Land off Dyke Nook, Clitheroe, BB7 1JJ

Flood Risk Assessment

For JPS Civil & Structural Engineers

KRS.0635.006.R.001.A

February 2023

www.krsenviro.com

CONTACT DETAILS

Registered Office:
KRS Environmental Ltd
3 Princes Square
Princes Street
Montgomery
Powys
SY15 6PZ

Tel: 01686 668957
Mob: 07711 257466

Email: keelan@krsenviro.com
Web: www.krsenviro.com
LinkedIn: uk.linkedin.com/in/keelanserjeant/

Office also at:
KRS Environmental Ltd
The Media Centre
7 Northumberland Street
Huddersfield
West Yorkshire
HD1 1RL

Tel: 01484 437420
Mob: 07711 257466

Land off Dyke Nook, Clitheroe, BB7 1JJ

Project	Flood Risk Assessment
Client	JPS Civil & Structural Engineers
Status	Final
Prepared by	Ruth Evans
Reviewed by	Keelan Serjeant BSc (Hons), MSc, MCIWEM
Date	February 2023

Disclaimer

This report has been produced by KRS Environmental Limited within the terms of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

CONTENTS

TABLES & FIGURES

EXECUTIVE SUMMARY

The Site would be expected to remain dry in all but the most extreme conditions. The consequences of flooding are acceptable, and the development would be in accordance with the requirements of the National Planning Policy Framework (NPPF).

This Flood Risk Assessment (FRA) demonstrates that the Proposed Development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of NPPF. The Proposed Development should not therefore be precluded on the grounds of flood risk.

1.0 INTRODUCTION

1.1 Background

This Flood Risk Assessment (FRA) has been prepared by KRS Enviro at the request of JPS Civil & Structural Engineers to support a planning application for the development of a Care Home ("the Proposed Development") on land off Dyke Nook, Clitheroe, BB7 1JJ ("the Site").

This FRA has been carried out in accordance with guidance contained in the National Planning Policy Framework (NPPF)[1], associated Planning Practice Guidance on flood risk and coastal change[2] (PPG) and the PPG 'Site-specific flood risk assessment checklist. This FRA identifies and assesses the risks of all forms of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe throughout the lifetime, taking climate change into account.

It is recognised that developments which are designed without regard to flood risk may endanger lives, damage property, cause disruption to the wider community, damage the environment, be difficult to insure and require additional expense on remedial works. The development design should be such that future users will not have difficulty obtaining insurance or mortgage finance, or in selling all or part of the development, as a result of flood risk issues.

1.2 National Planning Policy Framework (NPPF)

One of the key aims of the NPPF is to ensure that flood risk is taken into account at all stages of the planning process; to avoid inappropriate development in areas at risk of flooding and to direct development away from areas of highest risk.

It advises that where new development is exceptionally necessary in areas of higher risk, this should be safe, without increasing flood risk elsewhere, and where possible, reduce flood risk overall. A risk-based approach is adopted at stages of the planning process, applying a source pathway receptor model to planning and flood risk. To demonstrate this, an FRA is required and should include:

- whether a Proposed Development is likely to be affected by current or future flooding from all sources;
- whether it will increase flood risk elsewhere;
- whether the measures proposed to deal with these effects and risks are appropriate;
- if necessary, provide the evidence to the Local Planning Authority (LPA) that the Sequential Test can be applied; and
- whether the development will be safe and pass part c) of the Exception Test if this is appropriate.

The report findings are based upon professional judgement and are summarised below with detailed recommendations provided at the end of the report. The report includes rainfall data from the Flood Estimation Handbook (FEH) and hydrogeological information from the British Geological Survey (BGS). The assessment will summarise and refer to these datasets in the text.

[1] Ministry for Housing, Communities and Local Government (2021) National Planning Policy Framework: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf
[2] Communities and Local Government (2014) Planning Practice Guidance - Flood Risk and Coastal Change: https://www.gov.uk/guidance/flood-risk-and-coastal-change

1.3 Report Structure

This FRA has the following report structure:

- Section 2 describes the location and the existing and Proposed Development;
- Section 3 outlines the flood risk to the existing and Proposed Development;
- Section 4 describes the risk management methods used to mitigate all sources of flood risk;
- Section 5 details the Sequential and Exception Tests; and
- Section 6 presents a summary and conclusions.

2.0 LOCATION & DEVELOPMENT DESCRIPTION

2.1 Site Location

The Site is located on land off Dyke Nook, Clitheroe, BB7 1JJ (see Figure 1). The National Grid Reference (NGR) of the Site is 374890, 440702.

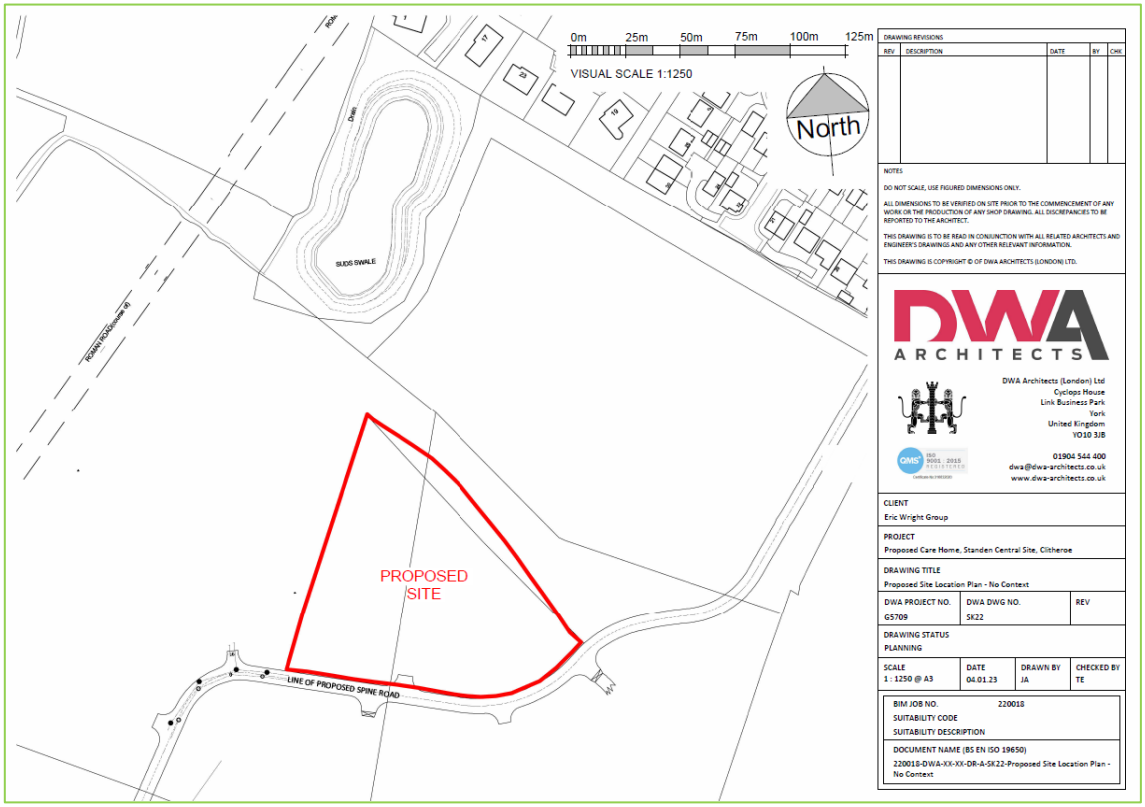


Figure 1 - Site Location

2.2 Existing Development

The Site is currently undeveloped grassland.

2.3 Proposed Development

The Proposed Development is for the construction of a new care home facility which is part of a wider development of the area (see Appendix 1). Further details with regard to the Proposed Development can be found in the accompanying information submitted with the planning application.

2.4 Ground Levels

A topographical survey of the Site has recently been completed (see Appendix 2). The Site rises from north to south with a minimum ground level of 101.30 metres Above Ordnance Datum (mAOD) to the north and a maximum ground level of 103.85mAOD to the south.

2.5 Catchment Hydrology / Drainage

There is a drainage ditch located approximately 50m to the north of the Site. The Pendleton Brook is located approximately 330m to the south of the Site and the Mearley Brook is located approximately 1.30km to the west of the Site. There is also SuDS basin approximately 60m to the north west of the Site which is connected to the drainage ditch.

2.6 Ground Conditions

The British Geological Survey (BGS) map[3] shows that the bedrock deposits underneath the Site consists of the Clitheroe Limestone Formation and Hodder Mudstone Formation - mudstone. The superficial deposits consist of Till, Devensian - diamicton.

Information from the National Soil Resources Institute[4] details the Site area as being situated on slowly permeable seasonally wet acid loamy and clayey soils with impeded drainage.

[3] https://mapapps2.bgs.ac.uk/geoindex/home.html
[4] http://www.landis.org.uk/soilscapes/

3.0 FLOOD RISK

3.1 Sources of Flooding

All sources of flooding have been considered, these are; fluvial (river) flooding, tidal (coastal) flooding, groundwater flooding, surface water (pluvial) flooding, sewer flooding and flooding from artificial drainage systems/infrastructure failure.

3.2 Historic Flooding

Environment Agency data shows that the Site has not historically flooded. There are no records of anecdotal information of flooding at the Site including within the British Hydrological Society "Chronology of British Hydrological Events". No other historical records of flooding for the Site have been recorded. Therefore, it has been concluded that the Site has not flooded within the recent past.

3.3 Existing and Planned Flood Defence Measures

Environment Agency data confirms that the Site is not protected against flooding by existing flood defence measures.

3.4 Environment Agency Flood Zones

A review of the Environment Agency's Flood Zones indicates that the Site is located within Flood Zone 1. Therefore, the Site has a 'low probability' of flooding as shown in Figure 2, with less than a 1 in 1000 annual probability of river or sea flooding in any year (<0.1%).

The Flood Zones are the current best information on the extent of the extremes of flooding from rivers or the sea that would occur without the presence of flood defences, because these can be breached, overtopped and may not be in existence for the lifetime of the development. They show the worst-case scenario.

The Environment Agency Flood Zones and acceptable development types are explained in Table 1. Table 1 shows that all development types are generally acceptable in Flood Zone 1.

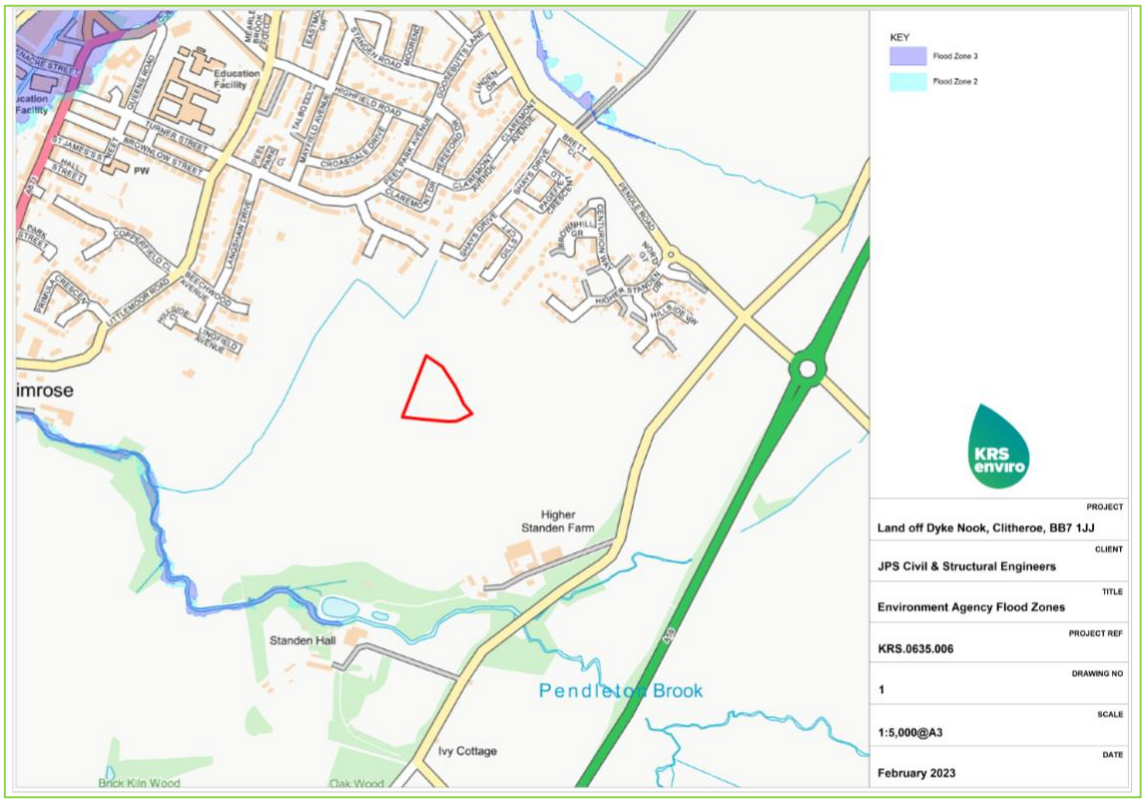


Figure 2 - Environment Agency Flood Zones

Table 1 - Environment Agency Flood Zones and Appropriate Land Use

Flood Zone	Probability	Explanation	Appropriate Land Use
Zone 1	Low	Less than a 1 in 1000 annual probability of river or sea flooding in any year (<0.1%)	All development types generally acceptable
Zone 2	Medium	Between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% 0.1%) in any year	Most development type are generally acceptable
Zone 3a	High	A 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year	Some development types not acceptable
Zone 3b	'Functional Floodplain'	Land where water has to be flow or be stored in times of flood. SFRAs should identify this zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1% flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes)	Some development types not acceptable

3.5 Flood Vulnerability

In the Planning Practice Guidance to the NPPF, appropriate uses have been identified for the Flood Zones. Applying the Flood Risk Vulnerability Classification in the Planning Practice Guidance to the NPPF, the proposed use is classified as 'more vulnerable'. Table 2 of this report and the Planning Practice Guidance to the NPPF states that 'more vulnerable' uses are appropriate within Flood Zone 1.

Table 2 - Flood Risk Vulnerability and Flood Zone 'Compatibility'

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception test required	✓	✓
Zone 3a	Exception test required	✓	×	Exception test required	✓
Zone 3b 'Functional Floodplain'	Exception test required	✓	×	×	×

Key: *✓: Development is appropriate, ×: Development should not be permitted.*

3.6 Climate Change

Projections of future climate change, in the UK, indicate more frequent, short-duration, high intensity rainfall and more frequent periods of long duration rainfall. Guidance included within the NPPF recommends that the effects of climate change are incorporated into FRA's. Recommended precautionary sensitivity ranges for peak rainfall intensities and peak river flows are outlined in the flood risk assessments: climate change allowances guidance[5]. Table 3 shows peak river flow allowances by river catchment.

As per Environment Agency guidance, the anticipated lifetime of the development is deemed to be 100 years. The flood risk assessments: climate change allowances guidance recommends that for 'more vulnerable' uses in Flood Zone 1 that the central allowances are used. Therefore, the design flood level for the Site is the 1 in 100 year (+36%) event.

Table 3 - Peak River Flow Allowances by River Catchment

Catchment	Allowance Category	2020s	2050s	2080s
Ribble Management Catchment	Upper	+27%	+44%	+71%
	Higher	+19%	+29%	+46%
	Central	+16%	+23%	+36%

3.7 Fluvial (River) Flooding

The Site is not located within the vicinity of fluvial flooding sources and the risk of fluvial flooding is considered to be not significant.

[5] https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances#high-allowances

3.8 Tidal (Coastal) Flooding

The Site is not located within the vicinity of tidal flooding sources and the risk of tidal flooding is considered to be not significant.

3.9 Groundwater Flooding

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements and car parks) underlain by permeable rocks (aquifers). Site ground conditions suggest a low potential for groundwater flooding. The risk of flooding from groundwater flooding is considered to be not significant.

3.10 Surface Water (Pluvial) Flooding

The Site is not situated near to large areas of poor permeability or areas with the geology and/or topography which may result in surface water flooding. The Site surroundings are relatively flat and there are no large catchments that would tend to generate surface water runoff towards the Site. Surface water flow flooding tends to occur sporadically in both location and time such surface water flows would tend to be confined to the streets around the Proposed Development.

The Environment Agency Surface Water flood map shows that the majority of the Site has a very low risk of surface water flooding (see Figure 3) with a chance of flooding of less than 1 in 1000 (0.1%) years. However, a small proportion of the Site has a low to high risk of surface water flooding with a chance of 1 in 1000 (0.1%) to greater than 1 in 30 years (3.3%). The areas shown to be at risk of surface water flooding are associated with low spots on the Site and the drainage ditch to the north of the Site.

During the 1 in 30 year (high risk) and 1 in 100 year (medium risk) events the water depths are shown to be less than 0.30m. During the 1 in 1000 year (low risk) event the water depths are shown to be less than 0.60m.

During the 1 in 30 year (high risk) and 1 in 100 year (medium risk) events the hazard rating is shown to be less than 0.75 with a 'very low' flood hazard with a 'flood zone with shallow flowing water or deep standing water' as per Table 4 of the Supplementary Note on Flood Hazard Ratings and Thresholds for Development Planning and Control Purpose - Clarification of the Table 13.1 of FD2320/TR2 and Figure 3.2 of FD/2321/TR1.

During the 1 in 1000 year (low risk) event the hazard rating is shown to be less than 2.00 with a 'significant' flood hazard with a 'flood zone with deep fast flowing water' this would pose a danger for most including the general public.

It should be noted that the above is the most conservative estimate of surface water flood risk. The flood risk from surface water is of a minor nature with low water depths and velocities being experienced. Therefore, the risk of flooding from surface water flooding is considered to be of low significance. The risk from this source will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the Site (see Section 4.0).

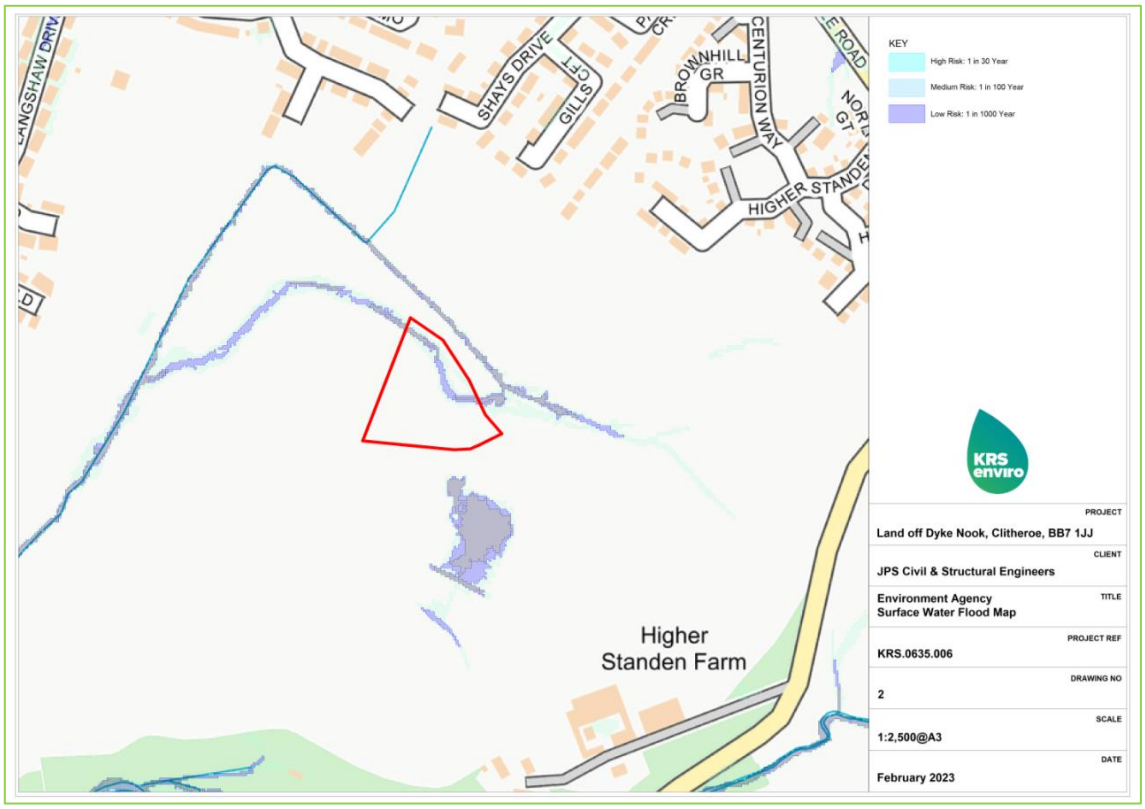


Figure 3 - Environment Agency Surface Water Flood Map

3.11 Sewer Flooding

Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. Sewer flooding tends to occur sporadically in both location and time such flood flows would tend to be confined to the streets around the development.

Any sewers will inevitably have a limited capacity so in extreme conditions there would be surcharges, which may in turn cause flooding. Flood flows could also be generated by burst water mains, but these would tend to be of a restricted and much lower volume than weather generated events and so can be discounted for the purposes of this assessment.

Given the design parameters normally used for drainage design in recent times and allowing for some deterioration in the performance of the installed systems, which are likely to have been in place for many years, an appropriate flood risk probability from this source could be assumed to have a return period in the order of 1 in 10 to 1 in 20 years. The provision of adequate level difference between the ground floors and adjacent ground level would reduce the annual probability of damage to property from this source to 1 in 100 years or less. The risk of flooding from sewer flooding is considered to be not significant.

3.12 Flooding from Artificial Drainage Systems/Infrastructure Failure

There are no other nearby artificial water bodies, water channels and artificial drainage systems that could be considered to pose a flood risk to the Site. The Environment Agency Reservoir flood map shows that the Site is not at risk of reservoir flooding (see Figure 4). The risk of

flooding from flooding from artificial drainage systems/infrastructure failure is considered to be not significant.

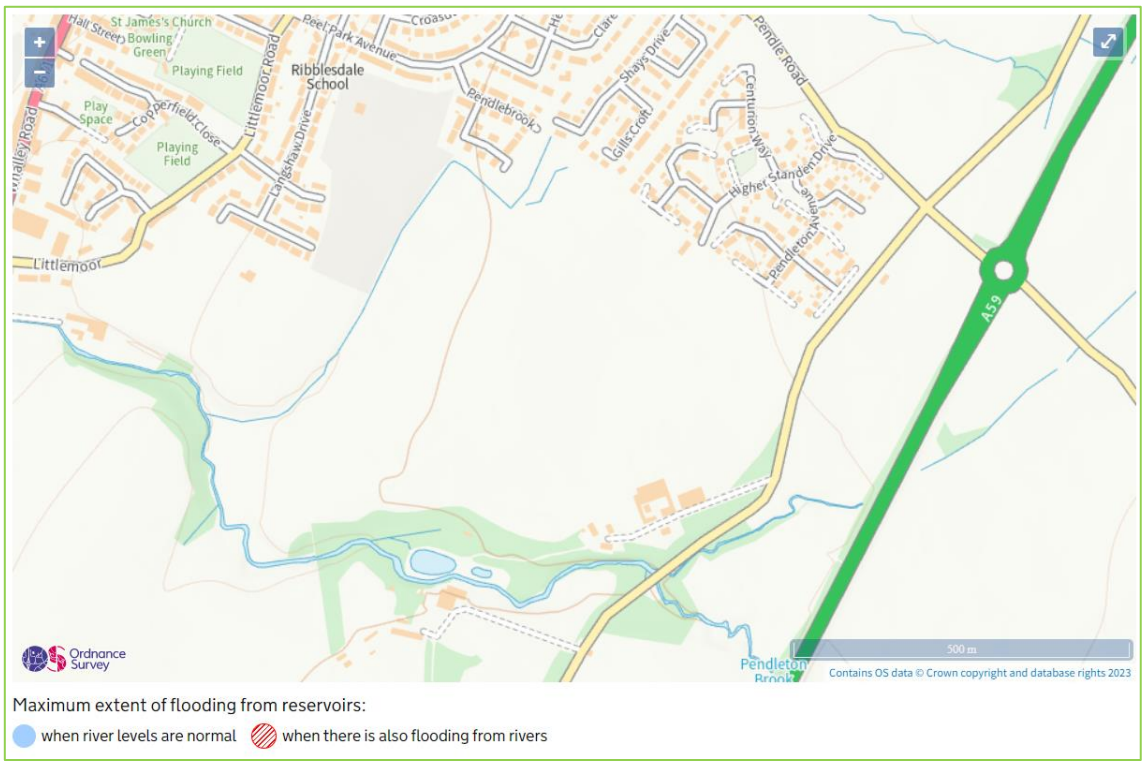


Figure 4 - Environment Agency Reservoir Flood Map

3.13 The Effect of the Development on Flood Risk

No land raising will occur within the Site therefore, this will ensure no detriment to the flood storage capacity of the Site. The Proposed Development will not impede the movement of floodwater across the Site. The topography of the Site will not be altered; therefore, the overland flow routes will not be altered. The overall direction of the movement of water will be maintained within the developed Site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed.

In summary, there will no net loss in flood storage capacity or impact on movement of floodwater across the Site as a result of the Proposed Development.

3.14 Summary of Site Specific Flood Risk

A summary of the sources of flooding and a review of the risk posed by each source at the Site is shown in Table 4.

The Site is not at risk of flooding from a major source (e.g. fluvial and/or tidal). The Site has a 'low probability' of fluvial/tidal flooding as the Site is located within Flood Zone 1 with less than a 1 in 1000 annual probability of river or sea flooding in any year (<0.1%). The proposed use of the Site is 'more vulnerable', 'more vulnerable' uses are appropriate within Flood Zone 1 after the completion of a satisfactory FRA.

A secondary flooding source has been identified which may pose a low significant risk to the Site. This is:

- Surface Water Flooding

The areas shown to be at risk of surface water flooding are associated with low spots on the Site and the drainage ditch to the north of the Site.

There will no net loss in flood storage capacity or impact on movement of floodwater across the Site as a result of the Proposed Development.

In conclusion, the flood risk posed to the Site can be considered to be limited; the Site is located within Flood Zone 1 and has a low or less annual probability of flooding from all sources. The Site is unlikely to flood except in very extreme conditions.

Table 4 - Risk Posed by Flooding Sources

Sources of Flooding	Potential Flood Risk	Potential Source	Probability/Significance
Fluvial Flooding	No	None Reported	None
Tidal Flooding	No	None Reported	None
Groundwater Flooding	No	None Reported	None
Surface Water Flooding	Yes	Low Spots/Drainage Ditch	Low
Sewer Flooding	No	None Reported	None
Flooding from Artificial Drainage Systems/Infrastructure Failure	No	None Reported	None

4.0 RISK MANAGEMENT

4.1 Introduction

The flood risk at this location is considered suitable for 'more vulnerable' developments within the NPPF. In this flood zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development and the use of flood mitigation measures.

The flooding sources will be mitigated on the Site by using a number of techniques, and mitigation strategies to manage and reduce the overall flood risk at the Site. This will ensure the development will be safe and there is:

- Minimal risk to life;
- Minimal disruption to people living and working in the area;
- Minimal potential damage to property;
- Minimal impact of the Proposed Development on flood risk generally; and;
- Minimal disruption to natural heritage.

The flood risk at the Site will be reduced by mitigation measures; these are discussed in more detail below.

4.2 Minimum Floor Level

It is recommended that generally all buildings are located above the highways by 150mm to enable the full capacity of any secondary flood conveyance to be utilised.

4.3 Flood Resilience and Resistance

To improve the Sites resilience to flooding the following measures will be incorporated. All electrical wiring, switches, sockets, socket outlets, electrical, and gas meters etc. will be located a minimum of 450mm above the finished floor levels and sloping landscaping away from the building/s.

4.4 Access and Egress

A permanently safe and dry access can be maintained via the Site access to the south of the Site.

4.5 Surface Water Drainage Strategy

A separate Surface Water Drainage Strategy is being undertaken to manage the runoff from the Site which will help mitigate the flood risk posed to the Site.

4.6 Residual Risk

The mitigation measures detailed above show that the flood risk can be effectively managed and therefore the consequences of flooding are acceptable. As such, the residual risk is considered to be acceptable for the lifetime of the development.

5.0 SEQUENTIAL APPROACH

5.1 Sequential and Exception Tests

The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. The approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The flood risk posed to the Site can be considered to be limited; the Site is located within Flood Zone 1 and has a low or less annual probability of flooding from all sources. The Site is unlikely to flood except in very extreme conditions.

Therefore, the Sequential and Exception Tests will not need to be undertaken as part of this planning application.

6.0 SUMMARY AND CONCLUSIONS

6.1 Introduction

This report presents a FRA in accordance with the NPPF for the Proposed Development on land off Dyke Nook, Clitheroe, BB7 1JJ.

This FRA identifies and assesses the risks of all forms of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe throughout the lifetime, taking climate change into account.

6.2 Flood Risk

The Site is not at risk of flooding from a major source (e.g. fluvial and/or tidal). The Site has a 'low probability' of fluvial/tidal flooding as the Site is located within Flood Zone 1 with less than a 1 in 1000 annual probability of river or sea flooding in any year (<0.1%). The proposed use of the Site is 'more vulnerable', 'more vulnerable' uses are appropriate within Flood Zone 1 after the completion of a satisfactory FRA.

A secondary flooding source has been identified which may pose a low significant risk to the Site. This is:

- Surface Water Flooding

The areas shown to be at risk of surface water flooding are associated with low spots on the Site and the drainage ditch to the north of the Site.

There will no net loss in flood storage capacity or impact on movement of floodwater across the Site as a result of the Proposed Development.

In conclusion, the flood risk posed to the Site can be considered to be limited; the Site is located within Flood Zone 1 and has a low or less annual probability of flooding from all sources. The Site is unlikely to flood except in very extreme conditions.

6.3 Risk Management

The flood risk at the Site will be reduced by using a number of risk management measures to manage and reduce the overall flood risk at the Site. Measures used:

Minimum Floor Level: It is recommended that generally all buildings are located above the highways by 150mm to enable the full capacity of any secondary flood conveyance to be utilised.

Flood Resilience and Resistance: To improve the Sites resilience to flooding the following measures will be incorporated. All electrical wiring, switches, sockets, socket outlets, electrical, and gas meters etc. will be located a minimum of 450mm above the finished floor levels and sloping landscaping away from the building/s.

Access and Egress: A permanently safe and dry access can be maintained via the Site access to the south of the Site.

Surface Water Drainage Strategy: A separate Surface Water Drainage Strategy is being undertaken to manage the runoff from the Site which will help mitigate the flood risk posed to the Site.

6.4 Sequential Approach

The Sequential and Exception Tests will not need to be undertaken as part of this planning application.

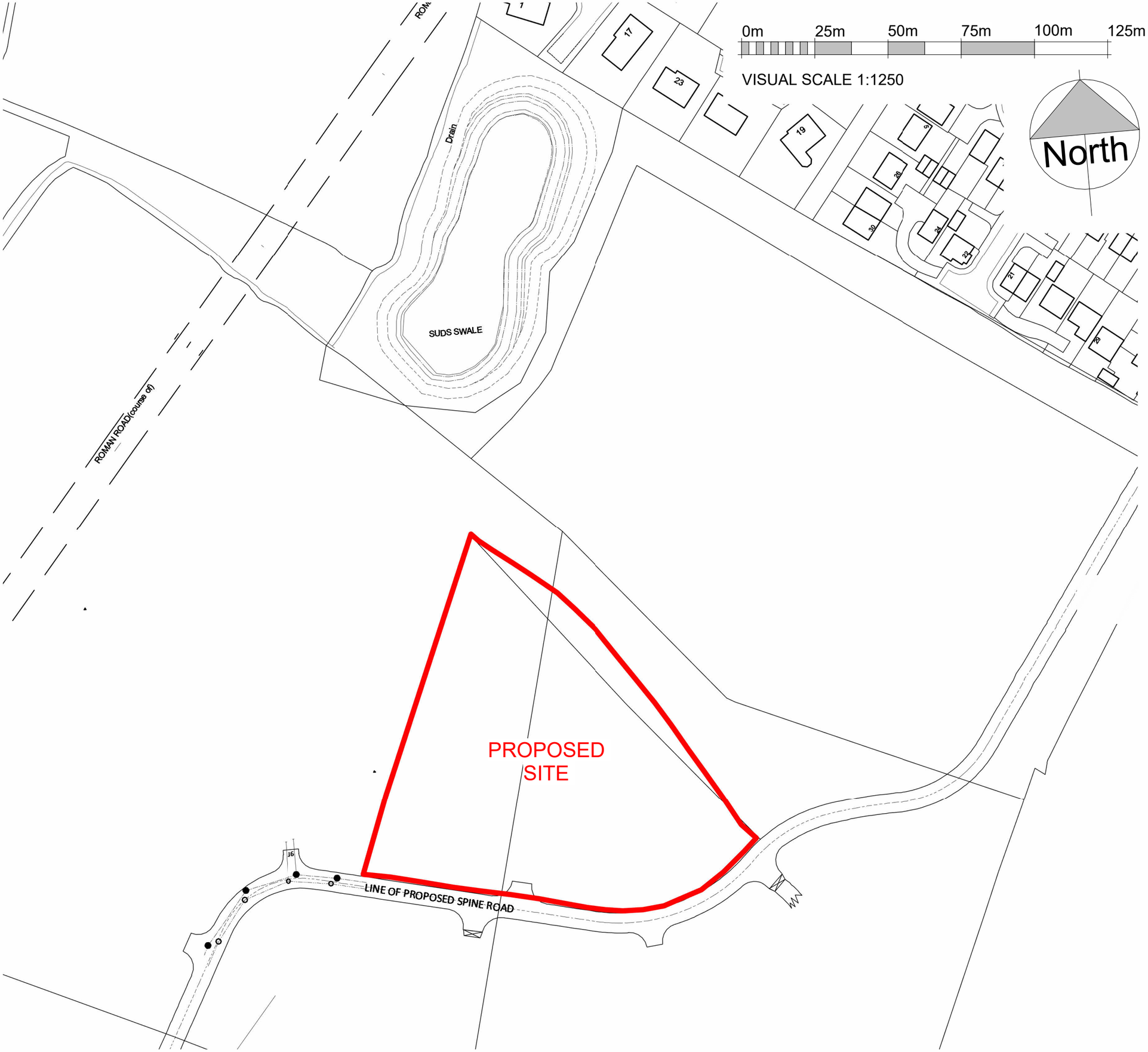
6.5 Conclusion

In conclusion, the Proposed Development, would be expected to remain dry in all but the most extreme conditions. Providing the recommendations made in this FRA are instigated, flood risk from all sources would be minimised, the consequences of flooding are acceptable and the development would be in accordance with the requirements of the NPPF.

This FRA demonstrates that the Proposed Development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. The development should not therefore be precluded on the grounds of flood risk.

APPENDICES

APPENDIX 1 – Proposed Site Layout



DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK

NOTES

DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PRODUCTION OF ANY SHOP DRAWING. ALL DISCREPANCIES TO BE REPORTED TO THE ARCHITECT.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELATED ARCHITECTS AND ENGINEER'S DRAWINGS AND ANY OTHER RELEVANT INFORMATION.

DWA ARCHITECTS

DWA Architects (London) Ltd
Cyclops House
Link Business Park
York
United Kingdom
YO10 3JB

01904 544 400
dwa@dwa-architects.co.uk
www.dwa-architects.co.uk

ISO 9001 : 2015 REGISTERED
Certificate No:316632020

CLIENT
Eric Wright Group

PROJECT
Proposed Care Home, Standen Central Site, Clitheroe

DRAWING TITLE
Proposed Site Location Plan - No Context

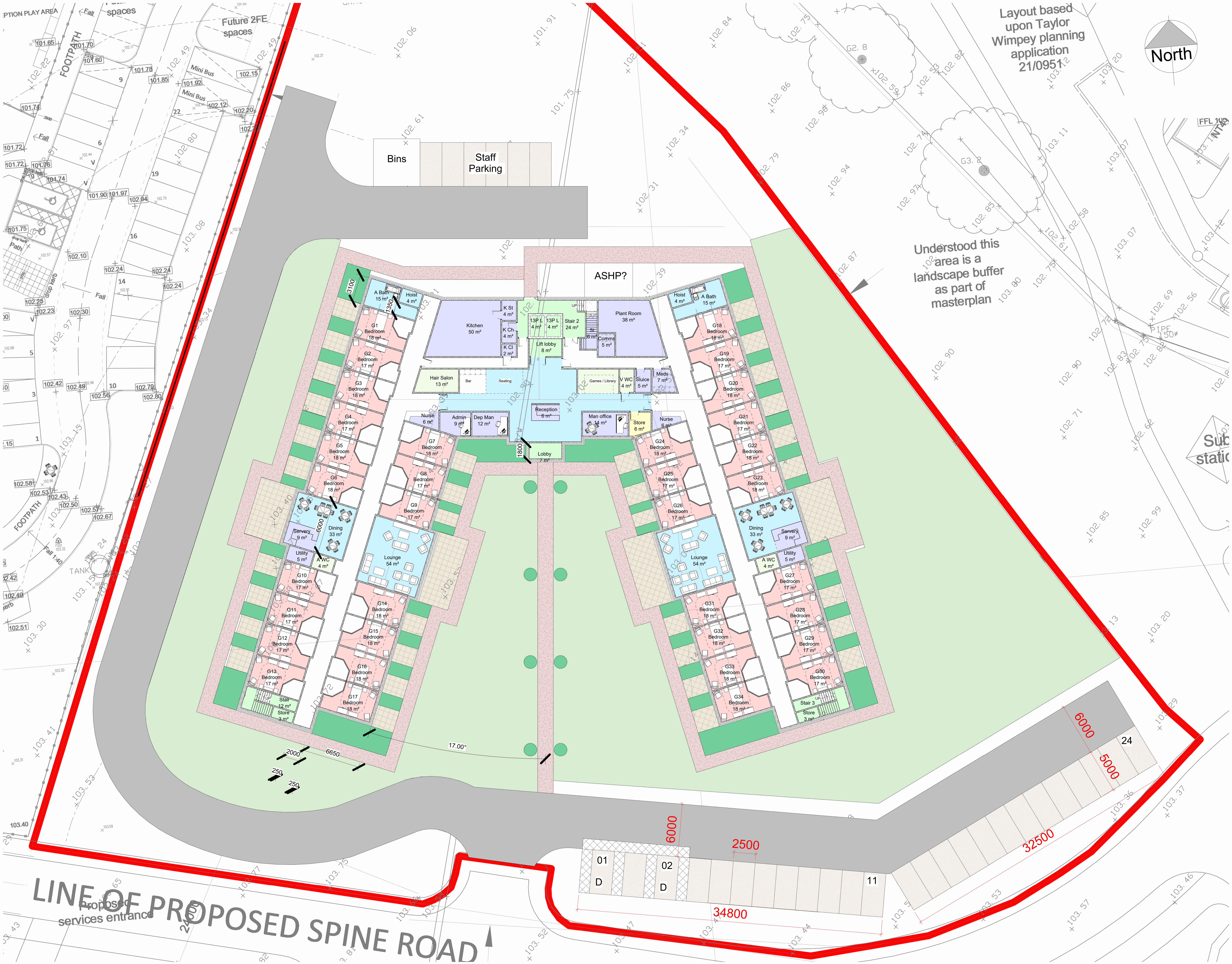
DWA PROJECT NO.	DWA DWG NO.	REV
G5709	SK22	

DRAWING STATUS
PLANNING

SCALE	DATE	DRAWN BY	CHECKED BY
1 : 1250 @ A3	04.01.23	JA	TE

BIM JOB NO. 220018
SUITABILITY CODE
SUITABILITY DESCRIPTION

DOCUMENT NAME (BS EN ISO 19650)
220018-DWA-XX-XX-DR-A-SK22-Proposed Site Location Plan - No Context



Ground Floor GA Plan

1 : 200

SCHEDULE OF AREAS:

GIA (Gross Internal Area):

Ground Floor: 1743m²

First Floor: 1691m²

Total: 3434m²

Beds:

Ground Floor (Residential): 34

First Floor (Dementia): 34

Total: 68

Total Dayspace (excluding reception area):

Ground Floor: 174m²

First Floor: 243m²

Total: 417m²

Dayspace per Resident: 6.1m²

(Excluding reception area and terraces)

0m 4m 8m 12m 16m 20m

VISUAL SCALE 1:200

DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
A	GIFA Reduced	9Dec2022	JA	TE
B	Anmendments to FF A WC location, A Bath moved, Staff area re-arranged, K Change moved to GF, Cleaners store moved to FF.	12Dec2022	JA	TE
C	Location of Visitor WC amended	13Dec2022	JA	TE
D	Sheet amended to ISO BIM type	13Dec2022	JA	TE

NOTES

DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PRODUCTION OF ANY SHOP DRAWING. ALL DISCREPANCIES TO BE REPORTED TO THE ARCHITECT.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELATED ARCHITECTS AND ENGINEER'S DRAWINGS AND ANY OTHER RELEVANT INFORMATION.

DWA ARCHITECTS

DWA Architects (London) Ltd
Cyclops House
Link Business Park
York
United Kingdom
YO10 3JB

01904 544 400
dwa@dwa-architects.co.uk
www.dwa-architects.co.uk

ISO 9001 : 2015 REGISTERED
Certificate No:316632020

CLIENT
Eric Wright Group

PROJECT
Proposed Care Home, Standen Central Site, Clitheroe

DRAWING TITLE
Proposed Ground Floor GA Plan

DWA PROJECT NO.	DWA DWG NO.	REV
G5709	SK12	D

DRAWING STATUS
SKETCH

SCALE	DATE	DRAWN BY	CHECKED BY
As indicated @ A1	21.11.22	JA	TE

BIM JOB NO. 220018

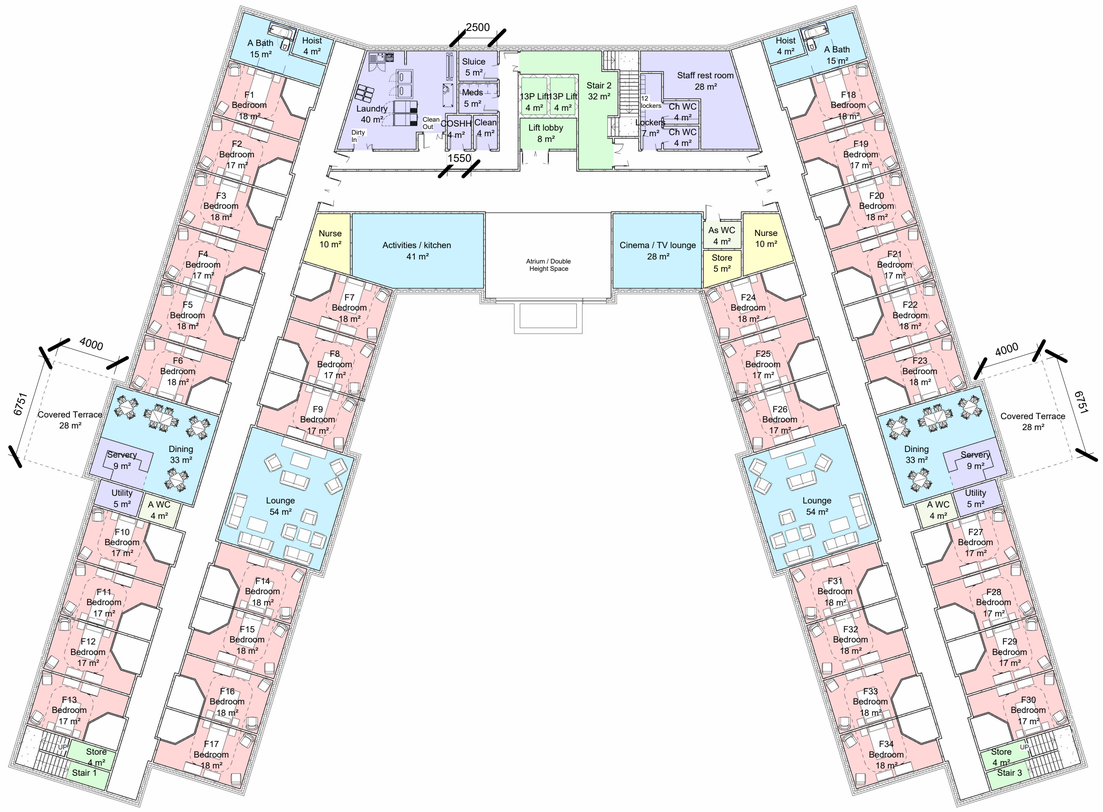
SUITABILITY CODE

SUITABILITY DESCRIPTION Suitable for information

DOCUMENT NAME (BS EN ISO 19650)

220018-DWA-XX-GF-DR-A-SK12-D-Proposed Ground Floor GA Plan

?
?



First Floor GA Plan

1 : 200

SCHEDULE OF AREAS:

GIA (Gross Internal Area):

Ground Floor: 1743m²

First Floor: 1691m²

Total: 3434m²

Beds:

Ground Floor (Residential): 34

First Floor (Dementia): 34

Total: 68

Total Dayspace (excluding reception area):

Ground Floor: 174m²

First Floor: 243m²

Total: 417m²

Dayspace per Resident: 6.1m²
(Excluding recpetion area and terraces)

VISUAL SCALE 1:200

DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
A	GIFA Reduced	9Dec2022	JA	TE
B	Anmendments to FF A WC location, A Bath moved, Staff area re-arranged, K Change moved to GF, Cleaners store moved to FF.	12Dec2022	JA	TE
C	Sluice and cleaners swapped position. Terraces increased in size.	13Dec2022	JA	TE
D	Sheet amended to ISO BIM type	13Dec2022	JA	TE

NOTES

DO NOT SCALE, USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PRODUCTION OF ANY SHOP DRAWING. ALL DISCREPANCIES TO BE REPORTED TO THE ARCHITECT.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELATED ARCHITECTS AND ENGINEER'S DRAWINGS AND ANY OTHER RELEVANT INFORMATION.

DWA ARCHITECTS

DWA Architects (London) Ltd
Cyclops House
Link Business Park
York
United Kingdom
YO10 3JB

01904 544 400
dwa@dwa-architects.co.uk
www.dwa-architects.co.uk

ISO 9001 : 2015 REGISTERED
Certificate No.51662020

CLIENT
Eric Wright Group

PROJECT
Proposed Care Home, Standen
Central Site, Clitheroe

DRAWING TITLE
Proposed First Floor GA Plan

DWA PROJECT NO.	DWA DWG NO.	REV
G5709	SK13	D

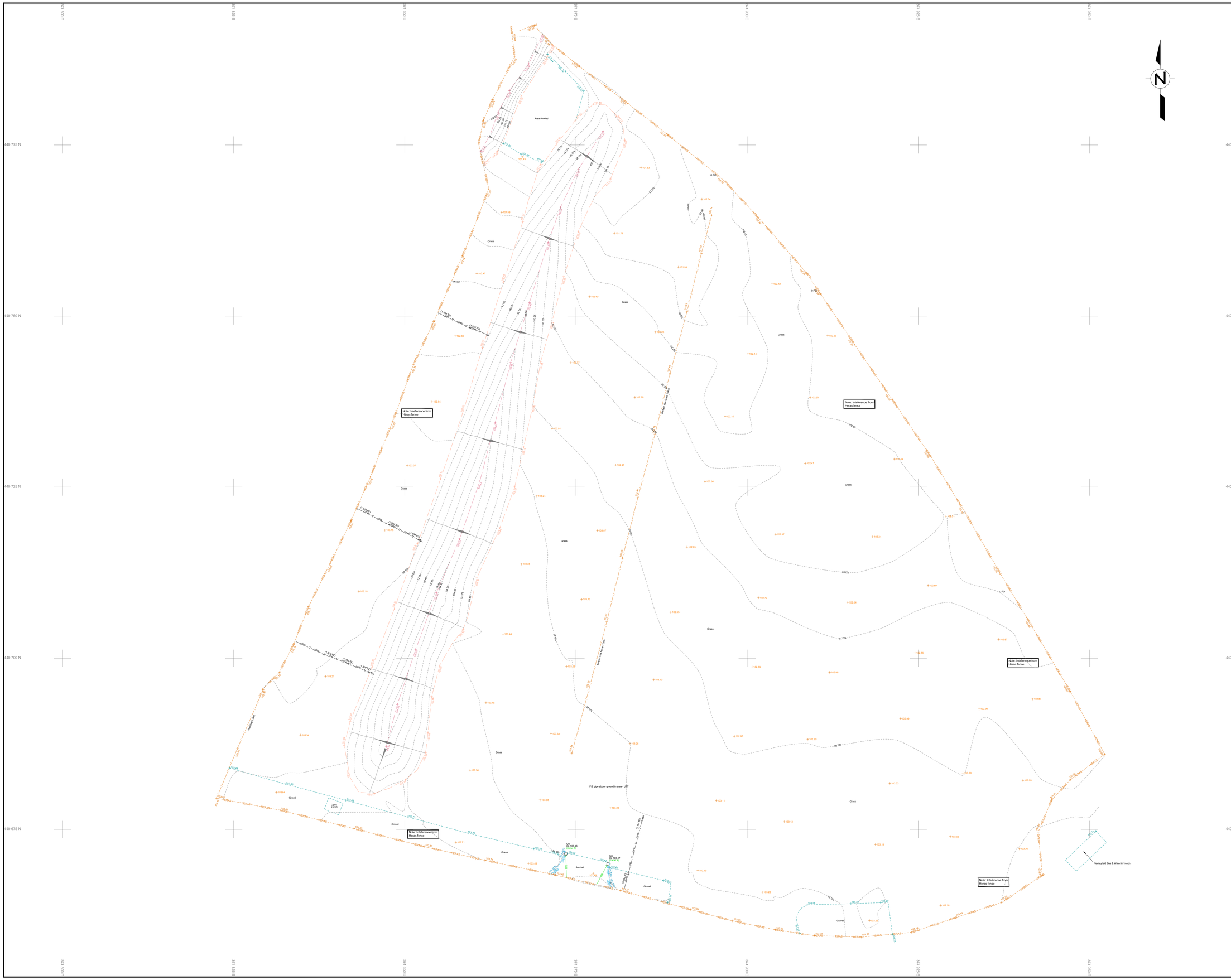
DRAWING STATUS
SKETCH

SCALE	DATE	DRAWN BY	CHECKED BY
As indicated @ A1	21.11.22	JA	TE

BIM JOB NO. 220018
SUITABILITY CODE
SUITABILITY DESCRIPTION Suitable for information

DOCUMENT NAME (BS EN ISO 19650)
220018-DWA-XX-FF-DR-A-SK13-D-Proposed First Floor GA Plan

APPENDIX 2 – Topographical Survey



TOPOGRAPHIC LEGEND

Barrier (symbol - sized)		Pipe into Ground (symbol)	
BS	Bellatha Beacon (symbol)	PO	Post (symbol)
B	Bollard (symbol)	RWP	Rain Water Pipe (symbol)
	Borehole (symbol)	RS	Road Sign (symbol)
BTIC	British Telecoms IC (sized)	RE	Rodding Eye (symbol)
	Building (incomplete detail)		Sapling (symbol)
	Cable into Ground (symbol)	SP	Sign Post (symbol)
CTV	Cable TV Box (symbol)	SL	Spot Light (symbol)
	CCTV Camera (symbol)	00.00 +	Spot Height
CL 50.00	Cover Level in metres	SC	Stop Cock (symbol)
	Direction of Flow (Drainage)	SV	Stop Valve (symbol)
DB	Distribution Board (symbol)		Survey Station (symbol)
ER	Earth Rod (symbol)	TP	Telephone Pole (symbol)
EC	Electric Cabinet (sized)	B	Traffic Bollard (symbol)
EP	Electric Pole (symbol)		Tree (dimensions in metres - e.g.)
ES	Electric Sign (symbol)	Dia. 0.3 Ht. 10.2 Maple	Diameter at 1mtr. (bole) Height: Species:
	Embankment Slope (symbol)	TL	Traffic Light (symbol)
FP	Feeder Pillar (sized)	UV	Unknown Valve (symbol)
FH	Fire Hydrant (sized)	VP	Vent Pipe (symbol)
FP	Flag Pole (symbol)		Wall
FL	Flood Light (symbol)	WP	Waste Pipe (symbol)
GV	Gas Valve (symbol)	WM	Water Meter (symbol)
	Gate	WV	Water Valve (symbol)
GL 50.00	Ground Level in metres		
GU	Gulley (sized)		Building Canopy
IC	Inspection Cover (sized)	IL 50.00	Invert Level in metres
JB BT	Junction Box - BT (sized)		Crash Barrier
JB COM	Junction Box - Comms (sized)		Drainage Channel
JB	Junction Box - Elec (sized)	00.00	Drop Kerb (level in metres)
LP	Lamp Post (symbol)	00.00	Edge Detail (level in metres)
LB	Light Bollard (symbol)	00.00	Footpath (level in metres)
LG	Light in ground (symbol)		Fence
MH	Manhole (sized)	HERAS	Heras Fence
	Manhole Capped Port	00.00	Kerb channel (m)
PL 50.00	Parapet Level (m)	00.00	Kerb top (m)
WO	Pipe Diameter (mm)	OHS	Overhead Service Line
			Pedestrian Railing

UTILITY LEGEND

UTILITY LINETYPES

BT	British Telecom	G	Gas
CATV	Cable Television	HP	Heating Pipes
CCTV	Closed Circuit Television	HV	HV Cables
C	Communications	MSR	Multiple Services Route
DR	Drainage	OL	Oil
CW	Drainage - Combined Water	OXY	Oxygen
FW	Drainage - Foul Water	SL	Street Lighting
SW	Drainage - Storm Water	TSL	Traffic Signal Loop
ED	Empty Duct	GPR U	Unknown found by GPR
E	Electric	U	Unknown
FW	Fire Hydrant Main	UC	Unknown Cable
FO	Fibre Optic	UPL	Unknown Pipeline
FUEL	Fuel	W	Water

Assumed Service Route - See GENERAL NOTES
(Using abbreviation of service and colour as above)

ASR XXX ASR XXX

UTILITY SURVEY INFORMATION

AOC	Area of Concern	UTS	Unable to Survey
SVY AREA	Contracted Survey Area	UTL	Unable to Lift (cover)
PREVIOUS	Previous Survey Area		Unable to Trace
GPR Survey	Post processed GPR Area		Unable to Trace (due to blockage)
(0.60d)	Depth to Top of Service (m)		Unable to Trace Further
			End of Trace

ABREVIATIONS used on a PAS 128 Survey
(O.65d B2P) 0.65d = Depth in metres, B2 = Quality Level, P = Post processed GPR

GENERAL NOTES

Irrespective of the information provided by a utility survey and statutory plans, excavation work should be undertaken with extreme caution and in accordance with HSE Guidelines - HSG47 Avoiding Danger from Underground Services

Only sub-surface utility information is provided. Above ground utility information may be shown where it assists with positional referencing.

Utilities may continue outside of the survey area. Any paint marks outside of the area are for investigative purposes only and may not represent the full extent of the sub-surface utilities.

Where logic indicates a utility exists but which cannot be positively confirmed with the technology, an assumed route (ASR) is recorded. All assumed service routes (ASR) have been highlighted with a background yellow colour for visual enhancement.

Sewer and manhole details shown on this drawing have been obtained by observation and measurement from the surface and as such cannot be guaranteed

Vertical & Horizontal Position - Vertical position (depth) is indicative to the top of the utility/feature and is recorded as (x.xxd) i.e. (1.25d) - (depth to top of service) and should not be taken as exact, as this could be the surround to the service rather than the service itself. Where depth information from the technology is unclear, depth is not shown. Drains and pipes/ducts may have been detected using threading and the depth indicated could be between the top (soffit) and the bottom (invert). Horizontal position is indicative to the centre of the utility/feature and should not be taken as exact.

Warranty - Biodegradable paints are used to mark-out the position of the utilities. Markings may become illegible quickly depending on ground, weather and traffic conditions. No warranty is given in respect of the durability of the paint markings and that they are a complete representation of the sub-surface utilities, therefore, this drawing should be used as the primary reference for the survey results.

This drawing does not provide an absolute representation of the sub-surface. Utilities have been detected using non-invasive techniques only and the performance can be adversely affected by ground, weather and site conditions outside of SUMO's control, therefore, some utilities may be undetectable. While SUMO uses reasonable endeavours to detect all utilities, it does not warrant that 100% detection will be achieved and that approximate depth penetration of the technologies SUMO uses will not be greater than two metres.

Rev	Notes	Drawn	Date

Notes:

Survey is referenced to OS Grid and Level Datum.

SUMO SERVICES Ltd
8 HAYWARD BUSINESS CENTRE
NEW LANE
HAVANT
HAMPSHIRE
PO9 2NL
TEL: 0845 456 1104
www.sumoservices.com

Title:
Utilities & Topographical Details

Client:
Eric Wright Construction Ltd

Project:
Standen Hall, Clitheroe, Lancashire

Date Completed:	06 December 2022	Post Code:	BB7 1PR

Surveyed:	TB, RW	Scale:	1/250 (A1 Sheet)
Drawn:	PC		
Checked:	RW		

Dwg No:	Job No:	Rev:
Sheet 01	SU<MO-10800=1	

01686 668957 • info@krsenviro.com • www.krsenviro.com