



Proposed Sui-Generis Use (Tool and Plant Hire)
Unit 1, Max House, Sandy Lane, Martlesham, Suffolk

FLOOD RISK ASSESSMENT

GHB Reference:

010/2024/FRA

Created:

January 2024

Revision:

01

Status:

FINAL

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Revision History				
Revision History & Issue Record (For Completion by Originating Company)				
Rev:	Date:	Reason status / Details of Changes:	Prepared by:	Reviewed by:
01	22/01/2024	Initial Issue	ER	JAH

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1. PROJECT DETAILS

1.1. Table 1 Project Details

Report Title:	Proposed Commercial and Storage Development, Unit 1, Max House, Sandy Lane, Martlesham, Suffolk - Flood Risk Assessment
Date:	17 January 2024
Document Reference and Revision:	010/2024/FRA 01
Prepared by:	GH Bullard & Associates LLP
On behalf of Client:	Steve Todd

1.2. Table 2 Authorisation Sheet

Project:	Proposed Commercial and Storage Development
Report Title:	Proposed Commercial and Storage Development, Unit 1, Max House, Sandy Lane, Martlesham, Suffolk - Flood Risk Assessment
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Position:	Partner
Signed:	
Organisation:	GH Bullard & Associates LLP
Date:	22 January 2024



2. ENVIRONMENT AGENCY CHECKLIST

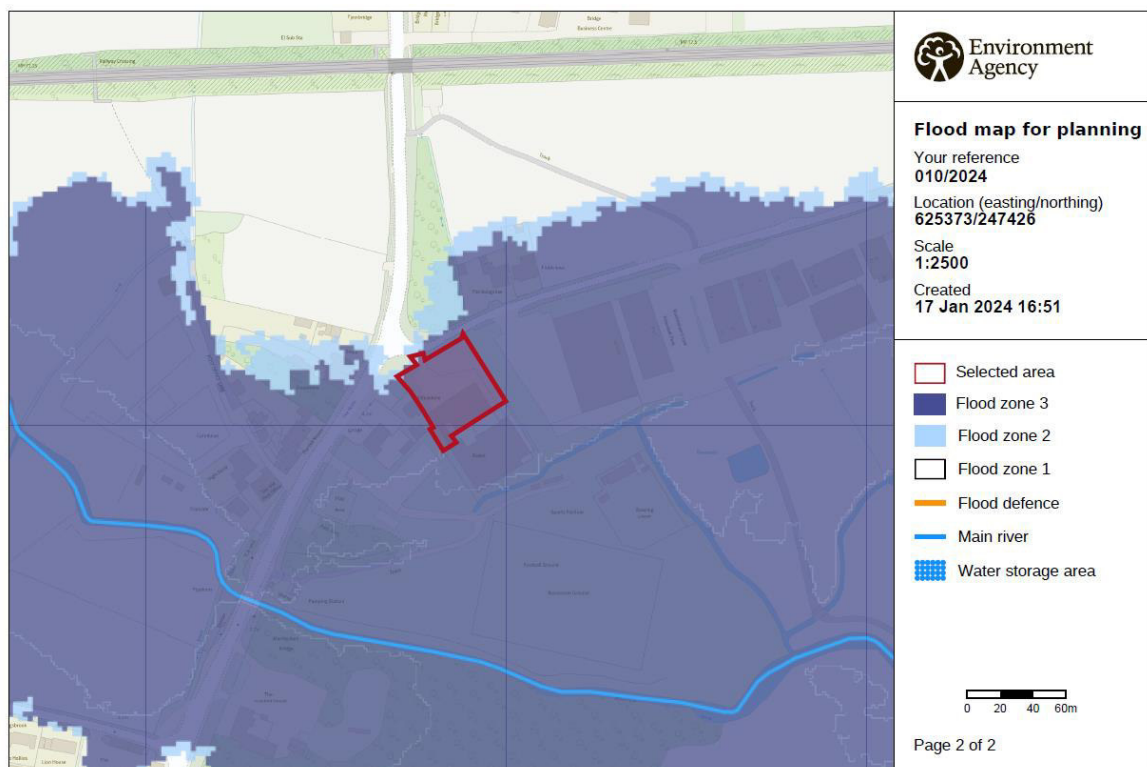
Flood Risk Assessment (FRA) Checklist	
This document should be attached to the front of the Flood Risk Assessment (FRA) issued to Local Planning Authorities (LPA) in support of a development proposal which may be at risk of flooding. This document is not a substitute for a FRA. Please note, under our responsibilities as a statutory consultee we will review any submitted FRA only in respect to fluvial and tidal risk. Your FRA should also consider other sources of flooding such as surface water, drainage, and ground water flooding.	
1. Development Proposal	
Site name	Unit 1, Max House, Sandy Lane, Martlesham, Suffolk, IP12 4SD
National Grid Reference (NGR)	625376, 247415
Flood Risk Assessment	Reference/Title: 010/2024/FRA 01 Date: January 2024
Existing site use & vulnerability classification	Office and Storage Use - Less Vulnerable
Proposed site use & vulnerability classification	Sui-generis use comprising tool and plant hire with associated storage, repairs and parking - Less Vulnerable
2. Flood Risk	
Flood Zone(s) affecting the site/property	Flood Zone 3
Sources of flooding affecting the site	Tidal
Have you considered flood storage compensation?	No – N/A
3. Please provide a node map and accompanying table in the Flood Risk Assessment similar to the example given (see Appendix A). You should clearly demonstrate the highest and most representative flood levels for your proposed development. For example, if it is a small extension (< 250 square metres) then approximately 5-10 nodes would be sufficient. For larger sites, approximately 10 to 20 nodes would be appropriate. Refer to Section 8.0	
4. Mitigation	
Finished floor levels (in m AOD) for each proposed floor.	N/A
Have you considered a freeboard for these Finished Floor Levels?***	
Drawing reference showing Finished Floor Levels for proposed development	N/A
Have you considered suitable internal and external access for safe refuge above the flood level?	No
5. Proximity to the watercourse/ flood defence/ culvert	
Are the proposed developments on, over, under or within 8 metres of a fluvial main river or 16 metres of a tidal main river or flood defence?	No If yes, please provide a cross section drawing in your planning application showing the distance of the proposed development in relation to the watercourse/flood defence/culvert. If yes, this will require a Flood Risk Activity Permit.
Map Many of our flood datasets are available online: Flood Map For Planning (Flood Zone 2 , Flood Zone 3 , Flood Storage Areas , Flood Defences , Areas Benefiting from Defences , Risk of Flooding from Rivers and Sea , Historic Flood Map , Current Flood Warnings)	



3. INTRODUCTION

- 3.1. This flood risk assessment is being submitted to accompany a planning application for a Change of Use development from offices and associated storage to commercial sui-generis use comprising tool and plant hire with associated storage, repairs and parking at Unit 1, Max House, Sandy Lane, Martlesham, Suffolk. Site location plans are attached in **Appendix A**.
- 3.2. This report includes a thorough review of commercially available flood risk and Environment Agency (EA) data indicating potential sources of flood risk to the site.
- 3.3. The information provided within this report is based on the best available data currently recorded or provided by a third party. The accuracy of this report is therefore not guaranteed and does not obviate the need to make additional appropriate searches, inspections and enquiries.
- 3.4. The National Planning Policy Framework (NPPF, December 2023), Section 14 (Meeting the challenge of climate change, flooding and coastal change), Paragraph 165 states that:

“Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.”
- 3.5. The NPPF recommends the Environment Agency (EA) Flood Maps as a starting point for Flood Risk Assessment. An extract from the EA Flood maps is reproduced in Figure 3.1 below.



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Figure 3.1 – Environment Agency Flood Map (Rivers and Seas)



- 3.6. The Environment Agency has produced standing guidance for developments dependent on their size and location. As can be seen from Figure 3.1, the site is located within Flood Zone 3 with a High probability of flooding.
- 3.7. Industry best practice requires assessment of all flooding sources to be carried out. Despite this document having now been superseded by the NPPF, Figure 3.2 of the “PPS25: Development and Flood Risk” (PPS25) Practice Guide lists five key sources of flooding:
 - i. Fluvial (refer to Section 6);
 - ii. Tidal (refer to Section 7);
 - iii. Pluvial (refer to Section 8);
 - iv. Groundwater (refer to Section 9); and
 - v. Infrastructure Failure (refer to Section 10).

4. POLICY CONTEXT

- 4.1. The purpose of the planning system is to contribute to the achievement of sustainable development – *NPPF, Paragraph 7*.
- 4.2. At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development which does not change the statutory status of the development plan as the starting point for decision-making – *NPPF, Paragraph 12*.
- 4.3. Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere – *NPPF, Paragraph 165*.
- 4.4. The aim of the Sequential Test is to steer new development to areas with the lowest risk of flooding from any source – *NPPF, Paragraph 168*.
- 4.5. Following the Sequential Test, both elements of the Exception Test will have to be passed for development to be allocated or permitted – *NPPF, Paragraph 171*.
- 4.6. East Suffolk Council, Suffolk Coastal Local Plan, Adopted 23 September 2020 Policy SCLP9.5: Flood Risk.
- 4.7. Suffolk Coastal and Waveney District Councils Level 1 Strategic Flood Risk Assessment, April 2018 prepared by Aecom.
- 4.8. Environment Agency Flood Risk Assessment Guidance.



5. EXISTING SITE INFORMATION

- 5.1. The site is located to the north extents of Martlesham, Suffolk and is accessed off Sandy Lane. The site is bound by commercial development to the east, west and south and by Sandy Lane to the north. Refer to the site location plans in **Appendix A**.
- 5.2. The site is brownfield with an area of approximately 0.2ha and comprises an existing building previously used for Offices and associated storage, with an informal parking area to the north of the building and some vegetation at the west, east and north boundaries. Refer to the existing site layout drawings in **Appendix B**.
- 5.3. The site can be located from the following information:
- i. Postcode: IP12 4SD
 - ii. NG Reference: TM253474
 - iii. Based on available LiDAR data, the site levels range from 3.6m AOD at the north-west corner to 2.4m AOD at the south-east corner, where the site slopes south-west to the south-east. The site entrance is at a level of approximately 3.6m AOD.
- 5.4. The BGS records describe the geology as:
- i. Superficial: River Terrace Deposits – Sand and Gravel
 - ii. Bedrock: Thanet Formation and Lambeth Group – Clay and Sand
- 5.5. The BGS 1:50,000 scale drift maps (Figure 5.1) show the form of the Superficial deposits.

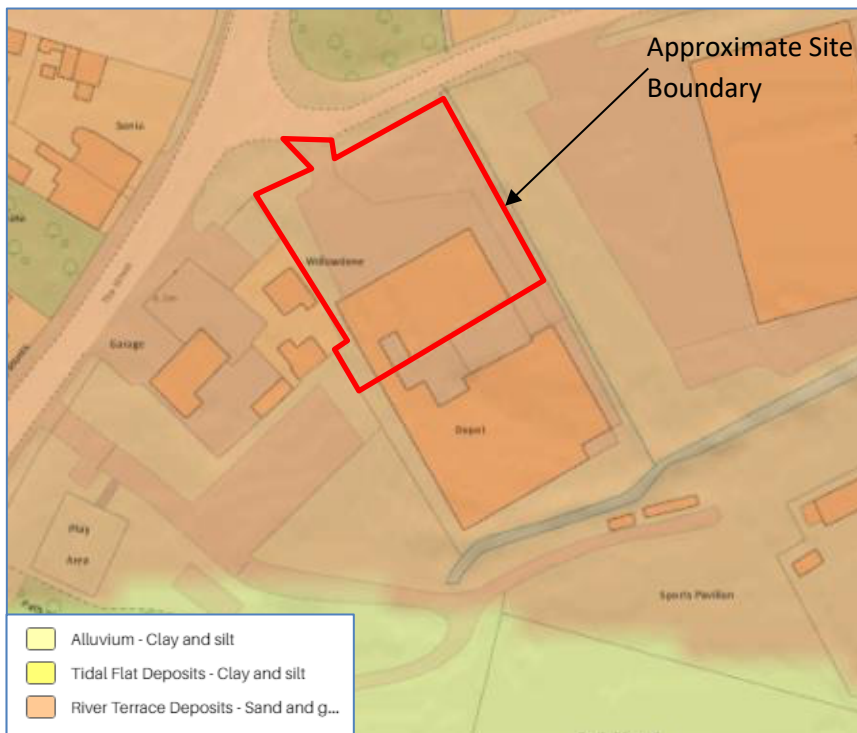


Figure 5.1 - BGS 1:50,000 Superficial Drift Map

- 5.6. The nearest Main River is the River Flynn located approximately 130m south-west of the site, which flows east to Martlesham Creek and then to the tidal Main River Deben out to the North Sea. Refer to Figure 3.1 and the mapping in **Appendix A** for the location of the rivers.



- 5.7. The nearest mapped watercourses are located at the east boundary and approximately 48m south-east of the site; these are un-named watercourses which discharge to the River Flynn approximately 235m south-east of the site. Refer to Figure 5.2 for the watercourse locations.



Figure 5.2: Extract from the Environment Agency Main River Mapping

- 5.8. The Environment Agency has mapped Source Protection Zones which shows the site is not located over a protection zone.
- 5.9. Environment Agency Aquifer (Bedrock Geology) mapping shows that the site is located over a Secondary A Aquifer; these comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.
- 5.10. Environment Agency Aquifer (Superficial Drift) mapping shows that the site is located over a Secondary A Aquifer; these comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.
- 5.11. The Environment Agency has mapped groundwater vulnerability and Figure 5.3 shows the site is located over a Medium to High Vulnerability Aquifer.



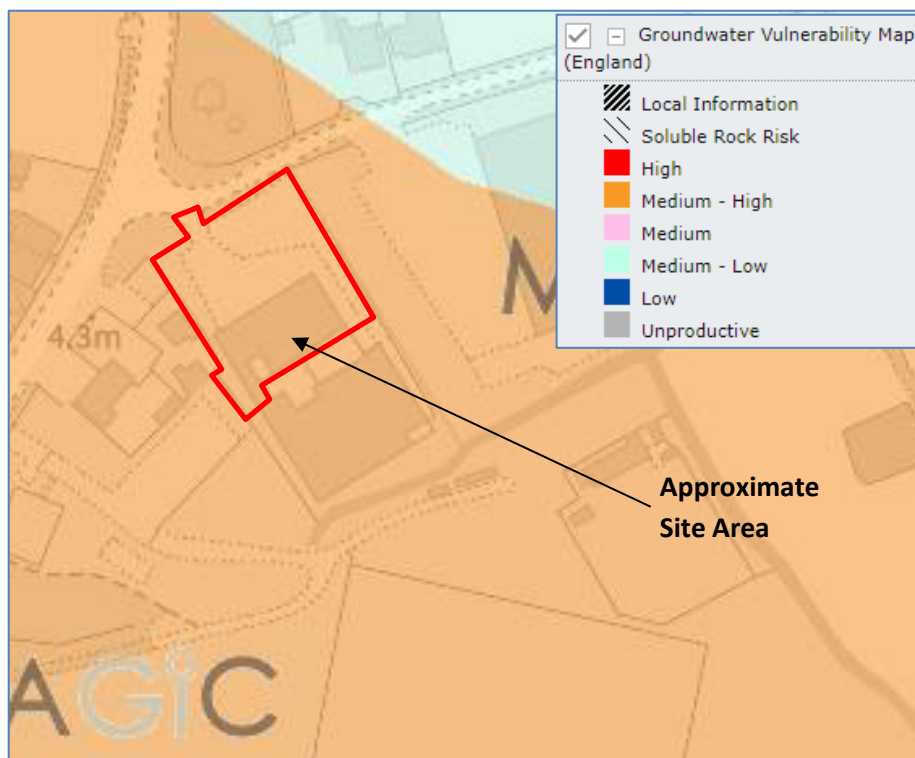


Figure 5.3- Environment Agency Groundwater Vulnerability Zones

6. PROPOSED DEVELOPMENT

- 6.1. The proposed development comprises the change of use from offices and associated storage to sui-generis use comprising tool and plant hire with associated storage, repairs and parking. The development does not include for an extension to the existing building, but some internal alterations. The proposed layout drawings are attached in **Appendix C**.
- 6.2. The existing site use and proposed development are classified as **Less Vulnerable**; Buildings used for shops; financial, professional and **other services**; restaurants, cafes and hot food takeaways; **offices; general industry, storage** and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure.
- 6.3. The Environment Agency Flood Risk map (Figure 3.1) shows that the site is located within Flood Zone 3.
- 6.4. Paragraph 174 of the NPPF advises that Changes of Use development should not be subject to the Sequential or Exception Test (unless your development is a caravan, camping chalet, mobile home or park home site) but that the application should still meet the requirements for a site-specific flood risk assessment. The Environment Agency Guidance for Flood Risk Assessments will be followed in the preparation of this report.
- 6.5. The design life of the development is 100 years.



7. FLUVIAL FLOODING

- 7.1. Fluvial flooding is the flooding associated with rivers. This can take the form of:
- i.* Inundation of floodplains from rivers and watercourses
 - ii.* Inundation of areas outside the floodplain due to influence of bridges, embankments and other features that artificially raise water levels
 - iii.* Overtopping of defences
 - iv.* Breaching of defences
 - v.* Blockages of culverts
 - vi.* Blockages of flood channels or corridors
- 7.2. The Environment Agency (EA) have produced flood maps that show the risk of flooding from Rivers and Seas; the EA Flood Map in Figure 3.1 shows the site is located within Flood Zone 3 where the likelihood of fluvial flooding is greater than 1%AEP.
- 7.3. Flood data and information has been requested from the Environment Agency and is their response is currently awaited. However, EA flood information previously provided for a nearby site related to the Coastal Modelling undertaken by JBA Consulting and included output data based on the Deben Estuary Coastal Model 2018. The EA modelling information related to tidal flooding and so this is discussed in Section 8.

8. TIDAL FLOODING

- 8.1. Tidal flooding is a risk of water levels from the sea or an estuary exceeding the normal tidal range. This can take the form of:
- i.* Overtopping of defences
 - ii.* Breaching of defences
 - iii.* Other flows (fluvial surface water) that could pond due to tide locking
 - iv.* Wave action
- 8.2. As outlined in 7.2, the Environment Agency (EA) Flood Map for Rivers and Seas shows the site is located within Flood Zone 3 where the likelihood of Tidal flooding is greater than 0.5% AEP. Flood data and information has been requested from the Environment Agency and is their response is currently awaited, however as outlined in 7.3, the EA has previously provided Product 5 information for a nearby site comprising modelling output relating to the Deben Estuary Coastal Model 2018. This Product 5 modelling data has been used in this assessment to review the tidal flood risk at the site; it is assumed that the modelling has not been updated since this time, however, upon receipt of the requested information this will be verified.
- 8.3. Available on-line Environment Agency (EA) Asset information (relating to flood defences) has been reviewed which shows there are two assets near to the site; Post Office Lane Marshes (Natural High Ground) and Sandy Lane (Natural high Ground) which are located along the north banks of the River Flynn. No defence level information is provided but the defences are of a 'Fair' condition and maintained by the EA. Refer to **Appendix D** for the asset information.
- 8.4. A review of the Product 5 modelling data has been carried out and Figure 8.1 shows the flood levels and depths associated with the defended and undefended scenarios for the 0.5% AEP plus climate change and 0.1% AEP events. Current online EA Sea Level climate change allowance guidance advises a cumulative Higher central allowance of 1.2m (between 2000 to 2125) and



cumulative Upper end allowance of 1.6m (between 2000 to 2125). However, previous EA Product 4 Guidance provided for a nearby site advised that ‘For water compatible or less vulnerable development (e.g commercial), the **higher central** climate change allowance for the lifetime of the development is out minimum benchmark for flood risk mitigation. In sensitive locations it may be necessary to use the **upper end** allowance to inform built in resilience. The **higher central** allowance for 2125 is approximately the same as our existing climate change levels from our 2018 coastal model, so you can use the existing climate change flood levels obtained in the Product 4 for all tidal models’.

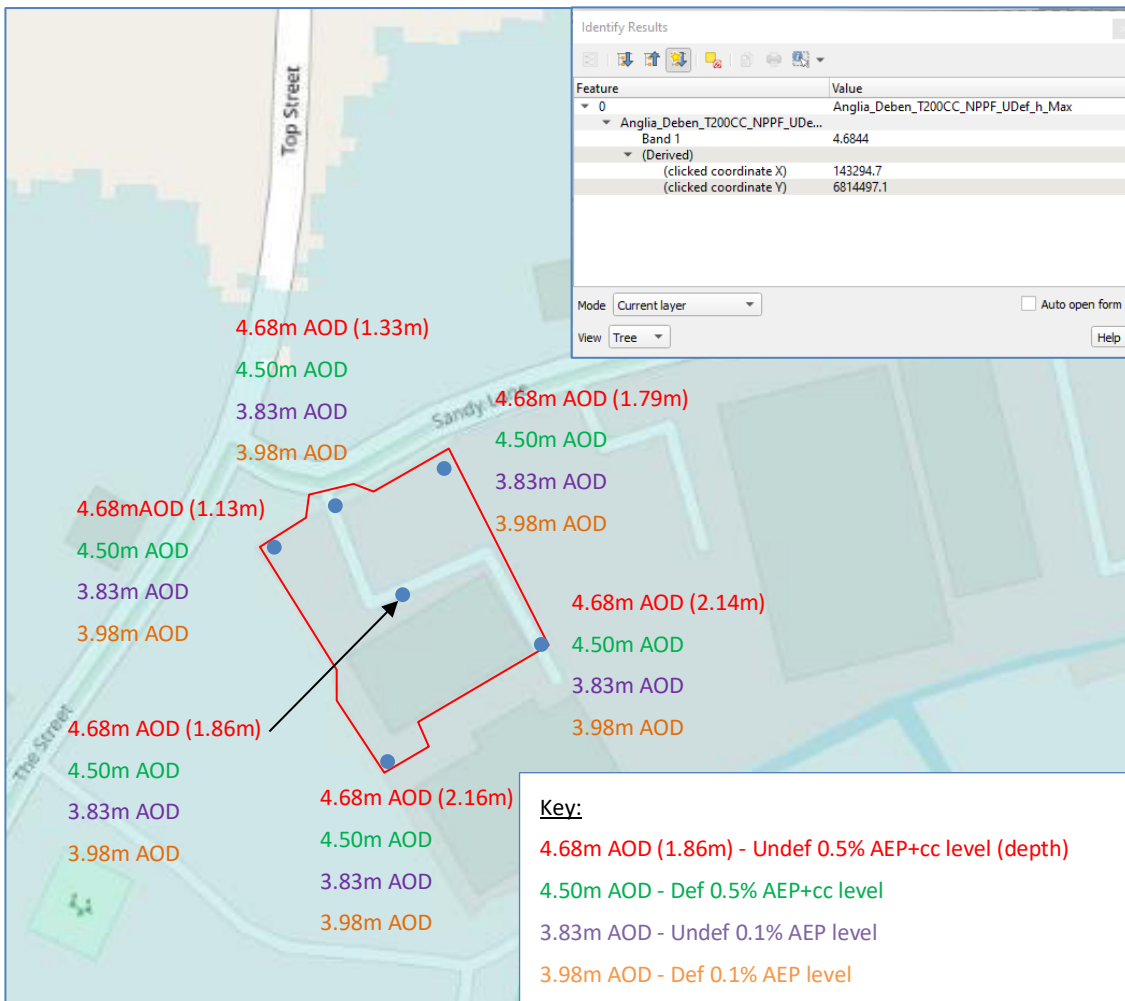


Figure 8.1: Summary of the Deben Estuary Coastal 2018 Model output data

- 8.5. The modelling data shows that the Un defended 0.5% AEP plus climate change flood level is **4.68m AOD**, relating to a maximum flood depth of 1.33m at the site entrance and 2.16m at the south-west site corner of the site. In the defended scenario the 0.5% AEP plus climate change level is 4.50m AOD; 168mm lower.
- 8.6. The flood risk to the development is the same as currently exists for the site, with the development vulnerability remaining as ‘Less Vulnerable’.



9. PLUVIAL FLOODING

- 9.1. Pluvial flooding is a risk of overland flows and ponding associated with extreme rainfall events. This can take the form of:
- i. Sheet runoff from adjacent land (urban or rural)
 - ii. Surcharged sewers
- 9.2. As rain falls everywhere within the United Kingdom, there will always be a residual risk of flooding from extreme rainfall events.
- 9.3. The Environment Agency has produced maps with risk classifications that show the risk of flooding from surface water runoff (Figure 9.1). The maps show that the site is at a Very Low risk of flooding.
- 9.4. The risk of overland flow from adjacent sites is considered to be Low based on the surface water mapping, the surrounding site use and the topography.



Figure 9.1 – Surface water flooding extents

10. GROUNDWATER FLOODING

- 10.1. Groundwater flooding is a risk of the water table rising after prolonged rainfall to emerge above ground level remote from a watercourse. It is most likely to occur in low lying areas underlain by aquifers of high vulnerability.
- 10.2. The Environment Agency has mapped groundwater vulnerability and Figure 5.2 shows the site is located over a Medium to High Vulnerability Aquifer.



- 10.3. The Suffolk Coastal and Waveney District Councils Level 1 Strategic Flood Risk Assessment (SFRA), April 2018 includes mapping of BGS Susceptibility to Groundwater Flooding. The report advises that there are some concentrated areas surrounding watercourses where the designation given is 'Potential for groundwater flooding to occur at surface' and that this is due to the permeable superficial alluvium being in hydraulic continuity with high water levels (river or tidal). The mapping covering the site location is attached in **Appendix E**, and shows the site is located within an area with 'Potential for groundwater flooding to occur at surface'. The SFRA does not indicate any recorded groundwater flood incidents at the site location.
- 10.4. Given the site geology, groundwater vulnerability, topography, BGS Susceptibility to Groundwater Flooding mapping and the location of watercourses providing an outlet for groundwater, the site is considered to be at Medium risk of groundwater flooding.

11. INFRASTRUCTURE FAILURE FLOODING

- 11.1. Infrastructure failure flooding is a risk of collapse, failure or surcharging of man-made structures and drainage systems. This could take the form of:
- i.* Reservoirs
 - ii.* Canals
 - iii.* Burst water mains
 - iv.* Blocked sewers
 - v.* Failed pumping stations
- 11.2. The Environment Agency have mapped failure of reservoirs, which shows the site is not located within the maximum extent of flooding from reservoirs.
- 11.3. The risk of flooding from blocked sewers is considered to be Low as any flood water would follow the site contours and enter the network downstream or flow towards the existing watercourses at and near the site boundaries and away from the site.

12. FLOOD RESILIENCE AND RESISTANCE MEASURES

- 12.1. As outlined in 8.5, EA modelling shows the Un defended 0.5% AEP plus climate change flood level is **4.68m AOD**, relating to a maximum flood depth of **1.33m** at the site entrance and **2.16m** at the south-west site corner.
- 12.2. It is not feasible to raise floor levels and openings above the modelled flood level, and therefore the building is likely to flood during a flood event. It is recommended that the development considers incorporating flood resilient construction where possible, using materials of a low permeability that will allow the building to be cleared and dried easily after a flood event. Internal fixtures, fittings and furniture could also be of materials that are easy to clean after a flood event. Further guidance regarding flood resilient construction is provided within the Government document:

https://assets.publishing.service.gov.uk/media/5a797ab2ed915d07d35b5da4/flood_performance.pdf



13. FLOOD HAZARD RATING

- 13.1. Based on the Environment Agency (EA) modelling data for the Undefended 0.5% AEP plus climate change tidal flooding scenario, the flood water depth in the location of the development ranges between **2.14m to 1.13m**.
- 13.2. The FD 2320 guidance document relating to Flood Hazard Ratings has been used to assess the ratings at the site, based on the above predicted tidal flood depths. The guidance shows that the hazard to people classification for the development, is likely to range from ‘Danger for most’ (includes the general public) to ‘Danger for All’ (includes the emergency services), assuming the flood water velocity is up to 1m/s.

Table 4 – Hazard to People Classification using Hazard Rating ($HR = d \times (v + 0.5) + DF$) for (Source Table 13.1 of FD2320/TR2 - Extended version)

HR	Depth of flooding - d (m)												
	DF = 0.5				DF = 1								
Velocity v (m/s)	0.05	0.10	0.20	0.25	0.30	0.40	0.50	0.60	0.80	1.00	1.50	2.00	2.50
0.0	0.03+0.5 = 0.53	0.05+0.5 = 0.55	0.10+0.5 = 0.60	0.13+0.5 = 0.63	0.15+1.0 = 1.15	0.20+1.0 = 1.20	0.25+1.0 = 1.25	0.30+1.0 = 1.30	0.40+1.0 = 1.40	0.50+1.0 = 1.50	0.75+1.0 = 1.75	1.00+1.0 = 2.00	1.25+1.0 = 2.25
0.1	0.03+0.5 = 0.53	0.06+0.5 = 0.56	0.12+0.5 = 0.62	0.15+0.5 = 0.65	0.18+1.0 = 1.18	0.24+1.0 = 1.24	0.30+1.0 = 1.30	0.36+1.0 = 1.36	0.48+1.0 = 1.48	0.60+1.0 = 1.60	0.90+1.0 = 1.90	1.20+1.0 = 2.20	1.50+1.0 = 2.50
0.3	0.04+0.5 = 0.54	0.08+0.5 = 0.58	0.15+0.5 = 0.65	0.19+0.5 = 0.69	0.23+1.0 = 1.23	0.30+1.0 = 1.30	0.38+1.0 = 1.38	0.45+1.0 = 1.45	0.60+1.0 = 1.60	0.75+1.0 = 1.75	1.13+1.0 = 2.13	1.50+1.0 = 2.50	1.88+1.0 = 2.88
0.5	0.05+0.5 = 0.55	0.10+0.5 = 0.60	0.20+0.5 = 0.70	0.25+0.5 = 0.75	0.30+1.0 = 1.30	0.40+1.0 = 1.40	0.50+1.0 = 1.50	0.60+1.0 = 1.60	0.80+1.0 = 1.80	1.00+1.0 = 2.00	1.50+1.0 = 2.50	2.00+1.0 = 3.00	2.50+1.0 = 3.50
1.0	0.08+0.5 = 0.58	0.15+0.5 = 0.65	0.30+0.5 = 0.80	0.38+0.5 = 0.88	0.45+1.0 = 1.45	0.60+1.0 = 1.60	0.75+1.0 = 1.75	0.90+1.0 = 1.90	1.20+1.0 = 2.20	1.50+1.0 = 2.50	2.23+1.0 = 3.23	3.00+1.0 = 4.00	3.75+1.0 = 4.75
1.5	0.10+0.5 = 0.60	0.20+0.5 = 0.70	0.40+0.5 = 0.90	0.50+0.5 = 1.00	0.60+1.0 = 1.60	0.80+1.0 = 1.80	1.00+1.0 = 2.00	1.20+1.0 = 2.20	1.60+1.0 = 2.60	2.00+1.0 = 3.00	3.00+1.0 = 4.00	4.00+1.0 = 5.00	5.00+1.0 = 6.00
2.0	0.13+0.5 = 0.63	0.25+0.5 = 0.75	0.50+0.5 = 1.00	0.63+0.5 = 1.13	0.75+1.0 = 1.75	1.00+1.0 = 2.00	1.25+1.0 = 2.25	1.50+1.0 = 2.50	2.00+1.0 = 3.00	3.50	4.75	6.00	7.25
2.5	0.15+0.5 = 0.65	0.30+0.5 = 0.80	0.60+0.5 = 1.10	0.75+0.5 = 1.25	0.90+1.0 = 1.90	1.20+1.0 = 2.20	1.50+1.0 = 2.50	1.80+1.0 = 2.80	3.40	4.00	5.50	7.00	8.50
3.0	0.18+0.5 = 0.68	0.35+0.5 = 0.85	0.70+0.5 = 1.20	0.88+0.5 = 1.38	1.05+1.0 = 2.05	1.40+1.0 = 2.40	1.75+1.0 = 2.75	3.10	3.80	4.50	6.25	8.00	9.75
3.5	0.20+0.5 = 0.70	0.40+0.5 = 0.90	0.80+0.5 = 1.30	1.00+0.5 = 1.50	1.20+1.0 = 2.20	1.60+1.0 = 2.60	3.00	3.40	4.20	5.00	7.00	9.00	11.00
4.0	0.23+0.5 = 0.73	0.45+0.5 = 0.95	0.90+0.5 = 1.40	1.13+0.5 = 1.63	1.35+1.0 = 2.35	1.80+1.0 = 2.80	3.25	3.70	4.60	5.50	7.75	10.00	12.25
4.5	0.25+0.5 = 0.75	0.50+0.5 = 1.00	1.00+0.5 = 1.50	1.25+0.5 = 1.75	1.50+1.0 = 2.50	2.00+1.0 = 3.00	3.50	4.00	5.00	6.00	8.50	11.00	13.50
5.0	0.28+0.5 = 0.78	0.60+0.5 = 1.10	1.10+0.5 = 1.60	1.38+0.5 = 1.88	1.65+1.0 = 2.65	3.20	3.75	4.30	5.40	6.50	9.25	12.00	14.75
Flood Hazard Rating (HR)	Colour Code		Hazard to People Classification										
Less than 0.75			Very low hazard - Caution										
0.75 to 1.25			Danger for some – includes children, the elderly and the infirm										
1.25 to 2.0			Danger for most – includes the general public										
More than 2.0			Danger for all – includes the emergency services										

Figure 11.1: Extract from Supplementary Note on Flood Hazard Ratings and Thresholds for Development Planning and Control Purposes

14. EMERGENCY FLOOD EVACUATION PLAN

- 14.1. It is not possible to provide a safe means of access away from the site area at a level above the design flood level in a tidal flood scenario, therefore it is recommended that the site owner/occupants sign up with the Environment Agency to receive 24 hour Flood Warnings to enable preparation and safe evacuation before a flood event occurs (**Floodline- 0345 988 1188**).



It is also recommended that an emergency flood evacuation plan is prepared. An emergency flood evacuation plan deals with matters of evacuation; the site owner should develop an emergency flood evacuation plan that includes receiving flood warnings and evacuating the site prior to the flood event.

15. SUMMARY

- 15.1. It has been demonstrated that the site is located within Flood Zone 3.
- 15.2. Table 15.1 summarises the probability of the site flooding from the five key sources as listed in PPS25.

Source	Description	Risk	
Fluvial	Rivers	Flood Zone 3	(>1% AEP River Flooding/>0.5%AEP Tidal Flooding)
Tidal	Seas		
Pluvial	Surface Water	Very Low	(<0.1% AEP)
Groundwater	Aquifers	Medium	-
Infrastructure failure	Reservoirs	Outside extent of flooding	-
	Blocked Sewers	Very Low	

Table 15.1 – Flood Risk Summary

- 15.3. The development comprises a change of use from ‘Office and associated storage’ to ‘sui-generis use’ comprising tool and plant hire with associated storage, repairs and parking. The existing and proposed site use have a classification of Less Vulnerable development. The development does not include for an extension to the existing building.
- 15.4. Environment Agency coastal modelling shows that the site is at risk of flooding to a level of **4.68m AOD** in the Undefended 0.5% AEP plus climate change event (to a depth of up to 2.14m). The flood risk to the development is the same as exists for the current site use. It is recommended that the site owner signs up to receive 24 hour Flood Warnings to enable preparation and safe evacuation before a flood event occurs (Floodline- 0345 988 1188) and that an emergency flood evacuation plan is prepared that includes receiving flood warnings and evacuating the site prior to the flood event.
- 15.5. In accordance with government policy, SuDS should be used on site where possible, and surface water drainage of the site carried out in a sustainable way.
- 15.6. As long as maintenance of the new drainage systems are correctly carried out, the risk of flooding and the subsequent risks from infrastructure failure or pluvial means, is very Low.
- 15.7. The Environment Agency accepts that extreme floods will occur and it will never be possible to eliminate flood risk altogether.
- 15.8. It is considered that the risk of flooding to the site has been adequately considered and that development of the site including for implementing the flood warning and flood evacuation plan recommendations outlined in this report, does not pose an unacceptable flood risk either to occupants of the site or to others off site.



APPENDICES



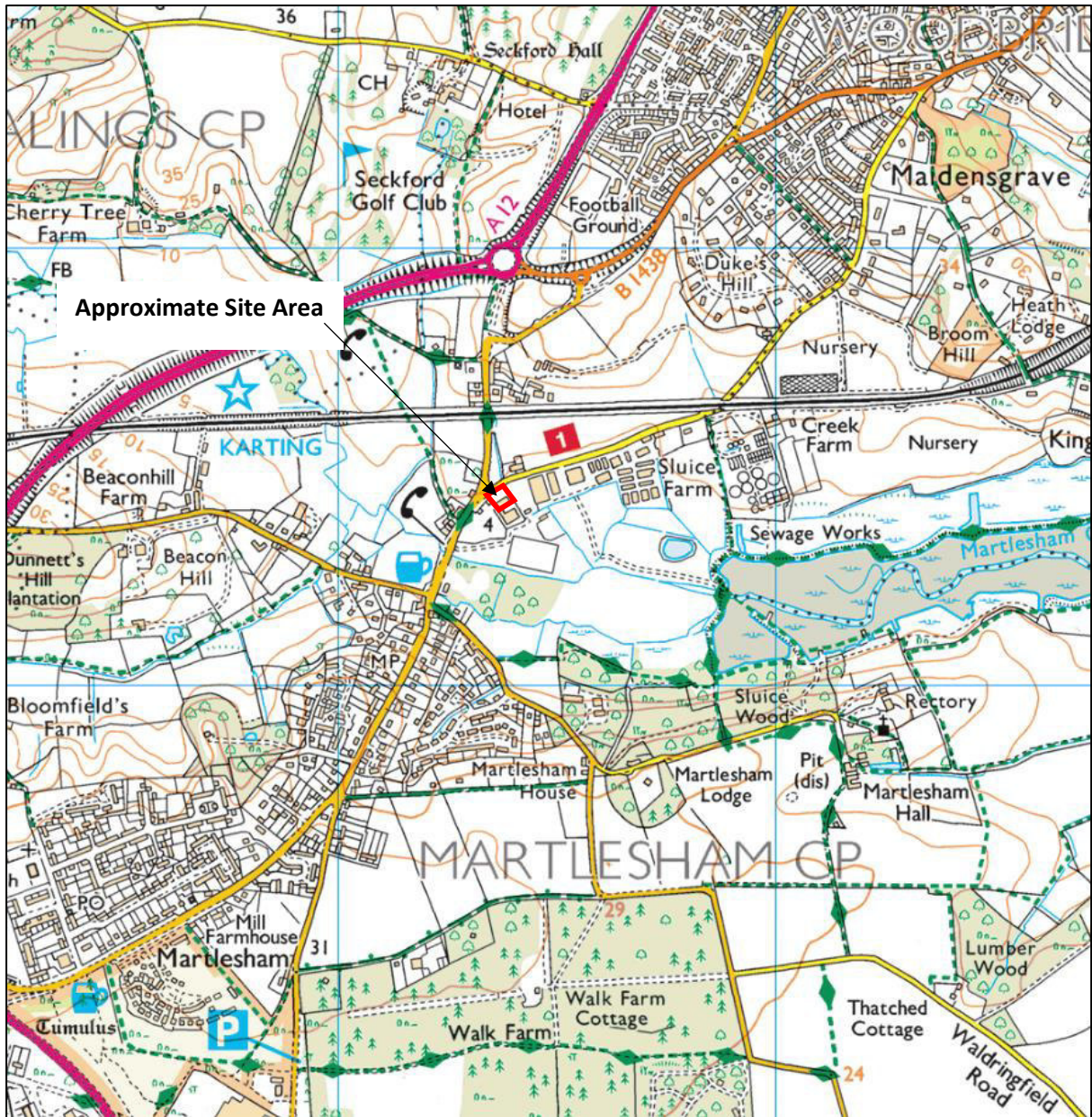
Appendix A

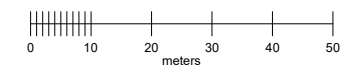
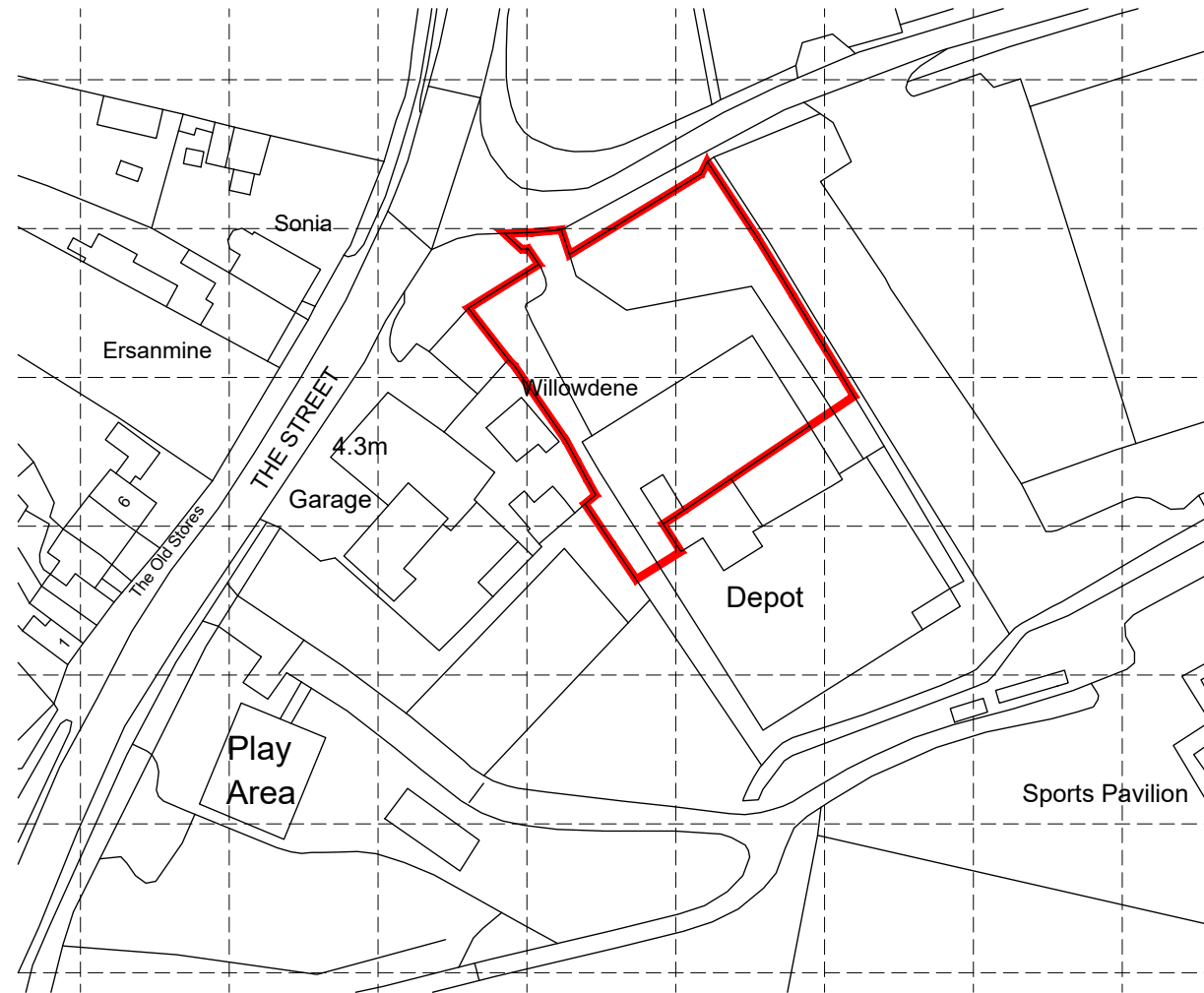
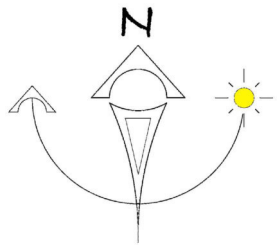
Site Location Plans



010/2024: Unit 1, Max House, Sandy Lane, Martlesham, Suffolk, IP12 4SD

Site Location Plan





Issued for:

PLANNING

Project/Client:

Unit 1 Max House
Sandy Lane
Martlesham
(Toddy Tool Hire Ltd)

Project No:

0658

Dwg No: Rev:

0001 -

Scale: 1:1250 @ A3

Drawing:

Site Location Plan

North:



Drawn By: Date:

PJA 12/2023

Checked By: Date:

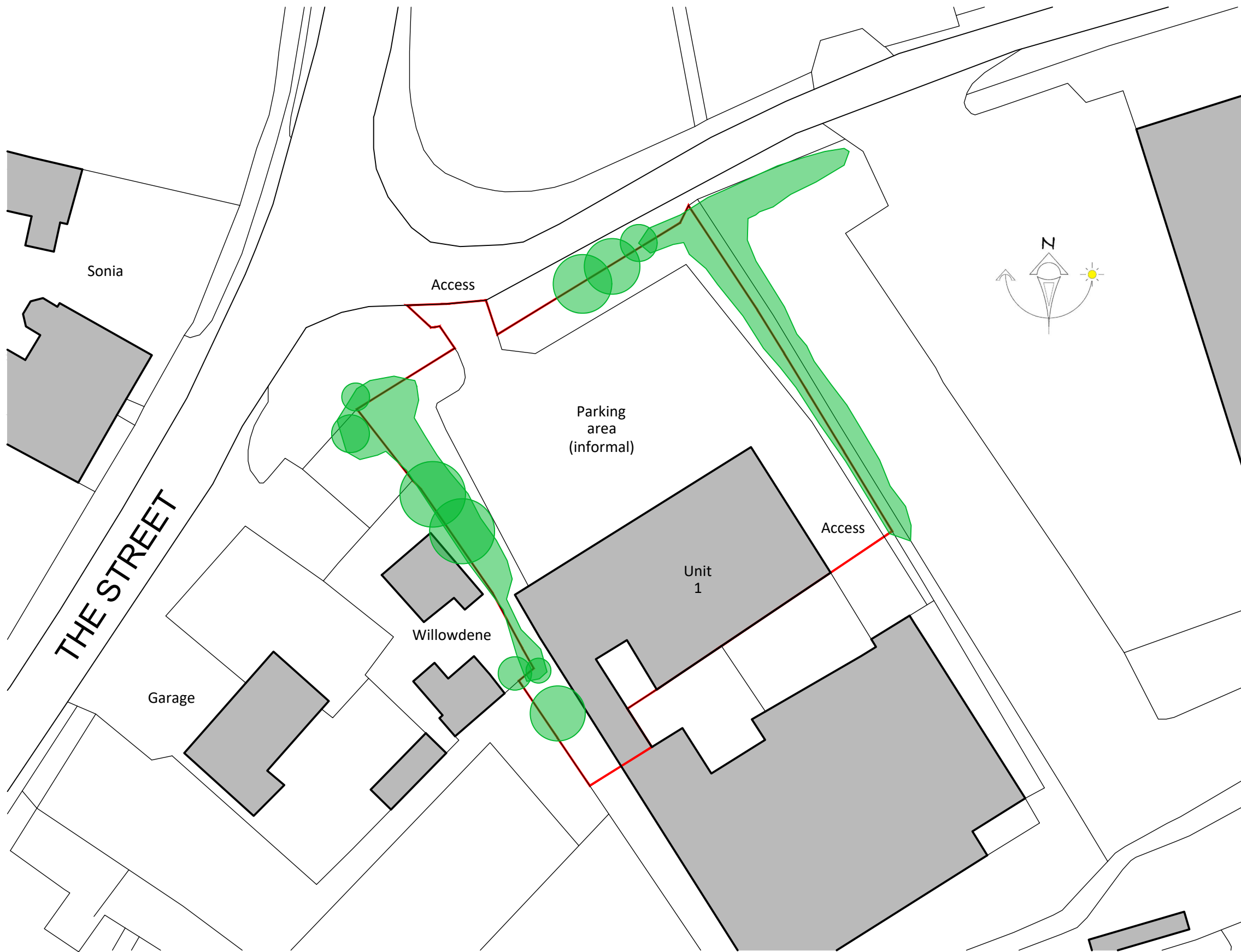
PJA 12/2023



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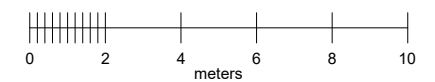
Existing Site Drawings





Key

- Site boundary
- Existing buildings
- Existing landscaping (shown indicatively)



Issued for:

PLANNING

Project/Client:

Unit 1 Max House
Sandy Lane
Martlesham
(Toddy Tool Hire Ltd)

Project No:
0658

Dwg No: Rev:
0006 -

Scale:
1:500 @ A3

Drawing:

Site Plan
as Existing

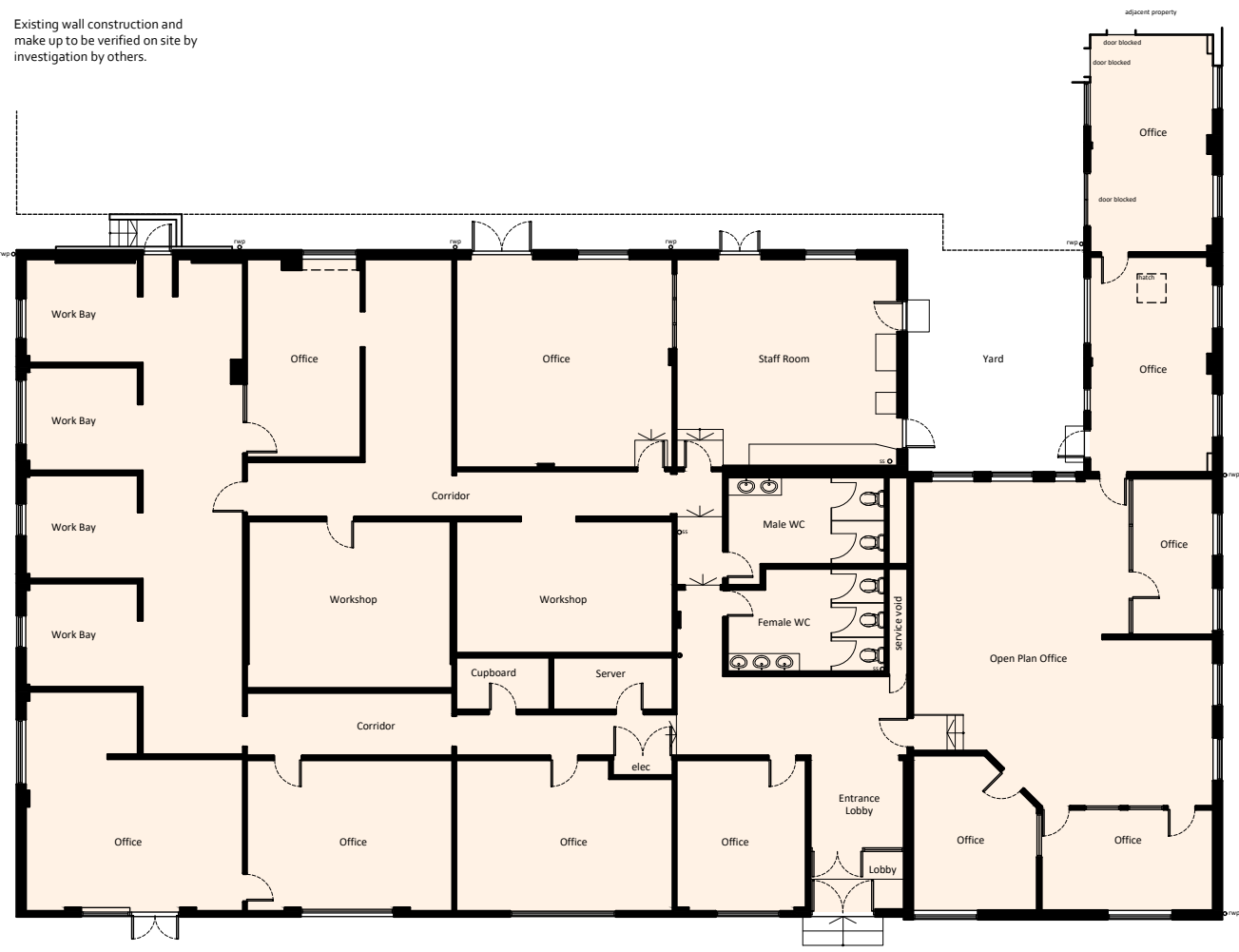
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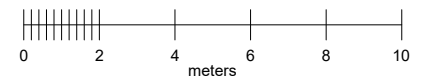
Drawn By: Date:
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Checked By: Date:
PJA 12/2023





**Floor Plan
as Existing**



Issued for:

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Project/Client:
Unit 1 Max House
Sandy Lane
Martlesham
(Toddy Tool Hire Ltd)

Project No:
0658

Dwg No: 0002 Rev: -

Scale: 1:200 @ A3
1:100 @ A1

Drawing:
**Floor Plan
as Existing**

North:

Drawn By: MIG Date: 12/2023

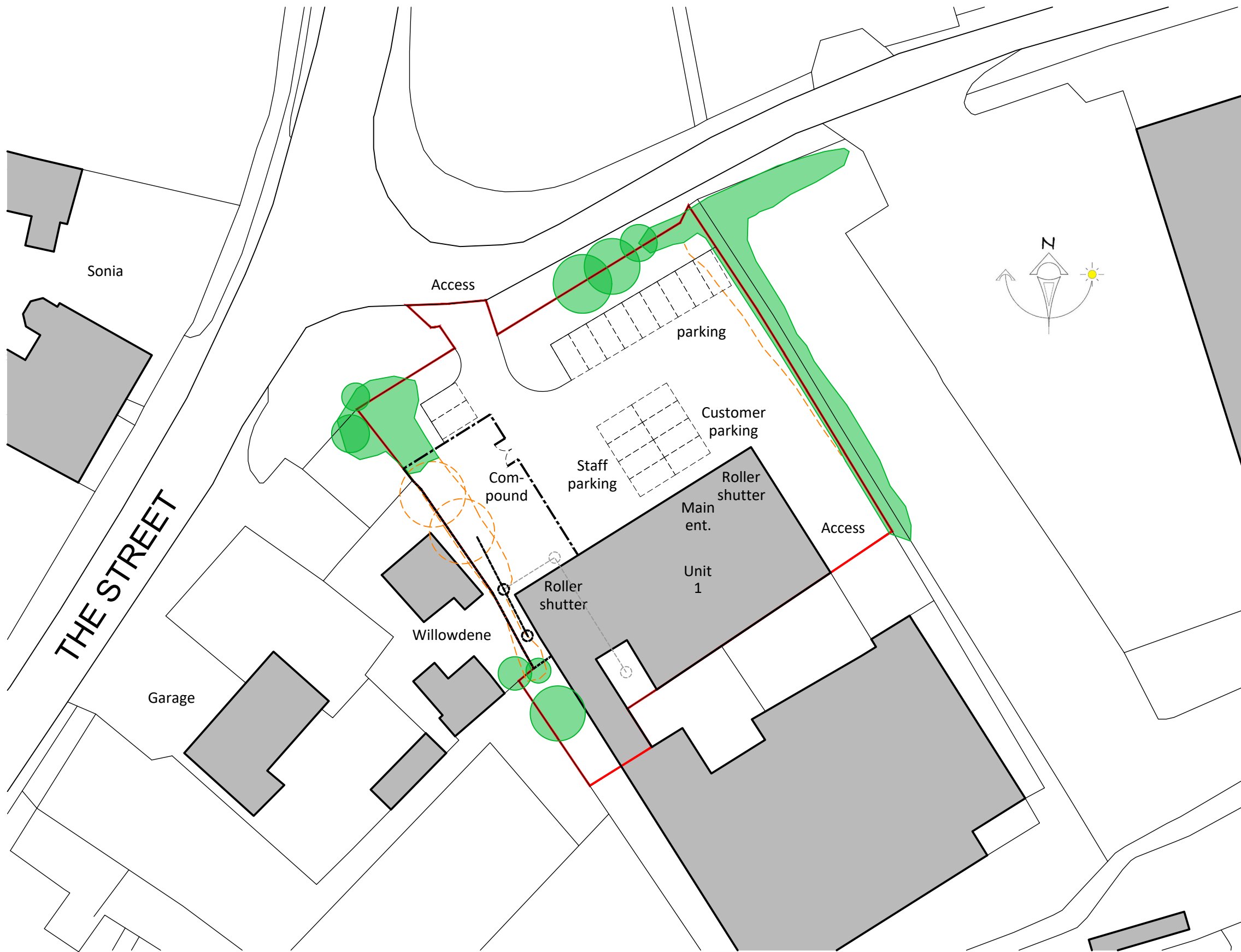
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Appendix C

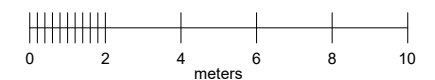
Proposed Development Drawings





Key

- Site boundary
- Existing buildings
- Existing landscaping (shown indicatively)
- Existing landscaping to be removed (shown indicatively)
- Parking bays (marked) (approx. 24 spaces)
- New 2m high timber close board fencing
- New 2m high palisade fencing



Issued for:

PLANNING

Project/Client:
 Unit 1 Max House
 Sandy Lane
 Martlesham
 (Toddy Tool Hire Ltd)

Project No:
 0658
 Dwg No: 0007 Rev: B
 Scale:
 1:500 @ A3

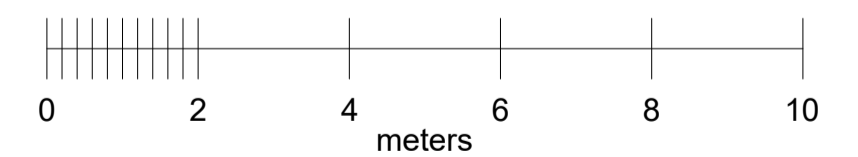
Drawing:
 Site Plan
 as Proposed

North:
 Drawn By: PJA Date: 12/2023
 Checked By: PJA Date: 12/2023





Floor Plan
as Proposed



Issued for:

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Project/Client:
Unit 1 Max House
Sandy Lane
Martlesham
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Project No:
0658

Dwg No: 0003 Rev: B

Scale: 1:200 @ A3
1:100 @ A1

Drawing:
Floor Plan
as Proposed

North:

Drawn By: PJA Date: 12/2023

Checked By: PJA Date: 12/2023



Appendix D

Environment Agency Asset Information



010/2024: Unit 1, Max House, Sandy Lane, Martlesham, Suffolk, IP12 4SD

Environment Agency Asset Data

Search Map / Post Office Lane Marshes Bank.

Post Office Lane Marshes Bank.

Asset

Basics


Asset Name	Post Office Lane Marshes Bank.
Asset ID	440845
Asset Category	Defence
Asset Type	Natural High Ground
Actual Condition	Fair
Asset Maintainer	Environment Agency
Include in Floodmap	not_yet_considered
Last Inspection Date	2023-01-12
Next Inspection Date	2024-01-12
Primary Purpose	flood risk management
Protection Type	fluvial
Target Condition	Fair
More info	View asset type in Data Requirements Library
Additional asset information	View additional asset information

Management

EA Area	East Anglia
---------	-------------

Spatial

Asset Length	584.51m
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Sandy Lane

Asset

Basics

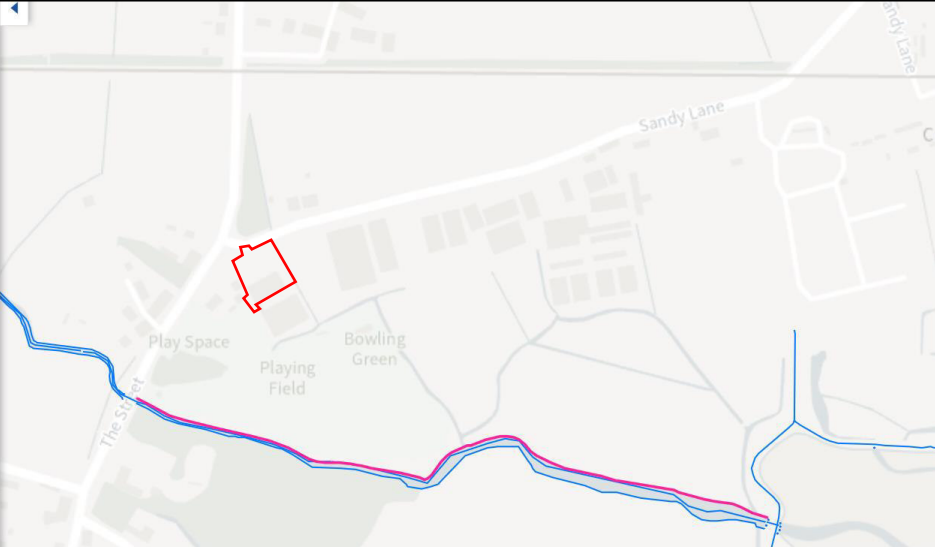
Asset Name	Sandy Lane
Asset ID	440839
Asset Category	Defence
Asset Type	Natural High Ground
Actual Condition	Fair
Asset Maintainer	Environment Agency
Include in Floodmap	not_yet_considered
Last Inspection Date	2023-01-12
Next Inspection Date	2024-01-12
Primary Purpose	flood risk management
Protection Type	fluvial
Target Condition	Fair
More info	View asset type in Data Requirements Library
Additional asset information	View additional asset information

Management

EA Area	East Anglia
---------	-------------

Spatial

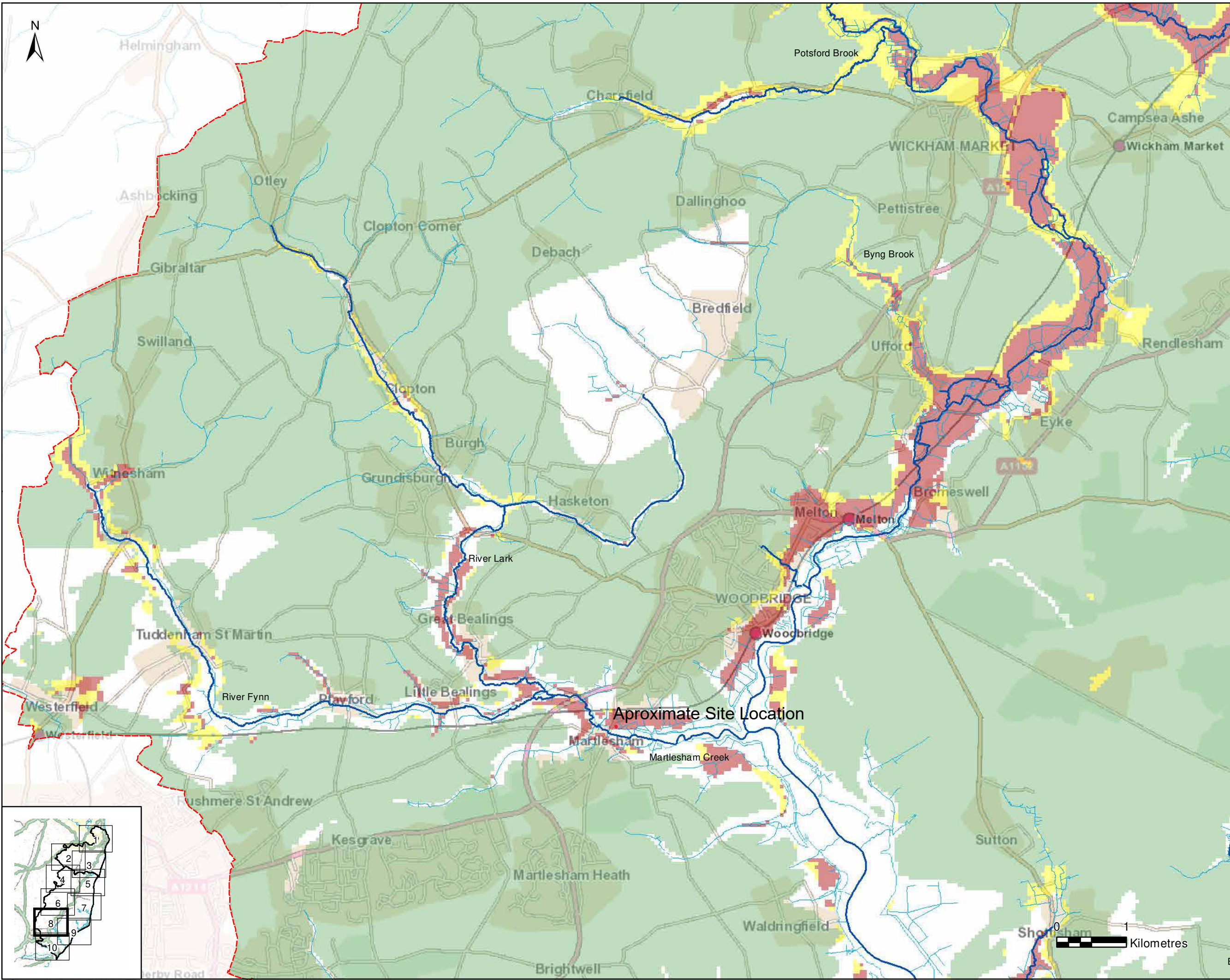
Asset Length	658.4m
--------------	--------



Appendix E

Strategic Flood Risk Assessment - BGS Susceptibility to Groundwater Flooding Map





LEGEND

- Suffolk Coastal District
- Waveney District
- Main River
- Main River (Culverted)
- Ordinary Watercourse
- Ordinary Watercourse (Culverted)
- Potential for groundwater flooding to occur at surface
- Potential for groundwater flooding of property situated below ground level
- Limited potential for groundwater flooding to occur
- Not considered to be prone to groundwater flooding

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River Labels amended	LM	MD	11.04.18	3
No changes - Issued as final	LM	MD	23.11.17	2
Revision Details	By	Check	Date	Suffix

Purpose of Issue: **FINAL**

Client: Waveney District Council
Serving the Community

Project Title: **EAST SUFFOLK COUNCILS STRATEGIC FLOOD RISK ASSESSMENT**

Drawing Title: **SUSCEPTIBILITY TO GROUNDWATER FLOODING SHEET 8 OF 10**

Drawn	Checked	Approved	Date
LM	MD	GP	11/04/2018
AECOM Internal Project No. 60520248		Scale at A3 1:50,000	

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Drawing Number	Rev.
FIGURE 07.8	3

