

NOISE IMPACTS & FLOOD RISKS

CLASS Q.2 (1)

Stokes Farm Barn Shed #4
Binfield Road,
Binfield,
RG40 5PR

Q.2. (1)

Noise impacts of the Development.

This Noise impact statement has been prepared to accompany a planning application in relation to development proposals on Stokes Farm Barn Shed #4, Binfield Road, Binfield, Wokingham. (herein after referred to as 'the site'). The site falls within the administrative boundary of Wokingham Borough Council.

The site is located to the Southeast of Binfield Road, the North West of Wokingham Town centre and to the East of Popeswood which are predominantly residential areas. To the North, the application site fronts onto open pasture, woodland and another redundant Poultry Shed not used for storage. To the South, the site is adjacent to Keephatch Meadows, a SANG/Thames SPA mitigated Greenspace over 100 m away, sitting between the site and A 329. To the East, the barn opens out onto open countryside and woodland, and to the West opens out towards the access road and more pasture.

The site has previously been subject to multiple prior approval planning applications within the parameters of Class Q, Part 3, Schedule 2 of the Town and Country Planning (General Permitted Development) Order 2015. Class Q allows for development consisting of a change of use of a building and any land within its curtilage from a use as an agricultural building to a use falling within Class C3 (dwelling houses) of the Schedule to the Use Classes Order.

The site comprises of Barn # 4 which is currently vacant but operated under agricultural use in the past. The development proposals seek prior approval permission to redevelop the site to provide 5 no. 2 and 3-bedroom houses. Access to the site will be achieved via the existing access road from Binfield Road. Car and cycle parking will be provided in accordance with applicable policy standards.

This Noise and Flood Risk impact statement will demonstrate that:

- The proposal would not detrimentally impact other neighboring uses.
- BS8233 standards will inform the Building Design providing guidance on sound insulation and noise reduction.
- The Proposal is not at Risk from Flooding.

Baseline Conditions

This Section sets the context for the application proposals, providing information on the application site and surrounding area.

Site Location

The site is located on land north west of Binfield Road, approximately 430 metres to the South West of the recently completed housing development Keephatch Gardens. The site is bound by agricultural land with Keephatch Meadows, A SANG/SAMM, Thames Basin Heaths 'Greenspace', implemented as part of the Keephatch Gardens Residential Development adjacent to the site. The site benefits from close proximity to the strategic highway network via A329 to the north and London Road. Figure 1.



Figure 1

Regulations implemented by Defra, require that every 5 years Noise maps are published.

The regulations require that Defra:

- adopts noise maps which show people's exposure to environmental noise
- adopts action plans based on the results of noise mapping
- aims to preserve environmental noise quality where it is good
- provides information to the public on environmental noise and its effects

This information relates to the maps produced for the fourth round of this 5 yearly cycle (hereafter referred to as 'round 4'). (Figure 2)

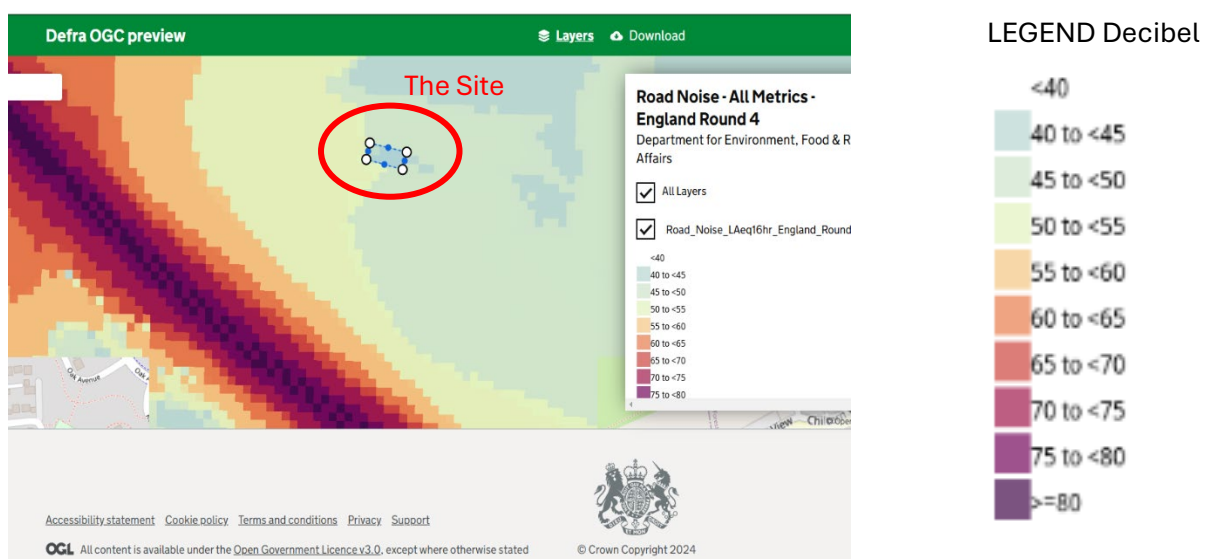


Figure 2

© Crown Copyright 2024 Defra OGC Preview Road Noise – All Metrics – All layers - Round 4

Data indicating the level of noise according to the strategic noise mapping of road sources across England.

- The day-evening-night level (Lden) is a noise indicator for overall annoyance based upon annual average A-weighted long-term sound over 24 hours with a 5 dB(A) penalty for evening noise (19:00-23:00) and a 10 dB(A) penalty for night-time noise (23:00-07:00).
- The 16-hour equivalent continuous level (LAeq,16h) is a noise indicator which describes the annual average steady noise level over the 16-hour daytime period (07:00 to 23:00) which contains the same sound energy as the actual fluctuating sound across the same period.
- The day level (Lday) is a daytime noise indicator based upon annual average A-weighted long-term sound over the daytime period (07:00-19:00) which contains the same sound energy as the actual fluctuating sound across the same period.
- The evening level (Leve) is an evening noise indicator based upon annual average A-weighted long-term sound over the evening period (19:00-23:00) which contains the same sound energy as the actual fluctuating sound across the same period.
- The night level (Lnight) is a night-time noise indicator based upon annual average A-weighted long-term sound over the night period (23:00-07:00) which contains the same sound energy as the actual fluctuating sound across the same period.

Noise levels are modelled on a 10m grid at a receptor height of 4m above ground, with a lower threshold cutoff of 35dB for the Lnight metrics, and 40dB for all other metrics. Data is available for all road traffic sources and also those defined as "major" under the Regulations.

This data is a product of the strategic noise mapping analysis undertaken in 2022 to meet the requirements of the Environmental Noise (England) Regulations 2006 (as amended).

The application site is placed in an area designated 45 to <50 and 50 to <55.

Noise level Decibel Chart describes this level of noise to be between soft safe to moderate levels of noise. Comparable to that of Average room noise, urban residence, moderate rainfall and normal conversation (Figure 3)

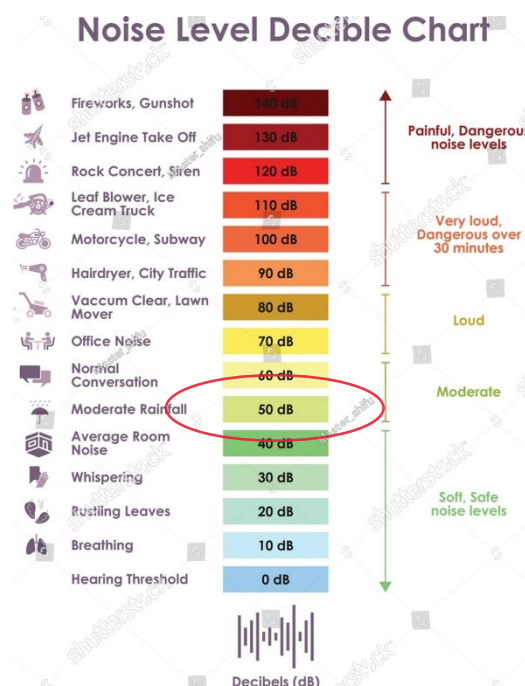


Figure 3

Planning History

There are a number of previous development schemes associated with the site under a Class Q Change of use application that are relevant to the new application, a summary of which is provided below.

212706 – REFUSED

The officer's report stated the following with regards to noise impacts of the development:

'The Council's Environmental Health Team Has also advised that the noise impacts would be acceptable. '

213795 – REFUSED

The officer's report stated the following with regards to noise impacts of the development:

The Council's Environmental Health Team Has also advised that the noise impacts would be acceptable.

22051 - REFUSED

The officer's report stated the following with regards to noise impacts of the development:

The Council's Environmental Health Team Has also advised that the noise impacts would be acceptable.

221948 – REFUSED

The officer's report stated the following with regards to noise impacts of the development:

'Whilst the site is unlikely to be adversely affected by noise from commercial premises in the vicinity & it is of sufficient distance (circa 230M) from the A329(M) for road noise not to be a significant concern, clarification is required regarding the use of the area of subject building outside this application including assessment of any ventilation services. The proposed dwellings may be subject to noise from the existing permitted use(s) therefore additional information is required which considers all noise sources that may have a significant adverse impact on residents..'

It is to be noted that this application was for the Change of use **for part of** the agricultural building.

231260

The Env. Protection Officer stated the following with regards to noise impacts of the development:

'No objection subject to conditions'

'The proposal is for residential dwellings, I have some concerns about noise because of the nearby A329 Motorway, I make this around 250 metres from the proposed site. Looking on our internal GIS mapping system it does look like it is open farmland between the proposed site of the old chicken shed and the motorway, sound from a fairly constant source such as a motorway can travel a significant distance. We always expect a property to be built to BS8233 standards for glazing and ventilation to mitigate noise.'

My recommendation to the developer is that they bring in an acoustic consultant to carry out a noise assessment to inform the building design. As this is prior approval, I will not suggest a condition, but this is my strong recommendation, it may be that a standard build is adequate to mitigate noise from the motorway, but it would be a shame if after occupation a drone of motorway noise becomes apparent at the new property. The chickens may have not been bothered by the motorway but a family moving in may be. The building sits alone in open countryside and 250 metres is not far for motorway noise to travel I have dealt with a noise complaint for a new build at about this distance from a motorway recently. Obtaining the advice of an acoustic consultant for relatively inexpensive mitigation may be money well spent if it improves the overall quality of the property for the future occupiers.'

241270 – REFUSED

The officer's report stated the following with regards to noise impacts of the development:

The Council's Environmental Health Team Has also advised that the noise impacts would be acceptable.

Impact on neighbouring amenities.

The site is unlikely to be adversely affected by noise from commercial premises in the vicinity. Stokes Farm Barn area of activity is c. 470m from the site.

Oak Avenue, Keephatch Gardens are in excess of 345m away from the site. Binfield Road, Keephatch Meadows and the A329 separate the site from the residential Development.

Existing Noise mitigation.

The A329 which runs adjacent to the south-western site boundary sharply drops off in ground levels, in relation to the site, therefore, the proposed development will be protected to some degree by the existing topography of the site. This joins London Road, which is also located below the ground-floor level of the proposed development site.

Keephatch Meadows

Keephatch Meadows implemented in 2019, a SANG Thames Basin Spa mitigation for planning permission O/2014/2434. **Appendix A** shows the detailed planting plan for Keephatch Meadows, thus demonstrating that the proposed building does not sit alone in 'open countryside' (Application 231260) . Detailed planting schedules and plans demonstrate that the land which lies between the site and A329 is significantly planted with large groups of Native Woodland Thicket, Woodland Planting, Native mixed species hedging and a number of other planting schedules. **Appendix B** and **Appendix C** demonstrates over the period of 5 years the maturity of the planting schemes. Whilst still in their infancy the woodland is only to grow higher and thicker creating a natural barrier against noise omitting from the A329.

Proposed noise mitigation

Mitigation measures will be required to achieve the internal ambient noise criteria, these are likely to be fairly standard (double glazing and alternative ventilation measures), and simple to engineer. Night-time noise levels are proposed to be controlled via double glazed windows, with alternative ventilation measures to provide sufficient whole dwelling ventilation and remove the

need to open windows. This can be achieved using a high-performance acoustic ventilation opening (likely to be a through-wall system or high-performance trickle ventilator) or a mechanical system (e.g. MVHR) that does not require passive façade openings to ventilate spaces.

Whilst the exact glazing and ventilation strategy has not yet been finalised an updated noise assessment will be undertaken in order to inform building design in line with BS8233 standards for glazing, noise and ventilation. The building will also be designed in line with Part E of the Building Regulations 2010. **Appendix D.**

Flood Risks.

The Site is Located in Flood Zone 1 **Appendix E.**

The site has a Low Risk of Surface Water Flooding in Extent (Between 0.1% and 1% chance each year, Depth (0.1% chance each year) and Velocity (0.1% chance each year). **Appendix F**

There are a number of previous development schemes associated with the site under a Class Q Change of use application that are relevant to the new application, a summary of which is provided below.

212706 – REFUSED

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

213795 – REFUSED

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

22051 - REFUSED

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

221948 – REFUSED

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

231260

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

241270 – REFUSED

The officer's report stated the following with regards to Flooding Risks on Site:

'The development is in Flood zone 1 according to the EA mapping. There are areas liable to surface water flooding around the building. The Council's Drainage Engineer raises no objection subject to a condition detailing sustainable drainage measures.'

Existing and Proposed Services

The existing site is currently supplied by Mains water. A Private Water Supply is therefore not required.

Mains water and electricity already exist to the site, this will be used for all services. There is no intention to install any gas.

Sewage needs will be serviced by the use of a septic tank.

Waste Storage shall be managed in line with Policy CC04 of the Local Plan.

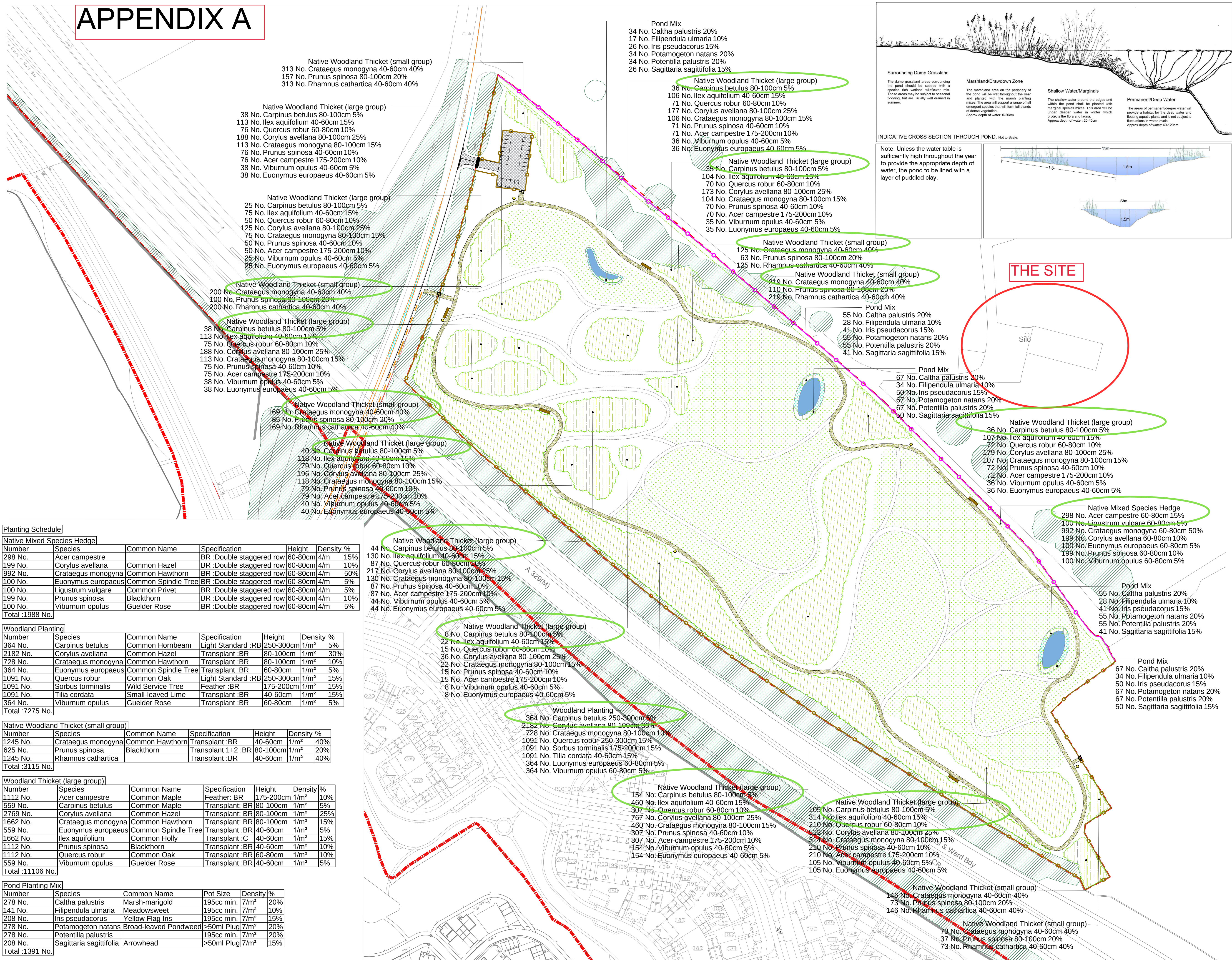
Surface water will be harvested alongside a Surface water drainage strategy.

Summary and Conclusions

- The proposal would not detrimentally impact other neighboring uses.
- The proposal will not detrimentally be affected by existing noise levels from roads in the area.
- BS8233 standards will inform the Building Design providing guidance on sound insulation and noise reduction to mitigate any potential noise.
- The Proposal is not at Risk from Flooding from rivers or Surface water Flooding.

APPENDIX A

APPENDIX A



NOTES:
Based upon the Ordnance Survey map with permission of The Controller of Her Majesty's Stationery Office. © Crown Copyright.
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- KEY:
- SANG Site Boundary
 - Existing Trees
 - Existing Vegetation Structure
 - Informal Mown Grass Pathways
 - Proposed Hedge
 - Proposed Planting Areas
 - Proposed Wildflower Mix:
Emorsgate EM3, Special General Purpose Meadow Mix or similar sown at 1.5 g/m² into existing grass areas.
 - Proposed Wetland Grass Mix:
Emorsgate EP1 Pond Edge Mix or similar sown at 4 g/m²
 - Pedestrian route to SANG

Refer to drawing 5244/ASPD010 for hard works drawing and 5244/ASPD011 for hard works details associated with the SANG.

PLANTING NOTES
All plants to be supplied in accordance with the HTA 'National Plant Specification' and from a HTA certified nursery. All plants and trees to be planted in accordance with BS3936 and BS5854. Delivery and handling of all plant material to be in accordance with BS4280/CJCPSE Code of Practice for 'Handling and Establishing Landscape Plants' Parts I, II and III and BS5854.

Planting Pit and Trench Preparation
Tree pits in soft landscape to be excavated to 1m x 1m x 1m depth prior to topsoiling and all shrub planting areas excavated to 450mm depth. All proposed hedge planting trenches to be excavated to 600mm depth. If suitable site conditions all bare root transplants, whips and feathered specimens can be notch planted as an alternative if appropriate. The preparation of planting pits, beds or trenches shall comply with the appropriate British Standards, namely BS4043, BS4428, BS5837 and BS5854. Excavation of planting pits, beds or trenches shall not take place when the ground is frozen or waterlogged such that damage may occur to the structure of the soil. All excavated areas to be backfilled with either site won topsoil or imported topsoil to be BS3882-General purpose grade. All topsoiled areas to be clear of rocks and rubble larger than 50mm diameter and any other debris that may interfere with the establishment of plants. The Contractor shall break up and cultivate at the base of the trenches or planting pits. The sides of the trenches or planting pits shall be loosened with a fork or other similar implement. All stones and the like over 75mm in any dimension, deleterious matter, weeds and weed roots brought to the surface by any cultivation or excavation shall be removed off site. The Contractor shall remove off site the excavated subsoil material when preparing planting pits. The imported topsoil should make up any deficiencies caused by the removal of the subsoil material. Trenches and pits shall have the topsoil and any subsoil material thoroughly broken up and mixed prior to backfilling. All trees shall be supplied root balled, unless otherwise stated. Root balled trees shall be well grown, healthy and with a compact, contained rootball. They shall be nursery grown and have been regularly watered. Prior to planting, all plant material shall be stored and sorted at in accordance with best practice.

Planting
All plants shall be planted in a random fashion avoiding formal regimented lines at densities indicated in the schedule, unless otherwise specified. Unless otherwise specified, all hedgerows shall be planted in a double staggered rows and hedgerow mixes shall be planted in groups of 7, 9 & 13s at densities indicated on the schedule. The selection, procurement, handling, storage and planting operations of all proposed trees shall be in accordance with BS5854:2014 - Trees: from nursery to independence in the landscape, recommendations. Planting and associated operations shall comply with BS4043, BS4428, BS5837 and BS5854. Unless otherwise stated planting shall be carried out during the period of 1 Nov to 31 March when the ground is not frozen or waterlogged. If planting is required outside this period agreement shall be sought and all bare root plants shall be substituted with container grown stock.

Watering
All plants shall be watered in to field capacity immediately after planting and mulched with 50mm depth of medium grade crushed mulch. The Contractor shall water the trees, shrubs and hedges once planted so that the entire tree pit or planted area is maintained to field capacity, i.e. 'The amount of water retained by previously saturated soil once full drainage has ceased'. Watering to field capacity shall continue frequently and on a regular basis as considered necessary by the landscape contractor and as necessary to ensure the successful establishment and continued thriving of all planting. Additional watering shall be undertaken during summer months and/or periods of drought. Post planting management and maintenance specifically for new tree planting shall include ongoing irrigation and formative pruning as outlined in BS5854. The period over which regular irrigation required for transplanted trees is likely to be at least two full growing seasons to ensure successful establishment. As the root system develops the frequency of irrigation can be reduced.

Staking
All trees within soft landscape areas to be double staked with cross bar and tied, using 1.5m long, 75mm diameter rounded tree stakes 15mm brace, rubber tie and spacer block. Stakes not to extend more than 650mm above ground level. Spiral rabbit protection guards shall be included for all other bare root transplants or whip planting.

Root Barriers
Root barriers (ReRoot 1000 or equivalent) to be included adjacent to buildings and services where necessary. Landscape contractor shall check all planting operations comply with appropriate standards and that in the absence of detailed surveys, any necessary underground investigations are undertaken to ensure there are no conflicts with existing or proposed utilities, services or foundations.

PROTECTION OF EXISTING VEGETATION TO BE RETAINED
Existing trees to be retained shall be protected in accordance with BS5837, from commencement to completion of all works on site.

C	02.06.16	Updated to LPA officer comments & feedback.	CW	CJ
B	01.04.16	Updated to LPA officer comments & feedback.	CW	CJ
B	26.11.15	Finalised for submission	CW	CJ
REV	DATE	NOTE	CW	Drawn
REVISIONS				CHK'd

aspect landscape planning

TITLE
Keephatch Beech, North Wokingham
SANG Detailed Planting Plan

CLIENT
Keephatch Beech Consortium

SCALE	DATE	DRAWN	CHK'D
1:1000 @ A1	JAN 2015	JM	CJ

DRAWING NUMBER	REVISION
5244/ASPD012/ SANG/ PP	C

Based on McBains Cooper Architects drawing no. 56379-SK14

APPENDIX B

APPENDIX B



Keephatch Meadows, January 2019
Image 15 of 15 (play slideshow)

CLOSE X



Keephatch Meadows, May 2023
Image 6 of 15 (pause slideshow)

CLOSE X

<https://www.tbhpartnership.org.uk/greenspace/keephatch-meadows/>

APPENDIX C

APPENDIX C



<https://www.tbhpartnership.org.uk/greenspace/keephatch-meadows/>

APPENDIX D

APPENDIX D

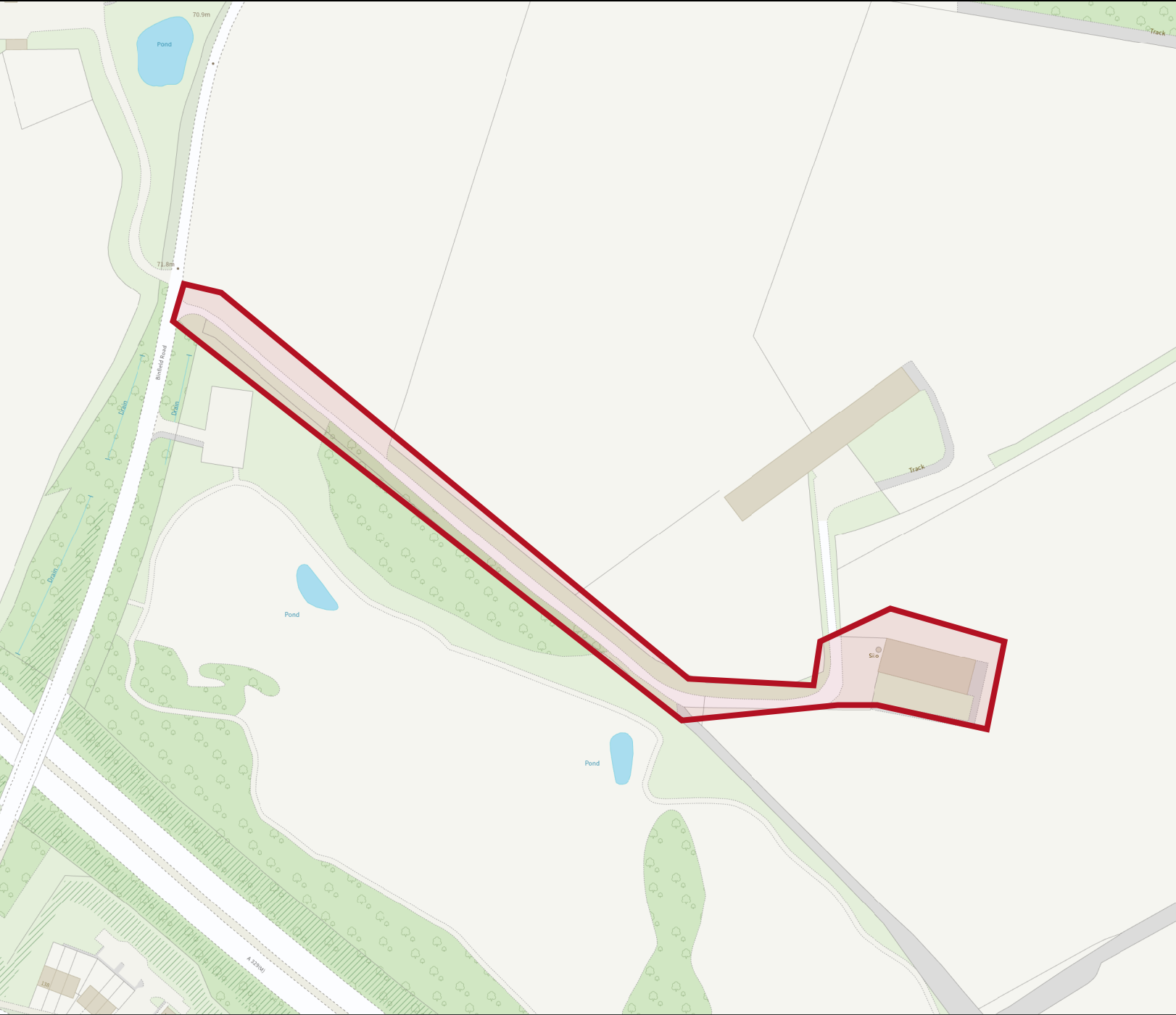
The Building Regulations 2010

RESISTANCE TO THE PASSAGE OF SOUND

PART E

Approved Document

APPENDIX E



Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
483166/169580

Scale
1:2500

Created
15 Oct 2024 17:57

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area



APPENDIX F

APPENDIX F

