



**PROPOSED CHANGE OF
USE OF EXISTING BARNs
AT THE FRING HALL
ESTATE, DOCKING ROAD,
FRING, NORFOLK**

FLOOD RISK ASSESSMENT

MARCH 2022

REF: 2536/RE/07-20/01 REVISION A

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CONTRACT

Evans Rivers and Coastal Ltd has been commissioned by Oykel Farms Ltd to carry out a Flood Risk Assessment for a proposed change of use of existing barns at the Fring Hall Estate, Docking Road, Fring, Norfolk.

QUALITY ASSURANCE, ENVIRONMENT AND HEALTH AND SAFETY

Evans Rivers and Coastal Ltd operates a Quality Assurance, Environmental, and Health and Safety Policy.

This project comprises various stages including data collection; hydrological and hydrogeological assessments; surface water drainage designs; and reporting. Quality will be maintained throughout the project by producing specific methodologies for each work stage. Quality will also be maintained by initiating internal quality procedures including the validation of third party deliverables; creation of an audit trail to record any changes made; and document control using a database and correspondence log file system.

To adhere to the Environmental Policy, data will be obtained and issued in electronic format and alternatively by post. Paper use will also be minimised by communicating via email or telephone where possible. Documents and drawings will be transferred in electronic format where possible and all waste paper will be recycled. Meetings away from the office of Evans Rivers and Coastal Ltd will be minimised to prevent unnecessary travel, however for those meetings deemed essential, public transport will be used in preference to car journeys.

The project will follow the commitment and objectives outlined in the Health and Safety Policy operated by Evans Rivers and Coastal Ltd. All employees will be equipped with suitable personal protective equipment prior to any site visits and a risk assessment will be completed and checked before any site visit. Other factors which have been taken into consideration are the wider safety of the public whilst operating on site, and the importance of safety when working close to a water source and highway. Any designs resulting from this project and directly created by Evans Rivers and Coastal Ltd will also take into account safety measures within a "designers risk assessment".

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	20.024-003P

1. INTRODUCTION

1.1 Project Scope

1.1.1 Evans Rivers and Coastal Ltd has been commissioned by Oykel Farms Ltd to carry out a Flood Risk Assessment for a proposed change of use of existing barns at the Fring Hall Estate, Docking Road, Fring, Norfolk.

1.1.2 It is understood that this Flood Risk Assessment will be submitted to the Planning Authority as part of a planning application. Specifically, this assessment intends to:

- 1) Carry out an appraisal of flood risk from all sources as required by NPPF;
- 2) Review any literature and guidance specific to this area;
- 3) Assess the risks to people and property and propose mitigation measures accordingly;
- 4) Review existing evacuation and warning procedures for the area;
- 5) Report findings and recommendations.

1.1.3 This assessment is carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) dated 2021. Other documents which have been consulted include:

- DEFRA/EA document entitled *Framework and guidance for assessing and managing flood risk for new development Phase 2 (FD2320/TR2)*, 2005;
- EA *Supplementary Note on Flood Hazard Ratings and Thresholds for Development Planning and Control Purpose*, 2008;
- Communities and Local Government 2007. *Improving the Flood Performance of New Buildings*. HMSO.
- National Planning Practice Guidance – Flood Risk and Coastal Change.
- UK Government’s climate change allowances guidance.
- Kings Lynn and West Norfolk Strategic Flood Risk Assessment (SFRA) dated 2007/8.
- JBA Consulting *Level 1 King’s Lynn and West Norfolk Strategic Flood Risk Assessment (SFRA)* dated 2018.
- JBA Consulting *Level 2 King’s Lynn and West Norfolk Strategic Flood Risk Assessment (SFRA)* dated 2019.
- Kings Lynn and West Norfolk *Surface Water Management Plan (SWMP)* dated 2010 and 2012.
- Norfolk County Council *Flood Investigation Report* dated 2015.
- Norfolk County Council document entitled *Lead Local Flood Authority Statutory Consultee for Planning – Guidance Document* dated October 2021.

2. DATA COLLECTION

2.1 To assist with this report, the data collected included:

- Ordnance Survey 1:10,000 street view map (Evans Rivers and Coastal Ltd OS licence number 100049458).
- Filtered LIDAR data at 1m resolution covering the site and surrounding area (LIDAR-LIDAR-DTM-1m-2020-TF73nw and LIDAR-DTM-1m-2020-TF73sw downloaded from <https://environment.data.gov.uk/DefraDataDownload/?Mode=survey> on 3rd February 2022).
- Topographical survey of the site and watercourse carried out by BB Surveys (Drawing Numbers 2219-3284-SU00, 2219-3284-SU01 and 2219-3284-SU02).
- 1:250,000 *Soil Map of Eastern England* (Sheet 4) published by Cranfield University and Soil Survey of England and Wales 1983.
- British Geological Survey, *Online Geology of Britain Viewer*.
- 1:625,000 *Hydrogeological Map of England and Wales*, published in 1977 by the Institute of Geological Sciences (now the British Geological Survey).
- Flood modelling report carried out by Evans Rivers and Coastal Ltd (ref: 2536/RE/07-20/02) in March 2022.

3. SITE CHARACTERISTICS

3.1 Existing Site Characteristics and Location

3.1.1 The site is located at Fring Hall Estate, Docking Road, Fring, Norfolk. The approximate Ordnance Survey (OS) grid reference for the site is 573630 334934 and the location of the site is shown on Figure 1.

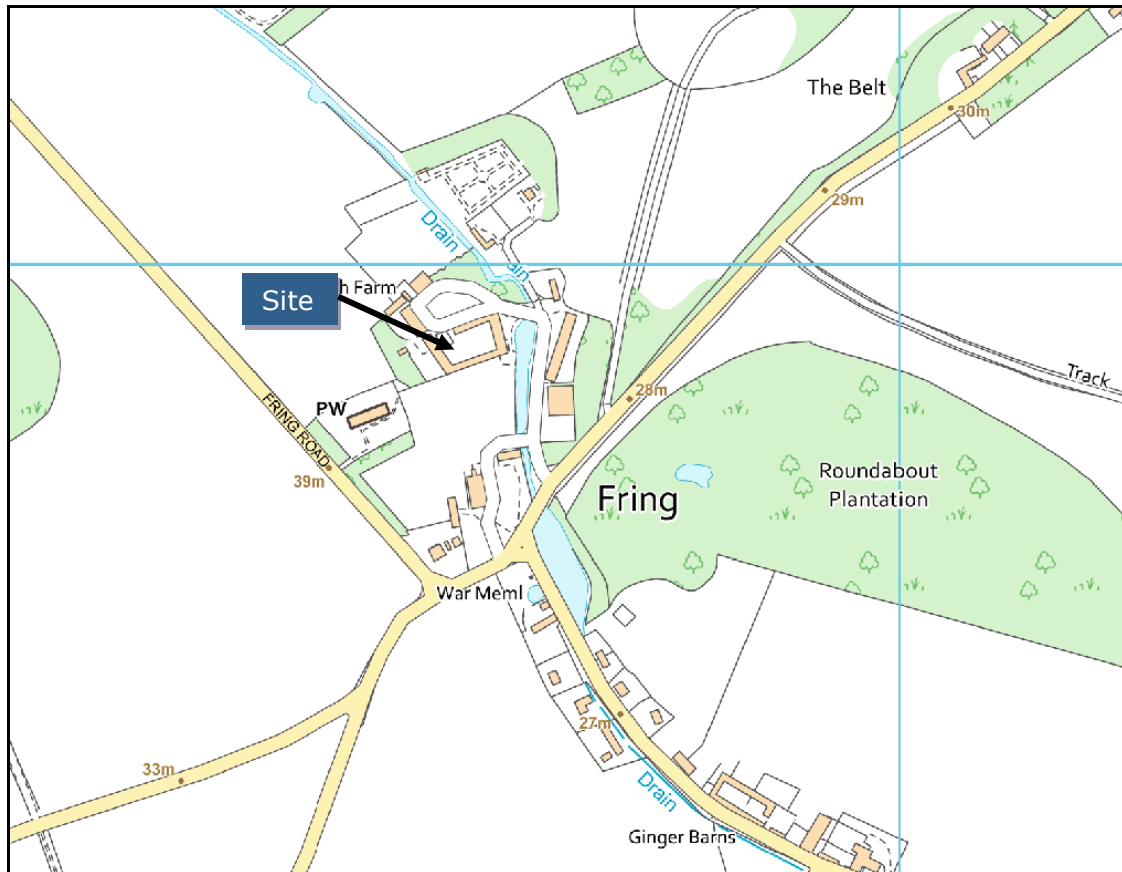


Figure 1: Site location plan (Source: Ordnance Survey)

- 3.1.2 The site comprises a collection of barns around a courtyard. The site is accessed from Docking Road via an access road.
- 3.1.3 The Heacham River flows in a north westerly direction through this area (Figure 3). However, the watercourse is not designated as 'Main River' at this location and Figure 6.1 of the SWMP together with 2017 SFRA map KL_16 shows that the watercourse is designated an Ordinary Watercourse.
- 3.1.4 A GPS topographical survey of the site and watercourse has been carried out by BB Surveys (Drawing Numbers 2219-3284-SU00, 2219-3284-SU01 and 2219-3284-SU02).
- 3.1.5 Filtered LIDAR data at 1m resolution has also been obtained in order to illustrate the topography across the site and surrounding area (Figure 2).
- 3.1.6 By reviewing the survey it can be seen that the ground floor level of the barns is variable and set at 26.23m AOD, 25.99m AOD, 26.68m AOD, 27.14m AOD and 25.89m AOD.

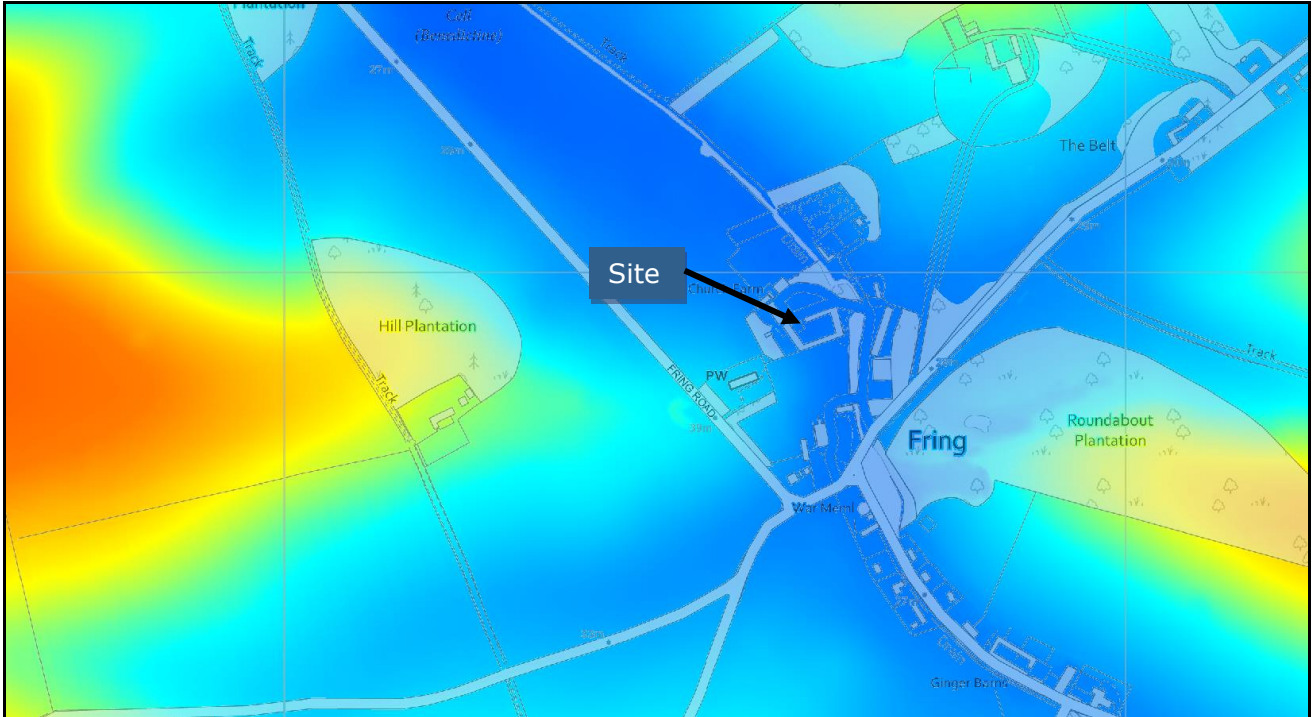


Figure 2: Filtered LIDAR survey of the site and surrounding area combined with OS



Figure 3: Aerial view of site and surrounding area looking north

3.2 Site Proposals

- 3.2.1 It is the Client's intention to use barns A-D as internal amenity space (including games room and kitchen) to be used in association with the holiday units proposed for the remainder of the barn complex (i.e. barns E - J).

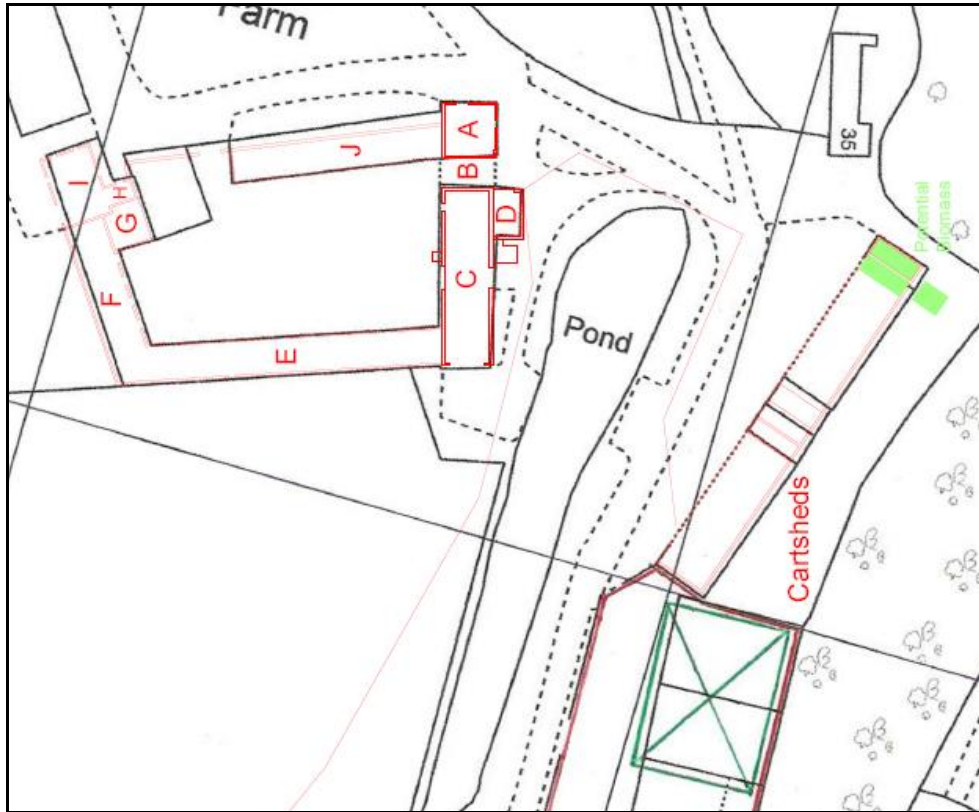


Figure 4: Barns to be converted

- 3.2.2 The proposed site layout can be seen on Drawing Numbers 20.024-002P and 20.024-003P.
- 3.2.3 The proposed ground floor level of the northern and eastern barns will be set at a minimum of 26.108m AOD so that they are above the climate change 1 in 1000 year flood level. The southern and western barns will be set at a minimum of 26.373m AOD.
- 3.2.4 Paragraph 33 (ID 7-033-20140306) of the NPPF Planning Practice Guidance (NPPG) states that the Sequential Test does not apply to change of use applications.
- 3.2.5 The proposals are classified as a "more-vulnerable" use according to Table 2 of the NPPF Planning Practice Guidance.

4. BASELINE INFORMATION

4.1 Environment Agency Flood Zone Map

4.1.1 The Environment Agency Flood Map (Figure 5) and 2017 SFRA map KL_16 show that the site is located within Flood Zone 3, 2 and 1 associated with the Heacham River.

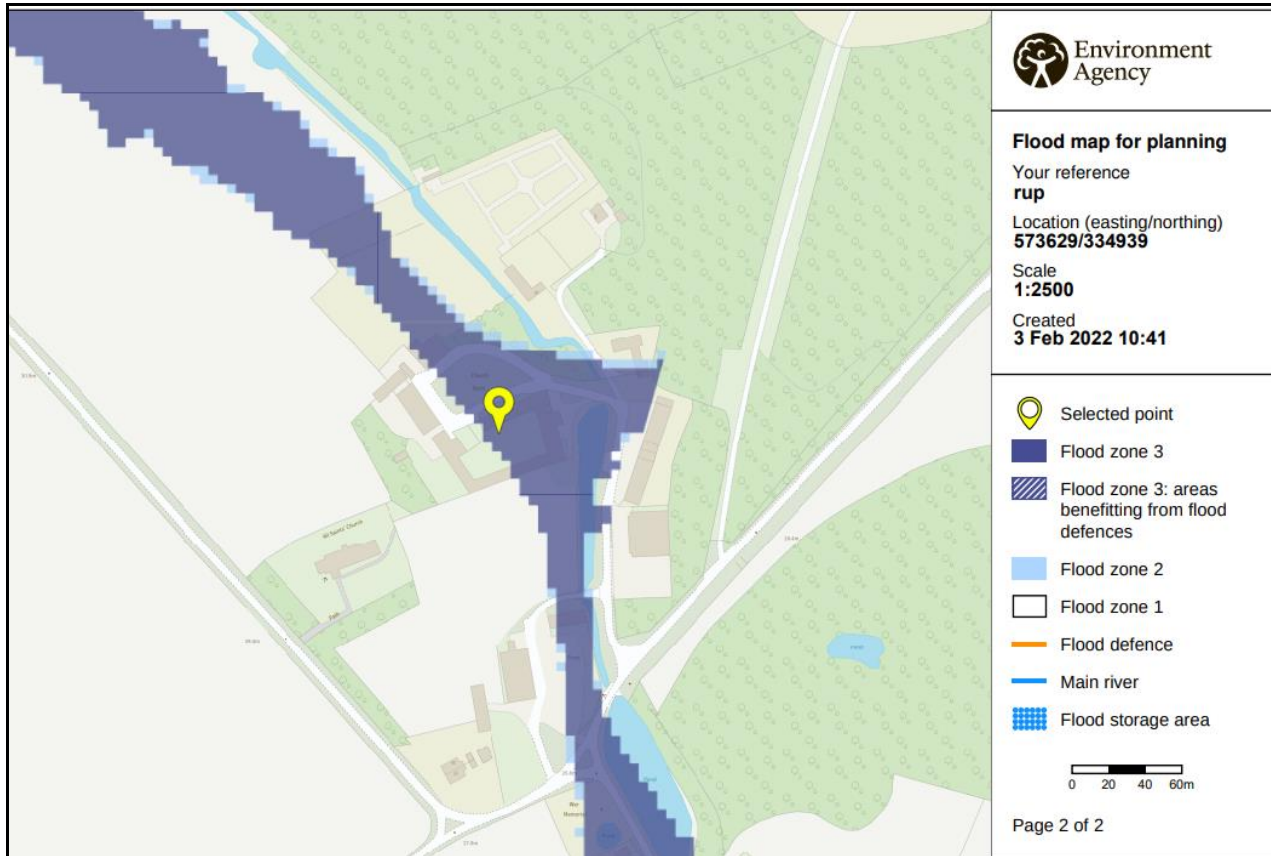


Figure 5: Environment Agency Flood Map (Source: Environment Agency, 2022)

4.1.2 The flood modelling report carried out by Evans Rivers and Coastal Ltd (ref: 2536/RE/07-20/02) in March 2022 has defined the flood zones across the site more accurately and this is discussed further in Chapter 5.

4.2 Flood Warning and Emergency Planning

4.2.1 The site is located within Environment Agency Flood Alert Area 052WAFWNR – North West Norfolk Rivers.

4.2.2 Sites at risk of fluvial flooding could have a minimum of 2 hours warning before any of the levels of flood warning is issued.

4.2.3 Flood Alerts, Flood Warnings and Severe Flood Warnings are issued to residents and businesses within flood risk areas by the Agency's *Floodline Warnings Direct* (FWD) service. This system is managed by the Environment Agency and dials out a message to the recipient when a particular category of flood warning is being advised. The message is conveyed by a constant ringing of the telephone or can alternatively be communicated to mobile phones and computers. The system functions at all times, issuing flood warnings and alerts in conjunction with announcements on radio and other media.

Owners and occupiers of dwellings or businesses thought to be at risk can sign up to the scheme. **The owners are encouraged to confirm details with the Agency and to sign up for these warnings.**

4.2.4 The various flood warning codes can be seen on Figure 6.

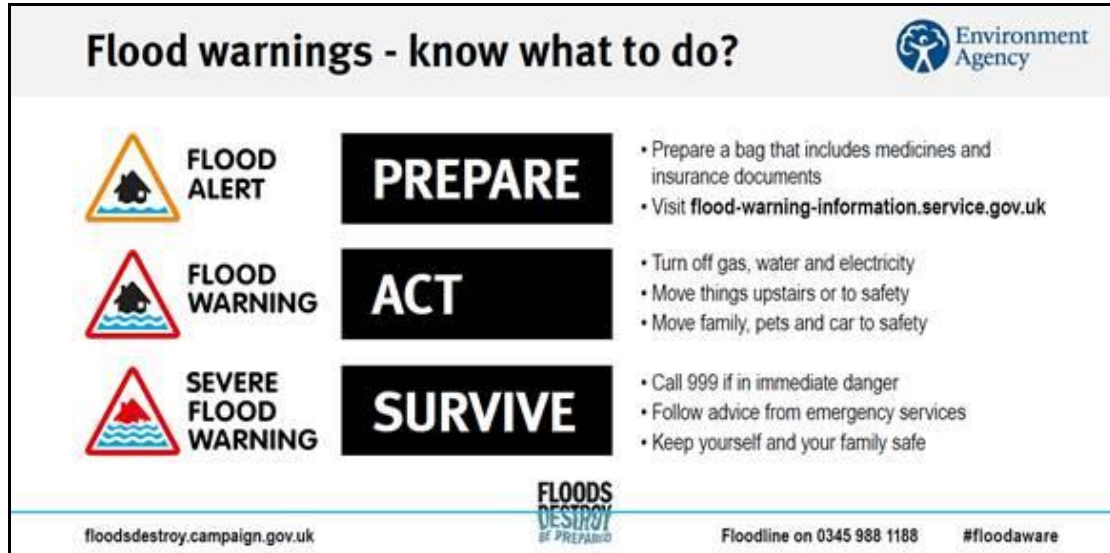


Figure 6: Flood warning codes (Source: Environment Agency)

4.2.5 It is understood that in the event of flooding, evacuation is managed by a multi-agency team in conjunction with the Police. The multi-agency team provides suitable premises for shelter, first aid, refreshments and possible transportation with consideration given to the elderly and vulnerable groups. It is essential that occupants produce robust Emergency Flood Plans to avoid putting themselves or emergency services at risk and that they do not rely solely on emergency services during the event.

5. FLUVIAL FLOOD RISK

- 5.1 A flood modelling report was carried out by Evans Rivers and Coastal Ltd (ref: 2536/RE/07-20/02) in March 2022. The modelling report should be read in conjunction with this flood risk assessment.
- 5.2 The results are summarised in Table 1 below and the results at cross sections 7 are most relevant to the site’s location. The flood mapping from the model is also shown on Figures 7 and 8.
- 5.3 The proposed ground floor level of the northern and eastern barns will be set at a minimum of 26.108m AOD so that they are above the climate change 1 in 1000 year flood level. The southern and western barns will be set at a minimum of 26.373m AOD.
- 5.4 Therefore, there will be no internal flooding during all modelled events up to and including the climate change 1 in 1000 year event.

Table 1: Tabulated Results from flood modelling at cross section 7 (m AOD)

20yr	20yr CC (Central 23%)	100yr	100yr CC (Central 23%)	1000yr	1000yr CC (Central 23%)
26.031	26.048	26.056	26.073	26.089	26.108

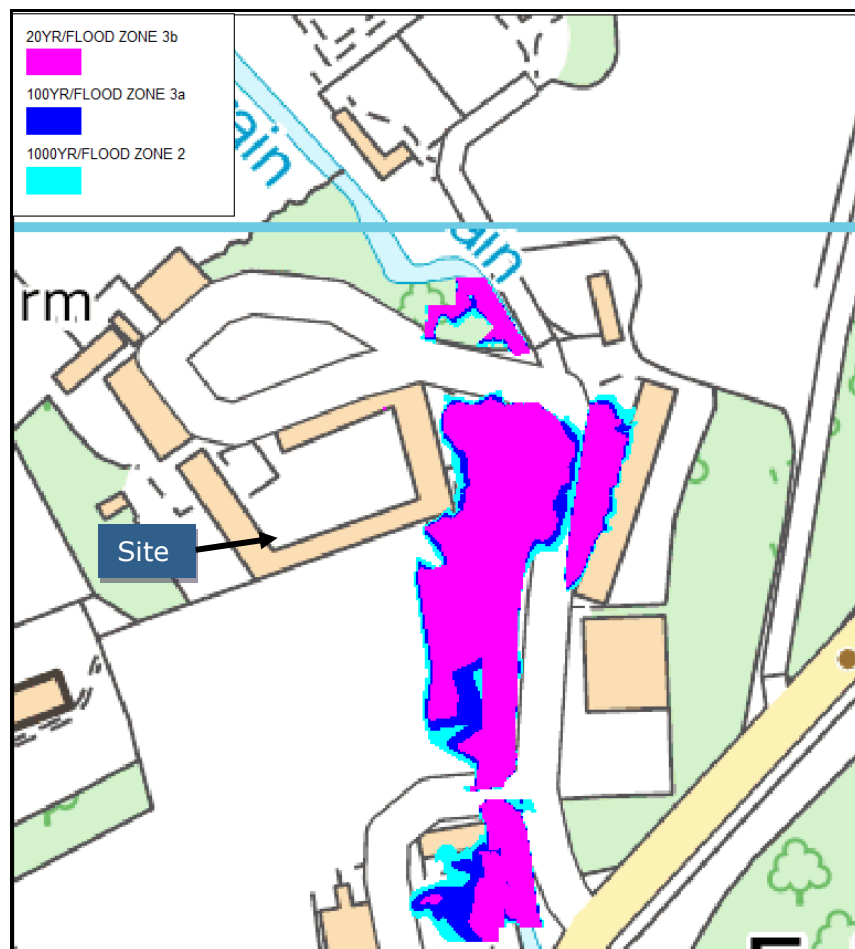


Figure 7: Present day flood extents and flood zones

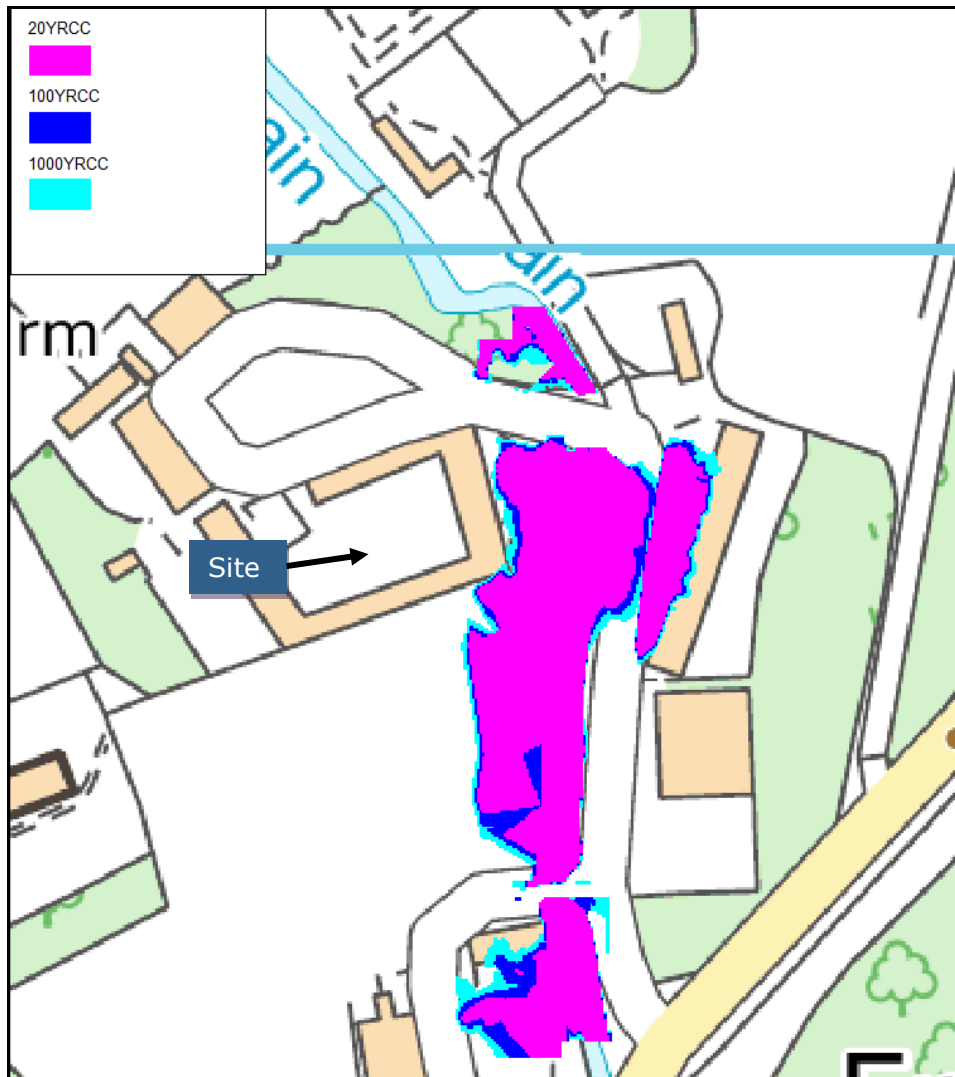


Figure 8: Climate change flood extents

6. FLOOD RISK MITIGATION AND EVACUATION

6.1 Reducing Exposure to the Hazard


- 6.1.1 In order to assess and reduce the exposure to the hazard and the vulnerability to the hazard after the site has been developed, the guidance outlined in the DCLG/DEFRA/EA document entitled *Flood Risk Assessment Guidance for New Development Phase 2; Flood Risks to People, Phase 2; Improving the Flood Performance of New Buildings* has been consulted.
- 6.1.2 Paragraph 060 (ID 7-060-20140306) of the NPPF Planning Practice Guidance states that the first preference is to avoid flood risk by raising floor levels above the flood level.
- 6.1.3 As discussed in Chapter 5, the ground floor will be set above all modelled flood levels and the hazard to people would be *Very low* thus complying with the NPPG.

6.2 Reducing Vulnerability to the Hazard

- 6.2.1 The Agency aims to provide up to 2 hours notice before the issue of a *Flood Alert* for fluvial events. It is understood that the police and other emergency services will assist in the evacuation to rest centres operated by the Council. People at the site will need to make a judgment themselves with regards to the flood hazard if evacuation is attempted and not solely rely on the emergency services.
- 6.2.2 It is highly likely that holiday-makers will either cancel their holiday or leave the area early and return home. Site management should also notify visitors who have not yet reached the site about the dangers. Safe refuge is available across the barns.
- 6.2.3 It is recommended that the site management liaise with the Agency in order to register with the Agency’s Flood Warnings Direct and ensure that they are aware of the flood risk so that they can evacuate upon receipt of a *Flood Alert*.
- 6.2.4 Site management should not solely rely on the Agency’s flood warning service or emergency services and should make a judgment on evacuating the site before, during or after the event. Site management will need to make a judgment with regards to the flood hazard if evacuation is attempted.
- 6.2.5 Signs and information plaques should be located regularly across the site to inform people of the flood risk. Site management should regularly review weather warnings and other media prior to permitting people onto the site.
- 6.2.6 It is recommended that a *Business Flood Plan* is developed and would include information on what to do during an event, together with evacuation procedures and routes. Flood wardens (i.e. duty manager) would be responsible for co-ordinating the closing of the site. Checklists would also be useful to prioritise procedures.

Table 2: Flood Event Action Plan

Environment Agency Flood Warning Code	What to do!	Evacuate?
Flood Alert (Flooding Possible. Be aware/prepared! Watch Out).	<ul style="list-style-type: none"> Monitor flood risk through media and Floodline Warnings Direct. Locate people and inform them of risk. If away from the site make 	Preferable, although up to occupants discretion. Drive carefully if

 <p>FLOOD ALERT</p>	<p>assessment on risk if considering returning to site (i.e. how long it will take to return etc).</p> <ul style="list-style-type: none"> • Begin to implement Flood Plan. • Gather Flood Kit and provisions in the event that evacuation is not possible. • Consider advice given from emergency services/Environment Agency. 	<p>evacuating as roads may be flooded or closed.</p> <p>If evacuation is not possible people should reside across the barns with their flood kit.</p>
<p>Warnings no longer in force (No further flooding is expected in the area. Be careful).</p>	<ul style="list-style-type: none"> • Return to site upon instruction from emergency services and assess any damage. • Contact insurance company depending on damage caused. • Beware of flood debris. • Do not touch sources of electricity. 	<p>Not applicable.</p>

6.3 Vulnerable Groups

6.3.1 People at the site may include vulnerable groups such as elderly people, those with sensory or physical disabilities, minority ethnic groups, or the infirm. Priority will need to be given to these people during the flood event.

6.3.2 Vulnerable groups should be identified by the site management and priority should be given to these groups.

6.4 Safe Access/Egress

6.4.1 Safe refuge is available during all flood events.

6.4.2 By consulting the flood levels and topographical survey, during the design climate change 1 in 100 year flood event according to Table 13.1 of *FD2320/TR2* the hazard to people would be *Very low* via the principle access route to the south, as well as the new access route to the west.

6.4.3 A flood response plan will be compiled to ensure that the occupants are aware of the flood risk and procedures to take before, during and after a flood.

6.5 Insurance

6.5.1 The Association of British Insurers (ABI) published a guidance document in 2012 entitled *Guidance on Insurance and Planning in Flood Risk Areas for Local Planning Authorities in England*.

6.5.2 The ABI guidance sets out the requirements of the insurance industry when considering flood risk and insurability of the property. The guidance suggests that properties should be protected for flood events up to the climate change 1 in 100 year event in order to access insurance at a competitive price.

- 6.5.3 The guidance also states that insurers would of course prefer to cover properties which are not at risk of flooding, however, for those properties which are at risk of flooding insurers would prefer that the properties are raised above the flood level, over resistance measures which prevent floodwater from entering the building, or resilience measures which allows floodwater to enter the building.
- 6.5.4 The barns will be set above the flood level, therefore, the ABI's requirement of protection during a climate change 1 in 100 year event will be met and there will be a good chance of the property being insured at a competitive rate.

7. OTHER SOURCES OF FLOODING

7.1 Groundwater Flooding

- 7.1.1 In order to assess the potential for groundwater flooding during higher return period rainfall events, the Jacobs/DEFRA report entitled *Strategy for Flood and Coastal Erosion Risk Management: Groundwater Flooding Scoping Study*, published in May 2004, was consulted, together with the guidance offered within the document entitled *Groundwater flooding records collation, monitoring and risk assessment (ref HA5)*, commissioned by DEFRA and carried out by Jacobs in 2006.

Soil and Geology at the Site

- 7.1.2 To assist with determining the soil and geology at the site, the various soil and hydrogeological data, listed in Section 2 has been referred to.
- 7.1.3 The British Geological Survey's *Online Geology of Britain Viewer* indicates that the soils beneath the site comprise clay, silt, sand and gravel.

Groundwater Flooding Potential at the Site

- 7.1.4 There have been no recorded groundwater flood events across the area between 2000 and 2003, as indicated by the Jacobs study. The 2017 SFRA map KL_16 shows that there is a less than 25% probability of flooding from groundwater.
- 7.1.5 Figure 6.1 of the SWMP shows that there have been no recorded incidents of groundwater flooding at the site.
- 7.1.6 It is likely that the risk of groundwater flooding is low considering the existing building footprints and hardstanding will confine the water table.

7.2 Surface Water Flooding and Sewer Flooding

- 7.2.1 Surface water and sewer flooding across urban areas is often a result of high intensity storm events which exceed the capacity of the sewer thus causing it to surcharge and flood. Poorly maintained sewer networks and blockages can also exacerbate the potential for sewer flooding. Surface water flooding can also occur as a result of overland flow across poorly drained rural areas.
- 7.2.2 The Norfolk County Council Flood Investigation Report for the 2014 event indicates that the site was not affected. Figure 6.3 of the SWMP shows that there have been no recorded incidents of surface water or sewer flooding at the site.
- 7.2.3 The Agency's Surface Water Flooding Map (Figure 9) indicates that there is a very low to high surface water flooding risk (less than 1 in 1000 year chance to events greater than 1 in 30 years).
- 7.2.4 Figure KL_16 of the 2017 SFRA shows that the site would also be affected during the climate change 1 in 100 year event, however, no depth data is provided. Therefore, it is recognised in the Norfolk County Council document entitled *Lead Local Flood Authority Statutory Consultee for Planning – Guidance Document* dated October 2021, that the low risk/1000yr flood event on the Agency's map (which does provide depth data), is used as a substitute for the climate change 1 in 100 year event to provide a worst-case scenario.

- 7.2.5 The site is shown to be located within a flow path as identified on the Agency’s velocity map which occurs in a north westerly direction and broadly follows the route of the watercourse.
- 7.2.6 Further more detailed data has been obtained via the Data.gov.uk site. The flood extent, depth and hazard GIS *shape file* was downloaded from Data.gov.uk (for tile TF_73), and compared with the survey data.
- 7.2.7 By comparing the flood extent to the survey data it can be seen that the flood contour is set at approximately 25.89m AOD during worst-case low risk events (i.e. between 1 in 1000 years and 1 in 100 years/climate change 1 in 100 year event).
- 7.2.8 The ground floor levels of the barns will be set above the flood level and the hazard to people would be *Very low* thus complying with the NPPG.

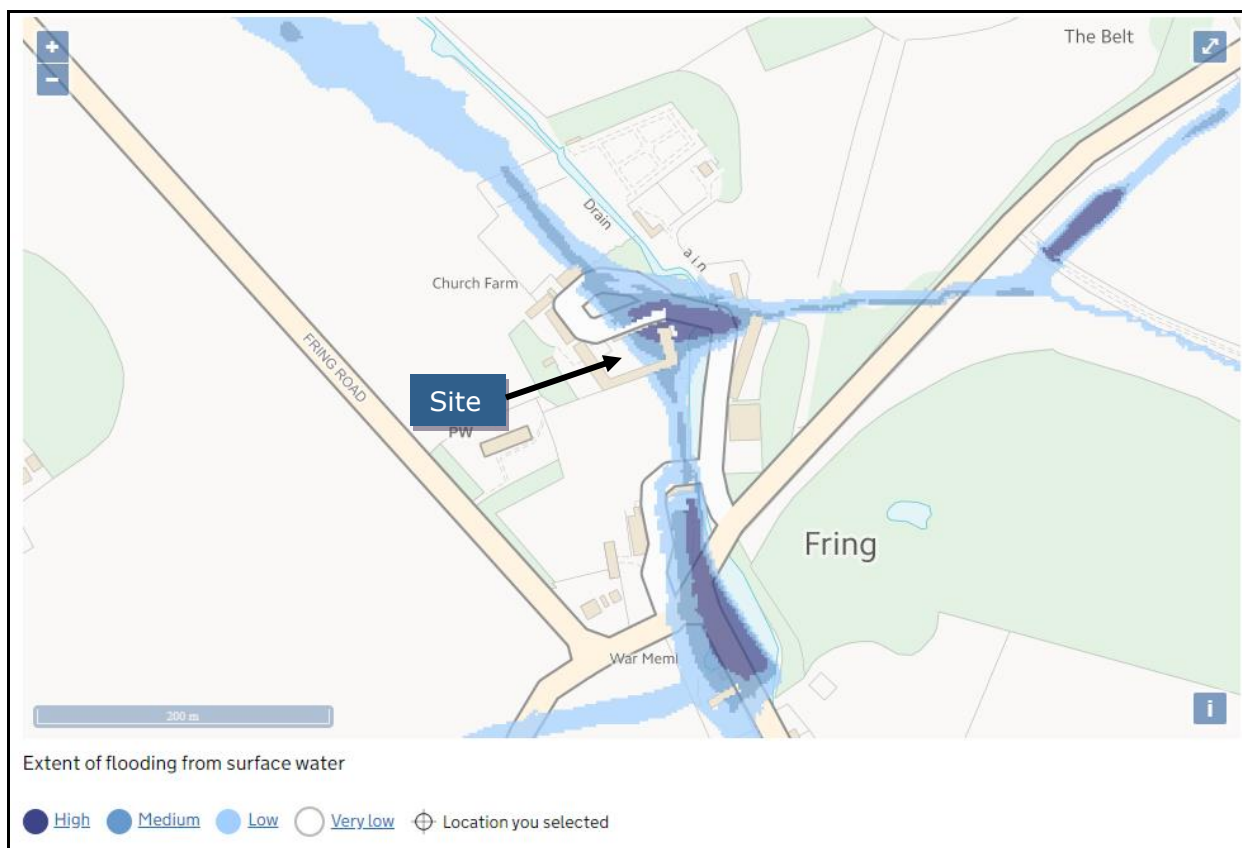


Figure 9: Environment Agency Surface Water Flooding Map (Source: Environment Agency, 2022)

Reducing Vulnerability to the Hazard

- 7.2.9 Flood Warnings for surface water flooding do not currently exist, however, the occupants should sign up to the Met Office weather warning system <https://www.metoffice.gov.uk/public/weather/warnings> and safe refuge is available at all times.

Table 3: Flood Event Action Plan

Alert	Level Definition	Action	Responsibility
<p>Yellow: be aware</p>	<p>Yellow warnings can be issued for a range of weather situations.</p> <p>Many are issued when it is likely that the weather will cause some low level impacts, including some disruption to travel in a few places.</p> <p>Other yellow warnings are issued when the weather could bring much more severe impacts to many people but the certainty of those impacts occurring is much lower.</p> <p>It is important to read the content of yellow warnings to determine which weather situation is being covered by the yellow warning.</p>	<p>Monitor weather through media and local observations.</p> <p>Locate occupants and inform them of risk. If away from the site make assessment on risk if considering returning to site (i.e. how long it will take to return etc).</p>	<p>Site management and employees.</p>
<p>Amber: be prepared</p>	<p>There is an increased likelihood of impacts from severe weather, which could potentially disrupt your works plans.</p> <p>This means there is the possibility of travel delays, road and rail closures, power cuts and the potential risk to life and property.</p>	<p>Monitor weather through media and local observations.</p> <p>Consider advice given from authorities including Council, Environment Agency and emergency services.</p> <p>Check insurance, Check flood kit.</p> <p>Cancel deliveries.</p> <p>People not to visit site if warned by site management.</p>	<p>Site management and employees.</p> <p>Occupants.</p>

Red: Take Action	<p>Dangerous weather is expected and, if you haven't already done so, you should take action now to keep yourself and your works force safe from the impact of the severe weather.</p> <p>It is very likely that there will be a risk to life, with substantial disruption to travel, energy supplies and possibly widespread.</p> <p>You should avoid travelling, where possible, and follow the advice of the emergency services and local authorities.</p>	<p>Follow advice given by Emergency Services, Environment Agency and Council.</p> <p>Maintain communication through the media.</p> <p>Begin to implement Flood Plan.</p>	<p>Site management and employees.</p> <p>Occupants.</p>
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Safe Access/Egress

- 7.2.10 The Agency's map indicates that there will be a low, medium and high surface water flood risk along the access route to the south.
- 7.2.11 The flood hazard is calculated based on different combinations of floodwater depth and velocity, and subsequently by using the hazard equation as cited in the DEFRA/EA R&D Document *Framework and guidance for assessing and managing flood risk for new development Phase 2 (FD2320/TR2)*. The numerical hazard rating is then categorised into four degrees of flood hazard in accordance with *FD2320/TR2*, shown on Table 4 overleaf.
- 7.2.12 The hazard rating has been extracted from the surface water hazard map which was downloaded from Data.gov.uk and is identified as being 1.25-2.00 during worst-case low risk events.
- 7.2.13 Therefore, according to Table 4 overleaf the hazard to people would therefore be *Dangerous for Most*.
- 7.2.14 Despite this, the proposed access route to the west as shown on the proposed site layout would be free from flooding and safe access/egress would be available at all times.

Table 4: Hazard to people categories (based on FD2320/TR2)

Hazard Rating	Degree of Flood Hazard	Description
< 0.75	Very low hazard	Caution "Flood zone with shallow flowing water or deep standing water"
0.75 – 1.25	Danger for Some	Dangerous for some (i.e. children) "Danger: Flood zone with deep or fast flowing water"
1.25 – 2.0	Danger for Most	Dangerous for most people (i.e. general public) "Danger: Flood zone with deep fast flowing water"
> 2.0	Danger for All	Dangerous for all "Extreme danger: flood zone with deep fast flowing water"

7.3 Reservoirs, Canals And Other Artificial Sources

7.3.1 The failure of man-made infrastructure such as flood defences and other structures can result in unexpected flooding. Flooding from artificial sources such as reservoirs, canals and lakes can occur suddenly and without warning, leading to high depths and velocities of flood water which pose a safety risk to people and property.

7.3.2 The Environment Agency’s “Risk of flooding from reservoirs” map shows that the site is not at risk from reservoir flooding or from artificial sources.

8. CONCLUSIONS

- Flood modelling has shown that the site is located within Flood Zone 1.
- The proposed ground floor level of the northern and eastern barns will be set at a minimum of 26.108m AOD so that they are above the climate change 1 in 1000 year flood level at cross section 7 (most relevant to the building location). The southern and western barns will be set at a minimum of 26.373m AOD.
- Safe (dry) refuge at the site is available during the flood event.
- A warning and evacuation strategy has been developed within this assessment. It is proposed that the site management register with the Agency's *Flood Warnings Direct* and prepare a *Business Flood Plan*.
- This assessment has investigated the possibility of groundwater flooding and flooding from other sources at the site. It is considered that there is a low groundwater flood risk.
- The low risk (1000yr/100yr plus climate change) surface water flood level across the site has been estimated to also be 25.89m AOD. The floor level of the building will therefore be set above the flood depth thus providing safe refuge and no internal flooding.
- Safe access/egress can be achieved during the peak of the fluvial event and surface water flood event, however, it is recommended that the occupants evacuate the site during the early warning stages.

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DRAWINGS



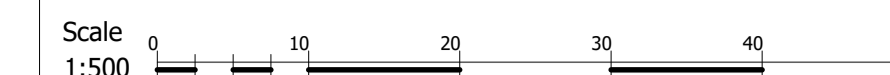
STATION TABLE				
Station Name	Easting	Northing	Height (m)	Station Identifier
STNBBS1	573718.090	334836.039	26.201	Mag Nail & Washer
STNBBS2	573693.853	334820.498	27.458	Mag Nail & Washer
STNBBS3	573672.716	334792.211	26.778	Mag Nail & Washer
STNBBS4	573632.688	334731.836	27.205	Mag Nail & Washer

Control Stations have been forced to a Scale Factor of 1.

Sheet 2



Sheet 1



Notes:

AV Air Valve	FH Fire Hydrant	SP Sign Post
BB Bottom Bank	FP Footpath	STAY Stay
BH Bore Hole	G Gully Grate	SV Sluice Valve
BL Lit Bollard	GV Gas Valve	TAC Tactile Paving
BOL Bollard	Hedge	TB Top Bank
BN Bin	IC Inspection Cover	TBOX Telephone Box
BS Bus Stop	IL Invert Level	TL Traffic Light
Bushes Bush	KO Kerb Outlet	TOK Top Of Kerb
BT BT Box	LP Lamp Post	TP Telegraph Pole
CAB Cabinet	MH Manhole	TRK Track
CHNL Channel	MP Marker Post	TS Traffic Sign MH
CL Centreline	NB Name Board	VENT Vent
CONC Concrete	P/W Partition Wall	W Water Cover
COL Column	PB Post Box	WL White Line
DB Ditch Bottom	PM Parking Meter	WO Wash Out
DCHNL Drainage Channel	PO Post	YL Yellow Line
Door Door	RE Rodding Eye	
EEB Electric MH Cover	Ridge	Ridge Level
EP Electric Pole	RP Reflector Post	
ER Earth Road	RS Road Sign	
ET EP Transformer	SETTS Granite Setts	
Feeder Feeder Pillar	SF Safety Fence	

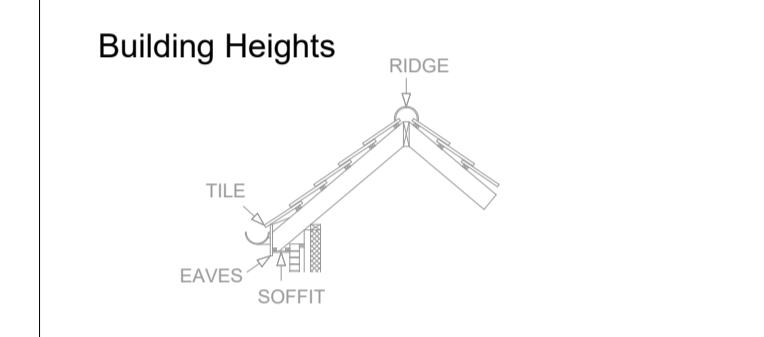
FCB Close Boarded	Control Station
FCL Chain Link	Column
FHD Hoarding	Flr to Ceiling Height
FHR Hoist Fence	Flr to False Ceiling Height
FPL Pallisade	Flr to False Ceiling Height
FPR Post & Rail	
FPW Post & Wire	
RAIL Railings	

Features

Fences	FCB 1.6m	
Walls	Wall 1.2m	
Hedges	Hedge 1.2m	Average root line shown.
Overhead Line	OKL	Indicative position of cables.

Services

Foul Sewers	0.2500	0.7500	Pipe position and alignment is indicative only.
Storm Sewers	0.3750	0.5000	



SURVEY CARRIED OUT USING TRIMBLE S6 TOTAL STATION & TRIMBLE R10 GPS.

THE SURVEY HAS BEEN ACCURATELY POSITIONED ON THE ORDINANCE SURVEY NATIONAL GRID SYSTEM USING GPS OBSERVATIONS TO THE OS ACTIVE NETWORK AND THE LATEST ORDINANCE SURVEY TRANSFORMATION (OSTN15/OSGM15).

LOCAL SCALE FACTOR HAS BEEN REMOVED TO TRANSFORM THE SURVEY TO A FLAT EARTH GRID (SCALE FACTOR 1.00000).

ALL LEVELS RELATE TO ORDINANCE SURVEY DATUM (NEWLYN). VERTICAL CONTROL HAS BEEN ESTABLISHED USING GPS OBSERVATIONS TO THE OS ACTIVE NETWORK AND THE LATEST ORDINANCE SURVEY TRANSFORMATION (OSTN15/OSGM15).

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DRAINAGE RUNS BETWEEN INSPECTION COVERS HAVE NOT BEEN INVESTIGATED. ANY SHOWN ARE ESTIMATED AND NOT CONFIRMED. ALL DRAINAGE RUNS SHOULD BE PROVIDED BY DYE TRACING AND IF NECESSARY BY RADIO DETECTION METHODS PRIOR TO ANY DESIGN WORK. ALL PIPE SIZES AND CONNECTIONS SHOULD ALSO BE CONFIRMED WITH YOUR LOCAL DRAINAGE AUTHORITY PRIOR TO ANY DESIGN WORK.

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-	02.03.22	BB	First Issue
REV	Date	Created By	Comments
Scale at A1	Project Number		
1:500	2219-3284		

Drawing Status

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<input type="checkbox"/>	As Built Survey
<input type="checkbox"/>	For Information



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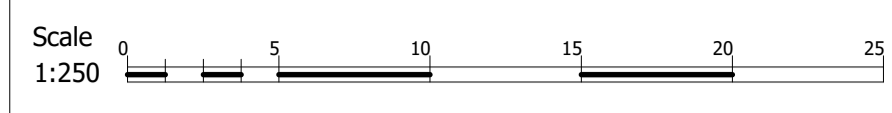
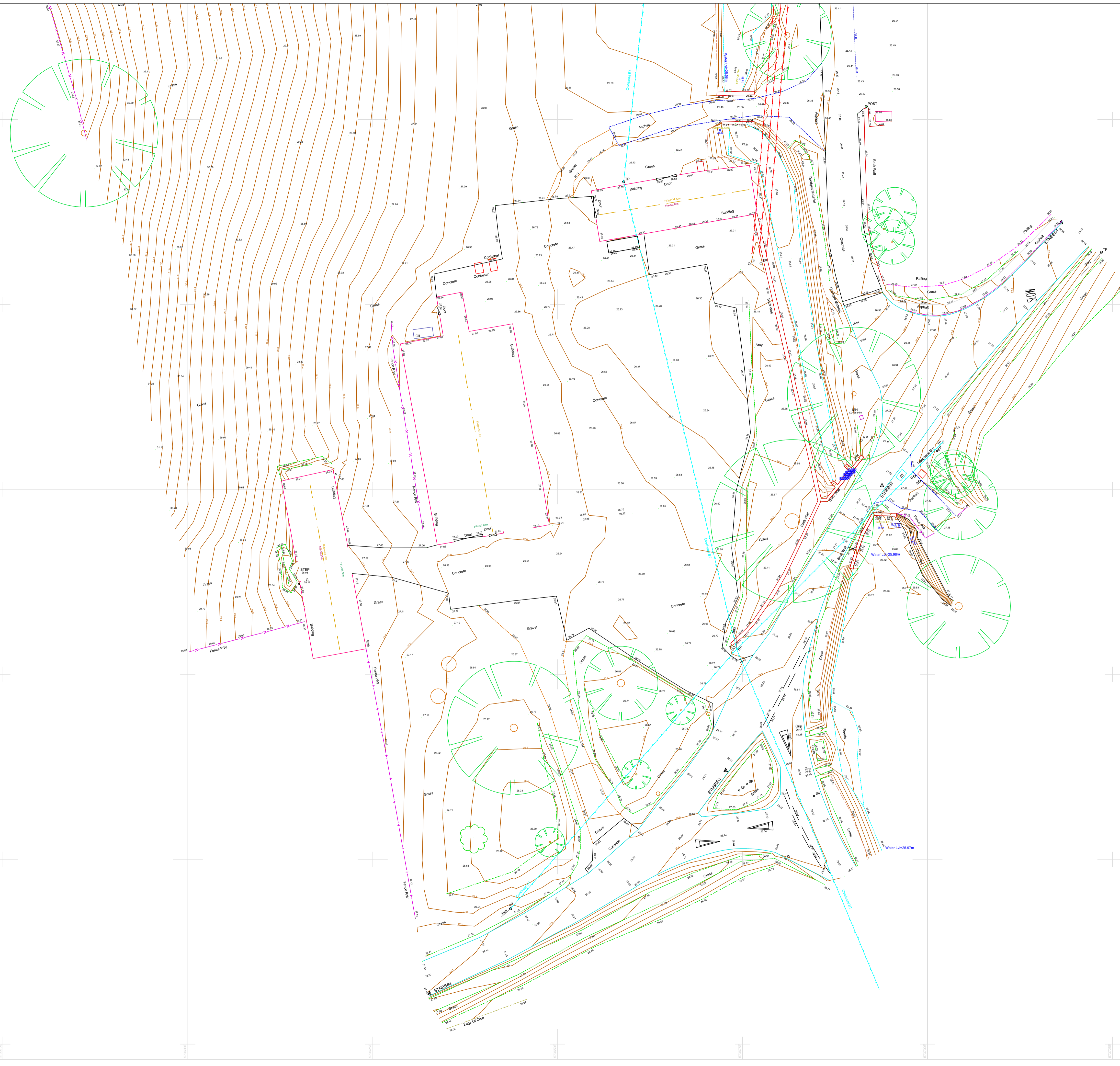
Project
**Courtyard Barns
Fring**

Title
**Existing Ground Level Survey
Overview**

BBS- BB- EGL- SU- 00	-
Originator Initials Detail Type Number	Reviser

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BBS- BB- EGL- SU- 01
 Originator Initials Detail Type Number Revisions



Notes:

AV	Air Valve	FH	Fire Hydrant	SP	Sign Post
BB	Bottom Bank	FP	Footpath	STAY	Stay
BH	Bore Hole	G	Gully Grate	SV	Sluice Valve
BL	Li Bollard	GV	Gas Valve	TAC	Tactile Paving
BOL	Bollard	Hedge		TB	Top Bank
BN	Bin	IC	Inspection Cover	TBOX	Telephone Box
BS	Bus Stop	IL	Invert Level	TL	Traffic Light
Bushes	Bush	KO	Kerb Outlet	TOK	Top Of Kerb
BT	BT Box	LP	Lamp Post	TP	Telegraph Pole
CAB	Cabinet	MH	Manhole	TRK	Track
CHNL	Channel	MP	Marker Post	TS	Traffic Sign MH
CL	Centreline	NB	Name Board	VENT	Vent
CONC	Concrete	P/W	Partition Wall	W	Water Cover
COL	Column	PB	Post Box	WL	White Line
DB	Ditch Bottom	PM	Parking Meter	WO	Wash Out
DCHNL	Drainage Channel	PO	Post	YL	Yellow Line
Door	Door	RE	Rodding Eye		
EEB	Electric MH Cover	Ridge	Ridge Level		
EP	Electric Pole	RP	Reflector Post		
ER	Earth Road	RS	Road Sign		
ET	EP Transformer	SETTS	Gravel Sets		
Feeder	Feeder Pillar	SF	Safety Fence		

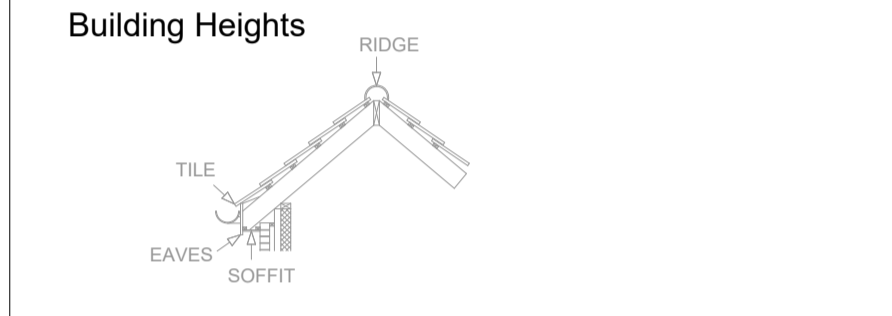
FCB	Close Boarded	Control Station	
FCL	Chain Link	Column	
FHD	Hoarding	Column	
FHR	Hoist Fence	K.X.S	Floor to Ceiling Height
FPL	Pallisade	K.X.S. R.C.	Floor to False Ceiling Height
FPR	Post & Rail		
FPW	Post & Wire		
RAIL	Railings		

Features

Fences	FCB 1.0m	Average route line shown.
Walls	Wall 1.2m	Indicative position of cables.
Hedges	Hedge 1.2m	
Overhead Line	Overhead Line	

Services

Foul Sewers	0.2250	0.750m	Pipe position and alignment is indicative only.
Storm Sewers	0.3750	0.750m	



SURVEY CARRIED OUT USING TRIMBLE S6 TOTAL STATION & TRIMBLE R10 GPS.
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-	02.03.22	BB	First Issue

Scale at A1	Project Number
1:250	2219-3284

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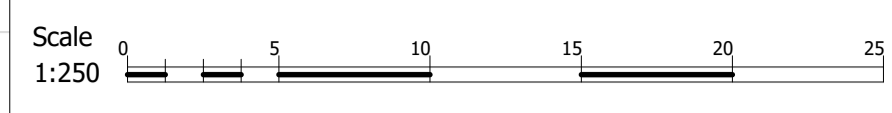
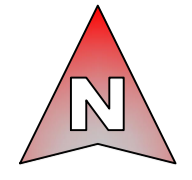
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 m: 07786 388175
 e: barry@bbsurveys.co.uk



Project
**Courtyard Barns
 Fring**

Title
**Existing Ground Level Survey
 Sheet 1**

BBS- BB- EGL- SU- 01
 Originator Initials Detail Type Number Revisions



Notes:

AV	Air Valve	FH	Fire Hydrant	SP	Sign Post
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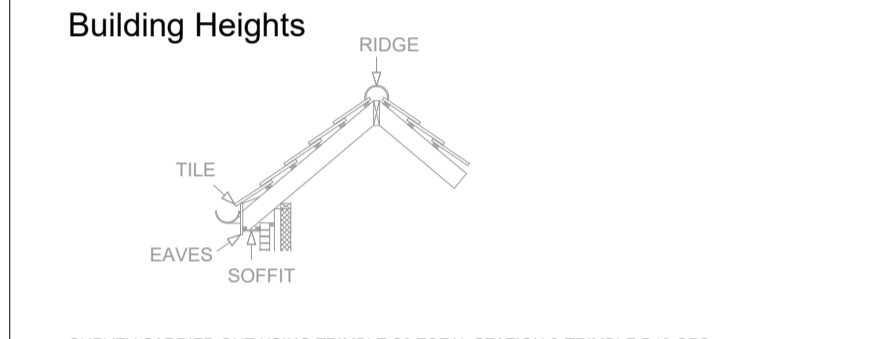
FCB	Close Boarded	CS	Control Station
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Features

Fences	FCB 1.0m	Average road line shown.
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Scale at A1	Project Number
1:250	2219-3284



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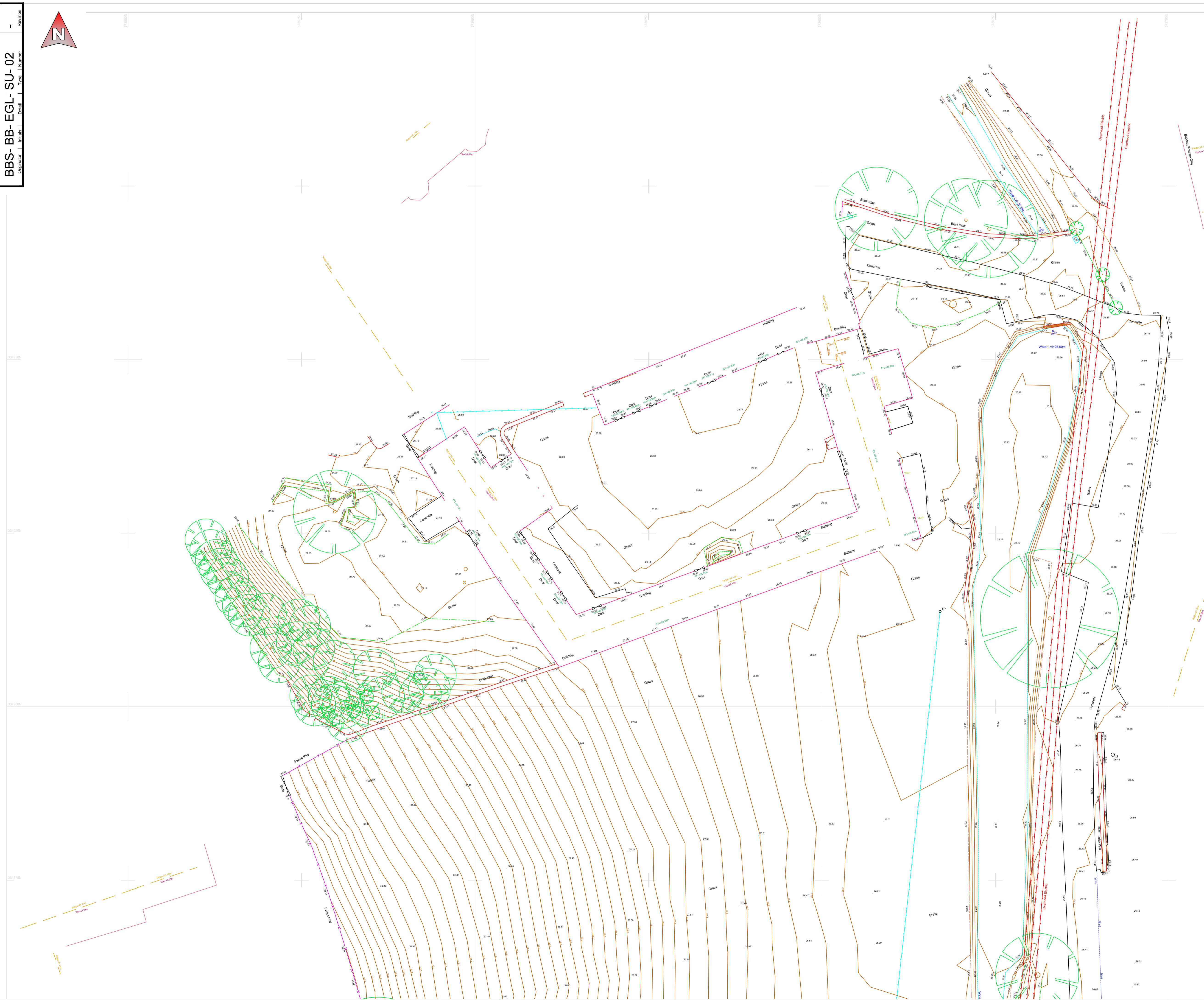


**Courtyard Barns
Fring**

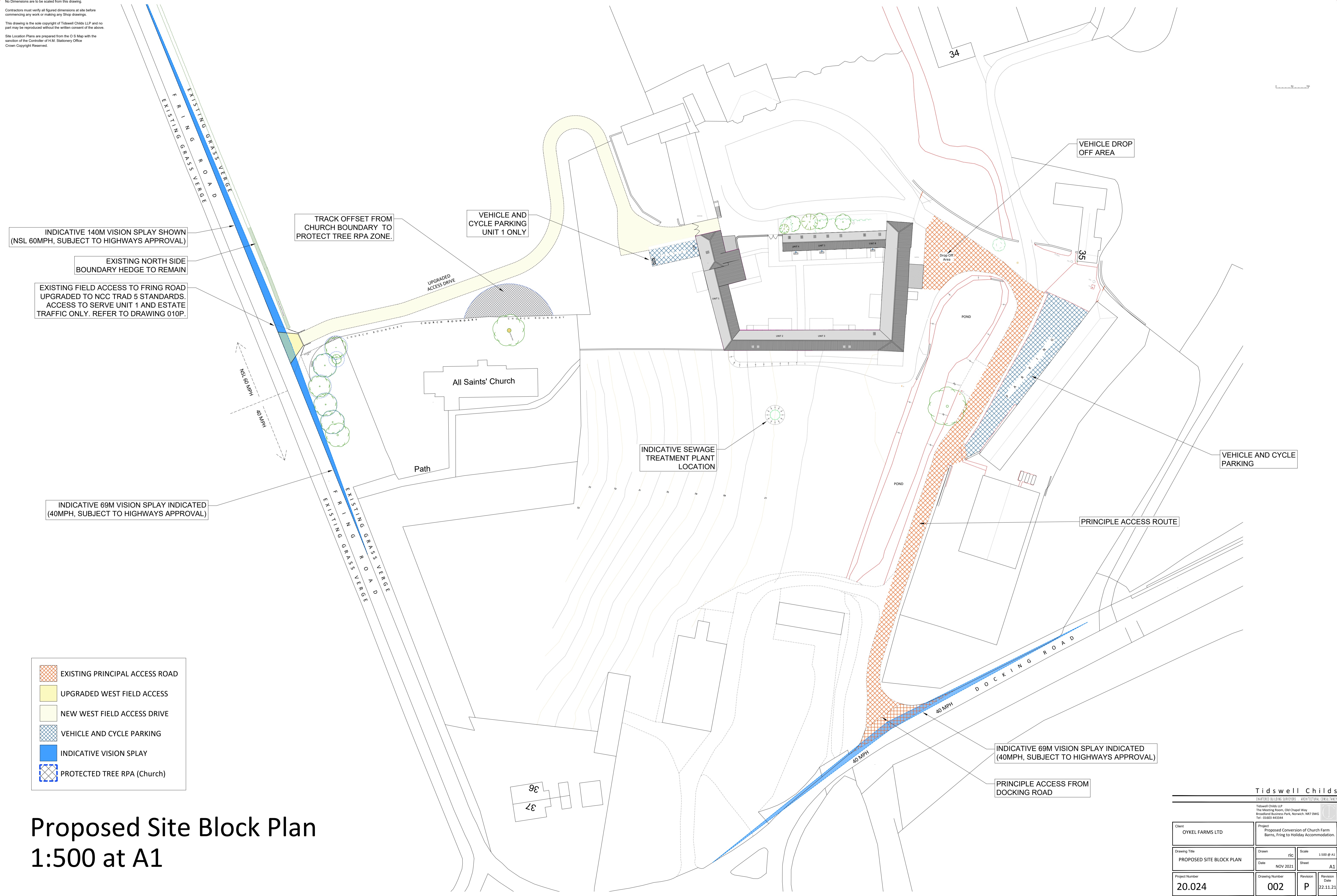
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Sheet 2**

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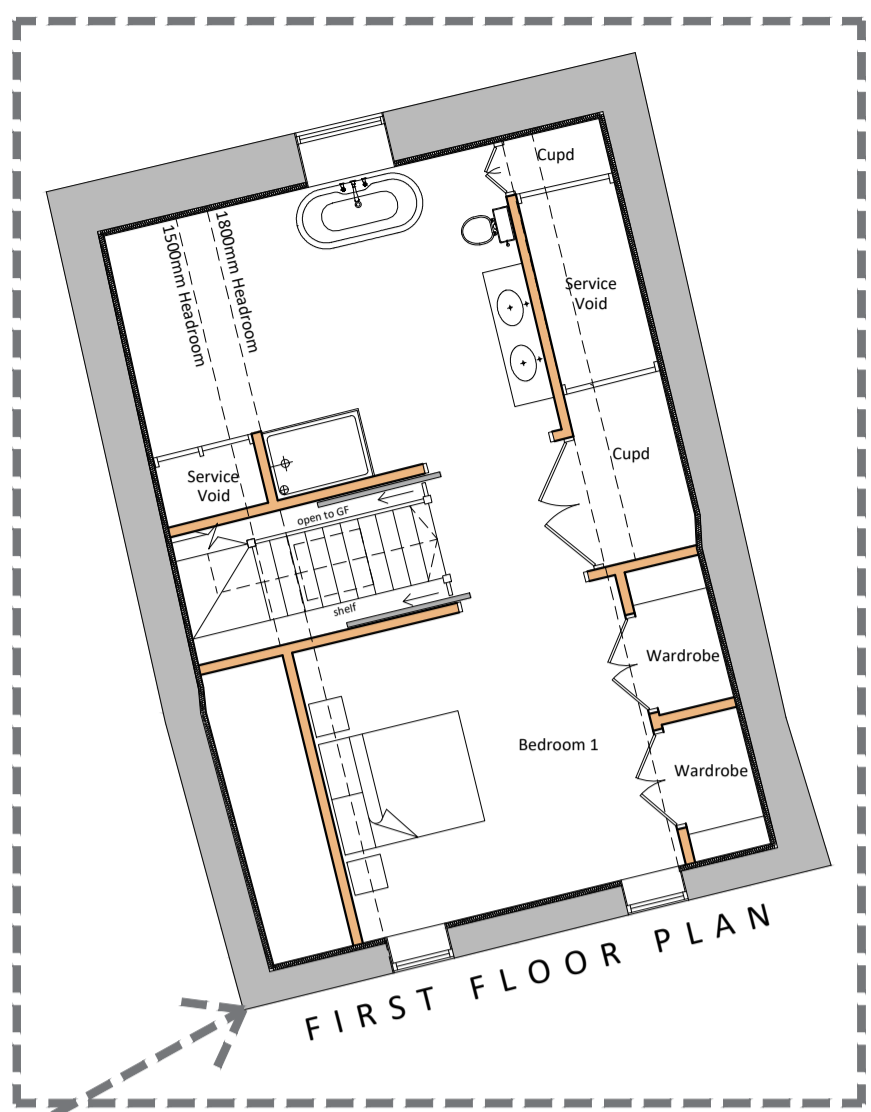


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Proposed Site Block Plan 1:500 at A1

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<small>Tidswell Childs LLP The Meeting Room, Old Chapel Way Broadland Business Park, Norwich, NR7 0WG Tel: 01603 443344</small>			
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Drawing Title	PROPOSED SITE BLOCK PLAN	Drawn	rfc
		Date	NOV 2021
Project Number	20.024	Drawing Number	002
		Revision	P
		Revision Date	22.11.21
		Scale	1:500 @ A1
		Sheet	A1



- Existing Walls
- Proposed Walls

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Client OYKEL FARMS LTD	Project Proposed Conversion of Church Farm Barns, Fring to Holiday Accommodation.		
Drawing Title PROPOSED FLOOR PLANS	Drawn ric	Scale 1:100 @ A1	Sheet A1
Project Number 20.024	Date NOV 2021	Revision P	Revision Date 24.11.21
Drawing Number 003	Revision P	Revision Date 24.11.21	

