



CC Ecology Ltd
44 Allbrook Hill
Eastleigh
Hampshire
SO50 4LY
tel: 02380 617215
mob: 07934 255505
email: cc.ecology@gmail.com
website: ccecolology.co.uk

Mr Jaskaran Sandu
30 Thistle Road
Hedge End
Hampshire

5 November 2024

Dear Mr and Mrs Sandu,

Re: 30 Thistle Road, Hedge End – Preliminary Ecological Appraisal (PEA) and Daytime Inspection for Bat Roost Potential

Thank you for commissioning CC Ecology to undertake an ecological survey of a site proposed for development at 30 Thistle Road. A site visit (Preliminary Ecological Appraisal), update site visit and two dusk emergence surveys for bats have now been completed. A desktop study including a search for protected species records and wildlife sites within 2 km of the site has also been completed. I am now writing to you to inform you of the results of the surveys, any ecological constraints to the proposals for the site and recommendations for enhancements for biodiversity.

The approach taken within the ecological surveys is in line with guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for the Ecological Impact Assessment in the United Kingdom (2018) and the Bat Conservation Trust (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023). In undertaking this survey due regard has been paid to relevant Government Planning Policy (in particular the revised National Planning Policy Framework, 2023), conservation policy under the local planning system, legislation providing protection for sites and species of nature conservation priorities under UK and Hampshire Biodiversity Action Plans. Details of relevant legislation and policy are included within the attached **Annex 1**.

Outline of the Scheme

I understand that a planning application is to be submitted to the Local Planning Authority (LPA) for the construction of single storey side extension and the conversion of garage space to a living area on the existing property. The proposal includes a single storey extension which would increase the footprint of the existing property on the southwest facing elevation. The proposal also includes the remodelling and integration of the existing single storey garage on the northwest facing elevation into the main property

and proposed extension. As a result of the extension on the side of the house a small triangle of hanging tiles will need to be removed to facilitate the joining of the roof of the new extension with the main house. A small number of roof tiles on the rear of the existing garage will need to be disturbed to join the new and old roofs. No vegetation removal is required to facilitate the construction. The proposals for the Site are included within **Annex 2**.

Site Context and Zone of Influence

The Site, known as 30 Thistle Road, is situated in a semi-suburban setting within a residential estate, northwest of central Hedge End at Ordnance Survey grid reference SU48621295. The immediate surrounding area to the Site comprises a mix of moderate density residential housing and associated gardens. A footpath runs adjacent to the property, which is vegetated with semi-mature Hawthorn *Crataegus monogyna*, Bramble *Fructicosus* agg. and Hazel *Corylus avellana*. Approximately 23m to the south of the Site is Wildern Local Nature Reserve (LNR) which supports a mosaic of connected wetland habitats including wet woodland, ponds, flooded meadows, and mire (Wildern LNR Citation, Natural England). Other nearby notable designated sites are Upper Hamble Estuary and Woods SSSI which is approximately 1.5km southeast of the Site which is cited for containing an array of ancient woodland types relating to a varied underlying geological structure (Upper Hamble Estuary and Woods SSSI Citation, Natural England).

In order to highlight the potential ecological effects of the proposed development, it is necessary to identify the area, known as the "Zone of Influence" (ZOI), within which activities associated with the sites proposals are likely to affect valued ecological features. The development of the Site will require the disturbance of a small number of tiles on the existing garage roof and the removal of a small triangle of hanging tiles where the new extension will join to the existing house. No vegetation will be removed to facilitate the construction of the new extension however a small strip of scrub/hedgerow located between the wall of the property and the public footpath to the side of 30 Thistle Road may be indirectly impacted by dust and noise as a result of localised construction works. The roof of the main house and loft space will remain intact.

The Site falls within the SSSI Impact Risk Zones (IRZs) for (Upper Hamble Estuary and Woods SSSI). IRZs are used to identify risks to protected sites such as SSSIs, SPAs, and SACs as a result of development. Local Planning Authorities (LPAs) are asked to consult Natural England on developments that are located within the Impact Risk Zones that fall within certain categories. The Defra Multi-Agency Geographic Information for the Countryside (MAGIC) Map website (<http://magic.defra.gov.uk/>) provides further advice and states that: *'The Impact Risk Zones (IRZs) are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks posed by development proposals to: Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.'*

During the construction phase there is likely to be additional noise, light and dust. Habitats on site that will be impacted upon may support protected species whose home ranges could extend further than the site boundary, although none that would be associated with the protected sites as described within this report. Whilst within the IRZ for the statutory protected sites described above it is not necessary for Natural England to be consulted for householder applications. Given the small scale of the development the ZOI is only likely to extend to the Site boundary.

Habitats and Features

30 Thistle Road was visited on 24th February 2022 in order to carry out a walkover survey of the site, including a daytime inspection of the property for bat roost potential. This survey is essentially a Preliminary Ecological Appraisal and Preliminary Roost Assessment and involves the mapping of habitats within the site boundary and assessing habitats within the zone of influence of the development

for their potential to support protected species. A description of the methodology involved is included in **Annex 3**.

An update site walkover was carried out on 11 July 2024.

Photos of the site and a more detailed description of the habitats are included in **Annex 4**.

The Site is comprised of a driveway and hardstanding at the front of the property, the property (refer to the section below on bats for a detailed description of the property) and a rear garden. A brick garden wall bounds the Site at the rear and connects to property at the garage on the north western elevation. The rear garden is comprised mainly of mown lawn on the south eastern elevation of the property, the garden wraps around the southwestern side of the property (where the new extension will be positioned) and this area is dominated by hardstanding patio and concrete base.

Just outside the Site boundary and the ownership of the property alongside the south eastern boundary brick wall is a strip of Bramble, Hazel and Hawthorn scrub between the wall of the property and the public footpath.

Bats

Preliminary Roost Assessment (PRA)

The property is a large, detached brick-built, two storey house and characteristic of construction during the 1990's. The property has a double pitch and gabled main roof structure, and single storey garage exists on the north western elevation with a pitched and gabled roof. The main roof of the property is clad with machine made plain clay tiles. Much of the upper 50% of the property is clad with clay hanging tiles, including the section of building on the south western side of the property that will be impacted upon by the new extension. A single storey lean to addition to the property is at the rear on the south eastern elevation with three skylights in a small pitch roof of concrete interlocking tiles. The soffits and windows on the property and garage are all of uPVC manufacture with lead flashing lining.

The external inspection of the property at 30 Thistle Road identified a moderate number of potential roosting opportunities and access/egress points for roosting bats including:

- A number of gaps under hanging tiles all around the property, but particular at the corners;
- Gaps around the overflow pipe on the southeastern side of the property, amongst the hanging tiles; and
- Lifted roof tiles on the main roof of the house.

A single loft void is present within the main property. The loft runs the length of the property to the gable ends. The loft space is relatively open although it is in use for storage at one end of the loft void. The loft is insulated with fibreglass and partly boarded between the joists. The roof is lined with black bitumen felt throughout the loft void with no obvious signs or damage. Internally, there is access to cavity walls from the loft void. No ridge beam is present and the height of loft void to the ridge is approximately 3 metres high. The loft void does ingress light at the eaves although this is through air ventilation grills which are too small to allow entry for bats.

The loft was searched for both recent and historic evidence of roosting bats with more recently placed insulation lifted for inspection beneath. The inspection of the loft found no evidence of roosting bats. No evidence of rodents were found either.

The attached garage was also inspected internally and found to be open to the roof with no loft space present. The roof is lined with black bitumen felt which was found to be intact. The garage was searched for evidence of bats and potential access points into the main garage room, and none were found. The

garage is lit by natural light from glass within the rear door and window and no dark crevices are present within the garage itself. The internal areas of the garage are considered unsuitable for roosting bats.

Taking into consideration the context of the site in the surrounding landscape, the property at 30 Thistle Road was assessed as having moderate potential to support roosting bats during the PEA/PRA Survey according to current BCT guidelines (Collins, 2023).

Initial Assessment for Bats

The property at 30 Thistle Road was considered to have moderate potential to support roosting bats. Although no evidence was found of bat habitation within the property at 30 Thistle Road, there were a number of features with the potential to provide access points for bats behind the hanging tiled sections of the property, including on the south western elevation. Other notable potential features included the gaps around the overflow pipe on the south western elevation. Other gaps were present on the main roof although these will not be impacted upon by the proposals. These features provide potential roosting opportunities crevice-dwelling bat species.

Phase 2 Bat Surveys

As the property has moderate potential to support roosting bats, and there are features with the potential to support bats within the small area to be impacted upon by the proposals, two Phase 2 bat surveys have been carried out to ascertain the presence or likely absence of roosting bats in line with best practice guidelines (Collins, 2023). These comprised two dusk emergence surveys during the bat maternity season (May-August inclusive). Detailed methodology for undertaking the emergence surveys is included within **Annex 3**.

Bat survey interpretation and evaluation of results

Two phase 2 bat surveys have been carried out during the peak bat maternity season 2024 (mid-May to August inclusive).

The dusk and dawn surveys undertaken are summarised in **Table 1** below.

The results of the surveys support the likely absence of bats roosting within the zone of influence for the works. Common pipistrelles are using the corridor of vegetation at the rear of the house for commuting.

Table 2: Summarised results of the bat activity surveys

Survey Date	Bat Emergences/re-entries	General Activity
11 th July 2024 DUSK	No emergences/re-entries	Species Recorded: common pipistrelle, soprano pipistrelle, Commuting Common Pipistrelles recorded along the vegetation corridor at the back of the house at the start of the survey. Intermittent passes from common and soprano pipistrelles, including brief moments foraging, but no sustained activity.
14 th August 2024 DUSK	No emergences/re-entries	Species Recorded: common pipistrelle, soprano pipistrelle, noctule, serotine, <i>Myotis</i> sp., long-eared sp. Commuting Common Pipistrelles recorded along the vegetation corridor at the back of the house at the start of the survey. Intermittent passes from a range of species but no sustained activity.

Nesting Birds

The hanging tiles and roof tiles of the property provide opportunities for nesting birds, in addition the vegetation along the southwestern boundary has the potential to be used by nesting birds.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). If works to remove hanging tiles and disturb roof tiles is undertaken during the nesting bird period (March-September) it is recommended that an early morning bird survey and check by a suitably qualified ecologist is undertaken prior to the works taking place. If active bird nests are recorded within the works area it will be necessary to set up a suitable buffer until the chicks have fledged and the nest site has been vacated. Further advice from a suitably qualified ecologist would be required to determine a suitable course of works that ensures compliance with the relevant legislation protecting nesting birds.

Scrub vegetation outside the southwestern boundary of the Site will not be directly impacted upon however it is immediately adjacent to the construction zone and therefore it will be necessary to be mindful of any potential nesting bird activity immediately adjacent to the Site. In the event that nesting birds are recorded within this area of scrub prior to or during the construction period, the work should immediately stop, and an ecologist contacted for advice. A suitable buffer around an active bird's nest would need to be provided until the chicks have fledged and the nest site is no longer in use.

Dormice

None of the habitats within the Site boundary are considered suitable for the Hazel Dormouse *Muscardinus avellanarius*, however the scrub vegetation (species and structure) along the southeastern boundary of the Site is stereotypically suitable for the foraging and passage of Dormice. This vegetation has good wider connectivity to larger woodlands at Wildern LNR to the south of the property which also contains suitable habitats for Dormice. There are known records of Dormouse presence in the local area of Hedge End after conducting a search using open-access public sources including NBN Atlas and Magic Maps. The nearest record of dormice is approximately 500m west of 30 Thistle Road.

Whilst it is possible that Dormice are in the area and may use the adjacent vegetation for foraging, there is no connectivity to the north that would provide a good dispersal route for this species. In addition, the

vegetation is dense and doesn't provide optimal opportunities for nesting Dormice and therefore it is unlikely that this species would use the narrow strip of vegetation as a resting place or nest site.

No removal of vegetation is necessary and therefore there are unlikely to be impacts on Dormice, however in the event that vegetation removal is considered necessary the impacts on Dormice would need further consideration and works would need to be carried out under a precautionary method statement.

Other Protected Species

The habitats around the property is comprised of hardstanding and do not present any suitability for other protected species.

Summary and Recommendations

Having completed a PEA, a PRA, and two dusk emergence surveys of the site at 30 Thistle Road, none of the habitats within the Site boundary were considered to have any intrinsic nature conservation value. However, habitats within the Site boundary may provide limited suitability for some protected species.

Bat surveys of the property, following current guidelines (Collins, 2023), have established the likely absence of bat roosts within the zone of influence of the proposed works.

The building does have potential to support nesting birds and therefore it is recommended that any destructive works carried out during the nesting bird season are undertaken following an early morning bird survey and inspection by a suitably qualified ecologist.

Similarly, works close to the narrow line of scrub adjacent to the southeastern boundary of the site should be mindful of any nesting bird activity within the vegetation and the advice of a suitably qualified ecologist sought in the event that nesting birds are found to be present during the construction period.

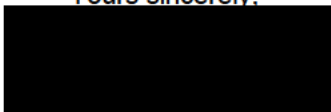
The vegetation, whilst connected to suitable Dormouse habitat is considered to be sub-optimal for this species and as no vegetation removal is proposed as part of the works there are unlikely to be impacts on Dormice as a result of the proposed extension works. In the event that vegetation removal is required further advice from an ecologist should be sought.

The *National Planning Policy Framework (NPPF, 2023)* states that Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests'. Whilst the Site is limited in ecological value at present there are some enhancement measures could be provided within the Site boundary. For 30 Thistle Road the following enhancements are recommended:

- Installation of bird boxes on the new extension such as a sparrow terrace and starling box;
- Planting of native fruiting shrubs and sowing of wildflower seed mix to create a wildlife garden.

I trust the advice within this letter is clear and helpful, but should you wish to discuss any of the issues raised in this letter further please do not hesitate to contact me.

Yours sincerely,



Claire Clarke BSc (Hons) ACIEEM
Director and Principal Ecologist

LEGISLATION

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017

The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) transpose Habitats Directive into UK legislation. The Habitats Regulations provide for the designation and protection of European Sites and European Protected Species. European Sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which form part of the Natura 2000 network of protected areas across Europe.

European Protected Species (EPS) are those listed under Schedule 2 of the Habitats Regulations and include dormouse, great crested newt, otter and all species of bat. The regulations prohibit the deliberate capture, killing or disturbance of any EPS; it is also an offence to damage or destroy a breeding site or resting place of any of these species. In order to carry out a lawful operation (e.g. development work which has full planning permission) that may result in an offence under the Habitats Regulations, it is necessary to obtain a licence from Natural England. EPS Licences will only be granted after Natural England has been satisfied that there are no satisfactory alternative and that there will not be any adverse impacts on the favourable conservation status of the species.

WILDLIFE AND COUNTRYSIDE ACT 1981

The Wildlife and Countryside Act 1981 is the principle piece of legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. The Wildlife and Countryside Act contains both habitat and species protection. Certain bird, animal and plant species are afforded protection under Schedules 1, 5 and 8 of the Act. Measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) are also included within the Act.

COUNTRYSIDE AND RIGHTS OF WAY ACT 2000

The Countryside and Rights of Way (CROW) Act 2000 adds to the protection afforded in the WCA to SSSI's and other important sites for nature conservation. In addition, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on the conviction of wildlife offences.

THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

The Natural Environment and Rural Communities (NERC) Act 2006 improved wildlife protection by amending the WCA. The main function of the NERC Act was to raise the profile of biodiversity amongst public authorities. Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions.

PLANNING POLICY

NATIONAL LEVEL - THE NATIONAL PLANNING POLICY FRAMEWORK (NPPF, 2023)

The revised National Planning Policy Framework (2023) (available at: <https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment>) sets out the Government's planning policies for England and how these should be applied. Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system. This guidance replaces *Planning Policy Statement 9 (PPS9) Biodiversity and Geological Conservation*. Section 15, Paragraph 180, of the NPPF specifies that the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

In consideration of habitats and biodiversity, Paragraph 185 states plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Paragraph 186 states when determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

GOVERNMENT CIRCULAR 06/05: BIODIVERSITY AND GEOLOGICAL CONSERVATION

The Government Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation. It was originally produced to accompany PPS9, and although some of the information contained within it is now out of date, paragraphs 98 and 99 of the document remain relevant.

Paragraph 98 states that *“the presence of protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitats”*

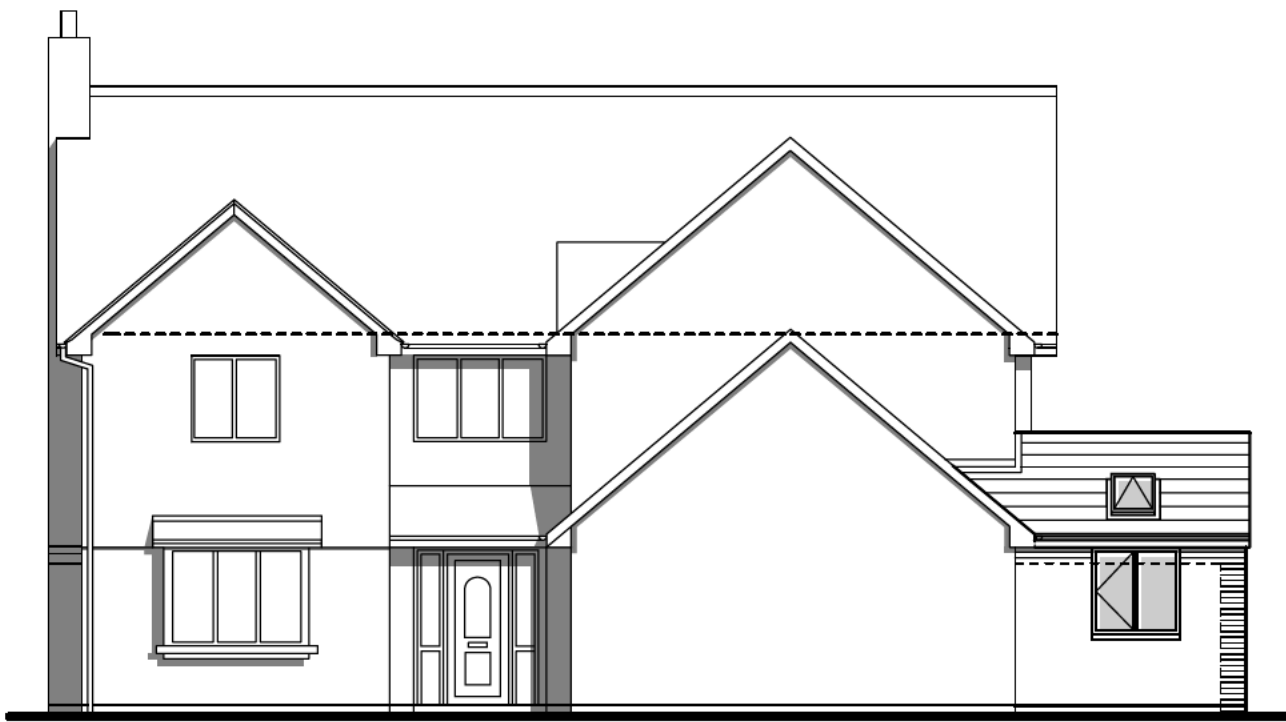
Paragraph 99 states that *“it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted”*

REGIONAL PLANNING POLICY

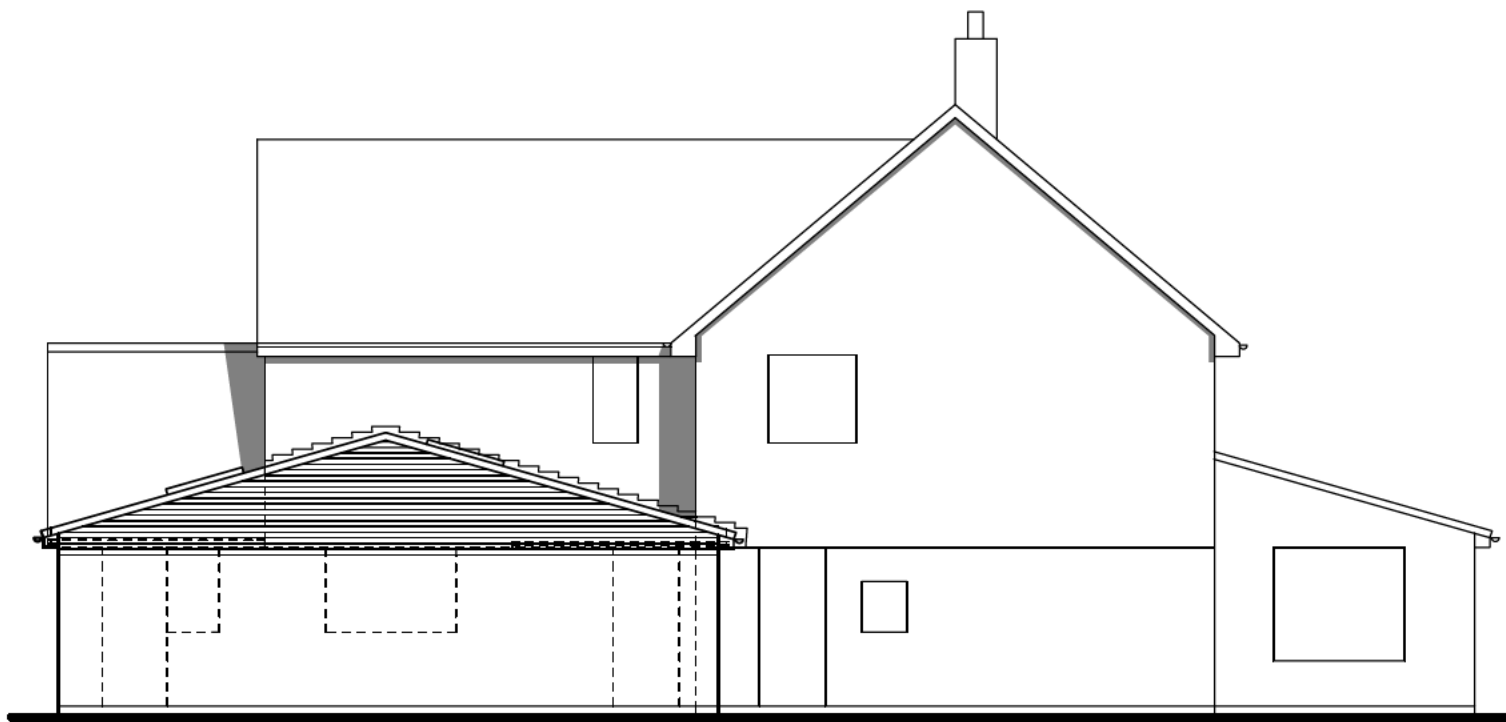
The Eastleigh Borough Local Plan (2016 to 2036) [Online] (Available from: <https://www.eastleigh.gov.uk/media/11806/to-be-published-final-local-plan-april-2022-v4.pdf>) sets out the long term spatial planning strategy for the region.



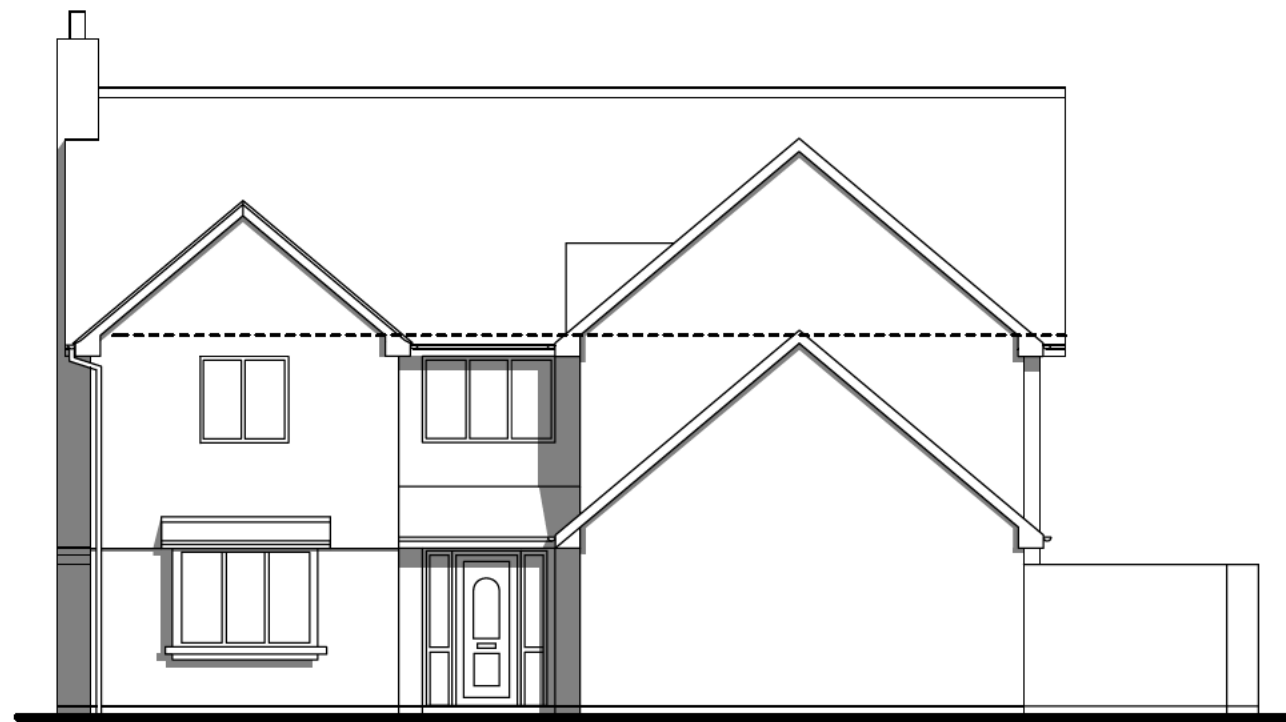
PROPOSED REAR VIEW



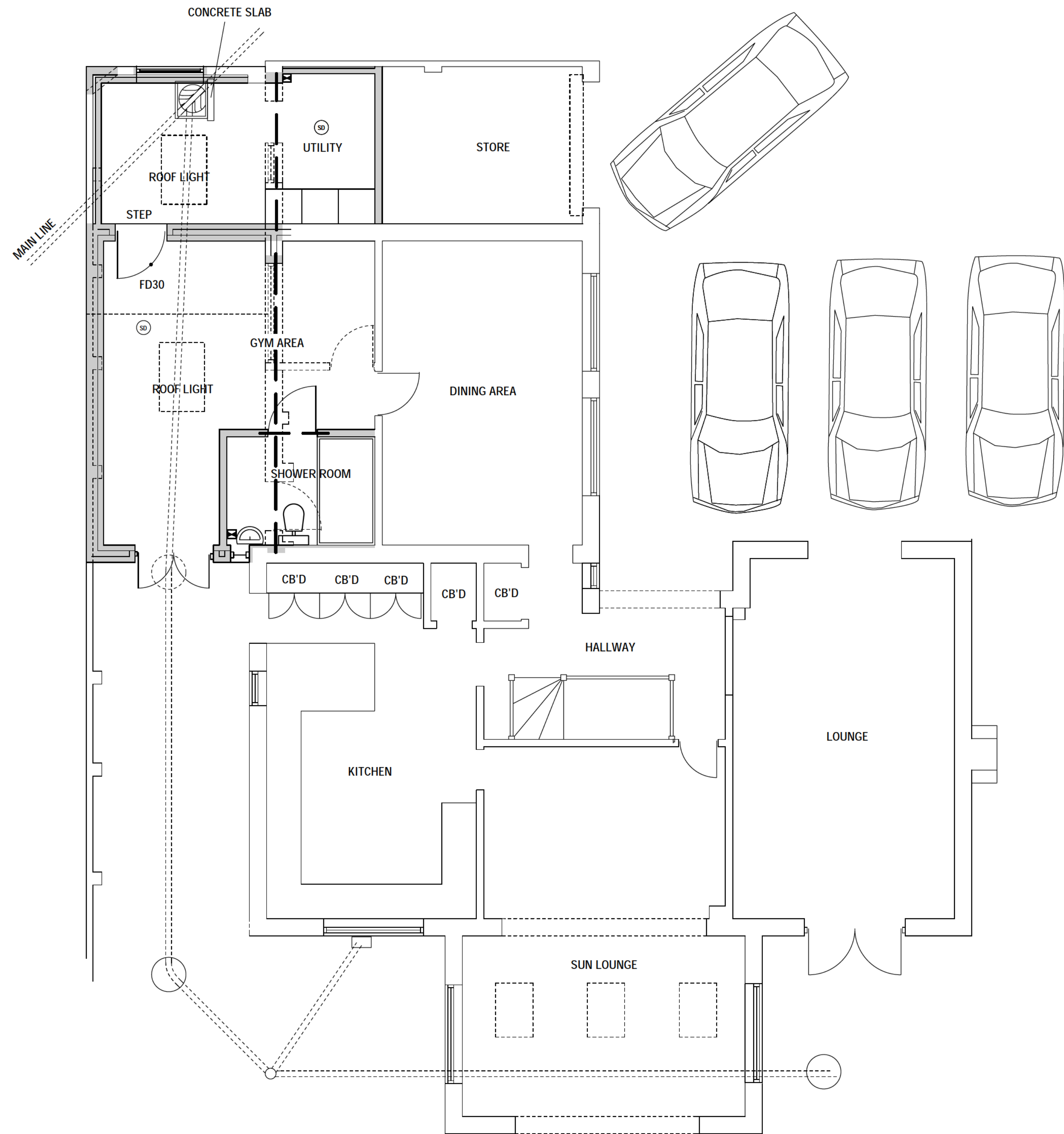
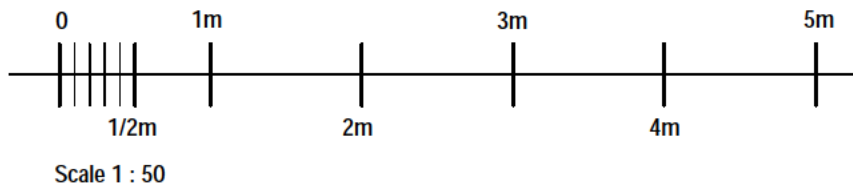
PROPOSED FRONT VIEW



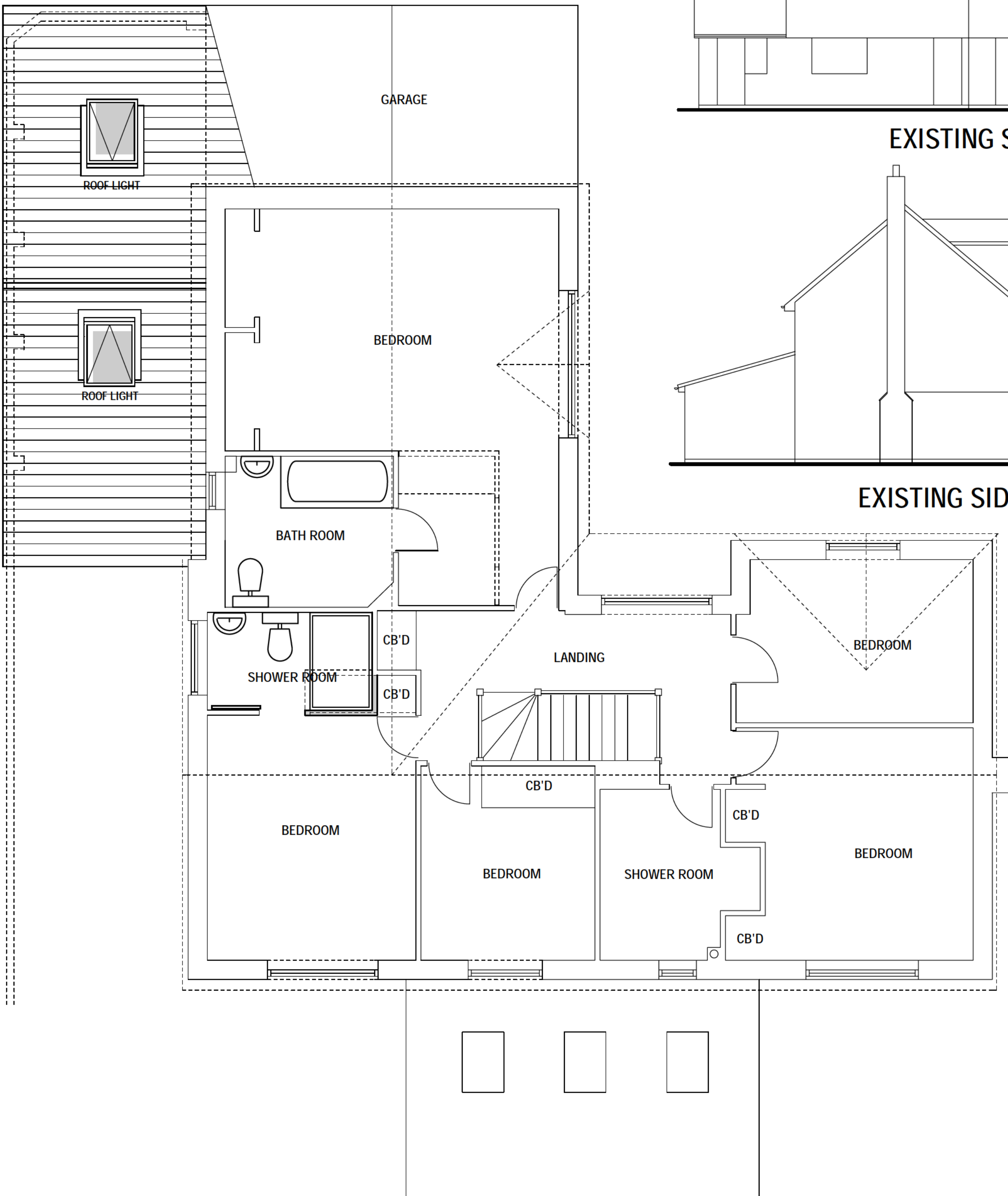
PROPOSED SIDE VIEW



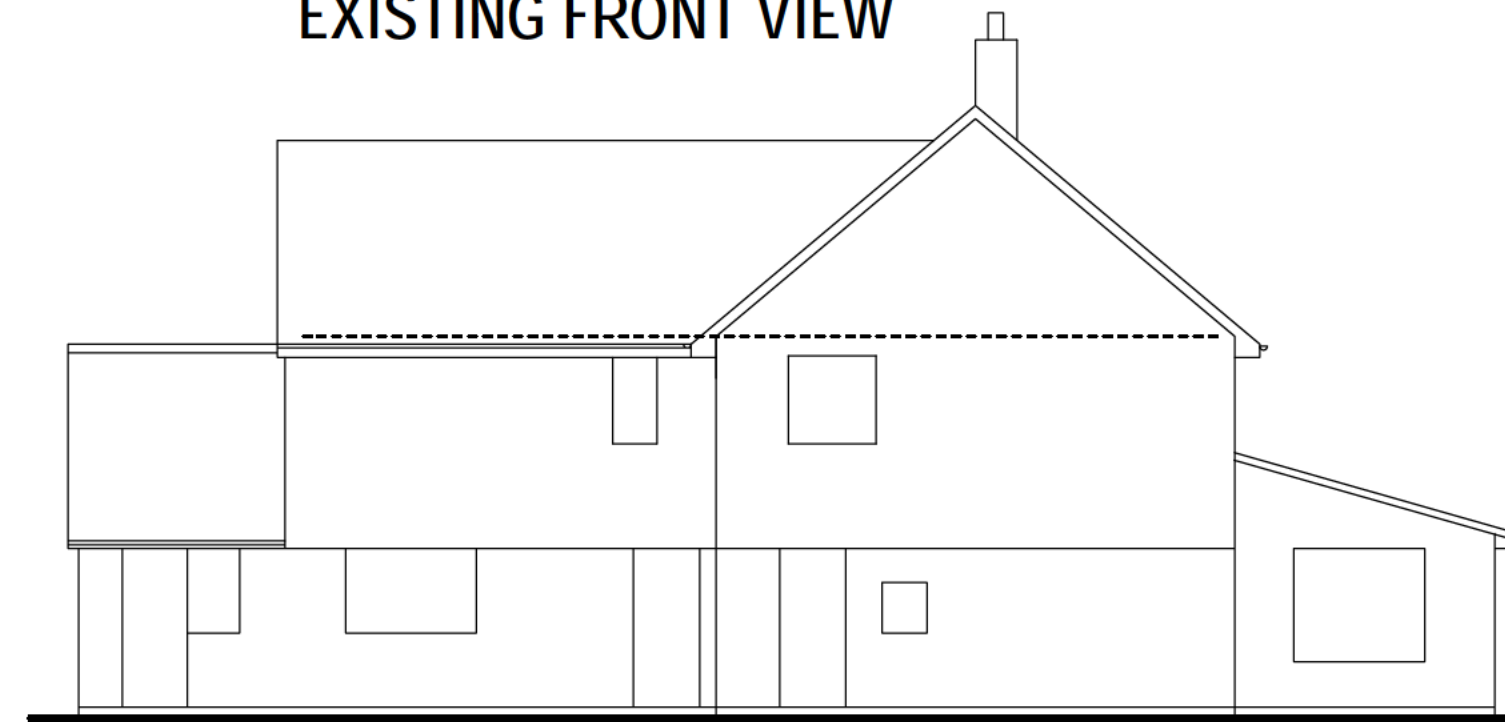
EXISTING FRONT VIEW



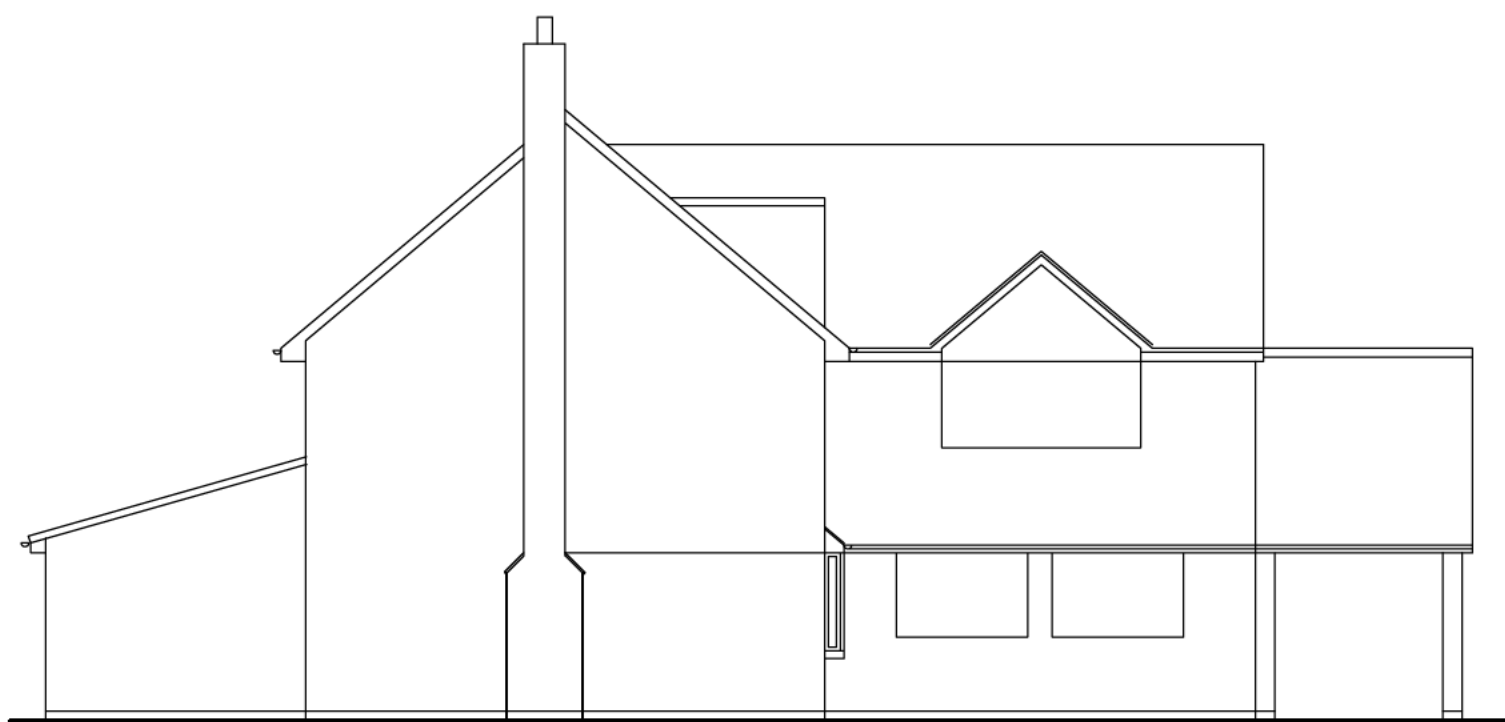
PROPOSED GROUND FLOOR



EXISTING FIRST FLOOR



EXISTING SIDE VIEW



EXISTING SIDE VIEW

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SINGLE STOREY SIDE
EXTENSION AND INTERNAL
ALTERATIONS
FOR
30 THISTLE ROAD
HEDGE END
SO30 0TT

SCALE 1:100 and 1:50

A3

DRAWING No 21122021 1A3

Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment Methodology

Aims of a PEA:

- Highlight any features of particular ecological value;
- Identify potential impacts to ecology as a result of the proposals;
- Identify any issues that may have legal or planning policy implications, such as the presence of protected or notable species;
- Identify any features that have the potential to significantly constrain future development proposals;
- Make recommendations for any further ecological work (such as targeted protected species surveys) that might be required to fully assess the value of the site and the likely impacts; and
- To recommend measures that could be undertaken to enhance biodiversity or to mitigate adverse impacts.

Desk Study

Prior to undertaking the walk over survey a desk study was carried out in order to gather information on the existing biodiversity of the site and the surrounding area. Internet sources such as the Multi-agency Geographic Information for the Countryside (MAGIC) and the National Biodiversity Network (NBN) were consulted for contextual information on wildlife sites and records of protected species within vicinity to the site.

Field Work

Within the site boundary the main land use, habitat types and specific features were mapped and described. Vegetation communities and plant species were recorded. Consideration was given for the presence of protected species through a combination of searching for evidence and noting the potential for protected species to be using various habitats within the site boundary and the zone of influence.

Badgers

The habitat within and immediately adjacent to the site boundary was considered for its potential to support badgers both for foraging and the presence of setts. The site was also searched for evidence of badgers such as holes, dung piles, snuffle holes, mammal tracks and hairs.

Bats

During the survey features such as buildings and trees were assessed for their potential to support roosting bats. Where possible an inspection of potential roost features was undertaken. The garage and house was inspected both internally and externally for evidence that bats may be using or have previously used the building for roosting. Such evidence may include:

- The presence of bats;
- Bat droppings on surfaces inside and on the external fabric of the building; or
- Staining or scratch marks.

Potential roosting opportunities were also noted and an assessment made on the building potential to support bats. A ladder was used to inspect gaps under the tiles on the roof with a torch and endoscope (where necessary) to search for any evidence of bats or access/egress points and roosting opportunities.

A survey of the trees noted any potential roost opportunities such as woodpecker holes, peeling bark, splits and cracks.

Inspection of potential roosting opportunities on both the building and trees was undertaken using close focusing binoculars and a bright torch to search cavities.

An assessment of the surrounding habitats was made of potential bat foraging habitat.

Reptiles

The habitats were assessed for their suitability to support species of reptile. Habitats with the potential to support reptiles such as rough grassland, log piles, compost heaps, scrub, banks, burrows, water bodies etc were noted and mapped.

During the survey the weather was warm and sunny. A visual search for reptiles was undertaken by walking over the site and watching potential reptile basking spots, natural refugia such as logs and any garden refuge were also turned over.

Amphibians

Consideration was given to the presence of habitats with the potential to support species of amphibians. Habitats with the potential to support amphibians include ponds, ditches, woodland, scrub etc.

Birds

The suitability of the habitats was assessed for their potential to support nesting birds. Any birds seen whilst carrying out the survey were recorded.

Dormouse

The suitability of habitats within the site boundary and the zone of influence for supporting dormice was recorded during the survey. Woodland and hedgerows were assessed, in particular the presence of hazel, oak and fruit bearing species was noted. In addition aerial maps were consulted to assess the connectivity of the habitats present.

Invertebrates

Habitats and features likely to support notable species of invertebrate were recorded for example woodland, dead wood, herb rich grasslands etc.

Phase 2 Bat Survey Methodology

Two surveyors in total were required to survey the areas of the house affected by the proposals. They were positioned at locations identified as allowing good sight lines of the building and ensuring that all potential bat access/egress points are visible between the surveyors. Each surveyor was equipped with either Petterson D240x, EM Touch and Iphone/android device, or BatBox Duet and an Ediol recorder. Each surveyor was also equipped with an infrared (IR) camera with suitable IR lighting to capture video of the building. Unidentified calls were recorded for subsequent computer analysis.

Each surveyor was supplied with a plan of the site on which to mark bat activity. The following information was recorded for any bats seen or heard:

- Species;
- Time;
- Behaviour (whether it was feeding, commuting, social calling or swarming);
- If seen, direction of flight; and
- If it emerged from the building.

Behaviour was identified by flight patterns and bat morphology, and by call characteristics as heard on the bat detector. Weather conditions (temperature, wind speed, cloud cover, rainfall in the last hour) was recorded at the start and end of each survey.

Two dusk emergence surveys have been undertaken on the property on the 11th of July 2024 and 14th August 2024. Details of the conditions and timing of the surveys can be found in **Table 1**.

Table 1 Timings and weather conditions of each of the bat surveys undertaken at 30 Thistle Road

Date	Type	Personnel	Start	End	Sunset/ Sunrise	Weather
11/07/2024	Dusk Emergence	Matthew Clarke Sarah Facey	21:08	22:46	21:16	20.7-18.1°C, Dry, Wind BF0, Cloud 75-90%
14/08/2024	Dusk Emergence	Sarah Facey Ross Brown	20:12	21:57	20:27	22.0-18.5°C, Dry, Wind BF0-1, Cloud 100%

ANNEX 4 HABITATS AND FEATURES



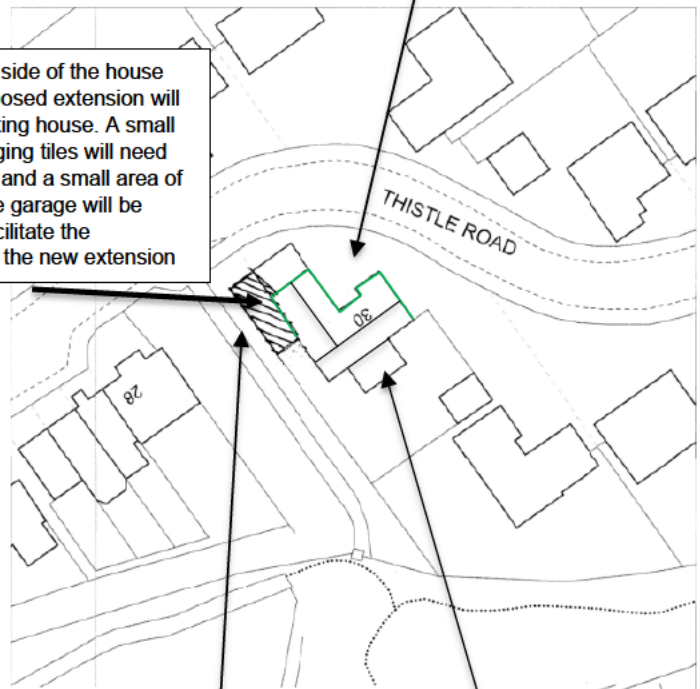
Hanging tiles around the property
(Denoted by Green Line)



Front of the property



South western side of the house
where the proposed extension will
join to the existing house. A small
triangle of hanging tiles will need
to be removed and a small area of
roof tiles on the garage will be
disturbed to facilitate the
construction of the new extension



Drawing from Blackwell's Mapping



Strip of scrub between the
boundary wall of the property and
public footpath



Rear of the property



Rear of the garage roof on south
western side of the house.



