil their use and can also provide various uses throughout the day depending on the visitors needs and requirements. Furthermore, it is important to include areas which are for private use only and within these spaces the lighting needs to be carefully considered to ensure these areas feel safe. It is also important to acknowledge that spaces can still remain calm and peaceful while offering playful pops of colour and excitement. Finally, the relationship between interior and exterior needs to be enhanced within Gibson Mill as this will have a positive impact on the health and wellbeing of the visitors, this can be achieved by use of materiality and exploiting views.

Fig. 343.



C D P R E N T
E R E N T
S U T I P E S



PRECEDENT STUDIES



MONASTERY OF SAN CLODIO

OLAestudio
2017
OURENSE, SPAIN

(Opposite) Fig. 344. Monastery Courtyard
Fig. 345. Spa

In 2013, the Tourism Agency of Galicia undertook the rehabilitation of the monastery as a spa which includes these facilities: Reception, Massage rooms, Changing rooms, Relaxation rooms, Sauna, Turkish Baths and a Swimming pool. The building is an important part of Galician Monastic Architecture and therefore the restoration was recognised as valuable and must read the passage of time (Arch Daily, 2017).



Any additions to the existing structure do not touch or alter the perimeter and compartments have been inserted in order to divide spaces and collect natural light.

Much of the existing masonry walls remain exposed as to exhibit their passage through time and to emphasize the juxtaposition of old and new materials. A muted material and colour palette add to the simplicity of the inserted architecture (Arch Daily, 2017).



Fig. 346 -347. Insertions



Fig. 348. Lighting

Insertion of compartments allows for a clear and compassionate restoration of the building which allows for the inherited atmosphere to be transitioned into a working 21st century building. Such modernisations would need to be accomplished in Gibson Mill and insertion of compartments could be a viable solution to both the preservation of history and sound proofing. Additionally, the graduation of natural and artificial light in different areas of the building, allows for spaces to be defined and maintain the appropriate atmosphere. This is something to consider within Gibson Mill to differentiate and allow the spaces to evoke a certain feeling and action.

Light highlights the meeting point between old & new structures. This design element allows the new structure to remain sensitive and respect the existing stonework.



Existing stonework exposed to allow history of the building to remain evident.

Double height space - highlights the relationship between new & old.

Insertion - uses modern materials with strong angles to define new shape of interior. Colour palette is similar to not overwhelm the existing architecture.

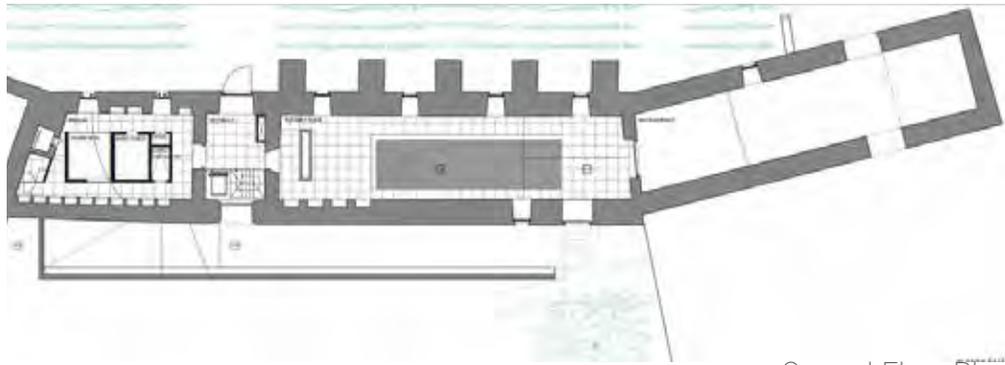
Insertion base height - contemporary height for a new structure.

New timber structure - allows geometric forms to be made, contrasting against existing structure, perhaps too busy.

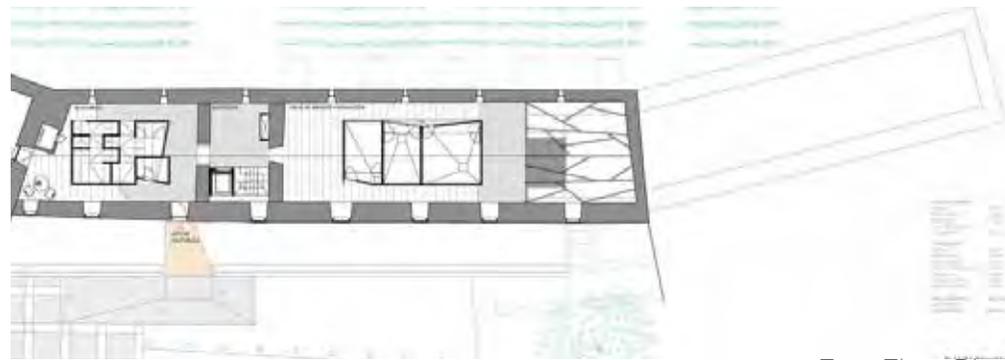
Direct sunlight enters through sky light, due to the orientation of the building it makes the space extremely bright and warm so this space becomes unusable during some hours of the day.



Strong contrasting shadows makes the area very busy, may have worked better if this structure had been north facing to reduce this effect.



Ground Floor Plan
Fig. 351.



First Floor Plan
Fig. 352.



Section
Fig. 353.



Fig. 354.

DOMSTATE ZORGHOTEL

Van Eijk & Van der Lubbe
2018
Utrecht, The Netherlands



(Opposite) Fig. 356. Communal Space
Fig. 357. Kitchen

Domstate Zorghotel is an 84-bed rehabilitation centre in Utrecht, the Netherlands. The architects deliberately designed the centre to embody a hotel atmosphere where patients can safely recover with comfort, independence, and integrity. All elements of the design have been focused on the process of healing and wellness in order to facilitate in the recovery process. Many of the areas consider functionality and accessibility and provide the opportunity to encourage patients to practise real-world situations. (VAN EIJK & VAN DER LUBBE, 2018)



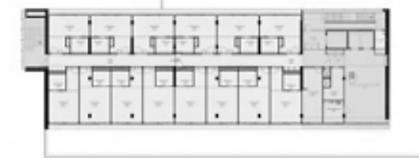
(Top Left) Fig. 358. Private Seating Area

(Top Right) Fig. 359. Communal Area

(Bottom) Fig. 360. Hidden Storage



Ground Floor Plan Fig. 361.



First Floor Plan Fig. 362.

Great attention has been paid in order for the centre to focus on wellness rather than a clinical environment. The hotel-like atmosphere allows patients to feel welcome and encourages them to be proactive. Each floor has a different colour scheme making the interiors feel less institutional and allows for areas to be easily recognized and identified. In addition, fabric curtains and natural elements have been used to screen off semi-private areas, introducing a healthy work/resting environment.

(VAN EIJK & VAN DER LUBBE, 2018)

Wide sliding doors - easy access for wheelchairs & space saving.

All equipment suspended from rail, therefore not a trip hazard & rail can be used for physiotherapy.



Peepholes in doors at different levels to cater for wheelchair users and height differences.

Built in storage for possessions of visitors/patients.

Fig. 363 - 364 Built in Storage

Glass Facade - allows light to flood into the darker areas & creates a positive connection for physical exercise.

White strip lights - makes the room bright however a softer warmer light may make the space feel more welcoming.



Grid Structure - painted on floor throughout the building, gives a sense of direction but can be confusing at first.

Distance between exercise equipment allows enough room for a person to stand between them & so they don't interfere with one another.

Fig. 365. Gym



Designed from the user's perspective, Domstate Zorghotel actively participates in the rehabilitation of the patients. By allowing a clinical space to become more comfortable and familiar to the patient and staff, it allows for innovative and unprecedented occurrences to take place daily. Many elements have multiple functions, allowing spaces to become dynamic and change to the users' needs, making them practical and effective. Many spaces have curved structures within them, creating room for wheelchair access and access to the central courtyard (VAN EIJK & VAN DER LUBBE, 2018).

(Above left) Fig. 366. Straps on door handles
(Above Right) Fig. 367. Bedroom
(Opposite) Fig. 368. Cafeteria

Health and wellness facilities are easily designed so clinically and impersonal, it can be daunting for a patient to begin recovery and healing. The innovative design of Domstate Zorghotel allows patients to feel encouraged and even enjoy a sense of luxury in their recovery. It is important that a patient is to remain positive throughout this journey and their healing environment can support this. Great attention has been paid in order to zone areas, allowing to keep spaces open and fluid, this may be something to consider within Gibson Mill as there are many large, open spaces. Additionally, although this centre is used for clinical purposes, the choices of materials and uses for furniture and design elements are versatile and sometimes have multiple purposes. This could be explored further as a space saving and sustainable design approach within Gibson Mill.





PERSONAL MANIFESTO

Inspired by my experience with Chronic Fatigue Syndrome, my Personal Manifesto encompasses my sensory issues in resin form. Each of the resin blocks represents a different sense and encapsulated within these blocks are the words, Time, Sense, Impact, Moment, Crash and Structure. These words are a highly personal representation of how my chronic fatigue has had an effect on my life and is the basis on which my project has developed from.

(Opposite) Fig. 369.

TIME
STRUCTURE
MOMENT
CRASH
IMPACT
SENSE

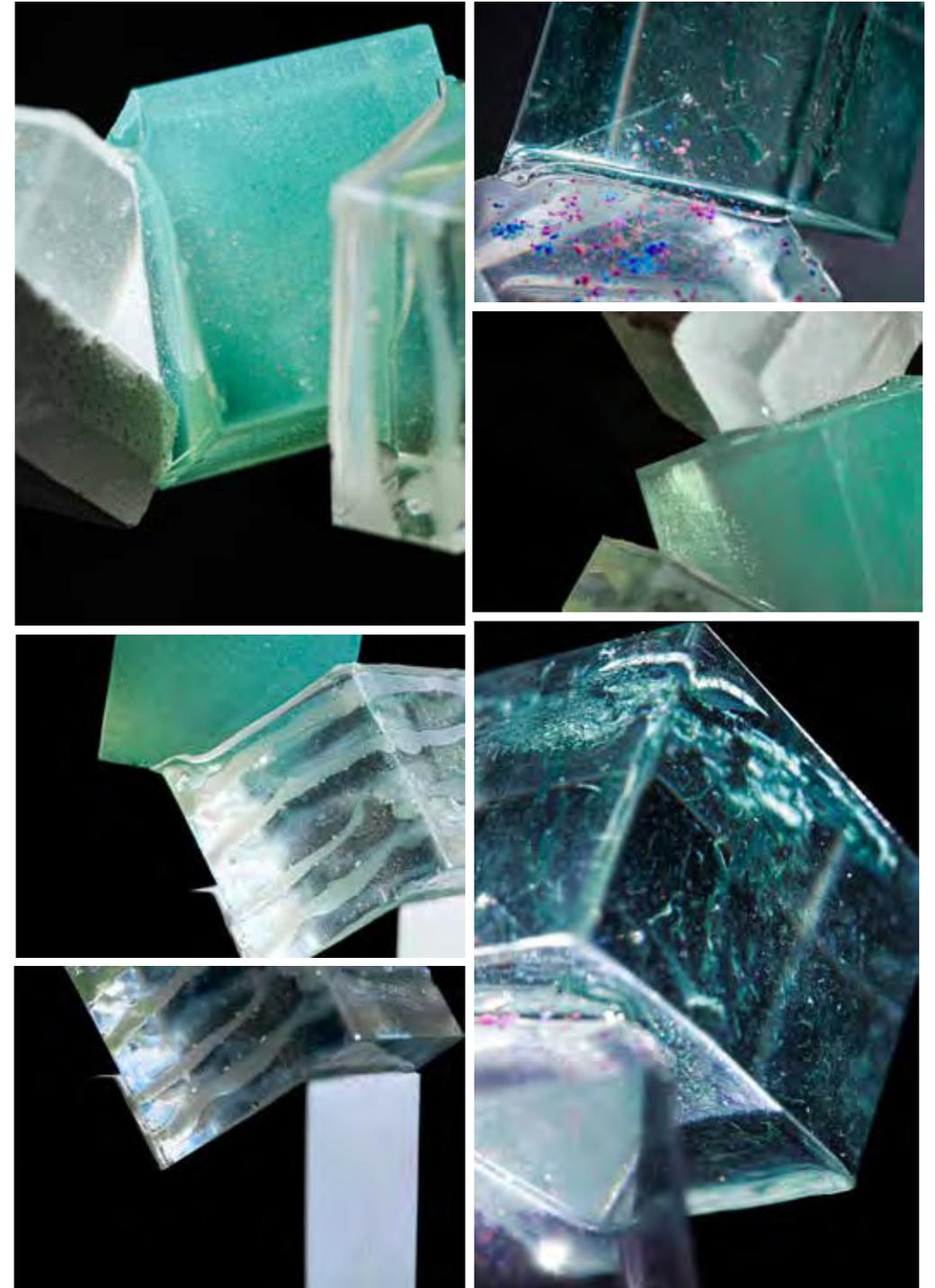


Fig. 370 - 375.

WEARABLE CONCEPT

The piece is used to transition the user into a state of relaxation, it acts as a tool to aid the user to feel comforted and safe in their new environment. The headphones allow for binaural beats to be played, engaging the sense of hearing, relaxing the user.



Fig. 376.

The shape of the piece shields the eyes and nose in order to withdraw the sense of sight and smell, limiting the chance of overstimulation. The repetitive adjoining forms represent the interconnected and complex factors which contribute to health and wellbeing as a whole.



Fig. 377.

SITE COMBINE



Fig. 378.



Fig. 379. Site Combine Collage

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