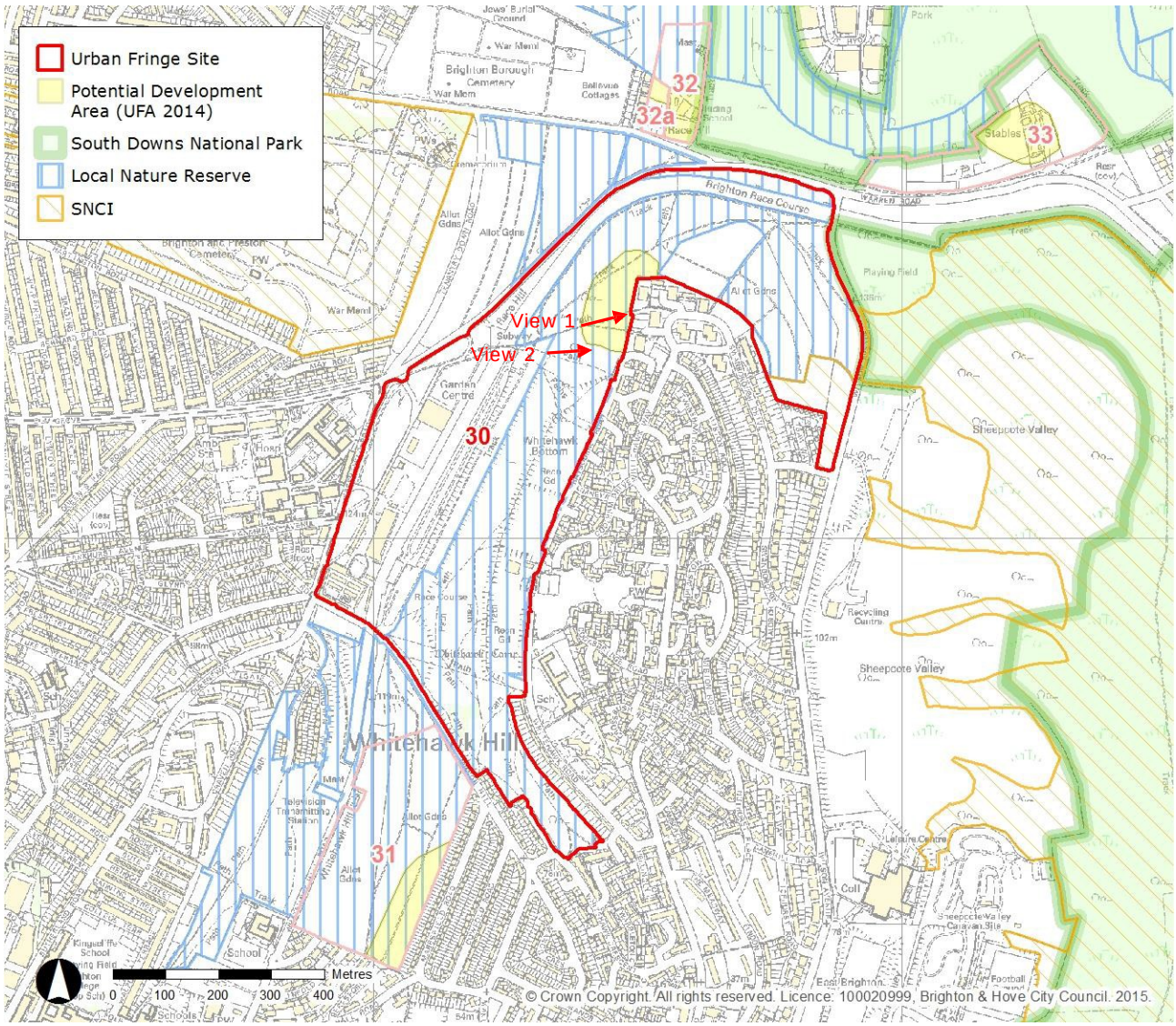
11 L8/E7 (Site 30) - Whitehawk: Landscape and Ecology Assessment

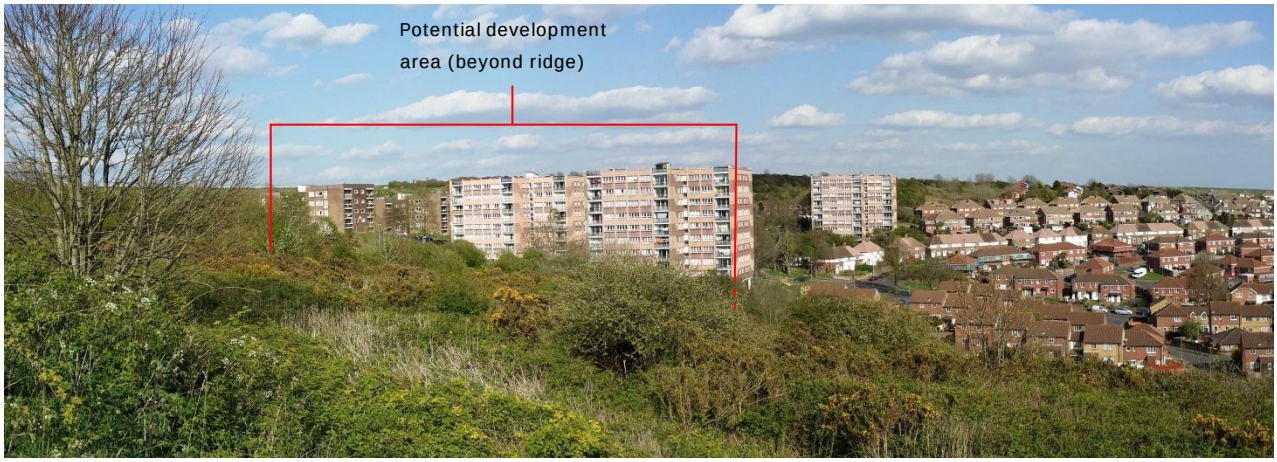
Background

Study Area	**L8/E7**	Location	Whitehawk
Site	30 – Land at and adjoining Brighton Race Course		
Study Area Overview			
This Study Area encompasses the top of the distinctive curving ridge on which Brighton Race Course is located, the steep scrubby eastern and southern slopes of the coombe in which Whitehawk is situated and the recreation ground in Whitehawk Bottom along the western edge of the coombe. The area suggested in the 2014 UFA as having potential for housing development is on the scrub-covered slope immediately to the west of tower blocks on Albourne Close and Lodsworth Close at the northern end of Whitehawk.			



Representative Views - local

View 1: looking east towards Whitehawk at the northern half of the potential development area



View 2: the potential development area in its wider context, viewed from the ridge crest looking north-east

Overall Conclusions of the 2014 Assessment

"The site has some potential for high density residential development adjacent to the existing tower blocks at the northern end of Whitehawk.

Despite their size, the tower blocks at the northern end of Whitehawk have very little impact on the wider landscape as they sit just below the enclosing ridgeline. There may be scope to accommodate similar buildings on the steeper slope to the west, but it would be important to maintain the same roof elevation above ordnance datum as the existing blocks to avoid any adverse effect on views, in particular from the SDNP towards the sea.

The new tower blocks would sit on land registered as a Local Nature Reserve and recognised as natural/semi-natural greenspace; however development has the potential to mitigate any significant negative effects. In addition, to the east of the tower blocks, to the north of the urban edge of Whitehawk, is an area not recognised as open space. This area could be an appropriate place to offset some of the negative effects associated with constructing high density residential development within an established Local Nature Reserve. Tree planting and other landscaping works could also bring this area in to use as a publically accessible open space, offsetting the loss of natural/semi-natural greenspace further to the east.

In addition, the potentially significant scale and density of residential development could create opportunities to improve the connectivity of Whitehawk to the built up area around the General Hospital to the west, thereby reducing Whitehawk's isolation from other parts of the City. This could include improvements to the existing tunnel under the racecourse.

In terms of wider landscape character the area at the base of the slope occupied by sports pitches makes little contribution, being very visually contained. Despite there being an over provision of all types of open space, there is a shortage of sports fields and pitches (and suitable flat land) across the city and the wider sub area has a predicted under provision of open space unless additional provision can be made. Therefore, it is deemed inappropriate to develop this portion of the site.

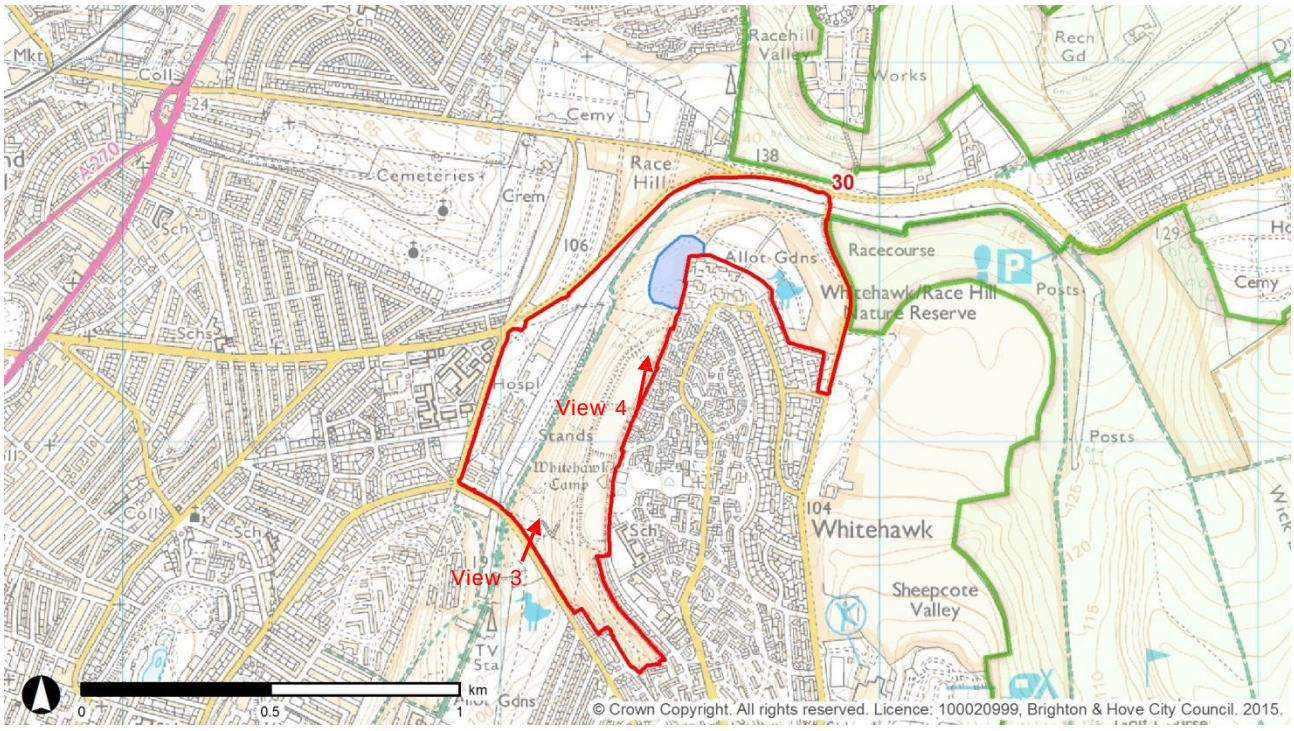
The northern part of the site is a significant distance away from the scheduled monument in the south of the site. Finally, there is a significant risk of groundwater flooding in the northern part of the site. Sustainable urban drainage systems would therefore be an essential component to the design of any high density residential development in the area."

Overall Site Area	46ha	Area with development potential	*1.5ha*	Suitable dwelling density	High: 75 per ha	Potential number of dwellings	150

Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	The horseshoe-shaped ridge linking Whitehawk Hill, Race Hill and Red Hill is a distinctive landform which is undeveloped other than in the vicinity of the race course buildings, where the main grandstand forms a local skyline landmark. The potential development area is a very small portion of the inner, east-facing slope down from this ridge into the northern end of Whitehawk. An almost continuous ring of scrub vegetation occupies the slopes from the south-western edge of Whitehawk around to Vines Cross Road on the western side, so there would be a degree of sensitivity associated with any significant impact on this, but the band is wider in the vicinity of the potential development area than in most other locations.
Settlement form	Whitehawk occupies the western part of the area enclosed by the horseshoe ridge, with Sheepcote Valley and Blackrock Valley occupying the eastern part. The settlement slopes uphill south to north and west to east, and the retention of open, recreational space means that there is currently no residential development on rising ground to the west of Haybourne Road. Housing in the potential development area would stand out in this respect, but there is already a clear difference in urban character at the northern end of Whitehawk as residential development here is in large, distinctively styled blocks of flats (View 4).
Settlement setting	The scrub-covered slopes and open ridges around Whitehawk form a distinctive settlement setting. The slope is more gentle to the north than to the west, so views northward are typically obscured by the blocks of flats. The flats themselves are a significant element in the setting of nearby dwellings, so scale of any new structures in relation to these would be an important consideration in terms of townscape character.
SDNP setting	The SDNP extends westwards as far as the Red Hill ridge, offering expansive views towards Brighton in which Whitehawk Hill is prominent, but built development within the coombe is largely screened by the higher ground in Sheepcote Valley, with views limited to rooftops and the upper storeys of the blocks of flats at the northern end of the setttlement. From the wider National Park area Whitehawk is very effectively screened from view by its surrounding ridgeline. It is apparent that the height of the blocks of flats above Ordnance Datum has been carefully set to avoid impact on the wider landscape, with the top level of all the blocks being approximately 122m (see Views 2 and 3); thus their heights decrease as they move uphill from south to north.
Visual receptors	The most important visual receptors are recreational users of the ridge top bridleway and open access land which surround Whitehawk on three sides. Views eastwards from the race course, other than from higher parts of the stands, are screened by a line of conifers beyond the track. Whilst the blocks of flats are visible at fairly close range from the bridleway alongside the track to the north they do not interfere with the horizon line over the sea.
Perceptual qualities	The potential development area is dominated by the adjacent blocks of flats, so this is clearly a contained, urban setting. On the ridge top, above the settlement and exposed to long views, the character is very different.
Cultural & historic value	Whilst most of the Study Area can be considered very sensitive in historic and cultural terms because of the race course, which has been in existence since the 18th century, development that is contained within the Whitehawk area would have no great sensitivity in this respect, given the development that exists already and the extent of screening provided by the local topography and vegetation.

Representative Views – wider area



View 3: looking north from Whitehawk Hill (within a Local Nature Reserve), just to the south of Manor Hill

View 4: looking north along Haybourne Road, from the junction with Limney Road

Potential Level of Landscape Effect

The key consideration with regard to development as indicated in the 2014 UFA is the top elevation of buildings. Buildings that could adhere to the maximum elevation of c.122m AOD, 'fit' with adjacent development and preserve an enclosing belt of scrub would be unlikely to give rise to significant adverse landscape impact. However, the indicated area extends further north than the four-storey flats which mark the outer extent of Whitehawk at present, and also eastward onto higher ground, so it is questionable whether buildings could be accommodated in these locations without having to be limited to just one or two storeys. Development that is too small in scale in comparison with the existing blocks would appear 'squeezed in' and out of character.

Avoidance, Mitigation and Enhancement Options

It is suggested that the potential development area could be redrawn (as illustrated on the figure under **Conclusions**) to avoid building on any land higher than the current northernmost blocks but to extend further south to compensate. It would be important to maintain a reasonable distance between the southernmost new block and the two-storey houses at the northern corner of Haybourne Road, and to maintain the same spacing as existing blocks so as not to create a 'wall' of tall buildings.

Ecology Assessment

Ecological Baseline

Biological Records

There are no internationally designated sites within or adjacent to the Study Area.

All of the Study Area sits within the **Whitehawk Hill Local Nature Reserve,** designated for calcareous grassland habitats which support notable butterflies, including adonis and chalkhill blue butterfly. A small area adjacent to Wilson Avenue is also designated as **Wilson Avenue, Whitehawk SNCI**. This SNCI is identified as a valuable semi-natural buffer to the proposed LNR.

Records of calcareous grassland were provided in the south of the Study Area, outside of the potential development area.

Records of protected and/or notable species identified within the Study Area included:

- West-European hedgehog
- Slow worm
- Common Lizard
- Common Toad
- Adonis blue*;*
- The moth *Adscita globulariae;*
- Garden tiger moth;
- Wasp spider;
- Hornet robberfly;
- Small heath;
- Small blue butterfly;
- The drilid beetle *Drilus flavescens*;
- Dingy skipper;
- Lesne's earwig;
- Clover head weevil;
- Wall butterfly;
- The fruit fly *Urophora cuspidata;*
- The weevil *Trachyphloeus asperatus;*
- The weevil *Tychius schneideri;*
- The fly *Zophomyia temula;*
- The ant-like stone beelte *Stenichnus pusillus;*
- Red-veined darter;
- Round-headed rampion
- Wormwood;
- Red valerian;
- Nettle-leaved goosefoot;
- Basil-thyme;
- Corn parsley;
- Yellow vetch;
- Winter heliotrope;
- Chalk eyebright;

- The leaf beetle *Longitarsus ballotae;*
- The leaf beetle *Longitarsus parvulus;*
- Adonis blue butterfly;
- Lackey moth;
- The bee *Melitta tricincta;*
- The tumbling flower-beetle *Mordellistena neuwaldeggiana;*
- The wasp *Mutilla europaea;*
- The weevil *Orthochaetes setiger;*
- The mason bee *Osmia (Neosmia) bicolor;*
- Red-tailed cuckoo bumblebee;
- Grizzled skipper;
- Chalk carpet moth
- Cinnabar moth;
- Dense-flowered fumitory;
- Grand-toothed hawkweed;
- Yellow vetchling;
- Narrow-leaved everlasting pea;
- Sickle medic;
- Chalk milkwort;
- Bulbous meadow-grass;
- Bastard-toadflax;
- Swift*;*
- Grey heron;
- House martin;
- Peregrine falcon;
- Crossbill;

Invasive species records located within the Study Area included:

- Variegated yellow archangel
- Japanese knotweed
- Giant kntoweed
- Hybrid bluebell

Habitat Description (see Figure 11.1)

Amenity Grassland

Large areas of the Study Area supported regularly managed amenity grassland habitats, with a low species diversity including common species such as perennial rye grass, red fescue, white clover, yarrow, dandelion *Taraxacum* agg., and creeping thistle *Cirsium arvense*. This included areas surrounding the racecourse buildings and forming the race course itself (adjacent to Warren Road); and sports pitches in the east of the Study Area adjacent to Haybourne Road and Whitehawk Road.

Semi-improved Neutral Grassland

Semi-improved grassland was recorded to the east of the race course track and east of the allotments in the north, within the centre of the Study Area between the race course and the sports pitches adjacent to Haybourne Road and Whitehawk Road.

The semi-improved grassland to east of the race course had a relatively tall sward height with mown footpaths. Species included dominant perennial ryegrass with abundant ribwort plantain and frequent false oat-grass. Occasional common knapweed, common toadflax, Timothy and common ragwort were also noted.

Semi-improved neutral grassland to the east of the allotments had a relatively varied sward structure, with a much shorter sward height in areas regularly used by recreational users. Species recorded included abundant red fescue, silver weed and white clover with frequent broad-leaved willowherb and occasional scarlet pimpernel. Scattered scrub was also present (see below), whilst frequent small areas of tall ruderal vegetation were also present. These areas included species such as abundant mugwort and great willowherb, frequent teasel and hedge mustard and occasional bristly ox-tongue.

The semi-improved grassland in the centre of the Study Area was rough with a relatively tall sward height. Species included abundant false-oat-grass, common nettle and hawkbit *Leontodon sp* with frequent creeping thistle, common toadflax, red clover, field scabious and ribwort plantain. Occasional common agrimony, bristly ox-tongue, ragged-robin and ladies bedstraw were also recorded. Areas in the south of the Study Area have been identified as calcareous grassland within biological records.

Semi-natural Broadleaved Woodland

Semi-natural broadleaved woodland was present in the south, adjacent to Manor Hill. The canopy layer comprised of dominant semi-mature sycamore and elder whilst the shrub layer supported dominant bramble. The shrub layer was dense and difficult to access.

Scrub

Dense scrub was noted in a linear strip in the centre of the Study Area and south-west of the allotments. Species included abundant sycamore, elder and bramble with frequent hawthorn and apple Malus *sp*., and occasional wild privet, cotoneaster *sp* and spurge *euphorbia sp*.

Scattered scrub was also present over neutral grassland to the east of the allotments. Species recorded included abundant sycamore with frequent ash and occasional hawthorn.

Dense scrub was also noted in the south and south-west of residential housing on Whitehawk Hill Road. The scrub was dominated by bramble, and the area included frequent small areas of tall ruderal vegetation which included dominant nettles, abundant hedge bindweed, frequent dandelion and occasional bristly ox-tongue and common mallow.

Allotments

In the north of the Study Area, north of Whitehawk, the Study Area included an active allotment. This supported a complex mosaic of habitats including cultivated plots, areas of rough grassland, tall ruderal and ephemeral communities, and areas colonised by scrub.

Buildings

Buildings associated with the race course and garden centre were situated along the western boundary of the Study Area.

Fauna

Potential was noted for the following protected or notable species to be present within the Study Area:

- Nesting birds – the scrub and woodland habitat were likely to support a range of nesting bird species.
- Reptiles – the rough semi-improved grassland, scattered/dense scrub and allotments provided optimal foraging and shelter habitat for common and widespread reptile species, whilst the woodland may also provide overwintering opportunities.
- Badgers – potential foraging habitat was located throughout the Study Area, with woodland providing opportunities for sett building.
- Invertebrates – the semi-improved grassland habitats, and edge habitats / scattered scrub habitats provide valuable habitat for invertebrates, in particular notable butterfly species. In addition the notable soldier beetle *Malthodes lobatus* has been identified from the Study Area (exact location unknown but understood to have been associated with scrub habitats), as well as species such as the hornet robberfly (although this species is reliant on grazing animals which are not present on the site and therefore any records may have been transitory individuals) and dingy skipper (both Brighton and Hove LBAP priority species).
- Bats – the habitat mosaic may provide a valuable foraging resource for bats. The woodlands did not appear to support trees of sufficient maturity to support bat roosts.
- No waterbodies were identified within 500m with ecological connectivity to the Study Area (as identified from OS base mapping; further investigation would be required). However, there is potential for waterbodies to be present within the allotments which could support breeding populations of GCN. The terrestrial habitats, and particularly the woodlands, allotments, semi-improved grassland and scrub habitats would provide terrestrial habitat for this species, if present, to forage, shelter and overwinter.

Dormice are unlikely to be present within the Study Area given the isolation of woodland and scrub from larger areas of suitable habitat.

Ecological Appraisal	
Designated Sites	The Study Area is designated as the Whitehawk Hill LNR with a small area adajcent to Wilson Avenue designated at the local level as Wilson Avenue SNCI. The potential development area includes a relatively small area of the LNR and therefore although this would result in loss of an area of habitat it is not considered that this would significantly affect the reasons for designation of the LNR.
Habitats	Common and widespread habitats were noted within the Study Area including semi-improved grassland, amenity grassland, semi-natural broadleaved woodland, scrub and tall ruderal habitats. The potential development area comprises of a mosaic of semi-improved neutral grassland and scrub. Extensive areas of these grassland habitats are located outside of the potential development area, and will be largely unaffected by development.
Species	Without detailed ecologial surveys, it is not possible to confirm the value of the Study Area for notable and protected species. However, the mosaic of semi-improved grassland, scrub, woodland, and allotments are likely to provide valuable habitat to a range of notable and protected species. The potential development area itself is likely to suport a range of nesting birds which would be affected by loss of scrub habitats. Other key constraints may include the potential presence of reptiles with foraging and sheltering habitat associated with the mosaic of grassland and scrub habitats likely to be lost as a result of any development, whilst badger could also be affected if setts are affected within scrub habitats. However, extensive opportunities for these species would remain in the wider Study Area. Notable invertebrate species may also be affected by habitat loss, with grassland and edge habitats between grassland and scrub likely to be of greatest value. However, a relatively small area of habitat would be affected, with extensive areas of similar habitat remaining in the wider site which would be likely to provide similar opportunities for notable invertebrate species. Lighting of adjacent habitats also has the potential to affect bats, which may be using scrub and grassland habitats for foraging or commuting. Although no Japanese knotweed was identified during the survey, this has been previously recorded on the Site as identified in biological records. This highly invasive species is subject to a range of legislation (for example, under the Wildlife and Countryside Act 1981 and Environmental Protection Act 1990) to prevent its spread. Other invasive species have also been recorded within ther study area. Any development works would present a risk of spread of these species should they remain present.

Ecological Avoidance, Mitigation and Enhancement Options

Further surveys

Detailed development proposals must be informed by an updated Extended Phase 1 Habitat Survey and species surveys to ensure that potential impacts are identified and appropriate mitigation developed. This may require detailed surveys for notable plant species, and surveys for birds, reptile, badger and invertebrates.

Surveys should also seek to confirm whether Japanese knotweed remains in the Study Area.

Avoidance, Mitigation and Enhancement Options

Potential impacts on the LNR, including partial loss, would require mitigation. This would be likely to include the enhancement of retained habitats, in particular to restore and recreate calcareous grassland through scrub control and grassland management regimes. The proposals here may also provide the opportunity to excavate chalky subsoils to be used to recreate calcareous grassland. The enhancement of habitats should also aim to increase their robustness to any increase in recreational pressure. This could include, for example, improved habitat management as above, and also improving footpaths and

interpretation to guide and educate people.

In addition, best construction practice will need to be assured, as detailed within a Construction and Environmental Management Plan or similar, to avoid contamination and disturbance impacts of retained habitats.

If Japanese knotweed is confirmed as present, a treatment strategy will need to be developed to ensure the species (included contaminated soil) is not spread. This may include proposals to chemically treat plants, and/or to excavate contaminated material for disposal in accordance with best practice guidance.

If notable or protected species are confirmed as present, mitigation requirements may include:

- Timing of works to avoid impacts on nesting birds
- Measures to prevent harm to reptiles, such as translocation from the potential development area to a receptor site which has been suitably enhanced to support the translocated population (ideally within the Study Area). If present, similar mitigation measures may be required to address impacts on GCN under a Natural England European Protected Species licence.
- Measures to prevent impacts on badger including sensitive timing of works in the vicinity of setts (and potentially under NE licence) and best practice construction measures
- Enhancement of habitat outside the potential development area to provide additional opportunities for species impacted by the proposals, such as invertebrates
- Sensitive design of any external lighting to minimise lightspill to adjacent habitats

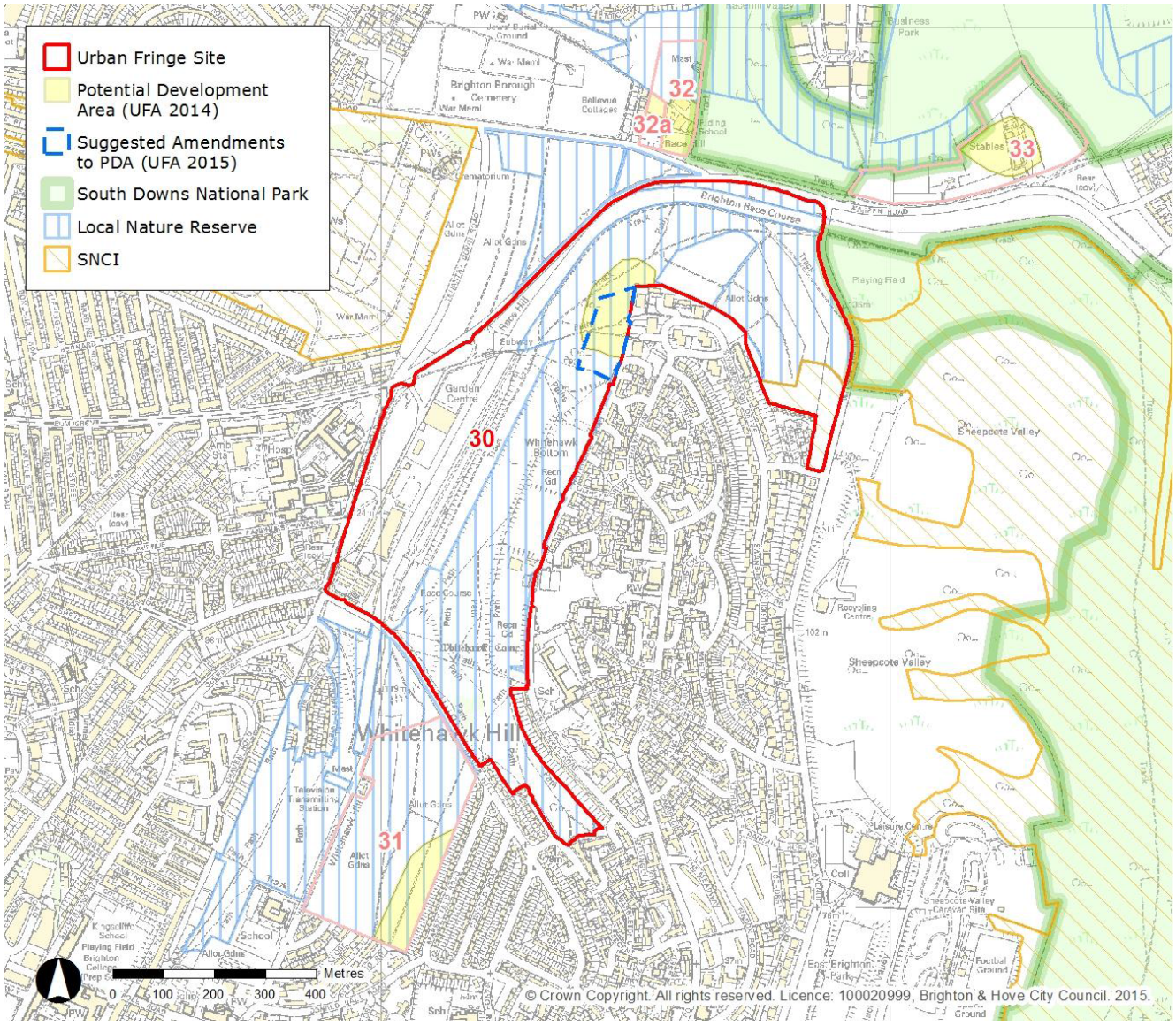
Other mitigation or enhancement opportunities may include the incorporation of green infrastructure within the development to provide opportunities for wildlife, such as green roofs or walls, wildlife-friendly planting (native species or those providing known benefits to widlife, such as species of benefit for pollinators), and incorporation of nesting/roosting opportunities for birds and bats. Given the nature of the potential development, residential blocks could be intersperrsed with landscaping proposals to include calcareous grassland.

Conclusion

Overall Conclusion

In conclusion, it is considered that housing can be delivered within Study Area L8/E7 without significant impacts on landscape and ecology, on the assumption that

- The potential development area is adjusted to avoid areas of higher ground (see Figure below), so that new buildings can fit in with the scale of existing buildings but not exceed the consistent elevation (c.122m AOD) to which neighbouring blocks of flats adhere.
- Incorporation of robust mitigation measures to address any impacts on protected species.
- Habitat enhancement can be assured elsewhere within the Study Area, including within the development, in particular to create and enhance calcareous grassland. This would require an adjustment in the potential development area to the south as illustrated below.


Urban Fringe Site
Potential Development Area (UFA 2014)
Suggested Amendments to PDA (UFA 2015)
South Downs National Park
Local Nature Reserve
SNCI
30
31
32
32a
33
Whitehawk Hill
Metres
0
100
200
300
400
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Brighton & Hove Urban Fringe Assessment

Figure 11.1 Phase 1 Habitat Survey Map Study Area L8/E7

- Urban Fringe Site
- Potential Development Area
- Target note
- Intact hedge - species-poor
- Broadleaved woodland - semi-natural
- Scrub - dense/continuous
- Dense scrub with tall ruderal
- Neutral grassland - semi-improved with scattered scrub
- Neutral grassland - semi-improved
- Improved grassland
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Cultivated/disturbed land - amenity grassland
- Hedge with trees - species-poor
- Allotments
- Buildings
- Hard standing

Map Scale @ A3: 1:6,000

LUC

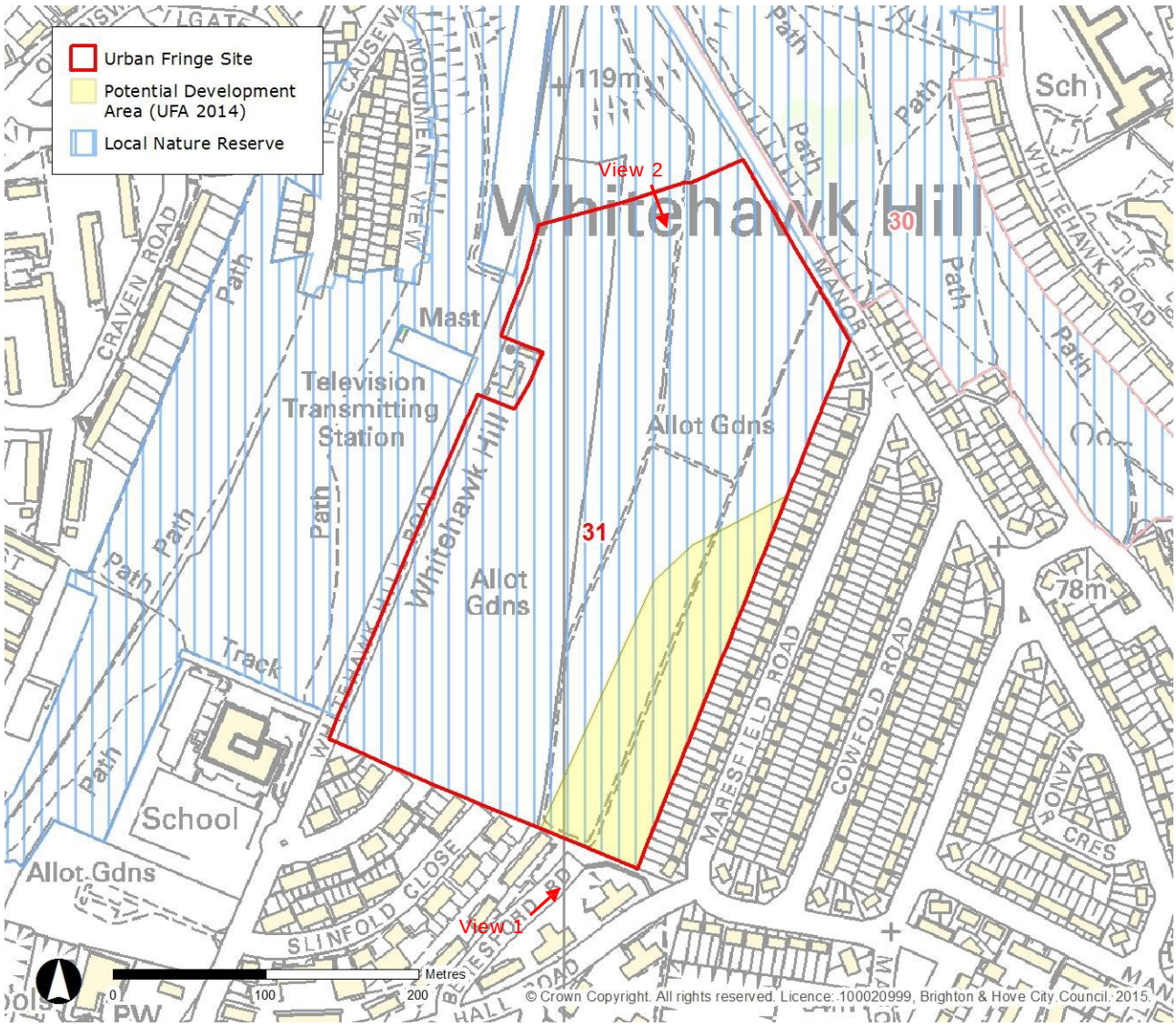
0 275 550 Metres

CB:JH EB:Johnny_H LUCLON 6555-01_007_Phase_1 12/11/2015 Source: LUC

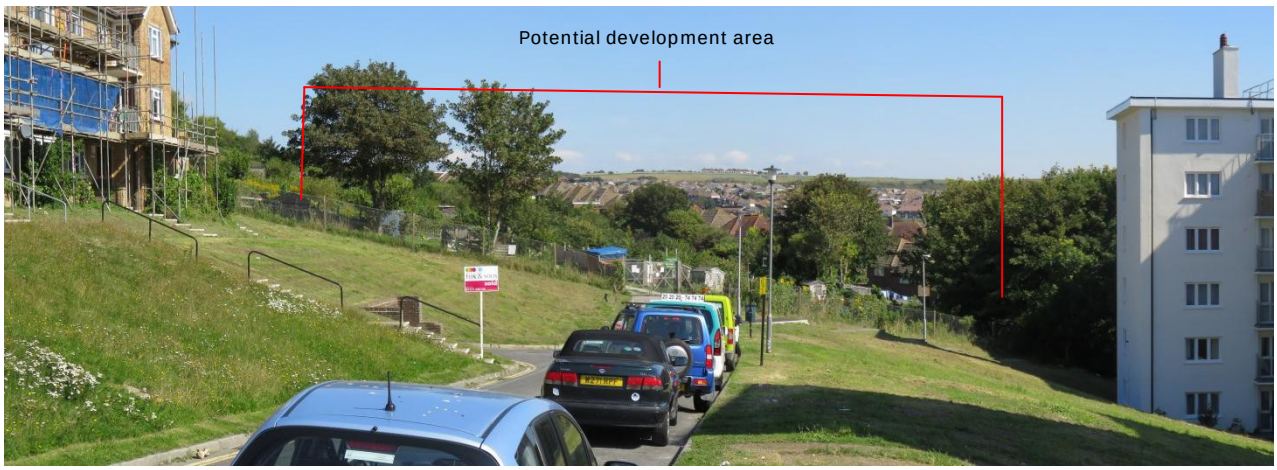
12 L9/E8 (Site 31) – Whitehawk Hill: Landscape and Ecology Assessment

Background

Study Area	**L9/E8**	Location	Whitehawk Hill
Site	31 – Land east of Whitehawk Hill Road		
Study Area Overview			
This Study Area comprises allotments on the eastern slopes of Whitehawk Hill, bounded by residential development to the south and east, the Whitehawk Hill Road byway along the ridge-top to the west and an area of grassland (part of a local nature reserve) and Manor Hill to the north. The area suggested in the 2014 UFA as having potential for housing development is on the lower, south-eastern part of the Study Area – i.e. extending Beresford Road parallel to Maresfield Road.			



Representative Views - local



View 1: looking north-east along Beresford Road (Woodingdean is visible on the distant ridgeline)

View 2: looking south-east from the northern edge of the allotments

Overall Conclusions of the 2014 Assessment
"Housing on the south-eastern slope of the hill already has an adverse effect on views, and allotment structures add clutter. Therefore, there is potential for some medium density development in the south eastern slope of the site extending Beresford Road north. Development further up the slope would increase the adverse impact of new residential development on views from the north and east or on local landscape character. *Development in the southern portion of the site outside the designated area of the scheduled monument has the potential to mitigate any significant negative effects by being sensitive to the setting of the Whitehawk Camp causewayed enclosure.* *The entire site is recognised as public open space and is designated as a Local Nature Reserve; however, the size of the site and the fact that there is an over provision of all types of open space in the area would suggest that a modest amount of development within the site, coupled with appropriate ecological enhancements to the remaining parts of the site, would mitigate any significant impacts of ecology or open space provision.* *An inevitable net loss of allotments on site 31 could be mitigated by expanding the allotments westwards on to the lower slopes of 31b to the west."*

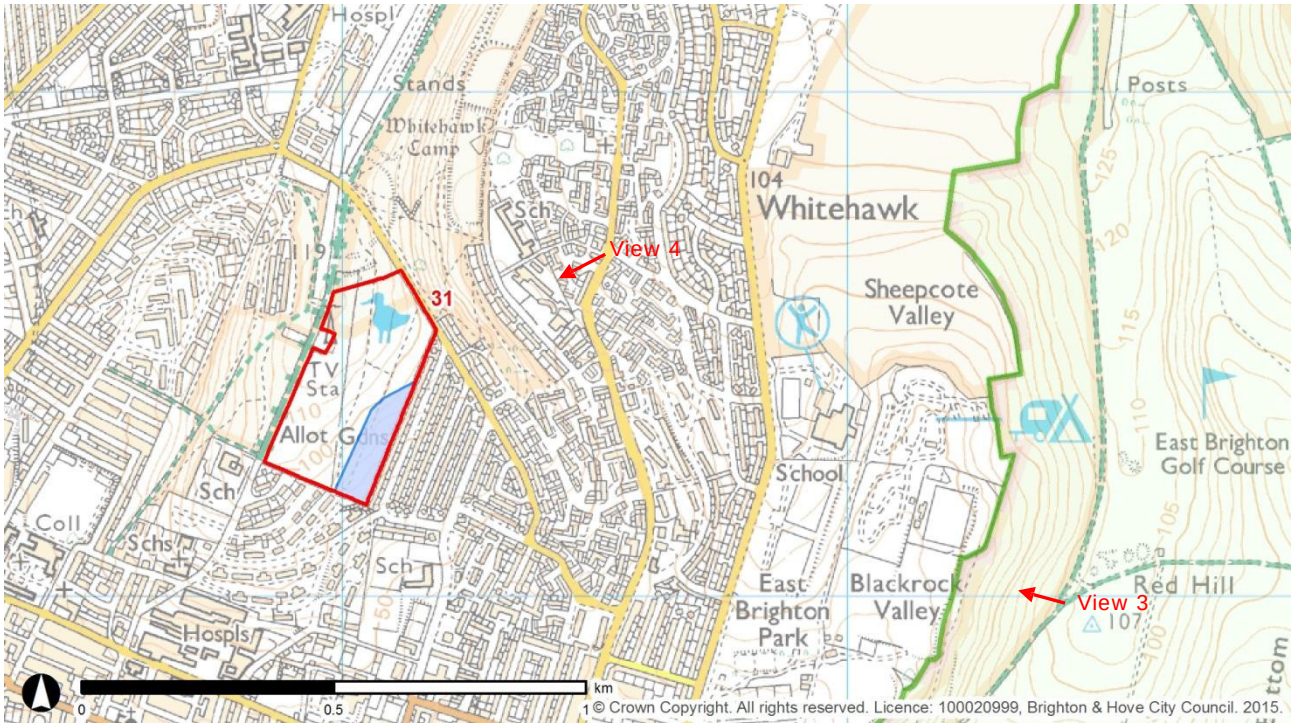
Overall Site Area	8.75ha	Area with development potential	*1ha*	Suitable dwelling density	Medium: 50 per ha	Potential number of dwellings	50

Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	Whitehawk Hill is a distinctive landform but one on which built development has had a marked impact.
Settlement form	The steep, scrub-covered slope between Whitehawk and Brighton Race Course marks a clear western settlement edge further north along the Whitehawk Hill ridge. East of the Study Area development has extended to a similar north-south line, but to the south residential dwellings occupy all of the hillside between the allotments and Whitehawk Hill Road, creating a rather abrupt vertical settlement edge (see View 3). There are a number of six-storey blocks of flats close to the south-eastern corner of the potential development area.
Settlement setting	Whitehawk Hill makes an important contribution to the setting of central

	Brighton to the west, Kemptown to the south and Whitehawk to the east, but it is the undeveloped ridge top which is most important in this respect since, as noted above, the slopes of the hill are already to an extent developed.
SDNP setting	Whitehawk Hill combines with Race Hill and Red Hill to form a horseshoe ridge, the eastern side of which is within the SDNP, so a continuation of the open character of the ridge contributes to landscape character connectivity between the City and the National Park countryside, but the proximity of development on the ridge to the south of the Study Area reduces the importance of this role in this location. There is no significant relationship with the SDNP to the north of the A27, as the northern (Race Hill) section of the ridge blocks views between the two areas.
Visual receptors	The Study Area is prominent in views from public rights of way and open access areas around the ridge, including from Red Hilll in the SDNP (View 3). It is also frequently visible from within Whitehawk (View 4). The allotments are distinct from the open grassland further north on the hill (in the Local Nature Reserve).
Perceptual qualities	Elevation and strong middle-distance views towards the sea front around the Marina and the Red Hill ridge (see View 2) give this area some sense of separation from the urban area, despite the proximity of houses, making it an appealing location for recreation and allotment gardening, although the allotments' perimeter vegetation and fencing obscure views from the ridge top byway.
Cultural & historic value	Whitehawk Hill has a long history of occupation, and the Camp to the north of the allotments is archaeologically important, but as a landscape feature the visible remains are not prominent or unified, having been affected by development of the race course and truncated by roads.

Representative Views – wider area



View 3: looking west across Blackrock Valley and Whitehawk, from public bridleway on Red Hill (in SDNP)

View 4: looking south-west from Whitehawk way near the junction with Crossbush Road

Potential Level of Landscape Effect

Development as indicated in the 2014 UFA, representing a northward extension of Beresford Road on the lower part of the Study Area, would be unlikely to have significant adverse effects on landscape character, due principally to the impact of existing nearby development.

Avoidance, Mitigation and Enhancement Options

The sharp vertical edge to built development at the southern end of Whitehawk Hill (evident in View 3) bears no relation to landform. An edge that followed a contour would be preferable visually, although it would be important to minimise impact on skyline views from the north and east, and there would also be potential to use landscaping to define a more contoured settlement edge. This offers scope to expand the potential development area, as illustrated by the within the **Conclusion**, with no additional adverse effect.

Ecology Assessment

Ecological Baseline

Biological Records

There are no internationally designated sites within or adjacent to the Study Area.

The Study Area lies within the **Whitehawk Hill Local Nature Reserve** (LNR). This is designated given the presence of calcareous grassland and several rare species including chalk-hill blue butterflies

Polyommatus coridon.

Records of protected and notable species identified within the Study Area included:

- Small heath;
- Common lizard; and
- Weasel's-snout.

Habitat Description (see Figure 12.1)

Allotments

The majority of the Study Area comprised active allotments. These formed a mosaic of habitats including areas of scrub and hedgerows, which were noted around the periphery of the Site, and also in between plots areas; bare ground both within un-cultivated beds and where access paths had been created; and lines of and scattered trees. Numerous sheds and greenhouses were also present within the allotments.

Semi-Improved Neutral Grassland

Semi-improved neutral grassland was noted in the north of the Study Area and was used as an informal area of open space. The grassland for the most part had a long, thatchy structure, however several short-mown paths were evident throughout. The grassland supported abundant perennial rye-grass, Yorkshire fog and cock's-foot; locally abundant yellow vetchling, white dead-nettle, tansy and heath bedstraw; frequent false oat-grass, common ragwort, ladies bedstraw and ribwort plantain; occasional yarrow, red bartsia, red clover, birds-foot trefoil, creeping thistle and common nettle. Tall meliot and broad everlasting pea were present but rare. Although the LNR designation cited the presence of calcareous grassland, the species recorded within the Study Area were not particularly characteristic of this habitat type.

Fauna

Potential was noted for the following protected or notable species to be present within the Study Area:

- Nesting birds – associated with scrub and trees throughout the allotments.
- Reptiles – associated with grassland habitats, and the allotments.
- Badgers – Opportunities for sett building within the Study Area are limited given the lack of woodland within the Study Area, and the high levels of disturbance from recreational use. If badgers have established setts in the wider area, the Study Area provides potential foraging habitat.
- Invertebrates – the grassland habitat to the north of the Study Area may provide value for invertebrates, including notable species.
- Bats – the habitat mosaic is likely to provide a valuable foraging resource for bats, whilst trees within the Study Area may provide opportunities for bats to roost.
- GCN – the Study Area provides suitable habitat for GCN, whilst ponds within the allotments may also provide potential aquatic habitat.

Dormice are highly unlikely to be present within the Study Area given the lack of suitable habitat.

Ecological Appraisal

Designated Sites	The Study Area is located within the Whitehawk Hill LNR which is designated on account of species rich grassland habitat and notable invertebrate assemblages. Although the potential development area is located within the southern part of this designation (and would therefore result in loss of LNR), this area supports allotments and therefore does not appear to contribute to the reason for designation of the LNR. There is also the potential for development to result in other impacts on the LNR, in particular as a result of increased recreational pressure given an increase in the local population. Contamination of notable habitats during works would be unlikely given the

	retention of large a large area of the allotments between the potential development area and grassland habitats for which the LNR is designated.
Habitats	The Study Area supports parks and gardens habitat (allotments) which is recognised as a priority habitat in the The Brighton & Hove LBAP. Impacts on this habitat include those listed for designated sites, above. Development of the potential development area would therefore result in loss of this BAP habitat, and the habitat mosaic it supports.
Species	Without detailed ecologial surveys, it is not possible to confirm the value of the Study Area for notable and protected species, although there is potential for such species to be present throughout the majority of the Study Area. The potential development area itself has the potential to support notable and/or protected species. Key constraints may include: • GCN and reptile populations within the allotment; • bats which may be roosting within allotment trees or using the potential development area for foraging and commuting. • Badger may also use the allotments for foraging if present within the wider area, however the presence of setts within the potential developmet area is considered unlikely, as discussed above. • Nesting birds could also be affected by any removal of scrub or trees.
Ecological Avoidance, Mitigation and Enhancement Options	
Further surveys Detailed development proposals must be informed by an updated Extended Phase 1 Habitat Survey and species surveys to ensure that potential impacts are identified and appropriate mitigation developed. In particular this would include surveys for reptiles and bats. Surveys should also seek to identify any waterbodies within the allotments, with GCN surveys required if suitable waterbodies are identified. **Avoidance, Mitigation and Enhancement Options** Development within the potential development area as shown will result in habitat loss within the LNR, namely of allotments and the habitat mosaic these support. Given that allotments support man-made habitats subject to regular disturbance, and that other such areas will remain unaffected, mitigation could include the incorporation of green infrastructure within the development to provide opportunities for wildlife, such as green roofs or walls, wildlife-friendly planting (native species or those providing known benefits to widlife, such as species of benefit for pollinators), and incorporation of nesting/roosting opportunities for birds and bats. In addition, the enhancement of habitats within the LNR may be required to increase the robustness of habitats to any increase in recreational pressure. This could include, for example, grassland management within the northern part of the Study Area to enhance habitat and floristic diversity of the grassland, or improvements to footpaths to help contain recreational pressure. If notable or protected species are confirmed as present, mitigation requirements may include: • Timing of works to avoid impacts on nesting birds • Measures to prevent harm to reptiles and GCN if suitable waterbodies are present, such as translocation from the potential development area to a receptor Area which has been suitably enhanced to support the translocated population (ideally within the wider Study Area) • If bat roosts are found and cannot be retained a suitable suite of suitable mitigation measures including potentially provision of replacement roosts and proceeding with works under a Natural England European Protected Species licence; • Enhancement of habitat outside the potential development area to provide additional opportunities for species impacted by the proposals, such as invertebrates • Sensitive design of any external lighting to minimise lightspill to adjacent habitats	

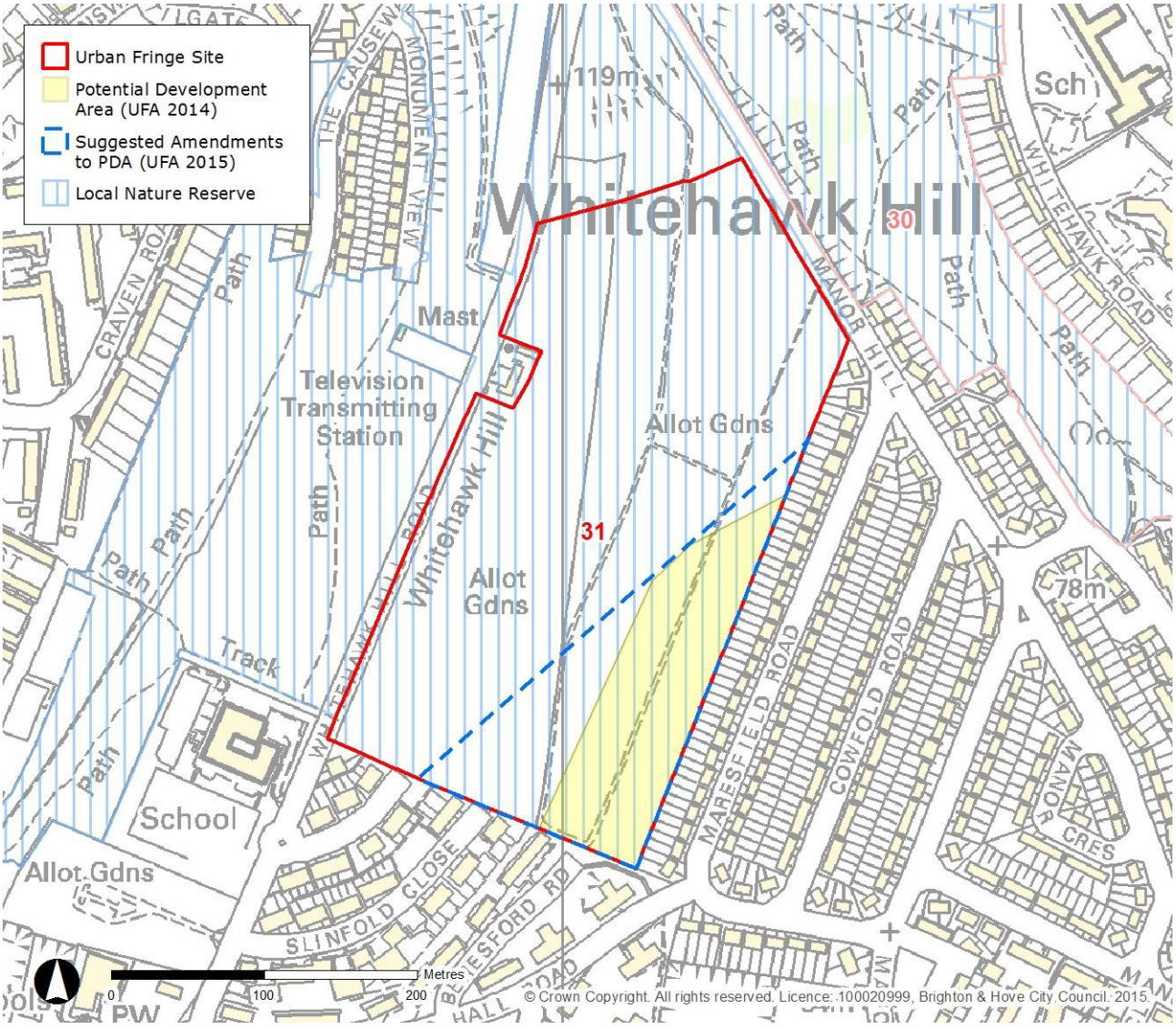
Conclusion

Overall Conculsion

In conclusion, it is considered that housing can be delivered within Study Area L9/E8 without significant impacts on landscape and ecology, on the assumption that:

- Green infrastructure within the development is designed to provide replacement opportunities for wildlife.
- Incorporation of robust mitigation measures to address any impacts on protected species.
- Potential recreational impacts on the LNR can be addressed through habitat enhancement within the LNR.

There is potential to adjust and increase the potential development area to better reflect the landform without a significant increase in the potential for landscape and ecological impacts, as illustrated below.



Brighton & Hove Urban Fringe Assessment

Figure 12.1 Phase 1 Habitat Survey Map
Study Area L9/E8

- Urban Fringe Site
- Potential Development Area
- Target note
- Defunct hedge - species-poor
- Calcareous grassland - unimproved
- Allotments

Map Scale @ A3: 1:2,200

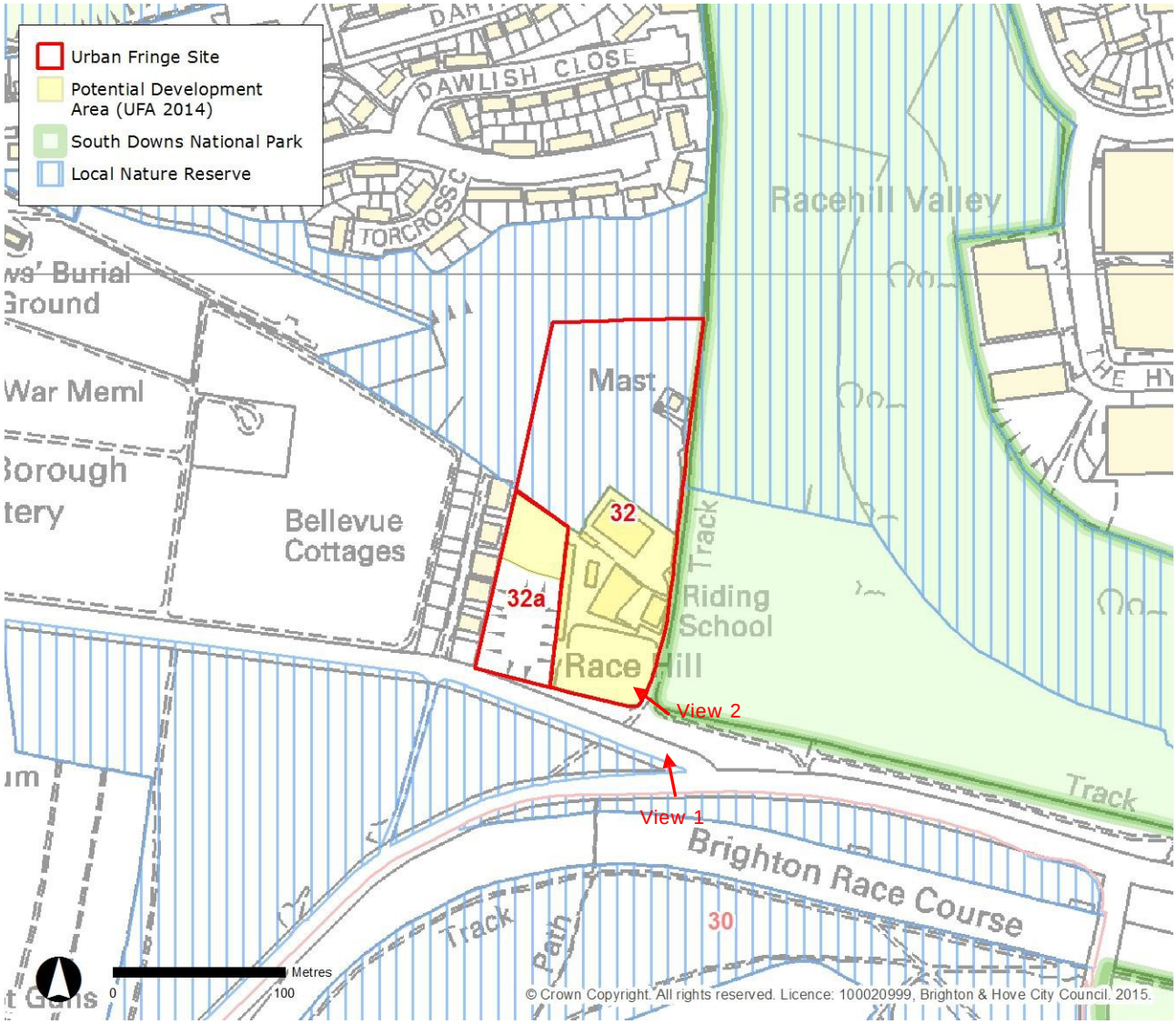
LUC

CB:JH EB:Johnny_H LUCLON 6555-01_007_Phase_1 12/11/2015 Source: LUC

13 L10/E9 (Site 32 and 32a) – Race Hill: Landscape and Ecology Assessment

Background

Study Area	**L10/E9**	Location	Race Hill
Sites	32 – Land at South Downs Riding School		
	32a – Reservoir Site		
Study Area Overview			
A cluster of barns, stable blocks and other buildings associated with use as a riding school, in a hilltop location with open paddock land and a transmitter mast to the north. The Study Area also includes a covered reservoir and adjacent grassland, bounded to the west by a row of houses (Bellevue Cottages). The Site fronts on to Bear Road to the south, and has a public footpath along its eastern edge, leading down to Bevendean. The area suggested in the 2014 UFA as having potential for housing development includes all of the area currently occupied by buildings/structures, together with the square of grassland to the north of the covered reservoir and a paddock fronting onto Bear Road.			



Representative Views - local

View 1: looking north from Warren Road

View 2: looking west from public footpath on eastern edge of Study Area

Overall Conclusions of the 2014 Assessment

Site 32: "The southern developed portion of the site is suitable for redevelopment with low density residential development. This portion of the site sits outside the proposed Local Nature Reserve in the northern half of the site and is not recognised as open space.

Indeed, the redevelopment and landscaping of the hilltop could have minor positive effects on the wider landscape character of the area, potentially enabling the northern slope to be managed as a more natural open downland area with ecological benefits to the potential Local Nature Reserve."

Site 32a: "The site has potential to accommodate a small amount of low density residential development to the north of the covered reservoir. While an increase in built development on this prominent hilltop would be undesirable, in combination with sensitive redevelopment of Site 32 to the east the overall impacts on wider landscape character could be neutral, even positive.

There are no significant ecological, heritage or other environmental issues on site, and the site is not recognised as containing any open spaces."

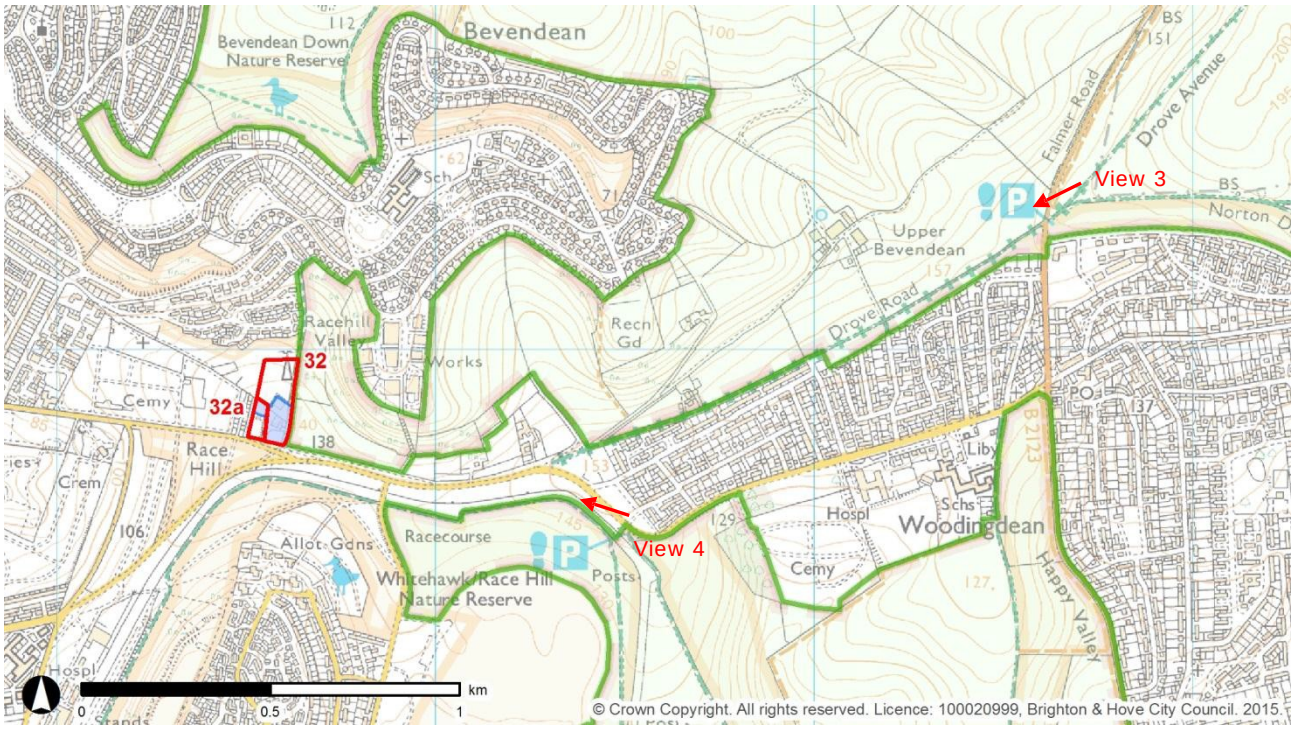
Overall Site Area	2.1ha	Area with development potential	0.95ha	Suitable dwelling density	Low: 25 per ha	Potential number of dwellings	25

Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	The Study Area occupies the summit of Race Hill, a prominent location, but there is no particular sensitivity associated with its existing equestrian buildings and associated paddocks.
Settlement form	The Study Area is detached from residential development other than the Bellevue Cottages row of dwellings. Its buildings are less than 150m from housing to the north in Bevendean, but the difference in elevation creates a clear separation. Industrial units on The Hyde are around 200m to the east but on considerably lower ground and separated by woodland. The large, tree-fringed Borough Cemetery lies between the Study Area and the larger urban area to the west. The collection of stables and barns has the form of a farmstead.
Settlement setting	The Study Area forms a skyline in some settlement views – e.g. from parts of Bevendean – but tree cover and topography limit its function in this respect.

SDNP setting	The land immediately to the east of the Study Area, sloping down into Race Hill Valley and gradually rising eastwards towards Newmarket Hill, lies within the SDNP. The surburb of Bevendean is prominent in this context, and also in views from Falmer Hill and the slopes of Hollingbury to the north, but the form of development on Race Hill and on the nearby hillcrest occupied by Ingleside Stables is distinctly different to housing in the coombe, and adjacent tree cover diminishes its impact on character. The location of the Study Area on the northern side of a fairly flat hill top limits its visibility in the context of views from the south, where the horseshoe ridge between Whitehawk Hill and Red Hill is a prominent landform on the National Park fringe, but approaching Brighton from the east along the ridge top Warren Road the Study Area forms part of a largely undeveloped skyline.
Visual receptors	The hilltop is prominent in SDNP views, as noted above, where despite its existing built development it is viewed in an open context, isolated from main areas of settlement and set in a well treed location. The transmitter mast on the north side of the hill can be seen as a negative feature in landscape terms, but it also marks it out as a clearly identifiable location in longer views. The adjacent public footpath (to/from Bevendean) and busy ridge top roads, Bear Road and Warren Road, provide passing views.
Perceptual qualities	The adjacent roads are well used, but this area has a strong visual relationship with the SDNP and a sense of separation from the City centre and suburbs such as Bevendean.
Cultural & historic value	Historically the hilltop was the site of a corn mill, with Bellevue Cottages being built in the late 19th century and the buildings within the Study Area following later in the 20th century. It has no cultural or historic value associated with its current use or appearance.

Representative Views – wider area



View 3: looking south-west from Drove Avenue byway near Falmer Road (in SDNP)

View 4: looking west from grassland between Warren Road and the Racecourse, near edge of Woodingdean

Potential Level of Landscape Effect

The key consideration in any development in this location would be the character and visual prominence of new buildings. The potential development area has a cluster of buildings already, and an adjacent row of houses, so despite its elevated location development would not in itself represent a significant landscape change; however, the character of any such development would be an important consideration. Any development which could be considered to represent a suburbanising influence could have a significant adverse effect on landscape character. It would be important to retain a separate hilltop character and to break up the massing of any new buildings with existing and new planting.

Existing buildings are set some distance back from the road, so development in the paddock adjacent to Bear Road would be more likely to have a significant adverse impact on the character of the ridge top.

Avoidance, Mitigation and Enhancement Options

It is suggested that the potential development area be reduced to exclude the paddock adjacent to Bear Road (as illustrated in the figure within **Conclusion**). In addition landscaping would be required to filter/break up views of new buildings.

Ecological Assessment

Ecological Baseline	
Biological Records There are no internationally designated sites within or adjacent to the Study Area. The northern part of the Study Area comprised part of the **Bevendean Down proposed Local Nature Reserve**. The LNR is designated for its rich chalk grassland, which support species such as Adonis blue butterfly, orchids and hornet robber fly. No records of protected and/or notable species were identified within the Study Area.	
Habitat Description (see Figure 13.1) *Poor Semi-improved Grassland* Poor semi-improved grassland was recorded in areas grazed by horses. The grassland present within the northern part of the Study Area (in the north of Site 32 and comprising the LNR) was particularly heavily grazed and was in dominated by areas of bare ground with frequent species associated with disturbed ground including dock sp., ribwort plantain and occasional pineapple weed. The poor semi-improved grassland in the south of Site 32 had a short sward height but was not grazed as heavily. Species included white clover and ribwort plantain. *Amenity Grassland* Amenity grassland was recorded in the southern part of Site 32a associated with a covered reservoir. This had been recently mown at the time of the survey and it is assumed it is relatively regularly mown as part of maintenance of the reservoir although this appeared to be managed through mowing rather than grazing. Access was restricted to this area, with species such as perennial rye-grass, dandelion, ribwort plantain and bristly ox-tongue viewed through the fence from the south. *Scrub* A small area of dense scrub was recorded on the eastern boundary of the Study Area, adjacent to the horse paddocks in the north. Species included dominant bramble and frequent elder. *Tall Ruderal* Tall ruderal vegetation, dominated by common nettle, was recorded in the east, adjacent to the farm track and south of the horse paddocks in the north of the Study Area. *Buildings and hard standing* Buildings and associated hard standing were located in the centre of the Study Area.	
Fauna Potential was noted for the following protected or notable species to be present within the Study Area: • Bats – given the type of buildings present on the site, including low wooden stables and metal farm buildings, it is unlikely that opportunities are provided for bats to roost. Nesting birds, reptiles, badgers and dormice are unlikely to be present within the Study Area due to a lack of suitable habitats. Great crested newts are unlikely to be present within the Study Area due to the lack of water bodies within 500m of the Study Area (as identified from OS base mapping; further investigation would be required). The habitats did not support features which would be likely to provide opportunities for notable invertebrate species, with low floristic diversity and heavily managed grassland habitats.	
Ecological Appraisal	
Designated Sites	The northern part of the study area comprised part of a pLNR, however the habitats supported within this area of low ecological value comprising heavily grazed horse pasture. However, this area falls outside of the

	potential development area and would remain largely unaffected.
Habitats	Habitats through the site were of low ecological value, with those within the potential development area including poor-semi-improved grassland, bare ground and buildings. Loss of these habitats would not result in a notable impact on the ecology of the wider area.
Species	It is not possible to confirm the value of the Study Area for notable and protected species. However given the habitats present it is highly unlikely that protected and/or notable species would be present and affected by works. The exception may include bats with further consideration required regarding the potential of the buildings to support bat roosts. The buildings may also support nesting birds which could be affected by any demolition works undertaken during the nesting season.

Ecological Avoidance, Mitigation and Enhancement Options

Further surveys

Detailed development proposals must be informed by an updated Extended Phase 1 Habitat Survey to ensure that potential impacts are identified and appropriate mitigation developed. Species surveys would likely be restricted, on the basis of the habitats present at the time of the survey, to detailed assessment of buildings for bat roost potential, and detailed bat surveys should potential be identified.

Avoidance, Mitigation and Enhancement Options

If bat roosts are found in buildings and cannot be retained mitigation measures will be required to address loss of roosts, such as the provision of replacement roosts, sensitive timing of works and exclusion of bats from roosts prior to demolition. Mitigation works would need to be undertaken under a Natural England European Protected Species licence.

In addition, demolition works may need to consider the potential for nesting birds, with works timed to avoid impacts on nesting birds.

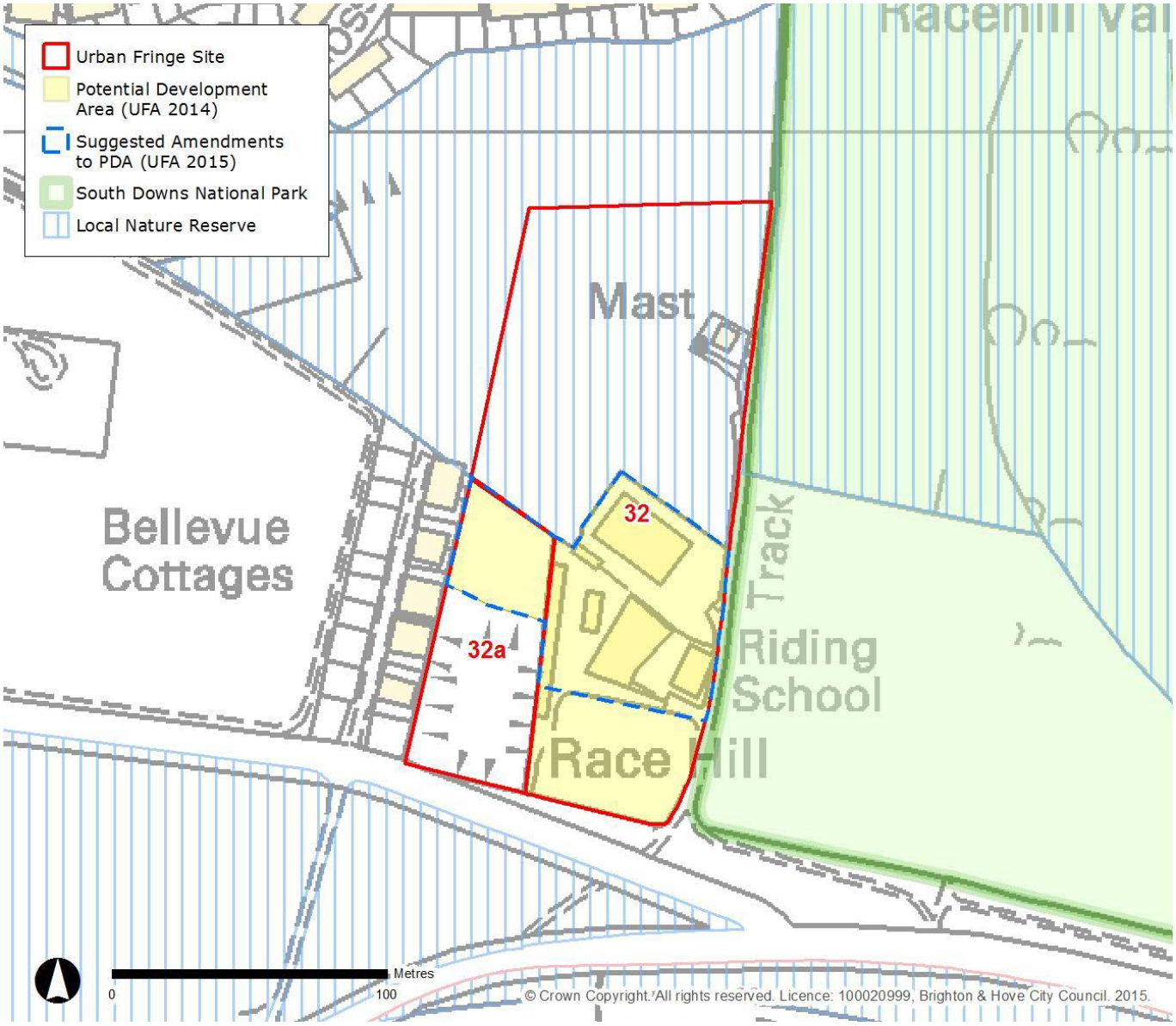
Development at this location may otherwise facilitate ecological enhancement of habitats in the wider area, for example with financial contributions to support the enhanced management of habitats in the north of the Study Area and the LNR.

Conclusion

Overall Conclusion

In conclusion, it is considered that housing can be delivered across the potential development area within Study Area L10/E9 without significant impacts on landscape and ecology, on the assumption that:

- Development is in keeping with local character, avoiding any suburbanising influence
- Development includes planting and green infrastructure
- The open ground adjacent to Bear Road is removed from the potential development area. This may have an impact on development yield. This is illustrated in the below figure.


Urban Fringe Site
Potential Development Area (UFA 2014)
Suggested Amendments to PDA (UFA 2015)
South Downs National Park
Local Nature Reserve
Mast
Bellevue Cottages
32
32a
Track
Riding School
Race Hill
Metres
0
100
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Brighton & Hove Urban Fringe Assessment

Figure 13.1 Phase 1 Habitat Survey Map
Study Area L10/E9

- Urban Fringe Site
- Potential Development Area
- Target note
- Scrub - dense/continuous
- Neutral grassland - semi-improved
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Cultivated/disturbed land - amenity grassland
- Buildings
- Bare ground

Map Scale @ A3: 1:1,000

LUC

0 40 80 Metres

CB:JH EB:Johnny_H LUCLON 6555-01_007_Phase_1 12/11/2015 Source: LUC