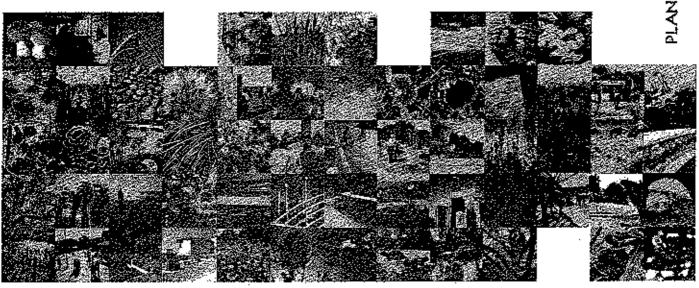
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CHURCH RAIKE, CHIPPING ECOLOGICAL ASSESSMENT 2011 (Report Ref: 3192.003)

December 2011

For
Croft Goode Architects
4 The Crossroads
Freckleton Street
Kirkham
Lancashire
PR4 2SH

Genzéis Centra Birchyrood Sdence Park Wernington. WAS 7841

T: 01925 844904 s: 01925 864002 E: tep@tep.uk.com W: www.tep.uk.com



Written:	Checked:	Approved:
LG	RH	RH



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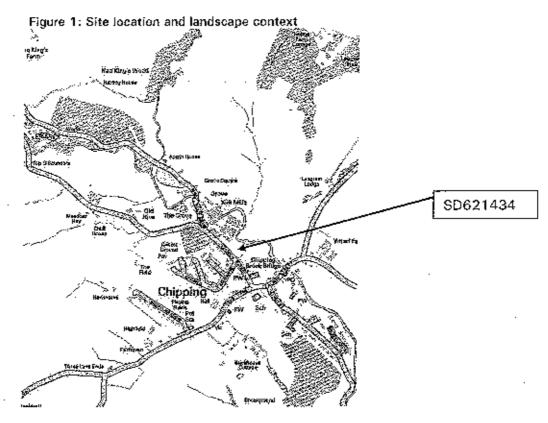
1.0 INTRODUCTION

- 1.1 TEP was commissioned in December 2011 by Croft Goode Architects to carry out an ecological assessment land at Church Raike, Chipping. Proposals for the site include the construction of eight residential buildings with associated gardens, hard surfacing and infrastructure. An access road and parking area joining Church Raike and bisecting the site is also proposed. Site proposals are illustrated in Croft Goode Drawing 09-144-F01
- 1.2 This report has the following objectives:
 - to describe the existing vegetation and give an overview of the habitats present on the site;
 - to identify whether there are any features of conservation value, such as species or habitats which are legally protected or of biodiversity importance (including those habitats prioritised in the UK Biodiversity Action Plan (BAP) or the Local BAP);
 - to advise of further surveys or mitigation requirements that might be needed prior to proposed works.

2.0 SITE CONTEXT

- 2.1 The site is located in the village of Chipping, Lancashire; grid ref SD621434. The surrounding landscape comprises areas of residential housing and agricultural land, with light industry to the north-east. The survey area consists of the land shown edged in red on Drawing G3192.001.
- The boundaries of the site approximately form a rectangle and orientated northeast to the south-west. The south-west boundary is formed by Church Raike
 (Road). A fenced boundary to the north-west abuts tree-covered slopes along
 the north and east of the site. Fences enclose the site on its eastern boundary,
 beyond which lies a large factory adjacent to a stream. A track and area of
 rough ground form the south-east boundary and separate the site from the
 adjacent properties beyond.
- 2.3 The topography of the site generally slopes to the north-east. The hedgerow that runs along the majority of the south-western boundary is on a raised bank which slopes down to road level. The site is currently not used.
- 2.4 The survey area consists of the land shown edged in red on Drawing G3192.001.





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3.0 METHODS

Desktop Study

3.1 Information regarding protected sites was gathered from Natural England and Magic Map: Multi-Agency Geographic Information for the Countryside. Information regarding protected species and habitats and species of local and national conservation priority was gathered from Lancashire Environment Record Network, the National Biodiversity Network Gateway and the UK Biodiversity Action Plan (BAP).

Field Survey

- 3.2 A walkover survey was carried out by Lee Greenhough on 29th November 2012. However, it is acknowledged that November is outside the optimum vegetation survey season and therefore some vascular plant species in accordance with JNCC Phase 1 habitat survey methodology (JNCC 2007) may not have been apparent at the time of survey. In all other aspects, the survey was completed in accord
- 3.3 All habitats were assessed for their potential to support protected species, particularly statutorily protected species or BAP priority species.

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4.0 RESULTS

Designated Sites

- 4.1 No nationally or internationally designated wildlife sites are located within or adjacent to the survey site. Lancashire County Biological Heritage Sites (BHS) Clarke House Farm Pasture, Lumpy Pasture and Nan's King Pasture are located 0.28km, 0.35km and 0.79km north-west of the survey site respectively Appendix A.
- The Ribble Valley District wide Local Plan was adopted in 1998. A Saved Policies Local Plan has now been issued. Information collated from the proposals plan and the saved policies plan is presented in Appendix A. There are no ecology polices that effect the site. The habitat survey is illustrated at Drawing G3192.001.

Habitats and Flora

- 4.3 Further details of the habitats and target notes providing species list are presented at Appendix B.
- The survey site is comprised predominantly of species poor improved grassland vegetation dominated by cock's-foot (*Dactylis glomerata*), with creeping thistle (*Cirsium arvense*) nettle (*Urtica dioica*), false oat-grass (*Arrhenatherum elatius*) and low-lying patches of bramble scrub (*Rubus fruticosus agg*) (Appendix B T3, Drawing 3192.004, picture 1, 2).
- 4.5 A species poor hedgerow lies along the west boundary adjacent to the road atop a bank. The hedge includes hazel (Corylus aveilana), hawthorn (Crataegus monogyna), ash (Fraxinus excelsior) and ivy (Hedera helix) throughout. A species poor flora verge of nutrient species is associated with the hedge. Species include nettle and Yorkshire fog (Holcus lanatus) (Appendix B T2, Drawing 3192.004 picture 3).
- 4.6 A defunct species poor hedge hawthorn hedge lies along part of the north east boundary.
- 4.7 A patch of dense blackthorn (*Prunus spinosa*) scrub abuts the hedgerow and spreads into the field. A dense L-shape strip of scrub dominated by garden privet (*Ligustrum ovalifolium*), which also contains blackthorn and bramble is located in the south of the survey site adjacent to a dilapidated shed. (Appendix B T1, Drawing 3192.004, picture 4, 9).
- 4.8 There are number of trees located around the survey site boundary including ash, hawthorn and oak (*Quercus robur*). Three trees noted within the site were ash (west boundary), sycamore (*Acer pseudoplatanus*) (north-west corner) and hawthorn (north boundary).



Along the boundary of the north-east corner of the survey site there is a strip of tall ruderal herbs. It is unmanaged and has been allowed to become rank. Creeping thistle is the most dominant species present (Appendix B TN4, Drawing 3192,004, picture 8).

STHIS

Invasive Species

4.10 Himalayan, balsam (*Impatiens glandulifera*) was recorded in small amounts through the grassland of the site (T3). Himalayan balsam invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act (1981) (as amended).

Fauna

- 4.11 Desktop survey (Appendix A) shows records for Lancashire BAP species brown hare 400m north of the survey site.
- 4.12 Records for Lancashire BAP (provisional long list) species common frog is shown approximately 520m to the north of the survey site. There are no ponds shown on the OS 1:25,000 map of the area within at least 470m of the site.
- 4.13 The broadleaved trees, hedgerow and scrub within the survey site provide potential habitat for nesting birds.
- 4.14 The shed situated within the survey site, is not considered to provide potential for roosting bats as it is in a poor state. The roof is damage and exposed to the elements. The trees within the site so no features suitable for supporting roosting bats.
- 4.15 The site is approximately 40m from Chipping Brook which lies to the north-east of the site at the base of a slope. No evidence of water vole or otter was recorded.
- 4.16 No evidence of any other protected species was identified within the site during the site survey.

5.0 CONCLUSIONS & IMPLICATIONS

- 5.1 Habitats within the site are common to the local area and of limited botanical value. There are no overriding ecological factors present that would preclude future development at this site.
- 5.2 No internationally or nationally designated wildlife sites will be affected by the proposed works.
- 5.3 Lancashire County Biological Heritage Sites, Clarke House Farm Pasture, Lumpy Pasture and Nan's King Pasture are privately owned. The proposed development will not have an effect on the sites. There is no connectivity to these sites from the survey site.
- 5.4 All the native hedgerows within the site qualify as UKBAP habitat and could be of material consideration for the planning application.

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- The hedgerow adjacent to the road may satisfy criteria for `Important' status under the *Hedgerow Regulations* (1997). No assessment could be undertaken as part of this survey due to seasonality. However the hedge is associated, has a supporting bank, has four woody species, standard trees, and less than 10% gaps and connected with other hedgerows.
- 5.6 Any loss of native hedgerow should be addressed through increased provision of species-rich native hedgerow within the site. New hedgerows should create green links between existing hedgerows. The defunct hedgerow to the north could be gap planted and extended.
- 5.7 Brown hare has been recorded 400m north of the site and is associated with arable and field margin habitat of the type found within the agricultural land to the north of the site. The less favourable habitat found within the site, the small size and fenced boundaries of the survey site; together with its immediate proximity to the residential area of Chipping indicate that the survey site is unlikely to provide suitable habitat for brown hare.
- 5.8 Removal of the scrub species and tall herb within the survey site, which provide potential habitat for nesting and foraging birds, will be needed facilitate the development.
- 5.9 Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). There is no provision under the licensing system for disturbance/destruction of nests to facilitate development. Any removal of vegetation should be undertaken outside of the nesting bird season (March August inclusive). If this is not possible a pre-clearance check should be made by an ecologist on the day of removal.
- 5.10 A landscaping scheme which maximises native species and wildlife friendly species, particularly seed, nectar and berry producing species, will offer foraging opportunities for birds
- 5.11 It is recommended that the proposed works include a landscaping scheme which maximises a native and wildlife friendly species will assist in offsetting the loss of existing habitats through the creation of higher value and more diverse habitats in the finished site.
- 5.12 Enhancement features such as trellising planted with native climbers such as honeysuckle or ivy, and the provision of bird boxes or bat boxes may also provide valuable habitat opportunities in the final landscape (Appendix C).
- 5.13 Himalayan balsam, an invasive species (listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) is present within the part of the proposed development area, within the grassland to the north of the site. If left unmanaged it would out-compete native flora and become the dominant ground-flora. If the site is to be developed, earthworks are likely to spread the plant, which could result in an offence under the WCA.
- 5.14 If control of Himalayan balsam is possible within enhancement measures to contribute to the redevelopment of the site, it is recommended that prior to the



development the balsam is cut back using mechanical methods or pulled out by hand. If strimming is used as a method of control, the plants should be cut as close to ground level as possible between May and June, prior to plants seed.

5.15 It is likely that extensive patches of balsam may take years to eradicate, due to the seed bank that may have established. This might be reduced by removing the topsoil from areas that had dense infestations.

6.0 REFERENCES & FURTHER READING

JOINT NATURE CONSERVATION COMMITTEE (2003) Phase 1 Habitat Survey. JNCC. Peterborough

OFFICE OF THE DEPUTY PRIME MINISTER (2005) 'Planning Policy Statement 9: Geological and Biological Conservation' HMSO, Norwich

STACE, C. A. (2010) Flora of the British Isles, 3rd ed. Cambridge University Press



APPENDIX A DESKTOP RECORDS

SHEET 6

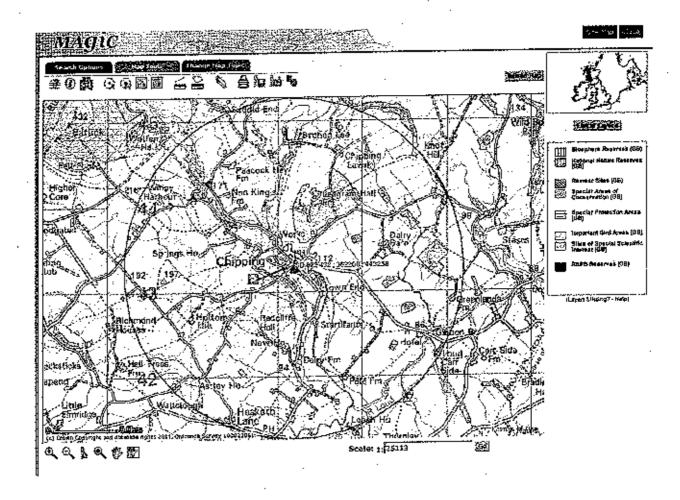
Ribble Valley Districtwide Local Plan Adopted June 1998

	Village boundary. Policy G4
G5	Land outside main settlement / village boundaries. Policy G5
	Essential open space. Policy G6
	Flood risk area. Policy G7
	Area of outstanding natural beauty. Policy ENV1
ENV3	Open countryside. Policy ENV3
	Sites of special scientific interest. Policy ENV8
	County biological heritage sites. Policy ENV9
: iii :	Scheduled ancient monument. Policy ENV14
Δ_Δ.	Conservation area. Policy ENV16
	Housing land allocation. Policy H1
-0	Public open space in recreational use. Policy RT10
******** ******* ******	Land safeguarded for possible station development. Policy T10
0 N O	Lancashire cycleway (N) north (S) south. Policy T12

Other Local Plan policies, not indicated above, apply across the whole area or to specific types of development.



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Site Check Report

Report generated on December 13 2011.

You clicked on the point:

Grid Ref: SD 622 432 Full Grid Ref: 362200, 443258

The following features have been found within 2,000 metres of your search point:

Counties, Metropolitan Districts and Unitary Authorities (GB)

Name Geographic Level LANCASHIRE COUNTY

NUTS1 - Government Office Regions (GB)

Name

Reference

Hotlink

NORTH WEST UKD

http://www.ons.gov.uk/ons/quide-method/geography/begignegs-ggide/europsan/north-weständex.html

National Cycle Network (GB)

There are no features within your search area.

Biosphere Reserves (GB)

There are no features within your search area.

National Nature Reserves (GB)

There are no features within your search area.

Ramsar Sites (GB)

There are no features within your search area.

Special Areas of Conservation (GB)

There are no features within your search area.

Special Protection Areas (GB)

There are no features within your search area.

Important Bird Areas (GB)

Site reference Nama

Description

980127

FOREST OF BOWLAND

THE FOREST OF BOWLAND FORMS A WESTERN OUTLIER TO THE PENNINES, WITH GENTLE SLOPES AND LEVEL GROUND ON RIDGES. FAST-FLOWING STREAMS DRAIN AN EXTENSIVE AREA OF UPLAND MOORLAND AND BLANKET MIRE, AND PTERIDIUM AQUINUM MAY DOMINATE ON LOWER GROUND.

Sites of Special Scientific Interest (GB)

There are no features within your search area.

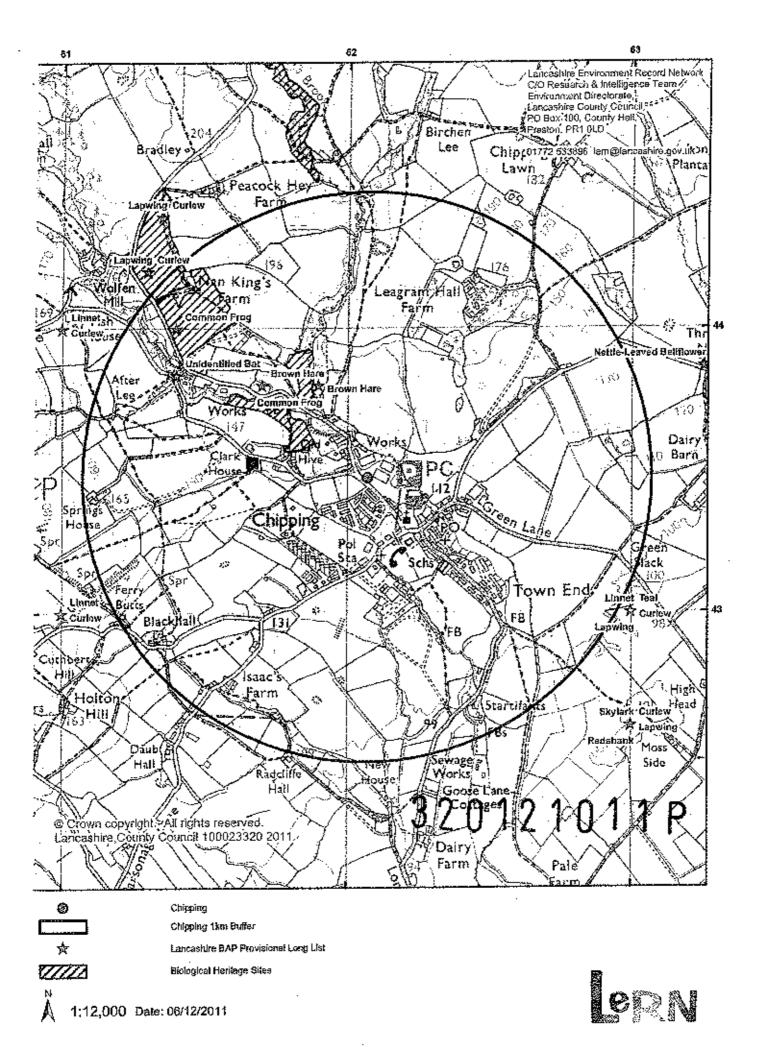
RSPB Reserves (GB)

There are no features within your search area.

To save the report, select "Save" or "Save As" from the File menu. You should save the file with a .html extension and give it a name of your choice.

You can then open your report using your web browser software.

Print Report | Close Window





Lancashire County Heritage Sites

Biological Heritage Site

Biological Heritage Sites Partnership:

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Natural England

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Site Name: Lumpy Pasture

Site Ref: 64SW08

Approved: 01 January 2003

Area (ha): 1.14

Date written/last updated: 01 March 2003

Grid Ref: SD618438

Owner/Occupier: Private

Districts: Ribble Valley Parishes: Chipping

Description:

The site comprises a field of semi-natural neutral grassland managed as pasture. It lies on steep uneven ground along the west side Dobson's Brook on the north western edge of Chipping village.

The grassland is species-rich and supports a rich assemblage of plants. The sward is dominated by sweet vernal-grass and crested dog's-tail with frequent red fescue and Yorkshire fog. Frequent herbs include pignut, common bird's-foot trefoll, ribwort plantain, common sorrel, red clover, white clover and field wood-rush. Occasional species include yarrow, bugle, angelica, cuckooflower, common knapweed, common mouse-ear, marsh thistle, meadowsweet, wild strawberry, heath bedstraw, cat's-ear, meadow vetchling, ragged-robin, yellow pimpernel, mouse-ear hawkweed, tormentil, primrose, selfheal, lesser celandine, tesser stitchwort, marsh valerian, germander speedwell, heath speedwell, compact rush and hard rush.

Alder, hawthorn and blackthorn occur along the brook together with bluebell, wood-sorrel, ramsons, enchanter's nightshade, yellow pimpernel and opposite-leaved golden-saxifrage. Scattered trees and scrub mainly alder, ash, sycamore, hawthorn and gorse - are present in parts of the pasture.

Guideline(s) for Site Selection:

Grassland

(Gr3)

Other Information/Comments:

Lowland hay meadow, which includes species-rich neutral grassland, is a priority habital in the UK Biodiversity Action Plan.



Lancashire County Heritage Sites Biological Heritage Site

Lumpy Pasture



Site Boundary

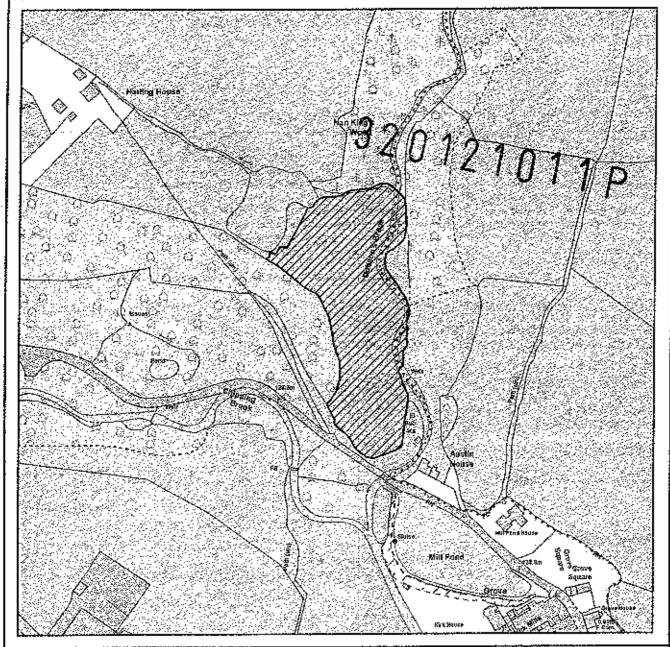
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Ref No. 64SW08

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Grid ref. SD618437	Scale 1;2,470		Lancashire
Site approved	Map 1 of 1		County Council
Boundary revised	Date of Map 06/12/11	CARPASTICE MANCRESTER SZERISBYSKIÉ	Codricii (Carro



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Biological Heritage Sites Permership:

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Site Name: Nan King's Grasslands

Site Ref: 64SW01

Area (ha): 8.65

Date written/last updated: 01 March 2003

Approved: 01 September 1993

Grid Ref: SD614440

Owner/Occupier: Private

Districts:

Parishes: Chipping

Ribble Valley

Description:The site comprises two fields of species-rich, semi-natural neutral grassland situated approximately 1 km north west of the village of Chipping, along the east side of Malt Kiln Brow.

The northern field, known as Top Field, supports a diverse assemblage of plants, especially at the far northern end. The sward is dominated by grasses including crested dog's-tail, sweet vernal-grass, Yorkshire fog, meadow fescue, and Timothy. Herbs include common knapweed, meadow vetching, common bird's-foot-trefoil, field woodrush, cuckooffower, common mouse-ear, ribwort plantain, creeping and meadow buttercup, common sorrel, red and white clover and thyme-leaved speedwell. The field supports some wet rushy areas with frequent sedges including common sedge, carnation sedge, hairy sedge and brown sedge and a variety of herbs such as ragged-robin, greater bird's-foot-trefoil, marsh bedstraw, marsh marigold, sneezewort, lesser spearwort and meadowsweet. Additional species found at the northern end of the field include ragged-robin, angelica, cat's-ear, selfheal and quaking grass. Adder's longue has been recorded here in the past just north of the pond which is now overgrown with willow and common reedmace.

The southern field, known as Front Meadow, is dominated by sweet vernal-grass, crested dog's-tail and Yorkshire fog with abundant creeping and meadow buttercup, red and white clover and common sorrel together with occasional bugte, marsh marigold, ragged-robin, cat's ear, meadow vetchling, common bird's-foot-trefoil, ribwort plantain and selfheal. The most species-rich areas are found at the southern end of the meadow.

The site also includes a small bank of semi-natural pasture grassland bordering the road at SD 614438. Species present here include common knapwood, pignut, meadow vetchling, common bird's-foot-trefoil, cuckooflower, ribwort plantain, common sorrel and field woodrush. The bank is part of a field, the rest of which now comprises more improved grassland.

Curlew and lapwing breed regularly in the fields.

Guideline(s) for Site Selection:

Grassland

(Gr3)

Other Information/Comments:

Lowland hay meadow is a priority habitat in the UK Blodiversity Action Plan. The name of the site was changed in 01/03 from Nan King's Farm Meadows to Nan King's Grasslands. The boundary of the site was modified in 01/03.

Lancashire County Heritage Sites Biological Heritage Site

Nan King's Grasslands



Site Boundary

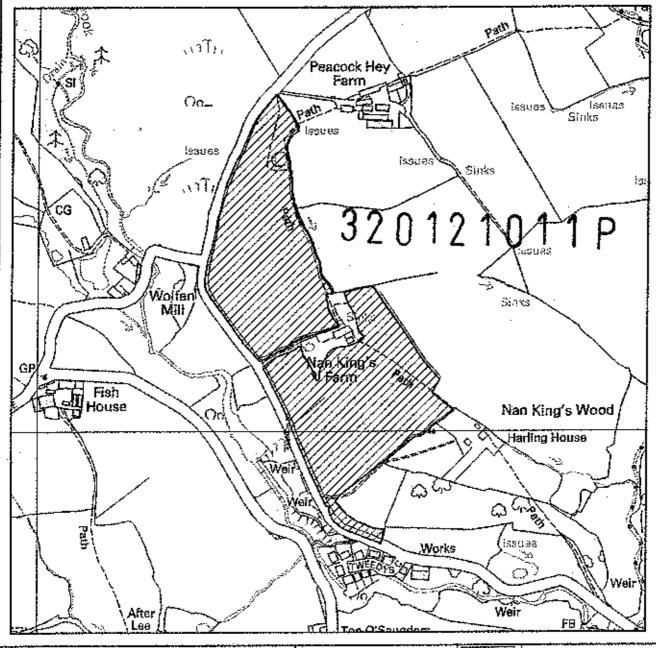
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Grid ref. SD614438	Scale 1:4,970
Site approved	Whap 1 of 1
Boundary revised	Date of Map 06/12/11







Lancashire County Heritage Sites

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Site Name: Clark House Farm Pasture

Site Ref: 64SW10

Approved: 01 January 2006

Area (ha): 1.91

Date written/last updated: 01 February 2006

Grid Ref: SD617437 Owner/Occupier: Private

Districts: Ribble Valley Parishes: Chipping

Description:

The site comprises semi-natural neutral grassland lying on steeply sloping ground adjoining Chipping Brook, approximately 0.5km north west of the village of Chipping. It is managed as pasture.

The grassland supports a rich assemblage of plants. Frequent species include Crested Dog's-tail, Sweet Vernal-grass, Yorkshire-fog, Common Bistort, Bugle, Lesser Stitchwort, Greater Bird's-foot-trefoil, Selfneal, Germander Speedwell, Red Clover and Soft-rush. Occasional species include Great Burnet, Common Knapweed, Pignut, Lady's-mantle, Cat's-oar, Meadow Vetchting, Devit's-bit Scabious, Brooklime, Meadowsweet, Biuebell, Common Sorrol, Heath Bedstraw, Tormentit, Cuckooflower, Wild Angelica, Yarrow, Common Vetch, Ribwort Plantain, Field Wood-rush, Hard Rush, Sharp-flowered Rush, Hairy Sedge, Marsh Foxfail, Meadow Foxfail, Tuffed Hair-grass, Creeping Bent, Gock's-foot-and Ryegrass.

Scattered copses, trees and shrubs occur in places on steep banks and alongside the brook. Species present include Alder, Ash, Rowan, Sycamore, Hazel, Hawthorn, Holly, Elder, Dog-rose and Blackthorn with occasional Bramble, Honeysuckle, Ivy, Wood-sorral, Yellow Pimpernel, Primrose, Opposite-leaved Golden-saxifrage, Wood Avens, Violet, Herb-Robert and Hart's-tongue.

Guldeline(s) for Site Selection:

Grassland

(Gr3)

Other Information/Comments:

Lowland hay meadow, which includes species-rich pasture, is a priority habitat in the UK Biodiversity Action Plan.

Lancashire County Heritage Sites Biological Heritage Site

Clark House Farm Pasture



Site Boundary

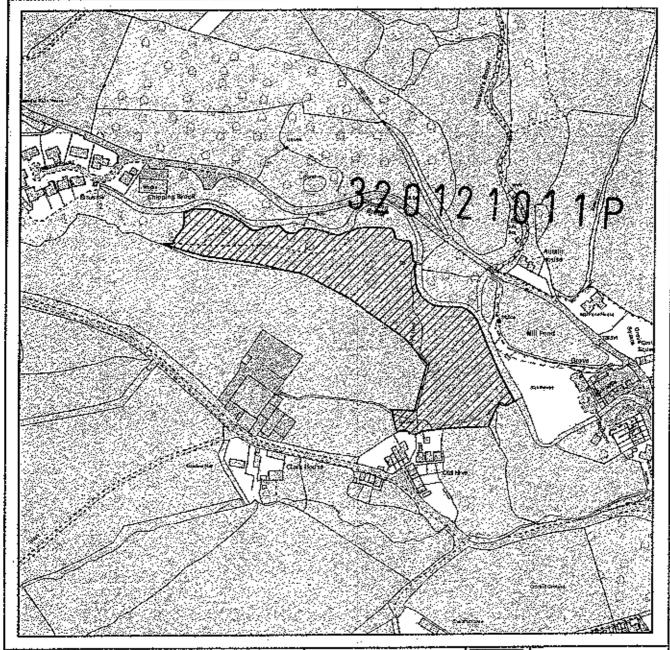
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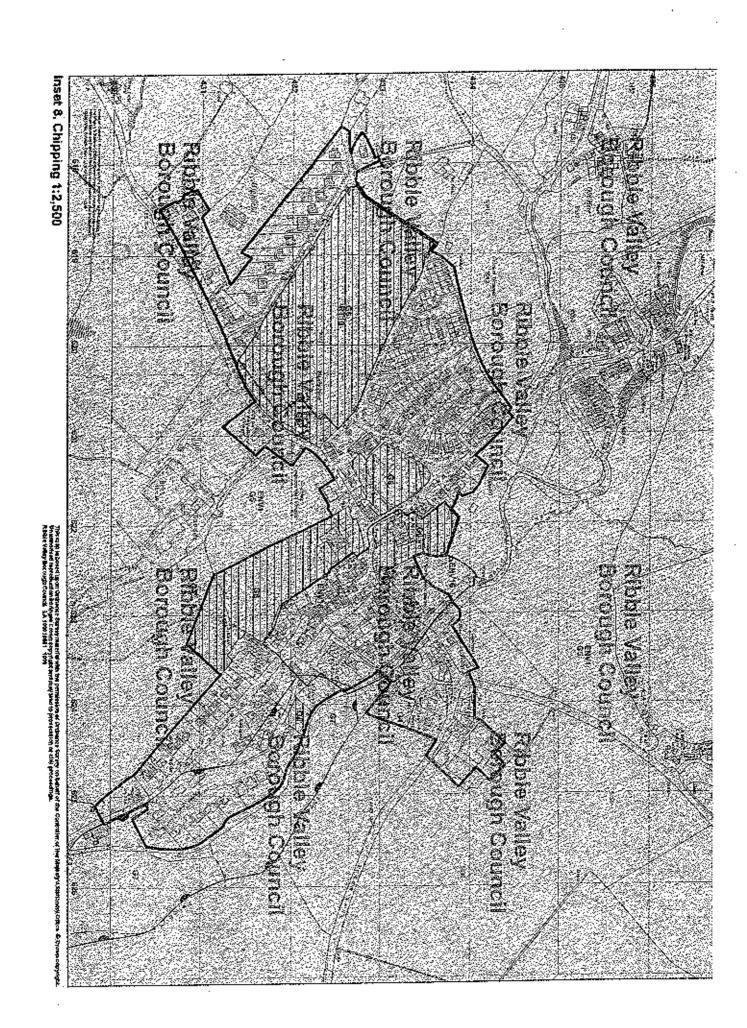
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Grid ref. SD617437	Scale 1:3,070		Lancashire
Site approved	Map 1 of 1		County Council
Boundary revised	Date of Map 06/12/11	MARCHESTER MARCHESTER B/MESSEYSIRS	Council





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APPENDIX B
TARGET NOTES



1.0 GENERAL DETAILS

Site Name	Church Raike, Chipping	
Job Number	3192	Doc. Ref 3192.002
Site Location	Land off located Church (Raike, Chipping
Date(s)	29/12/2011	
Surveyor(s)	Lee Greenhough	
Weather	Dry and cold	<u>. </u>
Seasonal Constraints	The survey was undertak	en outside the optimum survey period
Methods	JNCC Phase 1 Habitat Su	ırvey
Drawing Ref:		

2.0 PRE-EXISTING DATA FOR SITE

Source	Ecological data	Location relevant to site
Magic map	Designated Sites	None within 2km
LERN	Protected Sites	Within 0.5km: Brown hare (1998) Common frog (2000) Within 1km
Ribble Valley Districtwide Local Plan Adopted	Ribble Valley Districtwide Local Plan Adopted	N/A

3.0 HABITAT SURVEY RESULTS

3.1 Habitat descriptions

Habitat Type	Description & location within site	Protection/ Status	
Dense scrub	A large section of blackthorn (<i>Prunus spinosa</i>) scrub runs along the western boundary. In the southern corner (T5) is a dense strip of privet (<i>Ligustrum ovalifolium</i>) with occasional blackthorn and bramble (<i>Rubus fruticosus</i> .		T1 .
Species poor hedgerow	The site is bounded on west located by the road, by a species poor hedgerow atop a low bank which is intact and unmanaged. The hedge shows signs of previously being managed and now as been allowed to increase in height. The sides are managed for road clearance. The hedge provides a screen to the site and the buildings beyond for the houses opposite. The hedgerow provides foraging and	UK BAP	12

3084.001



Habitat Type	Description & location within site	Protection/ Status	10 20 N.T 70 N. N.T.
	nesting opportunities for birds. The hedge	<u> </u>	
	includes hazel (Corylus avellana), hawthorn		
	(Crataegus monogyna), ash (Fraxinus excelsior)		
	and ivy (Hedera helix) throughout.		
	A species poor flora verge of nutrient species		:
	is associated with the hedge. Species include		
	nettle (<i>Urtica dioica</i>) and Yorkshire fog (<i>Holcus</i>		
	lanatus).		
Broad-leaved	A number of trees are located around the site		
trees	boundary ash, hawthorn and oak (Quercus		
	robur). Three trees were noted within the site		
	ash, sycamore (Acer pseudoplatanus) and		
	hawthorn.		
Species poor	Small parcel of species poor improved		Т3
semi-improved	grassland, which has previously been grazed	:	ŀ
grassland	by sheep. The grass is now unmanaged and		
	been allow growing rank. The habitat is being		
	encroached by the blackthorn scrub and tall		
	ruderal herbs.		
	Species recorded include Yorkshire fog (Holcus		
	lanatus), cocksfoot (Dactylis glomerata) and		
	creeping thistle (Cirsium arvense). Himalayan		
	balsam (Impatiens glandulifera) was recorded		
	here.		
Fall ruderal	Tall ruderal herbs and tussock grasses along		14
nerb	the south west boundary. It is unmanaged and		
	has been allowed to become rank.) Creeping		
	thistle is the most dominant species present.		
	The tall ruderals border a area of bare ground	1	
w 	with refuge piles.	10 4	3 8 4

3.2 Target Notes

T1 Dense scrub which abuts the hedgerow in the west of the site.

Blackthorn	(Chamerion angustifolium)	(D)
Bramble	(Rubus fruticosus agg.)	(F)
Broad-leaved Dock	(Rumex obstusifolius)	(F)
Nettle	(Urtica dioica)	(F)
Creeping Thistle	(Cirsium arvense)	(0)
Yorkshire Fog	(Holcus lanatus)	(0)
False Oat-grass	(Arrhenatherum elatius)	(R)

T2 Species poor hedgerow in the west along road (Church Raike)

Blackthorn	(Chamerion angustifolium)	(A)
Hazel	(Corylus avellana)	(F)
Hawthorn	(Crataegus monogyna)	(F)
Nettle	(Urtica dioica)	(0)
Bramble	(Rubus fruticosus agg.)	(0)
Ash	(Fraxinus excelsior)	(0)
False Oat-grass	(Arrhenatherum elatius)	(0)

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	•	
lvy	(Hedera helix)	(0)
Sycamore	(Acer pseudoplatanus)	(R)
Yorkshire Fog	(Holcus lanatus)	(R)
T3 Species poor semi	grassland across the site	
Yorkshire fog	(Holcus lanatus)	(D)
Cock's-foot	(Dactylis glomerata)	(A)
Creeping thistle	(Cirsium arvense)	(F)
False Oat-grass	(Arrhenatherum elatius)	(0)
Hogweed	(Heracleum sphondylium)	(0)
Ragwort	(Senecio jacobaea)	(0)
Nettle	(Urtica dioica)	(0)
Himalayan balsam	(Impatiens glandulifere)	. (R)
T4 Tall ruderal herbs i	in the south east corner	
Creeping thistle	(Cirsium arvense)	(A)
False Oat-grass	(Arrhenatherum elatius)	(0)
Nettle	(Urtica dioica)	(0)
Ragwort	(Senecio jacobaea)	(R)
T5 Dense privet L sha	ped hedge or scrub located in	n south-west comer
Garden privet	(Ligustrum ovalifolium)	(D) .
Blackthorn	(Chamerion angustifolium)	(0)
Bramble	(Rubus fruticosus agg.)	(F)

4.0 ADDITIONAL NOTES

The mature trees were inspected from ground level for features that may support bats (cavities or cracks). No suitable features were recorded.

Himalayan balsam was noted on site. This species is listed on Schedule 9 of the Wildlife and Countryside 1981 as amended.

5.0 SUMMARY

There were no limitations when the survey was undertaken.

Hedgerows within the site are species poor and are UKBAP habitat. The hedgerow shows features that my satisfy criteria for 'Important' status under Hedgerow Regulations (1997). A detailed assessment could not be undertaken due to seasonality, however the presence four woody species, a supporting bank, connections with other hedges, less than 10% gaps may warrant a level of protection.

The habitats which are present are botanically impoverished and of generally low ecological value. Himalayan balsam was noted in the grassland.

Nesting birds are protected under the Wildlife & Countryside Act 1981 (as amended). There is no provision under the licensing system for disturbance or destruction of nests to facilitate development. Tree, hedge or scrub removal should take place outside of the

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breeding bird season (avoiding March – August inclusive). If this is not possible, any section of hedge to be removed, including a buffer of 10m either side, should be netted by an ecologist before March. Netting is not suitable for trees and scrub. These features would be subject to nest searches can be carried out by an ecologist to confirm the presence/absence of breeding birds. However nest inspections are suitable only for localised small areas of vegetation and may not be affective across the site. If breeding birds are found work will not be allowed to commence until the birds finish breeding.

320121011P



APPENDIX C BAT BRICKS, ACCESS AND BOX DETAILS



BAT BOXES TO INSTALL INTO / ON TO BUILDINGS & BUILT STRUCTURES

These bat boxes are designed to be built into buildings, or underneath bridges, arches or tunnels, where conditions are relatively humid. There are particularly useful for incorporating into new buildings or bridges to attract bats or to provide new roost sites where existing buildings with bats are being renovated.

Schwegler N27

This box should be cemented into a wall. It contains a single internal wooden panel which simulates a crevice. The removable front panel allows for easy cleaning. No painting is required, but if it is necessary, a natural breathable paint should be used

Woodcrete (75% wood sawdust, concrete and clay mixture) Width 18cm, Height 29cm, Depth 23.5cm



Schwegler 1FR Bat Tube

This long box can be installed within brick masonry, beneath plasterwork or wood panelling, or incorporated into concrete structures such as factory buildings or bridges. Inside it centains a woodcrete surface, a roughened wood board, and a metal mesh, providing a choice of roosting areas depending on the weather conditions and the bats' habits. This box is maintenance-free as the entrance slit is at the bottom, allowing for self cleaning. No painting required, but if painting is necessary a natural breathable paint should be used

Woodcrete (75% wood sawdust, concrete and clay mixture) Width 20cm, Height 47.5cm, Dapth 12.5cm Entrance width 15cm, Entrance depth 2cm



The same design as the 1FR but with holes in the sides. This allows multiple tubes to be placed next to each other to form a much larger bat roost.

These boxes are maintenance-free as the entrance stit is at the bottom. No painting required, but if painting is necessary a natural breathable paint should be used.

Woodcrete (75% wood sawdust, concrete and clay mixture) Width: 20cm, Height: 47cm, Depth: 12.5cm, Welght: 13kg Entrance Width: 15cm, Entrance Depth: 2cm

Norfolk Bat Brick

A handmade brick which can be used to replace an existing brick or incorporated into new structures, Ideal for sheltered sites such as under bridges, in tunnels, or oven in mines and caves. The slits are the perfect size for Daubentons', Natterers, Long-eared, and Brandts' bats. The bat brick should not be painted.

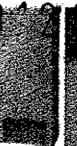
These bat bricks are only available directly from the Norfolk Bat Group. Contact John Goldsmith 01508 550 784 for orders. Delivery time may be several weeks

1bstock - Enclosed Bat Box B

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conscrvation work

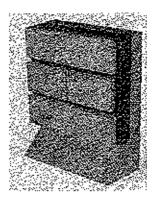
215mm x 215mm or 215mm x 290mm F2 \$2 Fully frost resistant











Ibstock - Bat Box with Engraved Motif C

- Attractive motive
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself.
- Maintenasce free with entrance at the base
- Ideal for new build & conservation work

216mm x 216mm or 215mm x 290mm F2 \$2 Fully frost resistant

Schwegier Bat Access Panel

This is a maintenance free access panel, designed to allow bats entry through exterior walls. The reer of the panel is left open so bats can pass through into existing bat roosts. The bat panel is particularly useful when renovation or conversion work is taking place in buildings containing bat roosts, where continued access to established bat roosts is desirable. No painting is required, but if painting is necessary a natural breathable paint should be used.

Material: Woodcrete (75% wood sawdust, concrete and clay mixture) Width: 30cm, Height: 30cm, Depth: 8cm, Weight: 7.8kg

Back Plate for 1FE Bat Panel

If access to an existing nesting site is not required, the 1FE can be fitted with an optional Back Plate, which includes an attached wooden panel to create a cavity well inside the box. The roughened surfaces of the Plate, and the inside of the 1FE itself, are very attractive to bats. Installation of the complete box is easy, For example, it can be acrewed to a wall or fixed within insulation.

Material: Woodcrete (75% wood sawdust, concrete and clay mixture) Weight: 2.2kg

Schwegler 1FQ Bat Box

An attractive box designed specifically to be fitted on the external wall of a house, barn or other building. Equally appealing to bats as a roost or a nursery, it features a special porous coating to help maintain the ideal temperature inside as well as a roughened front panel to enable the bats to land securely. Access into the box is via a step-like recess.

Inside the box, rough pieces of wood are incorporated into the back of the box which are good insulators and are used by the bats as perches. The internal layout offers three different areas with varying degrees of brightness and temperature.

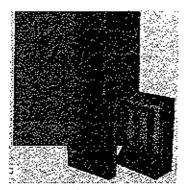
This durable box is easy to attach to most walls, requires no maintenance or cleaning and will last for decades. Please note that this box is designed to be fitted to a wall. Due to the weight it is unsuitable for fences or sheds.

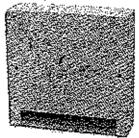
Woodcrete (75% wood sawdust, concrete and clay mixture) Height 565mm; Width 350mm, Depth 85mm, Weight 13kg

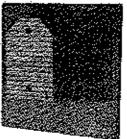
Schwegler 1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow cravice-like internal space to attract pipistrelle and noctule bats.

Woodcrete (75% wood sawdust, concrete and clay mixture) Width 27cm Height 43cm













BAT BOXES FOR SITE ON TREES

Schwegler 2F Bat Box

A popular general purpose box attractive to the smaller British bats. A simple design with a narrow entrance slit on the front.

Woodcrete (75% wood sawdust, concrete and clay mixture) Diameter 16cm Height 33cm



Schwegler 2F-DFP Bat Box

A general purpose box attractive to the smaller British bats, with a roughened wooden panel inside the box which simulates a crevice. This box is favgured by Daubenton's bat and Nathusius' pipistrelle.

Woodcrete (75% wood sawdust, concrete and clay mixture) Diarneter 16cm Height 33cm



Schwegler 2FN Bat Box

A larger box with both a wide access slit at the base and an access hole on the underside. Suitable for the larger British bat species. Particularly successful in attracting noctule and Bechstein's bats.

Woodcrete (75% wood sawdust, concrete and clay mixture) Diameter 16cm Height 36cm



Schwegler 1FD Bat Box

A large general purpose bat box, with two roughened wood panels inside the box which simulate crevices.

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Woodcrete (75% wood sawdust, concrete and clay mixture) Diameter 16cm, Height 36cm



Schwegler 1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract pipistrelle and noctule bats.

Woodcrete (75% wood sawdust, concrete and clay mixture) Width 27cm Height 43cm



Schwegler 1FW Hibernation Box

This monster box is designed to provide a protected environment, particularly through the cold winter months when bats hibernate. It has three internal wooden panels imitating crevices. Supplied with special fixing brackets. It is important to fit this heavy box very securely if mounting above the ground, and to site it well away from public areas.

Woodcrete (75% wood sawdust, concrete and clay mixture) Diameter 38cm, Height 50cm, Weight 30kg



Schwagler 1FS Bat Box

Schwegler woodcrete boxes have the highest rates of occupation of all box types. The 75% wood sawdust, concrete and clay mixture allows natural respiration, stable temperature, and durability. They are extremely long lasting and rot- and predator-proof.

The 1FS is a larger capacity general purpose but box with more insulation than most boxes for a more stable temperature in the winter.

Wooden block hanger and 'tree-friendly' aluminium nails included.

Woodcrate (75% wood sawdust, concrete and clay mixture)

Diameter: 28cm Height: 44cm Weight: 10kg



BAT ACCESS

Excerpt from JNCC (1999) Bat workers manual. Eds Mitchell-Jones, A. J. & McLeish, A. P. Joint Nature Conservation Committee

Access holes should be kept small or birds may move in. For most bat species a slit 15mm x 20-25mm long is adequate and the ideal position appears to be between soffit and wall. The bats can then land on the vertical wall and run up through the gap; most birds cannot manage this. Building regulations specify that roost must have adequate ventilation around the soffit, so access for bats can easily be incorporated into this. Other suitable access points for bats are at gable ends, around lead flashing or through gaps between slates or tiles.

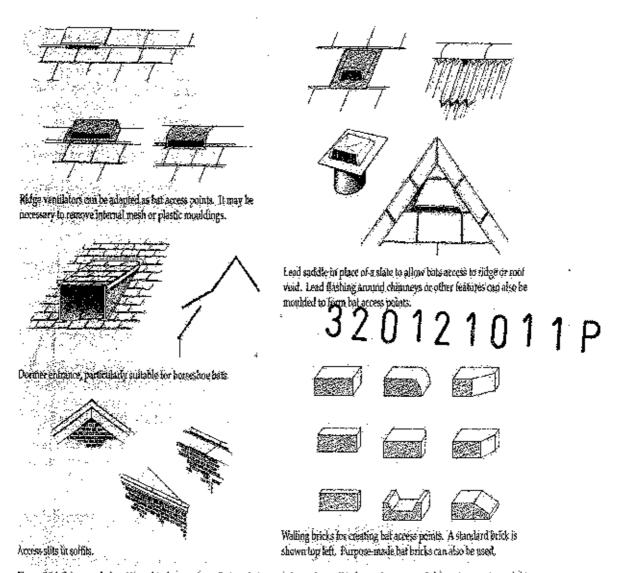
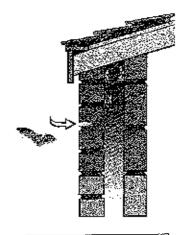


Figure 10.4. Bat geness holes. Horseshoe bats prefer to By into their roosts, but only small holes or state are needed for other species and this glad helps to determination by birds.

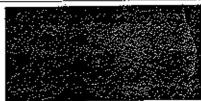
BAT ACCESS BRICKS

A Bat Brick should ideally be placed as high as possible, at the gable apex or close to the soffit



EXAMPLE PRODUCTS

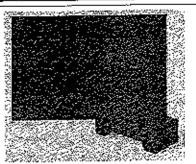
Marshall's Bat Access Brick (also available in stone)



lbstock Brick Ltd Free Access Bat Box A

Discrete single bat brick. Easy to install. Allows bats to create a natural home habitat within the cavity of the building

Dimensions 215mm x 65mm F2 S2 Fully frost resistant



Schwegler Bat Access Panel 🛴

This is a maintenance free access panel designed to allow bats entry through exterior walls. The rear of the panel is left open so bats can pass through into existing bat roosts. The bat panel is particularly useful when renovation or conversion work is taking place in buildings containing bat roosts, where continued access to established bat roosts is desirable.

No painting is required, but if painting is necessary a natural breathable paint should be used.

Material: Woodcrete (75% wood sawdust, concrete and clay

mixture) Width: 30cm Height: 30cm Depth: 8cm Weight: 7.8kg

