

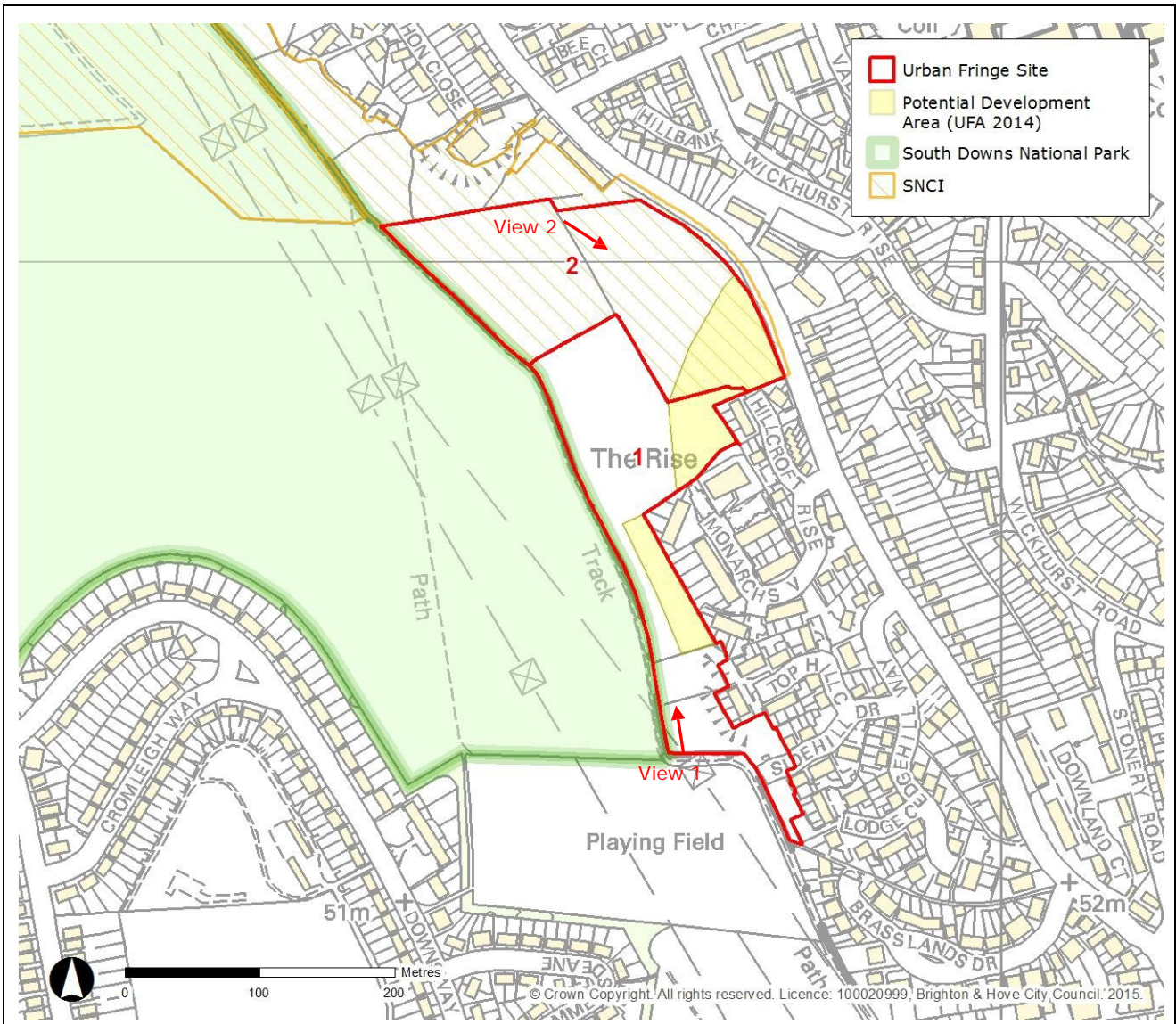
3 Findings and Assessment

- 3.1 The following sections present the findings of the landscape and/or ecology assessments for each of the Study Areas, with findings presented as a series of proformas which can be extracted as stand-alone documents.
- 3.2 Phase 1 Habitat maps for each study area subject to ecological assessment are provided within each Section, whilst target notes are provided in **Appendix 2**.

4 L1/E1 (Site 1 and 2) - Portslade: Landscape and Ecology Assessment

Background

Study Area	L1/E1	Location	Portslade
Sites	1 – Land at Oakdene, Southwick Hill,		
	2 – Land west of Mile Oak Road, Portslade		
Study Area Overview			
<p>Site 1 is an area of grassland and woodland located on the south-eastern side of Southwick Hill, used for recreation (principally dog walking) with access to the SDNP. Housing and a nursery on Monarchs View and Hillcroft Rise border the Site to the east, and a hedgerow along the western side marks the edge of the SDNP. To the north, Site 2 consists of grazed paddocks, bounded by a woodland belt to the north and by hedgerows alongside the SDNP to the west and Mile Oak Road to the east.</p> <p>Three areas were suggested in the 2014 UFA as having potential for housing development: 0.5ha in the central part of Site 1, just to the north of the woodland and west of Monarchs View, 0.5 ha to the north of Monarchs View, also in Site 1, and 0.5ha in Site 2 to the north of Hillcroft Rise.</p>			



Representative Views - local



View 1: looking north across the potential development area east of Monarchs View in Site 1



View 2: looking east across potential development area in Site 2 (houses on Hillcroft Rise lie beyond)

Overall Conclusions of the 2014 Assessment

Site 1: "The site has potential for relatively low density residential development in two small areas of the site: one approximately 0.5ha to the west of Monarchs View (where existing houses already break the ridge line in views from Foredown) and another approximately 0.5ha to the north of the nursery (i.e. a continuation of Monarchs View).

These two portions of the site contain no ecological or open space designations and are relatively sheltered by the existing residential development and the hedge-lined ridge along the western edge of the site. This would limit the wider landscape impact of residential development in the site on the National Park."

Site 2: Subject to suitable ecological mitigation to protect the SNCI and associated notable / protected species, including Red Star Thistle, the south eastern corner of the site could be suitable for residential development at a density consistent with the surrounding residential streets, and in line with any extension to Monarchs View in Site 1 to the south.

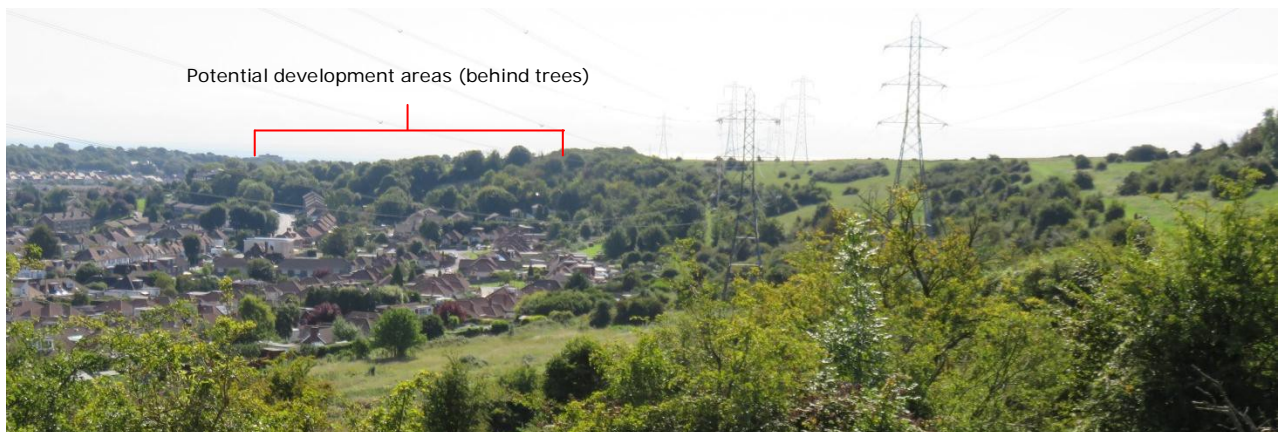
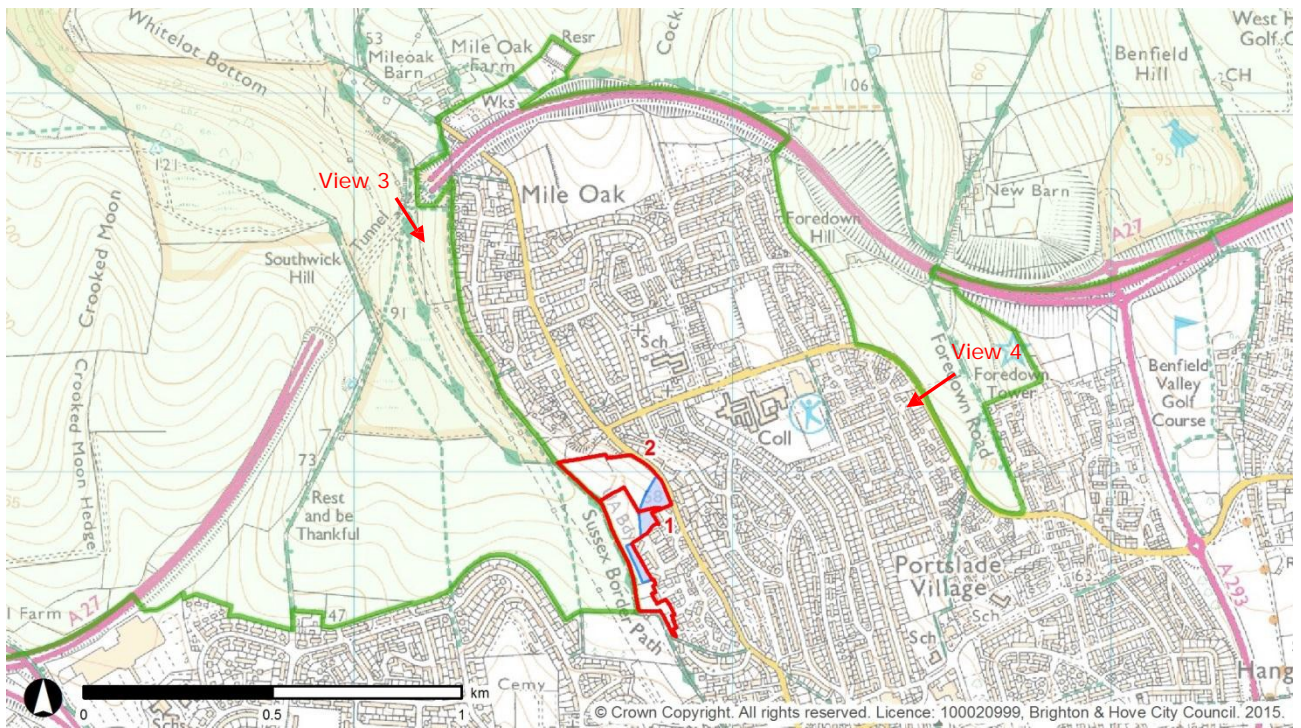
Overall Site Area	4.75ha	Area with development potential	1.5ha	Suitable dwelling density	Low: 25 per ha	Potential number of dwellings	37
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Landscape Sensitivity Assessment

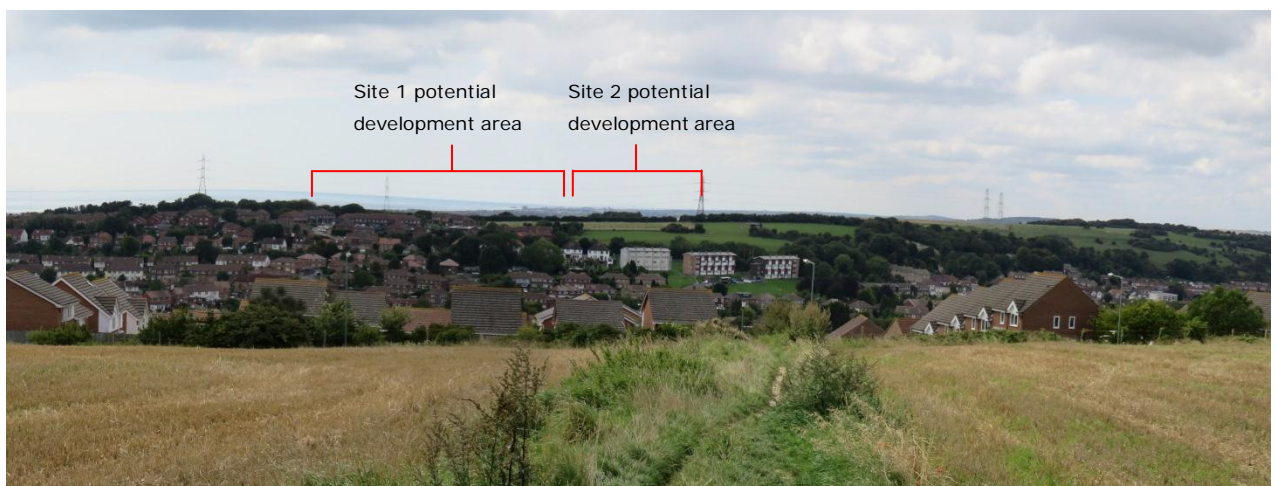
Landscape Sensitivity Assessment	
Physical character	Evenly sloping ground on a south-eastern spur of Southwick Hill. Site 2 and the western part of Site 1 rise fairly steeply up to the east, whilst the southern end of Site 1 slopes more gently up to the north. The houses towards the top of Monarchs View sit on the crest of the spur. The potential development areas are open grassland but are contained to the north and south by the dense scrub vegetation which is typical of steeper chalk slopes around Brighton.
Settlement form	Site 2 is the only location to the west of Mile Oak Road that has not been developed, and the Monarchs View and Hillcroft Rise bring the settlement edge up to the boundary of both sites. The sites therefore form a distinct gap in the settlement form, but one which in the upper parts of the area reflects the elevated landform in this location. The belt of scrub on the upper eastern slope of Southwick Hill which extends in an arm around the settlement marks a distinct boundary to the urban area, but this scrub belt runs along the northern edge of Site 2 and stops at Mile Oak Road, leaving Site 1 and the upper part of Site 2 more exposed.

Settlement setting	Localised but regular views of downland are an important characteristic of the setting of Portslade/Mile Oak, but views of the slopes below the SDNP boundary are localised and limited from within the settlement area.
SDNP setting	The elevation of the Sites, and their location in relation to the belt of scrub mentioned above, suggests a greater connection with the SDNP but this is limited by the presence of the somewhat uncharacteristic hedgerow along the western edge of the Sites. The orientation of a double line of pylons cutting across the spur of land en route to the power station at Shoreham also competes as a boundary feature, detracting from the relationship between the Study Area and the wider SDNP.
Visual receptors	<p>High ground within the SDNP to the north and east provides views into the areas of development potential. Viewed from the north (e.g. on the tracks on the east side of Southwick Hill – see View 3) the Study Area is visible as open, green space extending into the scrub belt, so development would appear to break out of the existing settlement form to an extent, and could intrude on sea views. However, distance diminishes the significance of this effect, so there is little impact on views from further into the SDNP (e.g. Cockroost Hill), and there are a limited number of viewpoints from Southwick Hill in which the Study Area is not obscured by vegetation. Viewed from the east (e.g. Foredown – View 4), there is more of a sense that the Study Area lies within the settled area, and that development would be a continuation of the existing housing line. It is noted that development close to the western edge of Site 1 would appear above the hedgerow in seaward views from the lower slopes Southwick Hill.</p> <p>Development within the potential development areas would have a limited impact on views from within Site 1 due to the proximity of existing housing and the retention of lines of sight to the SDNP downland to the north and east.</p>
Perceptual qualities	The elevation of the upper part of Site 1 creates a degree of separation from the urban area, but this location still feels more related to the City than to the open countryside beyond the hedgerow. The northern parts of Sites 1 and 2, away from Monarchs View, feel more rural but the lower slopes feel increasingly part of the urban area.
Cultural & historic value	This location has no particular cultural or historic associations.

Representative Views – wider area



View 3: from open access area on Southwick Hill (in SDNP)



View 4: from public right of way on Foredown, east of the Sites (in SDNP)

Potential Level of Landscape Effect

Development at the southern end of Site 2, as indicated in the Overall Conclusions of the 2014 Assessment, would be likely to have only minor adverse effects on landscape character and views, and would be unlikely to be sufficient to make development unacceptable as long as built development avoided the higher parts of the area. Development in Site 1 would be expected to have a greater adverse effect due to encroachment on views from the SDNP; in the context of existing nearby development it would not represent a step change in effects on landscape, but dependent on the nature of development proposals there would be some potential for significant adverse landscape and/or visual effects.

Avoidance, Mitigation and Enhancement Options

Development within the two potential development areas within Site 1 (to the north and west of Monarchs View) would potentially result in significant landscape and visual effects. However, it is considered that the omission of the area to the west of Monarchs View would reduce the likelihood of significant adverse effects. Scrub/hedgerow planting/encouragement along the western edge of the Study Area would reduce the effect of development on settlement form. Instances of houses appearing against the skyline in views from the SDNP should be minimised. Avoiding development in the south-western part of Site 1 would assist with this.

Built development in Site 2 would have less effect if it was restricted to the eastern half of this lower field, alongside Mile Oak Road, but there is scope to increase the number of dwellings without significantly increasing the level of landscape or visual impact by extending the PDA to the north alongside Mile Oak Road as far as the northern boundary (see figure under **Conclusion**).

Ecological Assessment

Ecological Baseline

Biological Records

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

The Study Area partly sits within **Oakdene, Southwick Hill SNCI**, which is designated for supporting relict downland communities and red star thistle.

Protected and/or notable species records identified within the Study Area:

- Red Star Thistle

The eastern part of Site 2 is identified as lowland calcareous grassland within biological records.

Habitat Description (see Figure 4.1)

Semi-improved Neutral Grassland

Semi-improved neutral grassland was recorded in a field in the centre/south west of the Study Area, in Site 1. The grassland here was rough, with a relatively tall sward height, given a lack of recent management or grazing. Species present included dominant red fescue, and abundant cock's-foot, Timothy and wall barley. There was frequent common agrimony and ribwort plantain, with occasional creeping thistle and common knapweed.

The northern and eastern parts of the Study Area (Site 2) comprised a series of fields which supported heavily grazed, short sward semi-improved grassland with low species diversity recorded including red fescue, common daisy, ribwort plantain and white clover. Red star thistle was noted in close proximity to the potential development area. These fields could not be accessed directly due to fencing and the presence of horses, but the habitats were viewed from adjacent fields. Therefore, given lack of direct access and records suggesting these areas support calcareous grassland, this area has been mapped as semi-improved grassland.

Semi-natural Broadleaved Woodland

Semi-natural broadleaved woodland was noted in the south of the Study Area (Site 1). The canopy layer comprised mostly semi-mature sycamore, ash and horse chestnut, whilst the shrub layer supported abundant hawthorn, elder, bramble and holly. The ground flora was dominated by ivy and common nettle.

Scrub

Scattered scrub was noted within an area of tall ruderal habitat to the east of the Study Area (north east of Site 1, near Hilcroft) and was dominated by bramble, abundant hazel, hawthorn, ash, rowan and elder. Areas of dense scrub were also located in the north east of the Study Area (Site 1) although these could not be directly accessed.

Tall Ruderal Communities

Tall vegetation was noted in the east of the Study Area. The vegetation was dominated by common nettle with scattered scrub (noted above). An informal path had been created through the vegetation to provide access to nearby housing.

Hedges and Treelines

Species poor hedgerows were noted on the east and west boundaries of the Study Area. Species included abundant hawthorn and elder, with the roadside verge to the east of the hedgerow along Mile Oak Road dominated by regenerating ash.

Fauna

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

- Reptiles – associated with the rough grassland field, the tall ruderal habitats with scattered scrub, and edge habitats. These habitats provide opportunities for common and widespread reptile species (particularly common lizard and slow worm) to forage and shelter.
- Badgers – potential foraging habitat provided throughout the Study Area, although the short grazed fields were less suitable, and the woodland in particular providing optimal opportunities for sett building.
- Bats – the open grassland, scrub and woodland provide potential foraging habitat. It is unlikely that there will be roosting opportunities within the semi-mature woodland.
- Invertebrates – the grassland and edge habitats provide potentially valuable resources for invertebrates. Given the presence of grazing animals, and the occurrence of this species in the wider vicinity, there is potential for the hornet robberfly to be present (a Species of Principal Importance under Section 41 of the NERC Act).

Ground nesting birds are unlikely to nest within the Study Area due to the high level of disturbance caused by recreational access and horse grazing. Great crested newts are unlikely to be present within the Study Area due to the lack of waterbodies within 500m of the site (as identified from OS base

mapping; further investigation would be required). Dormice are also unlikely to be present within the Study Area given the isolation of the woodland and hedgerows from larger areas of suitable habitat.	
Ecological Appraisal	
Designated Sites	<p>Part of the Study Area is designated at the local level as the Oakdene, Southwick Hill SNCI due to the presence of relict downland communities and red star thistle. This species was confirmed as present during the survey.</p> <p>The potential development area in the east of the Study Area (Site 2) would result in the loss of a relatively small area of the horse grazed paddock within the SNCI, including potentially red star thistle plants. However, it is assumed that this species is also present in areas outside of the potential development area. Retained areas of the SNCI may be also impacted by contamination during construction, and recreational pressure as a result of the increased local residential population.</p>
Habitats	<p>The Study Area supported mostly common and widespread habitats, subject to disturbance as a result of horse grazing and recreational access. These were mostly of relatively low value in their own right, although the habitat mosaic across the Study Area is likely to be of some value at the local level for wildlife. However, the eastern part of Site 2, including the potential development area, has been identified as calcareous grassland within biological records which is recognised as a priority habitat in the The Brighton & Hove Local Biodiversity Action Plan, and as habitats of principal importance (NERC Act,2006).</p> <p>Hedgerows are recognised as a priority habitat in the The Brighton & Hove Local Biodiversity Action Plan, and as habitats of principal importance (NERC Act,2006), although those present in the Study Area were identified as species-poor and of relatively low value, and were also located outside the potential development area.</p> <p>Excluding the above grassland, other habitats within the potential development areas comprised areas of relatively low value including rough grassland (Site 1) and tall ruderal/scattered scrub (Site 2), with areas of these habitats also located in the wider Study Area which would not be directly affected by development.</p>
Species	<p>It is not possible to confirm the value of the Study Area for notable and protected species in the absence of detailed surveys, although there is potential for such species to be present throughout the majority of the Study Area, given the mosaic of grassland, woodland and scrub habitats of value to a wide range of species.</p> <p>The potential development areas themselves are likely to be of relatively low value to the majority of notable and/or protected species. Key constraints include the presence of notable plant species, including red star thistle within the horse grazed paddocks; and the potential presence of reptiles within the rough grassland (Site 1) and tall ruderal and scattered scrub habitats (Site 2).</p> <p>Nesting birds could also be affected by any removal of trees and scattered scrub. Lighting of adjacent habitats also has the potential to affect bats, which may be using woodland, scrub and grassland habitats for foraging, roosting or commuting, however it is unlikely roosting bats would be directly affected given the absence of mature trees within the potential development areas.</p> <p>Notable invertebrate species may also be present within the site, particularly associated with grassland habitats.</p>

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 would include detailed surveys for red star thistle to assess the potential loss of individual plants, the population within the wider Study Area, and the potential extent of loss of this species. In addition, more detailed vegetation surveys, including National Vegetation Classification (NVC) surveys, would be required to classify and value the grassland communities present. This is required given the recorded presence of calcareous grassland in the east of Site 2 which could not be fully accessed during this study. Further detailed surveys for reptiles, badgers and invertebrates may also be required to determine the presence of these species within the Study Area.

Avoidance, Mitigation and Enhancement Options

The potential development areas are considered appropriate given, on the whole, the relatively low ecological value of these areas and the potential for mitigation of impacts.

Potential impacts on the SNCI, including partial loss, would require mitigation. This should also be informed by the above NVC surveys. If the presence of calcareous grassland is confirmed this would require further mitigation. This may include the enhancement of retained habitats within the SNCI and also other habitats in the Study Area to complement the SNCI, for example through strengthening the north-south hedgerow along the west of the Study Area to provide habitat for species and improved connectivity, and should seek to restore or create calcareous grassland (even if presence is not confirmed). Mitigation measures will need to ensure retention of red star thistle within the Study Area (see below), and should also aim to increase the robustness of habitats to any increase in recreational pressure.

Any planting must also be informed by detailed ecological surveys to ensure higher value habitats are not adversely affected, in particular with the retention of open grassland habitat and areas of calcareous/potential calcareous grassland.

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.

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

- Timing of works to avoid impacts on nesting birds
- If red star thistle is present and cannot be retained, suitable mitigation measures may include seed collection, translocation of plants and enhancement/management of retained habitats for this species.
- 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 or near vicinity);
- Measures to prevent impacts on badger including sensitive timing of works in the vicinity of any setts recorded (and potentially under NE licence) and implementation of 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:

- 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 wildlife, such as species of benefit for pollinators), and incorporation of nesting/roosting opportunities for birds and bats.

Conclusion

Overall Conclusion

In conclusion, it is considered that housing can be delivered at parts of the potential development areas within Study Area L1/E1 with reduced potential for significant impacts on landscape and ecology, on the assumption that:

- Within Site 1, the potential development area west of Monarchs View is omitted (retaining the area north of Monarchs View). Removing all development from Site 1 would further reduce the potential for adverse landscape impacts.
- Built development is limited to the eastern part of the potential development area alongside Mile Oak Road.
- Habitat is enhanced within the SNCI and across the Study Area to include localised hedgerow/scrub planting along the western boundary, but with retention and enhancement of open grassland habitats (particularly to allow retention of red star thistle as below and restoration of calcareous grassland).
- The retention of red star thistle can be assured within the remainder of the Study Area.
- Incorporation of robust mitigation measures to address any impacts on protected species.

Subject to detailed vegetation surveys to confirm the value of grassland and potential presence of calcareous grassland, and the development of robust mitigation proposals to address increased impacts on the SNCI, it may be possible to extend the potential development area within Site 2 to the north alongside Mile Oak Road.

Recommended amendments to the potential development areas are indicated below, subject to the above precautions.

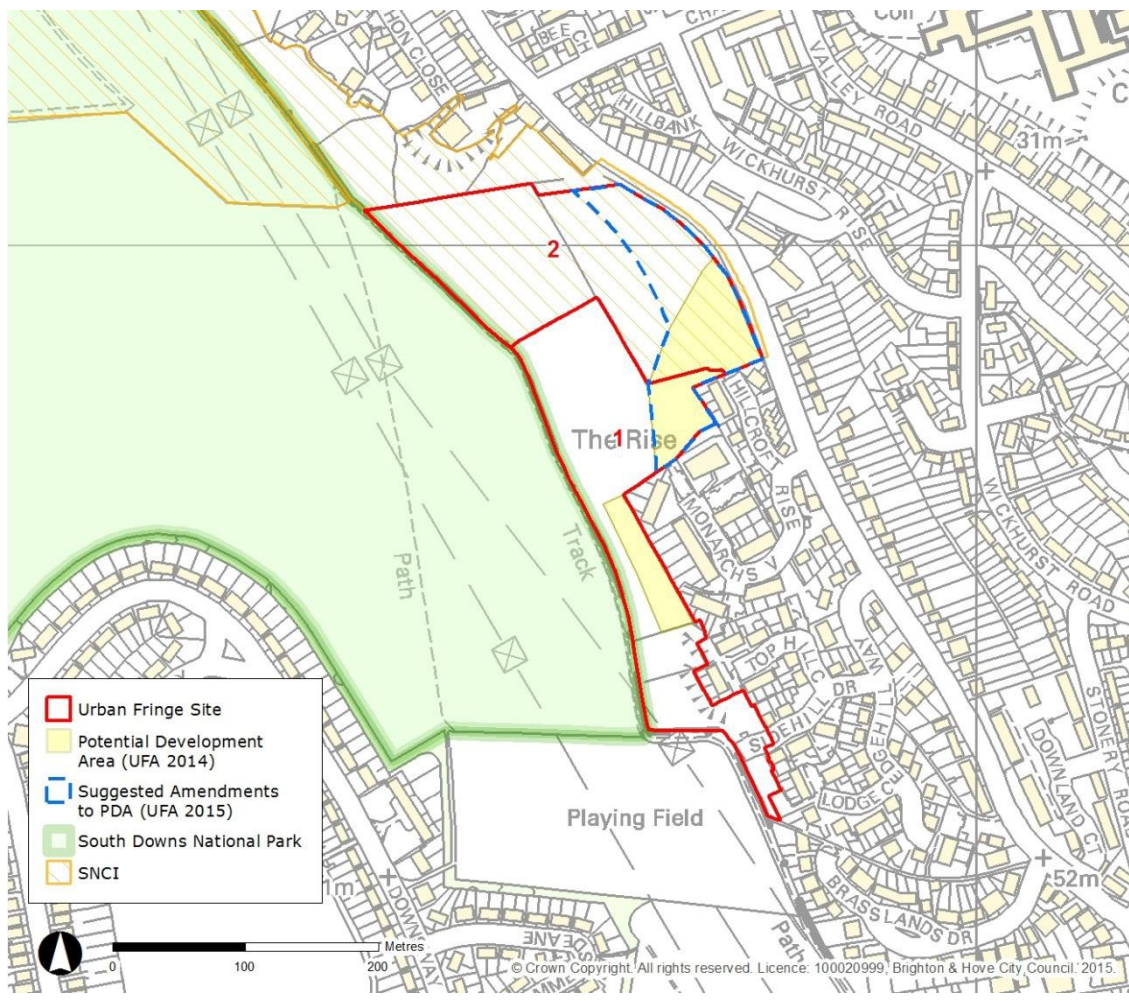
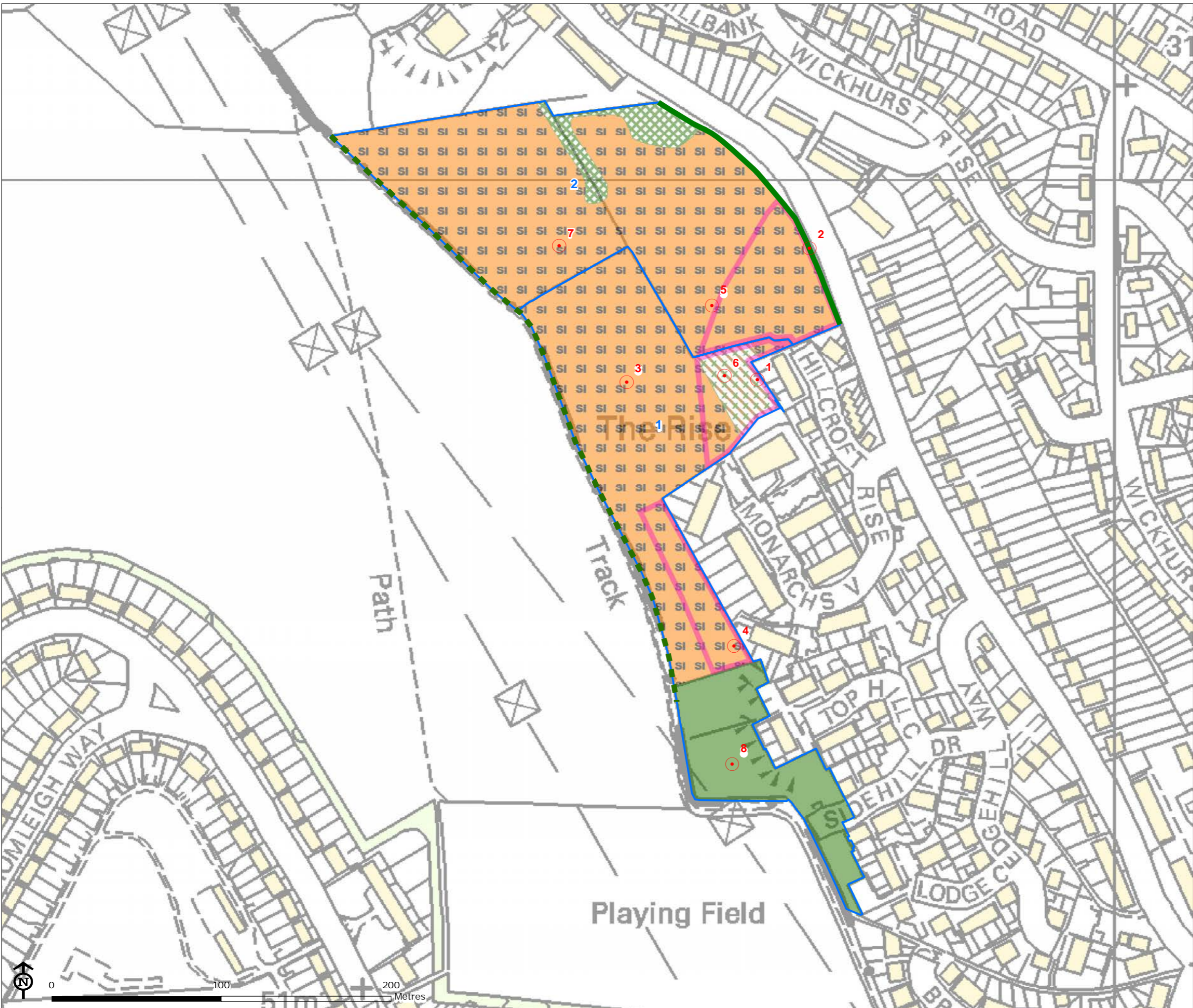
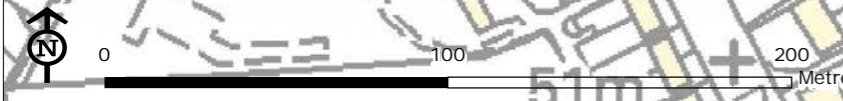


Figure 4.1: Phase 1 Habitat Survey Map - Study Area L1/E1



- Urban Fringe Site
- Potential Development Area (UFA 2014)
- Target note
- Intact hedge - species-poor
- Defunct hedge - species-poor
- Broadleaved woodland - semi-natural
- Scrub - dense/continuous
- Tall ruderal with scattered scrub
- SI SI Neutral grassland - semi-improved



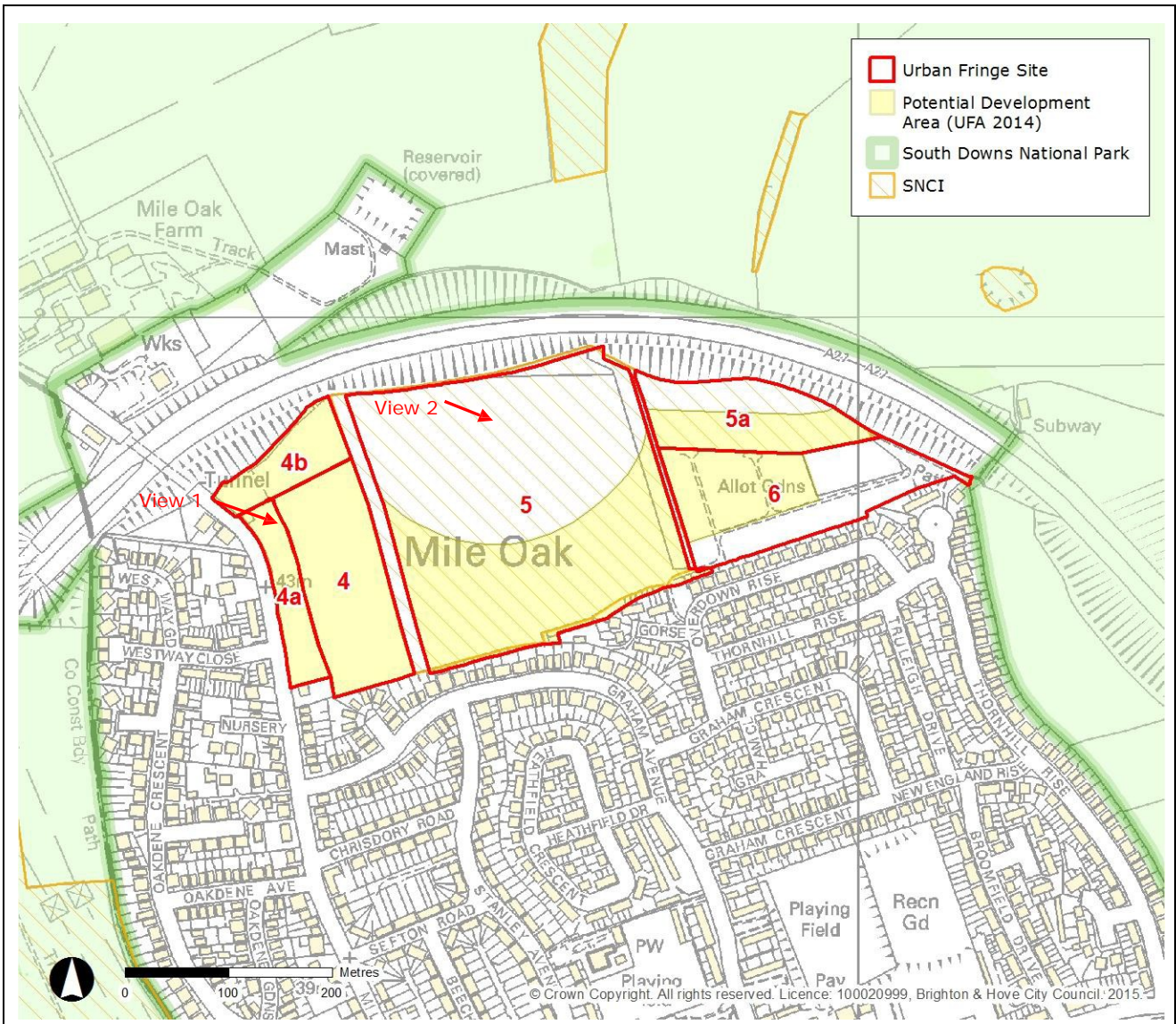
Map Scale @ A3: 1:2,200



5 L2/E2 (Site 4, 4a, 4b, 5, 5a and 6) - Portslade: Landscape and Ecology Assessment

Background

Study Area	L2/E2	Location	Portslade
Sites	4, 4a, 4b, 5 and 5a – Land at Mile Oak Road, Portslade		
	6 – Land at Mile Oak Allotments, Portslade		
Study Area Overview			
<p>The sites comprising this Study Area lie on the slopes of Mile Oak Hill, a spur on the southern side of Cockroost Hill which is bisected by the A27 cutting just to the east of Southwick Tunnel. Sites 4, 4a and 4b occupy the steeper west-facing slope, Site 5 forms the crest of the spur, sloping off to the west, south and east, and Sites 5a and 6 slope up north-eastwards towards Mount Zion.</p> <p>Sites 4 and 4a were grazed by horses at the time of the 2014 assessment but were longer, ungrazed grassland at the time of this assessment. Site 4b is still in equestrian use. Sites 5 and 5a are rough grassland with open scrub and Site 6 is occupied by allotments.</p> <p>All areas other than the higher slopes of Site 5, 7.5ha of the 12.8ha total, were suggested in the 2014 UFA as having potential for housing development, but it was recommended that only 5.6ha be developed in total across the 5 sites to allow for appropriate mitigation of potential adverse effects.</p>			



Representative Views - local



View 1: looking south across Sites 4b (the grazed field to the left), 4a (a strip along the bottom of the field to the right) and 4 (the remainder of the righthand field)



View 2: looking east across Site 5 down towards Site 5a (the area of broken scrub to the left) and Site 6 (the allotments to the fore of the housing estate). The higher ground from which the photo was taken is excluded from the potential development area.

Overall Conclusions of the 2014 Assessment

Site 4: "The site has potential for medium density housing consistent with the residential streets to the west and south of the site. There are no significant ecological, heritage, open space or other environmental issues. Furthermore, although visually connected to SDNP in views from the south the site is contained in character, with a hedgerow boundary to the east and scrub to the north, and is not open downland. Development in this area would not be out of keeping with the pattern of development on the eastern side of Mile Oak and would not significantly interfere with views towards the higher downs to the north."

Sites 4a and 4b: "The site has potential for medium density housing consistent with the residential streets to the west and south of the site. With the exception of some risk for surface water flooding, there are no significant ecological, heritage, open space or other environmental issues. Furthermore, although visually connected to SDNP in views from the south the site is contained in character, with a hedgerow boundary to the east and scrub to the north, and is not open downland. Development in this area would not be out of keeping with the pattern of development on the eastern side of Mile Oak and would not significantly interfere with views towards the higher downs to the north."

Site 5: "The site has potential to accommodate some residential development, although the development of the whole site would be inappropriate, due to its designation as an SNCI and relatively exposed location of the site astride a ridge crest sloping up towards Cockroost Hill. Utilising only the lower, southern slopes of the site and retaining a buffer of scrub, perhaps enhanced with appropriate native tree and shrub planting, to the north would reduce adverse landscape character and ecological impacts. Development in site 5 would have a greater adverse impact in isolation if the areas to the east and west were not developed. For the same reason, dwelling density should be consistent with the sites to the east and west."

Site 5a: "The site has potential to accommodate some residential development, although the development of the whole site would be inappropriate, due to its designation as an SNCI. The site is privately owned natural/semi-natural greenspace. Therefore, new residential development on the site could create new publically accessible open space in an area of under provision for many types of open space. Development in this area would not have a significant effect on the character of the wider landscape and a housing density of a similar density to existing neighbourhoods would have the least impact. There is some risk of surface water flooding; however, this could be overcome through any development's design."

Site 6: "The site has potential to accommodate some residential development, although the development on the site would require the allotments to be relocated within close proximity to the site, potentially in site 5a to the north. It is unlikely that the existing area of the allotments could be fully accommodated within site 5a. Therefore some could be retained within site 6. Development in this area would not have a significant effect on the character of the wider landscape, but removal of the more mature vegetation to the east of the allotments would be detrimental to landscape character. A housing density of a similar density to existing neighbourhoods would have the least impact. There is some risk of surface water

flooding; however, this could be overcome through design.”

All sites: “Taken as a whole, sites 4, 4a, 4b, 5, 5a and 6, represent a cluster of sites all of which have potential for development. However, in order to develop dwellings in some sites, mitigation and enhancement measures are required in others. For example Site 5a could accommodate allotments relocated from Site 6, with semi-natural open space provided on Site 5. If all the sites were developed there would be a significant net loss of open space in sites 5a and 6 in the east and significant adverse ecological effects in sites 5 and 5a. Therefore, the number of dwellings that could be developed across the cluster has been limited to 75% of the sum total of all the developable sites so that the necessary mitigation and enhancement measures required to develop dwellings within this area of the urban fringe can be accommodated. This limited total provides a more accurate estimate of the total capacity of this area of the urban fringe.”

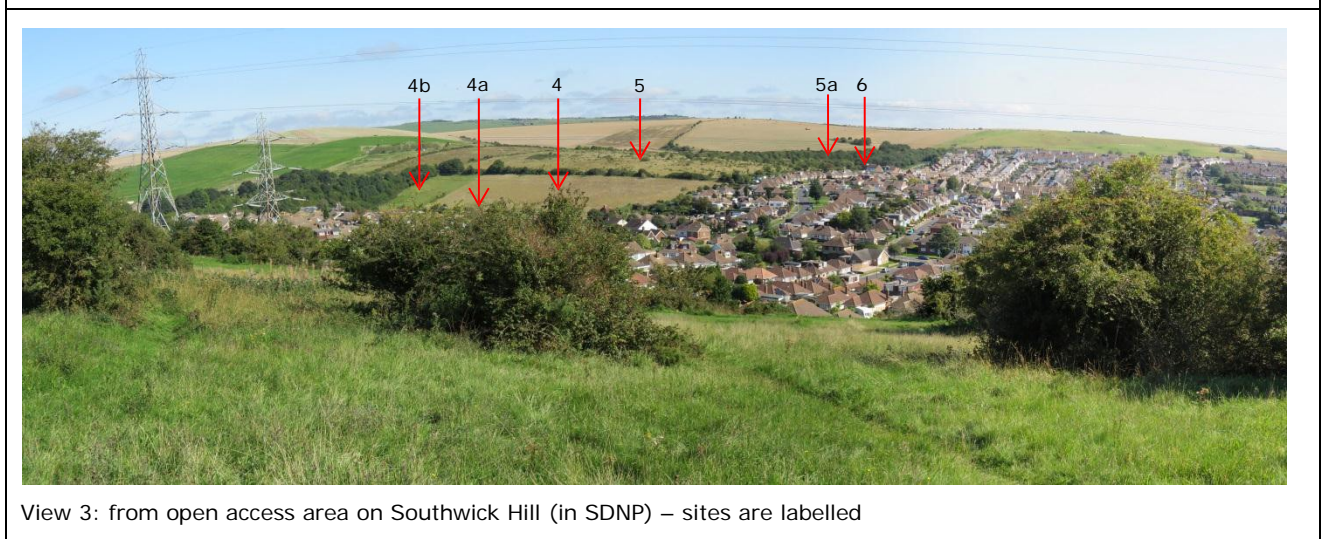
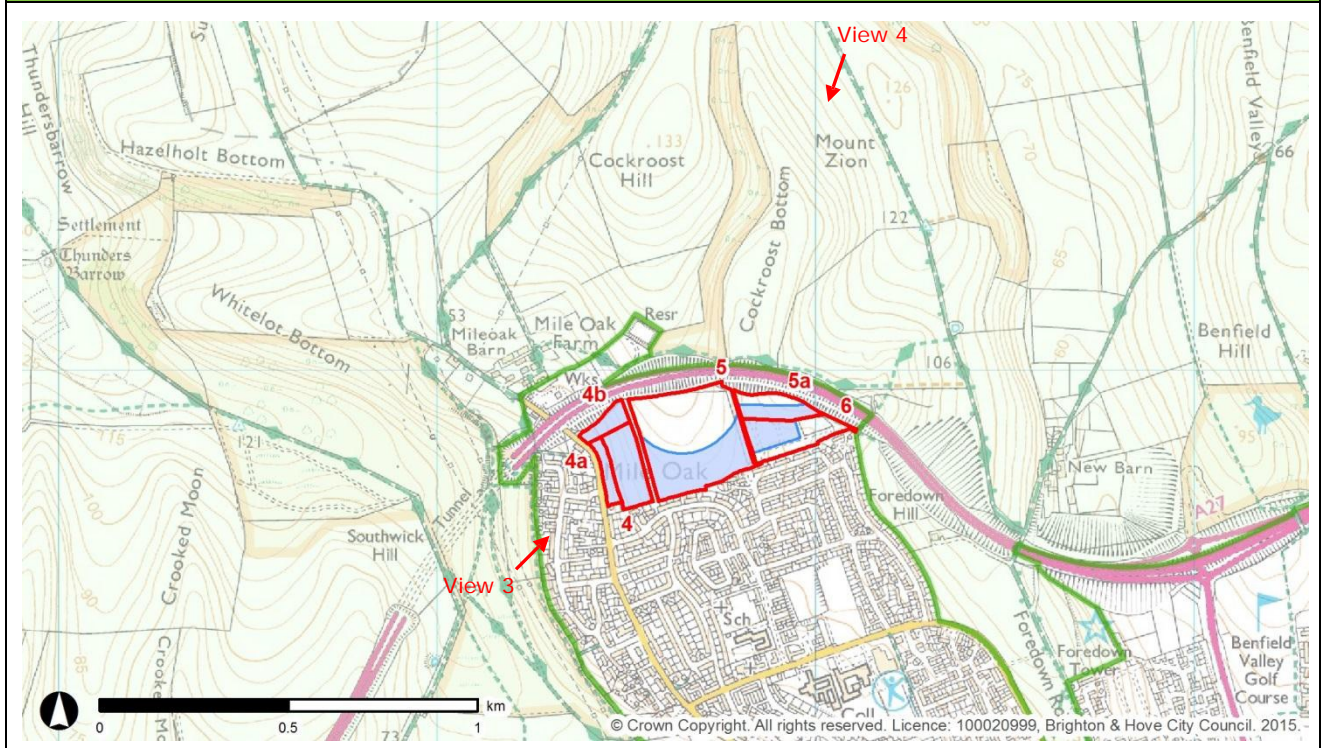
Overall Site Area	12.8ha	Area with development potential	7.5ha	Suitable dwelling density	Medium: 50 per ha	Potential number of dwellings	280
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Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	The varied topography of the Study Area makes it more sensitive to housing use than land with a more consistent form, but in the context of the locality this is not on its own considered to be a major issue. Housing in this and in many parts of Brighton occupies sloping and undulating ground. In combination with its elevation, however, the rounded sloping form of Site 5, occupying the crest of the hillside, is more sensitive than the other sites.
Settlement form	The slope to west of Mile Oak Road adjacent to Sites 4-4b is developed, almost up to the A27. To the south the developed edge follows an even east-west line which doesn't demonstrate any relationship with the contours of the land or with the A27 and its vegetated margins, which forms a distinct settlement boundary to much of the northern edge of Brighton and Hove. Housing on Ridge Close, in the north-eastern corner of Mile Oak, already extends up to a ground level of around 70m, which is higher than any of the areas suggested as having potential for development on Mile Oak Hill.
Settlement setting	Localised but regular views of downland are an important characteristic of the setting of Portslade/Mile Oak, but views of the slopes of Mile Oak Hill are very limited from within the settlement area, where houses typically obscure views to the north. The sharper slopes up towards Southwick Hill to the west and Foredown to the east are more frequently visible.
SDNP setting	The landform of Mile Oak Hill represents a southerly continuation of the slope down from Cockroost Hill, which creates a degree of connection between the SDNP and the City which is evident from some viewpoints to the south (e.g. View 3 below), although the belt of dense scrub vegetation along the southern side of the A27 adds a degree of separation. In views from the north (e.g. View 4) the landform relationship is much diminished by the presence of the A27 and associated banks/bunds, and by the proximity of housing in Mile Oak.
Visual receptors	High ground within the SDNP to the north, east and west provides views into the areas of development potential, but from none of these angles is there a sense that development would be significantly extending the developed area. Housing would typically be seen in the context of the framing hills of Foredown and Southwick, which extend much further south into the City and are much more important than Mile Oak Hill in forming a settlement setting. Although the Sites are privately owned public access is permitted, so development would diminish the availability of southward views, but those

	views are already heavily influenced by existing housing. There are very limited views northward into the Downs, due to site boundary vegetation.
Perceptual qualities	The elevation of the upper part of Site 5, the screening by trees at the eastern end of Site 5a, and the size of the combined Sites create a degree of separation from the urban area, but the containing presence of the A27 and the visibility and proximity of extensive housing means that these locations feels more related to the City than to the open countryside.
Cultural & historic value	This location has no particular cultural or historic associations.

Representative Views – wider area



View 3: from open access area on Southwick Hill (in SDNP) – sites are labelled



View 4: Site 5 viewed from public right of way on Mount Zion, north-east of the Sites (in SDNP)

Potential Level of Landscape Effect

Any development would be likely to have a degree of adverse landscape impact. The lowest impact in landscape terms would result from development in Site 4a, the lower slopes of Sites 4 and 4b and Site 6, but there is some potential for development in the other identified areas to have a more significant impact.

Avoidance, Mitigation and Enhancement Options

The avoidance of development on the higher parts of Site 5, as suggested in the 2014 UFA, would preserve open space for informal recreation and ecological benefit, but to minimise impact on views from this area buildings within Sites 4 and 4b should not be located so high up the slope as to significantly intrude on views towards Southwick Hill. This may potentially reduce the yield suggested for this Study Area.

Housing in all areas should be constructed with sufficient permeability to retain frequent lines of sight through to downland, where such views exist at present. The tree and shrub planting suggested in the 2014 UFA would not necessarily enhance landscape character in terms of relationship with the SDNP downland if it were to reduce views north from Site 5, and so might be better located closer to the development edge rather than adjacent to the existing roadside belt. Consideration could also be given to locating any new development edge along a similar contour height, rather than creating a straight-line with a significant slope, as exists at present.

Taking into consideration the additional mitigation identified above, significant adverse effects on landscape and views would be unlikely.

Ecological Assessment

Ecological Baseline

Biological Records

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

A large portion of the Study Area sits within the **Mile Oak Fields SNCI**. The SNCI is designated for a number of notable species, including rough grassland flora, skylark and badger.

The following records of protected and notable species were identified within the Study Area:

- Bythinian vetch;
- Viginia creeper;
- Dense-flowered fumitory;

- Yellow vetchling;
- Slow worm;
- Common lizard;
- Corn bunting;
- Red-shanked carder bee;
- The bug *Deraeocoris olivaceus*;
- Roesel's bush cricket;
- Shaded broad-bar moth; and
- Cinnabar moth.

Habitat Description (see Figure 5.1)

Semi-improved Neutral Grassland

Semi-improved neutral grassland was present across the Study Area, with areas of varying character and condition subject to management. A horse paddock to the north-west (Site 4b) was heavily grazed by horses, resulting in a short sward height and areas of bare ground. Species noted included abundant white clover, common daisy, frequent field speedwell and rough hawkbit. There was also occasional hedge mustard, red clover and scarlet pimpernel.

The horse paddocks to the south-west of the Study Area (Site 4a) were not in use, with rough grassland with a tall sward height developing. The grassland was dominated by *Agrostis sp.*, with abundant cock's-foot and perennial rye grass and frequent rough hawkbit. Common centaury was also occasionally found.

Semi-improved grassland with scattered scrub was recorded across the majority of the centre and east of the Study Area (Site 5 and 5a), and formed part of the Mile Oak Fields SNCI. Species noted here included abundant cock's-foot, red fescue and yarrow, with frequent great willowherb, common eyebright and hemp agrimony. There was also occasional black medick and ladies bedstraw.

Semi-natural Broadleaved Woodland

Semi-natural broadleaved woodland was located in the east of the Study Area. The shrub layer was dense and difficult to access. The canopy layer was dominated by semi-mature sycamore, with elder, hazel, dogwood, spindle and bramble in the secondary canopy/shrub layer.

Scrub

Scattered scrub was noted throughout the semi-improved neutral grassland in the east of the Study Area (Site 5 and 5a), with abundant bramble and hawthorn, frequent dogwood and spindle, and rare yew.

Hedges and Treelines

Species poor hedgerows were present along the east, west and southern boundary of the horse paddocks (Site 4, 4a and 4b). The hedgerows were comprised of blackthorn, elder and hawthorn.

Allotments

The east of the study (Site 6) comprised active allotments supporting a complex mosaic of habitats, including cultivated plots, plots overgrown with tall Ruderal/ephemeral communities, and areas of scrub.

Fauna

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

- Nesting birds – the scattered scrub and woodland habitats are likely to support a range of nesting bird species. Ground nesting birds, such as skylark, have been noted at the Study Area previously are unlikely to be present currently as colonisation by scattered scrub will have rendered much of the Study Area unsuitable for such species. However, the unmanaged paddock and more open grassland to the west (Site 5) may provide a sufficient area of open habitat for

this species to nest.

- Reptiles – the unmanaged semi-improved grassland with scattered scrub and allotments provides optimal foraging and shelter habitat for common and widespread reptile species.
- Badgers – potential foraging habitat provided throughout the site, with woodland/scrub providing opportunities for sett building.
- Invertebrates – the grassland habitats in particular may be of value for invertebrates, given floristic and structural diversity.
- Bats – the habitat mosaic may provide a valuable foraging resource for bats. The woodlands did not appear to support trees of sufficient maturity to provide for bats to roost.
- 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 also unlikely to be present within the Study Area given the isolation of the woodland and hedgerows from larger areas of suitable habitat.

Ecological Appraisal

<p>Designated Sites</p>	<p>A large proportion of the Study Area is designated at the local level as Mile Oak Fields SNCI, with the citation identifying a range of notable species including nesting skylark and grassland species, such as grass vetchling, common broomrape and bladder campion. It is also noted as valuable habitat for foraging badgers.</p> <p>The potential development areas include a large proportion of the SNCI, which would result in a loss of habitat within the SNCI. There will also be the potential for contamination during construction of the retained areas of the SNCI, and in the long-term increased disturbance of the SNCI as a result of recreational pressure and 'urban effects' such as pet predation, litter and risk of fires (although it is important to note that the area is already adjacent to residential development and subject to recreational pressure and risk of such urban affects).</p>
<p>Habitats</p>	<p>Hedgerows are recognised as a priority habitat in the Brighton & Hove LBAP, and as a habitat of principal importance (NERC Act 2006) although those present on Study Area were identified as species-poor and of relatively low value. The value of allotments is also recognised within the Brighton & Hove LBAP.</p> <p>The habitats within the potential development areas which may be affected by development consist of semi-improved grassland, scattered scrub, hedgerows and allotments. The habitat mosaic provided by these habitats is likely to be of value to a range of species and to provide ecological connectivity around the urban fringe. Although areas of the habitats are located outside of the potential development area, as above these comprise a relatively small proportion of the habitats within the Study Area and would likely be affected by recreational pressure and 'urban effects'.</p>
<p>Species</p>	<p>It is not possible to confirm the value of the Study Area for notable and protected species in the absence of detailed surveys, although there is potential for such species to be present throughout the majority of the Study Area, with the mosaic of grassland, scrub and woodland habitats of value to a wide range of species.</p> <p>The potential development area itself is likely to have an effect on some notable and/or protected species. Key constraints may include habitat loss affecting the following species:</p> <ul style="list-style-type: none"> • notable flora within the grassland habitats (although not noted during

the Phase 1 Habitat Survey)

- Scrub and tree loss impacting on nesting birds, while loss of open grassland habitats in the south west could affect species such as skylark
- reptiles within the mosaic of rough grassland/scrub/allotments.
- If waterbodies are present within the allotments, and GCN were confirmed as present, a large area of the Study Area would be suitable terrestrial habitat for this species.
- Invertebrate diversity, and potentially notable species, may also be affected by habitat loss (particularly grassland habitat).
- If badger setts in particular are identified adjacent to the potential development areas, these may be subject to disturbance impacts. Given the habitats present, it is unlikely that setts would be located within the potential development areas and therefore sett loss is unlikely.
- Lighting of adjacent habitats also has the potential to affect bats, which may use woodland, scrub and grassland habitats for foraging, roosting or commuting.

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 in particular detailed searches for notable plant species, and surveys for reptile, badger, birds and invertebrates (subject to a Phase 1 Habitat Survey and development proposals). 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

Given the extent of potential loss of the SNCI, and that the mitigation for this will be reliant on enhancing retained habitats (see below), it may be necessary to reduce the potential development area to retain a greater proportion of the SNCI and habitats. This may be achieved by reducing the size of potential development areas and yield across the study area.

Potential impacts on the SNCI, including loss, would require mitigation. This may include the enhancement of retained habitats within the SNCI and also other habitats in the Study Area to complement the SNCI. These measures should seek in particular to restore calcareous grassland habitat, although recognising the value of scattered scrub habitat. The enhancement of habitats within the SNCI 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.

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 wider site). 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 any setts (potentially under a 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

Given the extent of loss of habitat including within the SNCI, it is likely that mitigation will also need to include the incorporation of green infrastructure within the development to provide replacement opportunities for wildlife, including green roofs (in particular favouring calcareous species), wildlife-friendly planting (native species or those providing known benefits to wildlife, such as species of benefit for pollinators), and incorporation of nesting/roosting opportunities for birds and bats.

Conclusion

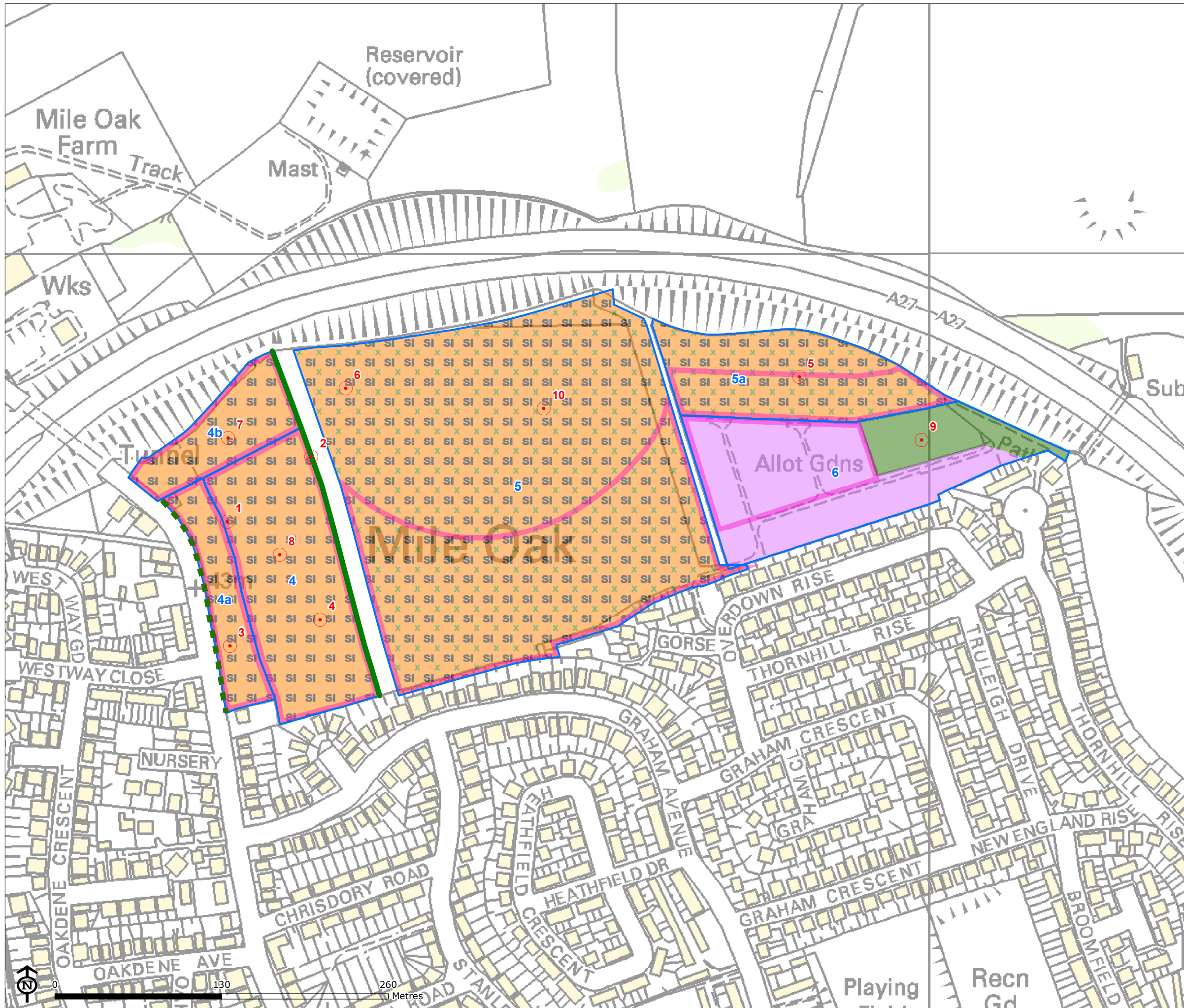
Overall Conclusion

In conclusion, it is considered that housing can be delivered at certain parts of the potential development areas within Study Area L2/E2 without significant impacts on landscape and ecology, on the assumption that:

- The size of potential development areas and yield is reduced to address the potential for significant ecological impacts, with a greater proportion of grassland habitats in particular retained to enable mitigation to be delivered.
- Habitat enhancement can be assured within the remainder of the Study Area, including within the development.
- Built development is minimised at the upper slopes of Site 4b and permeability is maintained through developments (to minimise landscape impacts).
- Incorporation of robust mitigation measures to address any impacts on protected species.

Given the issues associated with development of these sites, and the importance of developing robust mitigation proposals, this Study Area would benefit from the development of a Masterplan to guide detailed design.

Figure 5.1 Phase 1 Habitat Survey Map Study Area L2/E2



- Urban Fringe Site
- Potential Development Area
- Target note
- Intact hedge - species-poor
- Defunct hedge - species-poor
- Broadleaved woodland - semi-natural
- Neutral grassland - semi-improved with scattered scrub
- Neutral grassland - semi-improved
- Allotments

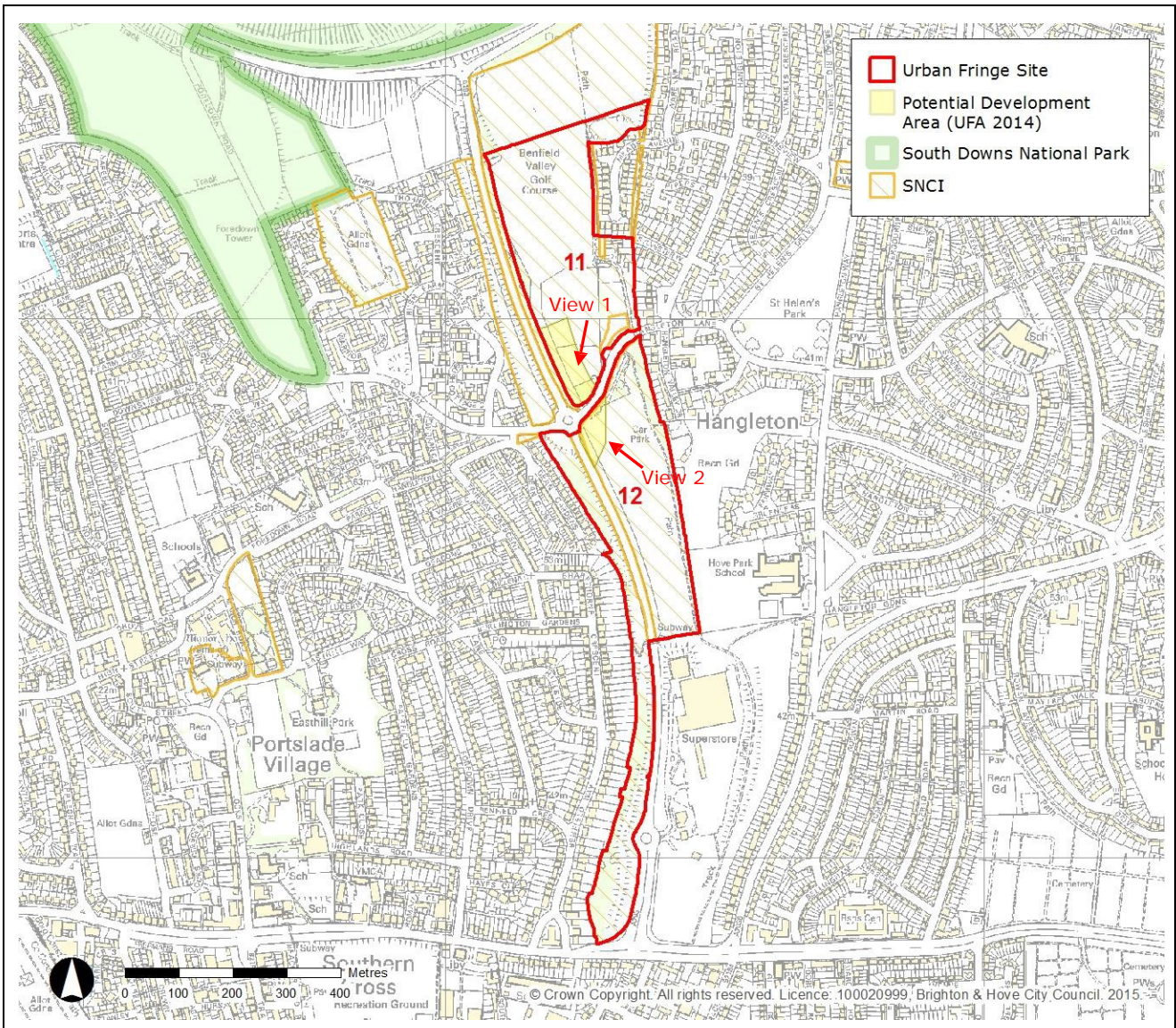
Map Scale @ A3: 1:2,900



6 L3/E3 (Site 11 and 12) – Benfield Valley: Landscape and Ecology Assessment

Background

Study Area	L3/E3	Location	Benfield Valley
Sites	11 – Benfield Valley, north of Hangleton Link Road		
	12 – Benfield Valley, south of Hangleton Link Road		
Study Area Overview			
<p>The full sites assessed in the 2014 UFA, together with Site 10 (which was not taken forward for further assessment), form a green corridor stretching over 1.5km from the edge of the SDNP down to the A270 Old Shoreham Road. To the south of the Hangleton Link Road, which bisects the corridor, Site 12 contains an area of open grassland surrounded by a woodland belt. To the north, Site 11 contains some grassland, scrub, and perimeter woodland but is largely occupied by the amenity grassland and roughs of Benfield Valley Golf Course.</p> <p>The 2014 UFA recognised the sensitivity of this green corridor but identified several relatively small areas just to the north and south of the Hangleton Link Road in which adverse effects would potentially be lower.</p>			



Representative Views - local





View 2: looking north-west towards Site 12, which is set into the edge of the woodland belt

Overall Conclusions of the 2014 Assessment

Both Sites: “The site is suitable for a small amount of development. While most of the site performs an important role as publically accessible open space, of which there is an under provision in the area, the site is of a significant size and a modest loss could be mitigated through appropriate enhancement of the remaining open spaces. Development would require significant mitigation not to compromise the ‘green wedge’ of which the site forms a central part, maintaining a clear green north-south link, with development not overly visible from the rights of way along the ridges of the SDNP. The site’s significant ecological constraints would require significant measures to maintain connectivity along this important wildlife corridor and appropriate enhancement measures to offset any long term adverse effects. Lost trees would need to be replaced and positioned to help enhance the Benfield Valley wildlife corridor and screen development from key views highlighted above.”

Site 11: “The site contains important heritage and ecological features that would need careful consideration and handling through the location, layout and design of development. The southern part of the site is more contained. With extensive tree and shrub cover, views into and from the SDNP are more restricted than from the exposed flanks of Site 10 to the north. Furthermore, exposure to housing on high ground to the west and to traffic noise from the A293 gives the area an urban-edge character. Therefore, there is limited scope for low density development set within the vegetation at the southern end of the site, away from the Hangleton Conservation Area.”

Site 12: “The site is at risk from groundwater and surface water flooding, is in close proximity to important heritage assets to the north and east and the significant ecological value of the valley as a wildlife corridor becomes more and more sensitive in the southern half of the site where it narrows. Therefore, any development should be concentrated in the north east corner of the site, away from the Hangleton Conservation Area, close to the roundabout.”

Overall Site Area	19.3ha	Area with development potential	1.5ha	Suitable dwelling density	Low: 25 per ha	Potential number of dwellings	30
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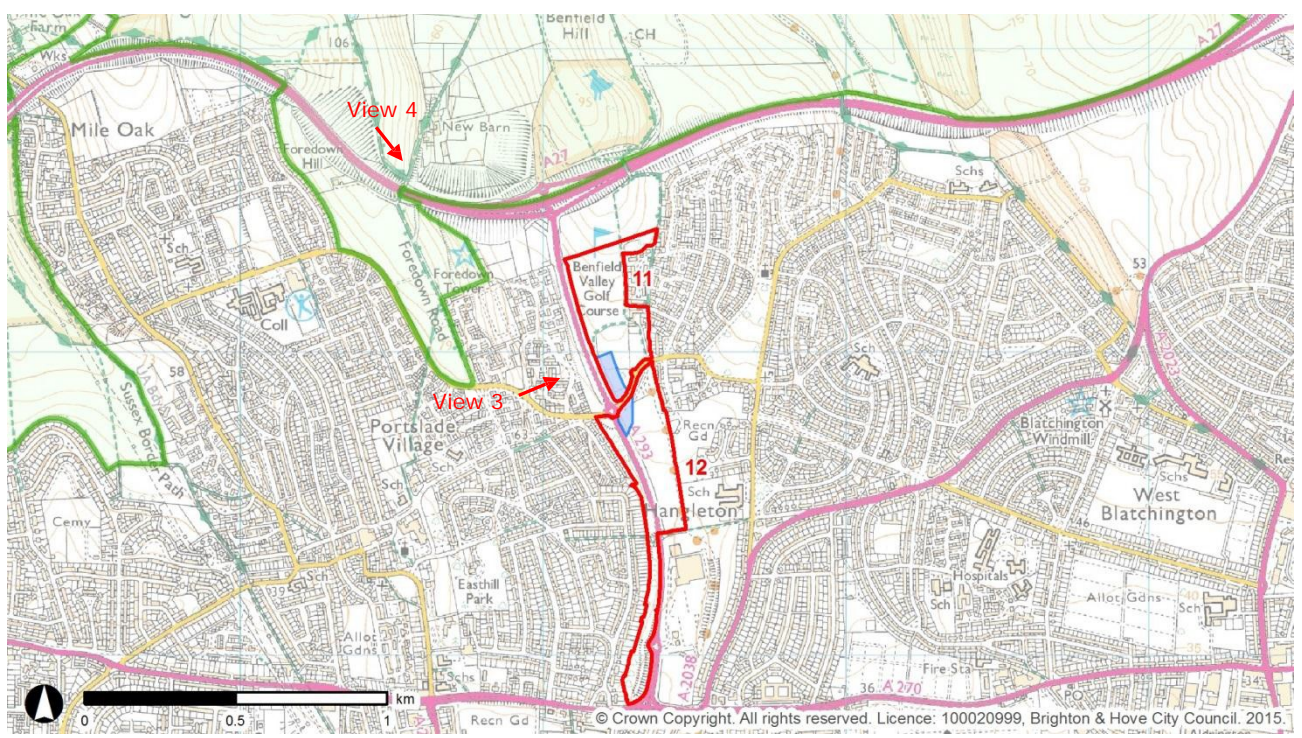
Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	The green corridor in which the Study Area is located is primarily on the western and southern slopes of Benfield Hill, with the valley floor, which is largely developed, being located between the A293 and the Foredown ridge. It is only to the south of the potential development areas that the valley floor lies within Site 12. In its undeveloped condition, with extensive tree cover, it is a distinctive physical feature. The potential development areas occupy fairly level ground, but with some dense vegetation, and in the case of Site 12 a number of mature trees, which increase sensitivity.
Settlement form	Development in Benfield Valley as a whole would clearly sit within the Brighton urban area. However, the tree-lined A293 marks a distinct boundary between Portslade and Hangleton which is unbreached by development other than the Sainsbury's supermarket at the southern end of the valley, and by the Hangleton Link Road, and extensive tree cover gives the area a homogeneous, undeveloped character. The screening effects of tree cover could reduce the impact of development on settlement form, but housing visible above tree tops in views from higher ground, or visible from the A293 or the Hangleton Link Road would have greater impact.
Settlement setting	The wooded valley forms part of the setting of more elevated residential areas in Hangleton to the east and particularly on the slopes of Foredown to the west (see View 3), but only the fringes of the area are visible from lower viewpoints.
SDNP setting	There is a degree of continuity between the landscape in the SDNP to the north of the A27 and the green corridor that extends south into the City, although the remaining open land along Foredown, and on the ridge to the east of Hangleton, are more evident landform links. The high ground along Foredown and Round Hill (including the Dyke Rail Trail) provide views of the City in which the wooded Benfield Valley is prominent, reducing the impact of the A27 as a barrier between City and countryside.
Visual receptors	Rights of way along the downland ridges, linked to the City by pedestrian bridges across the A27, make the Benfield Valley an important element in views from the SDNP, and the public open space and golf course within the valley provide many sensitive receptors for views. Although the Study Area is clearly located in a wider urban context the greenness and openness of the Valley is an important element in views so any housing development that appeared to be set within the green corridor would be incongruous and would detract visually. Development within the two areas identified as having some potential would to an extent be screened from wider view by existing tree cover, assuming sufficiently sensitive design and placement, but there is a likelihood that there would still be some degree of visibility of the area in Site 11 from the north and the area in Site 12 from the south. Development in Site 12 to the extent indicated in the 2012 UFA would also be likely to require roadside tree removal, and therefore be visible from the A293 and Hangleton Link Road.
Perceptual qualities	The Sites are not isolated from the urban area, with buildings visible from many locations and road noise reducing any sense of being in the countryside, but there is nonetheless an undeveloped character and a degree of separation as a result of perimeter tree cover which enhances the quality of the area for informal recreation. The presence of the golf course car park in Site 11 already has an adverse effect on the character of this part of the green corridor so reduction of public access and impacts on the character of the potential development area which lies only 50m to the west of the car park would have adverse effects on recreational amenity.

Cultural & historic value

Historical interest is focused on the eastern side of the Valley, where listed buildings form focal points in the Hangleton and Benfield Barn conservation areas. The potential development areas are well screened from the Hangleton Conservation Area, but there is some potential for limited adverse effects on the setting of Grade II listed Benfield Barn, which is c.130m from the potential development area in Site 11. The Barn has a conservation area drawn fairly closely around it, and vegetation is likely to screen any development from most of this area, but visibility of the Barn in conjunction with new development in views from the golf course would be a negative impact in terms of landscape character.

Representative Views – wider area



View 3: from Fox Way near junction with Bush Farm Drive, Portslade



View 4: Looking south-east from Foredown Road public byway (in SDNP)

Potential Level of Landscape Effect

The key necessity in introducing housing to the Benfield Valley would be to provide sufficient mitigation to maintain a green corridor which can be utilised for public recreation without a sense of development intruding within its strong, vegetated perimeter. As indicated in the 2014 UFA, mitigation solely within the areas identified as having potential for development would be unlikely to be sufficient to avoid significant adverse effects on landscape character and views.

The 2014 UFA suggested that development could be contained by vegetation, but in the case of Site 12 the indicated number and density of dwellings could not be achieved without significant clearance of trees. Screening from recreational areas would therefore be reliant on new planting and would be likely to result in significant adverse visual effects for some years. The potential development area in Site 11 is more contained in the context of public open space but not to the extent that development on the scale suggested could be fully screened, and it is also more exposed to views from the SDNP, so effects here would also be likely to be significant in the short to mid-term.

Avoidance, Mitigation and Enhancement Options

The A293 and Hangleton Link Road are lined on both sides by trees, but the value of these is chiefly in creating a buffer to housing and to the public open space, rather than in giving the main road a rural character. Therefore locating houses closer to the roads, at the expense of existing boundary vegetation, and planting strong buffers of native trees and shrubs between them and the public recreational space, could be expected to have less landscape impact in the longer term than locating developing further into the open area. This would, however, still potentially have significant landscape impact and, although this is not a landscape issue, there would be likely to be adverse impact on amenity for residents of houses close to these busy roads.

Alternatively a much lower density or yield of housing could be considered across the Study Area, with dwellings carefully positioned within the existing landscape in locations with the least impact, rather than relying on new landscaping to screen views. Whilst there would still be potential for significant adverse landscape impact, the likelihood would be reduced, particularly to the north of the Hangleton Link Road in Site 11.

Anything above a very low level of development in Site 11 is likely to require realignment of at least one golf hole, to ensure adequate safety margins, if the golf facility is to continue operating as as present, but in terms of landscape and ecological mitigation in Site 11 (and also the adjacent area to the north, Site 10) there is greater potential for enhancement if retention of the golf course is not a requirement. Retaining open grassland over much of the area, without excessive tree planting, would be more in keeping with the character of the SDNP landscape to the north of the A27. There is less scope for wider landscape enhancement within Site 12.

Ecological Assessment

Ecological Baseline

Biological Records

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

The Study Area sits within the **Benfield Valley SNCI**, with the designation including the presence of mature elm trees, anthills, part of an ancient Saxon hedgeline and several specially protected species including early spider orchid (fully protected under schedule 8 of the Wildlife and Countryside Act).

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

- Dense-flowered fumitory;
- White letter hairstreak
- European hedgehog

Habitat Description (see Figure 6.1)

Amenity Grassland

Amenity grassland within the Study Area comprised the fairway of the golf course. The grassland was dominated by perennial rye-grass and red fescue and was very closely mown.

Poor Semi-improved Grassland

Poor semi-improved grassland was noted in the north of the Study Area, comprising areas of rougher grassland adjacent to the fairway dominated by false oat-grass, cocks-foot and red fescue.

Semi-improved Neutral Grassland

Semi-improved neutral grassland was noted along the Hangleton Link Road verges (too small to map on **Figure 6.1**) and in a large area of informal open space in the southern part of the Study Area. The road verges were dominated by red fescue with abundant creeping bent-grass and wild carrot; frequent cock's-foot, yarrow and red clover; frequent to locally abundant bird's-foot trefoil and occasional rib-wort plantain. Common knapweed, Canadian goldenrod and ragwort were all present but rare.

In the southern part of the Study Area (Site12) the grassland had a greater structural diversity, with areas of rougher grassland supporting large anthills, and shorter mown paths throughout. The grassland was dominated by cock's-foot and perennial rye-grass with abundant Timothy, frequent false oat-grass and frequent meadow oat-grass. Creeping thistle, dock *Rumex* spp., and common ragwort were occasional. Vervain and black horehound were present but rare.

Semi-natural Broadleaved Woodland

A large band of semi-natural broadleaved woodland extended along the northern and western boundaries of Site 12. The woodland was dominated by sycamore with frequent field maple and occasional ash in the north, whilst ash was dominant in the north-west. A sparse shrub layer included hazel coppice with frequent elder and occasional whitebeam also present in the north-west. Holly and Scot's pine were both present but rare. Towards the south-west of Urban Fringe Study Area 12, the shrub layer became denser, with field maple, dogwood, blackthorn, bird cherry, elder and privet all occasional to locally abundant. Close to the A293 along the eastern edge of the woodland, dense ash planting was noted. The ground flora throughout the woodland was dominated by ivy.

Broadleaved Plantation Woodland

Broadleaved plantation woodland was noted along the south-western boundary of Urban Fringe Study Area 11. It was dominated by sycamore with occasional ash, holly and elm *Ulmus* sp. with a shrub layer dominated by bramble, with frequent laurel and privet present but rare. The ground flora was dominated by ivy.

Dense and Scattered Scrub (Including with Scattered Trees)

Dense and scattered scrub bordered the golf course to the south and south-east. In the south dense scrub was dominated by hawthorn and bramble with abundant travellers joy. To the south-east scattered

scrub included hawthorn with frequent laurel and dogwood and occasional ivy. Butterfly bush was present but rare.

Scattered scrub dominated by hawthorn was noted in small areas within the grassland in the north-east and south-west of Site 12.

Species-Rich Hedgerow with Trees

An outgrown hedgerow with trees was noted along the south-east boundary of site 12. Species included abundant field maple, hawthorn and blackthorn; occasional to locally-dominant elm; and occasional ivy, travellers joy, elder and wych elm. Dog rose was present but rare.

Bare Ground

Bare ground access tracks and a car park associated with the golf course were noted within the southern part of Site 11.

Buildings

Several buildings were noted in the south-east of Site 11, including a barn constructed of flint and mortar with a pitched tiled roof and several derelict buildings of similar construction.

Fauna

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

- Nesting birds – associated with trees, hedgerows and scrub vegetation throughout the Study Area. Ground nesting birds are considered relatively unlikely given disturbance from recreational use of the Study Area.
- Reptiles – associated with rough grassland habitats in the northern and southern parts of the Study Area, and including areas with scattered scrub and edge habitats.
- Badgers – potential foraging habitat provided throughout the Study Area, with woodland and dense scrub providing optimal opportunities for sett building. Evidence of badger (dung pits) was noted within Site 12 during the survey.
- Bats – the habitat mosaic within the Study Area may provide a valuable foraging resource for bats, whilst mature trees within woodlands and hedgerows, and buildings in Site 11, may provide opportunities for bats to roost.

In addition to the above, the following notable species were identified as potentially present within the Study Area (including those listed of Principal Importance or those listed on the Brighton and Hove local Biodiversity Action Plan):

- Invertebrates – In general grassland habitats in the north of the Study Area are considered relatively low value for invertebrates given the relatively low floristic diversity and high levels of management as a golf course. However small areas supporting higher floristic diversity that were less regularly managed (particularly grassland in the north-east of the Study Area) and including those with anthills (which are known to increase the ecological value of a habitat for invertebrates and other species) may be of value for invertebrates. The mosaic of habitats which provides an abundance of edge habitats throughout the remainder of the Study Area may be of further value to invertebrates. The Study Area is also rich in elm, the sole larval food plant of the white-letter hairstreak which has been recorded on the site.
- Hedgehog – The Study Area provides suitable habitat for this species, including grassland areas suitable for foraging, and woodland and scrub/hedgerows for sheltering and commuting.

Great crested newts are unlikely to be present within the Study Area due to the lack of waterbodies in the vicinity (as identified from OS base mapping, further investigation would be required). Dormice are also unlikely to be present within the Study Area given the isolation of the woodland and hedgerows from larger areas of suitable habitat.

Ecological Appraisal	
Designated Sites	<p>No nationally or internationally designated sites are present within or adjacent to the Study Area.</p> <p>The Benfield Valley SNCI encompasses the Study Area. The potential development area is also located within this designation, therefore any development will result in habitat loss within the SNCI. Other impacts may include contamination during construction. Any increase in the local population could increase recreational pressure, although in this case given the relatively low number of proposed dwellings and existing public access, this would not be considered to comprise a particularly notable impact.</p>
Habitats	<p>The Study Area supports hederows and broadleaved woodland habitats which are recognised as priority habitats in the The Brighton & Hove LBAP, and under S41 of the NERC Act. In addition, records of the rare arable plant dense-flowered fumitory have been identified within Site 11 (see above for biological records) therefore any development proposals should take this into consideration.</p> <p>Other habitats present within the Study Area are generally common and widespread in the urban fringe and adjacent countryside, although the mosaic within the site is likely to provide value for a range of wildlife.</p> <p>The habitats within the potential development area itself partly comprised semi-improved neutral grassland and scattered scrub habitats of relatively low ecological value. Habitats of higher ecological value included semi-natural broadleaved and plantation woodland.</p>
Species	<p>It is not possible to confirm the value of the Study Area for notable and protected species in the absence of detailed surveys, although there is potential for such species to be present throughout the majority of the Study Area, with the mosaic of grassland, woodland and scrub habitats of value to a wide range of species.</p> <p>Key constraints include:</p> <ul style="list-style-type: none"> • Reptiles within grassland areas; • Badgers, particularly the presence of setts associated with woodland and scrub; • Bats roosting within mature trees. Lighting of adjacent habitats also has the potential to affect foraging, roosting or commuting habitat; • Notable invertebrates including white letter hairstreak should elm be affected; • Nesting birds could also be affected by removal of scrub or trees.
Ecological Avoidance, Mitigation and Enhancement Options	
<p>Further surveys</p> <p>Detailed development proposals must be informed by an updated Extended Phase 1 Habitat Surveys and species surveys to ensure that potential impacts are identified and appropriate mitigation developed. This would likely include (but not necessarily be restricted to) reptile, badger and bat surveys, with potential consideration given the invertebrates subject to detailed design proposals.</p> <p>Avoidance, Mitigation and Enhancement Options</p> <p>The potential development areas are considered appropriate given that they affect a relatively small area of habitats within the SNCI, the relatively low ecological value of the areas affected, and the potential for mitigation of impacts.</p> <p>Potential impacts on the SNCI, despite the small area of loss, would require mitigation. This may include the enhancement of retained habitats within the SNCI and also other habitats in the Study Area to complement the SNCI, including grassland/scrub management to enhance habitat and floristic diversity</p>	

and rough grassland habitats. This could also include, for example, improvements to footpaths to help manage access.

Additional hedgerow or scrub planting to the south-east of the potential development area may also help buffer the SNCI from some disturbance (including lighting), whilst providing habitat in its own right and retaining ecological connectivity through the Study Area as mitigation for removal of woodland. This should include elm species to benefit white letter hairstreak.

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.

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

- Timing of works to avoid impacts on nesting birds;
- If bat roosts are found and cannot be retained a suite of suitable mitigation measures would be required including potentially provision of replacement roosts and proceeding with works under a NE licence;
- Measures to prevent harm to reptiles, such as translocation from the potential development area to a receptor Study Area which has been suitably enhanced to support the translocated population (ideally within the wider Study Area);
- 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 opportunities for species impacted by the proposals, such as invertebrates or notable plant species;
- Sensitive design of any external lighting to minimise lightspill to adjacent habitats

Other mitigation or enhancement opportunities may include incorporation of green infrastructure within the development to provide opportunities for wildlife, such as green roofs or walls, SUDS, wildlife-friendly planting (native species or those providing known benefits to wildlife, such as species of benefit for pollinators), and incorporation of nesting/roosting opportunities for birds and bats.

Long-term management of habitats should be detailed in a Landscape and Habitat management Plan (LHMP) or similar, including any newly created as well as retained habitats to ensure long-term viability of such habitats. Any LHMP should also include remedial measures should a decline in habitat quality of quantity be recorded.

Conclusion

Overall Conclusion

In conclusion, it is considered that housing cannot be delivered in the potential development areas within Study Area L3/E3 at the suggested density/yield without a high likelihood of significant impacts on landscape until new screening planting reaches maturity, although ecological impacts are likely to be mitigable. Development may be delivered at this location with a high likelihood of significant adverse landscape effects in the short/mid term but with a reduced risk of significant adverse landscape effects in the longer term assuming:

- Either housing yields are greatly reduced, or yields are reduced to a lesser extent but development is located on the margins of the Study Area/potential development area. The latter would be at the expense of existing roadside trees but would achieve greater separation between the public open space and development
- Provision of landscape planting as screening (and to provide wildlife habitat), assuming no significant reduction in open habitats.
- Incorporation of robust mitigation measures to address any impacts on protected species.
- Habitat enhancement can be assured within the remainder of the Study Area, including within the development.

7 L4 (Site 16) - Patcham: Landscape Assessment Only

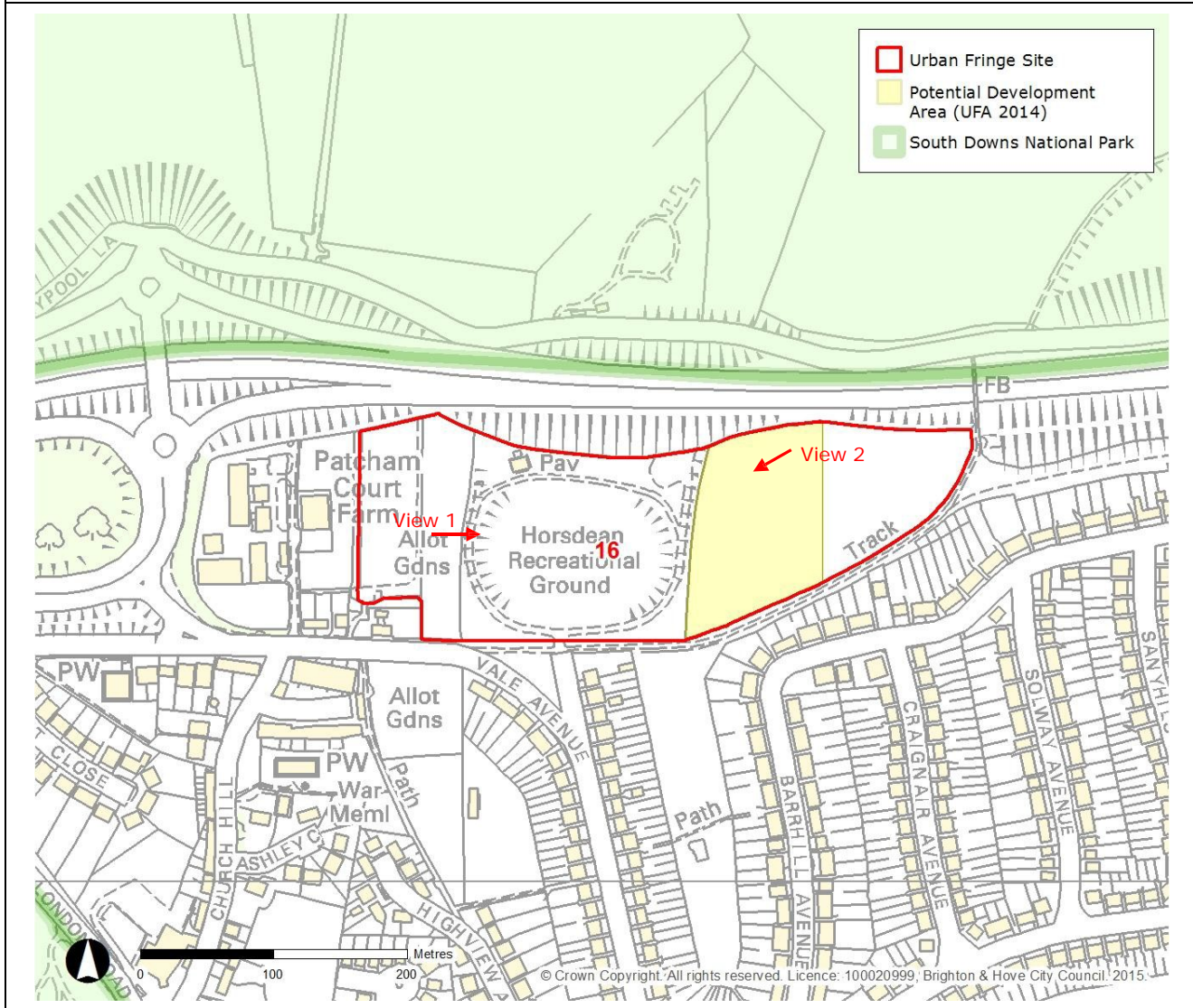
Background

Study Area	L4	Location	Patcham
Site	16 – Land at and adjoining Horsdean Recreation Ground, Patcham		

Study Area Overview

Horsdean Recreation Ground is located on the floor of a steep-sided valley which has been truncated immediately to the north of the Site by the A27. The Study Area also includes allotments on the slope to the west of the Recreation Ground and an area of rough, scrubby grassland on the slope to the east.

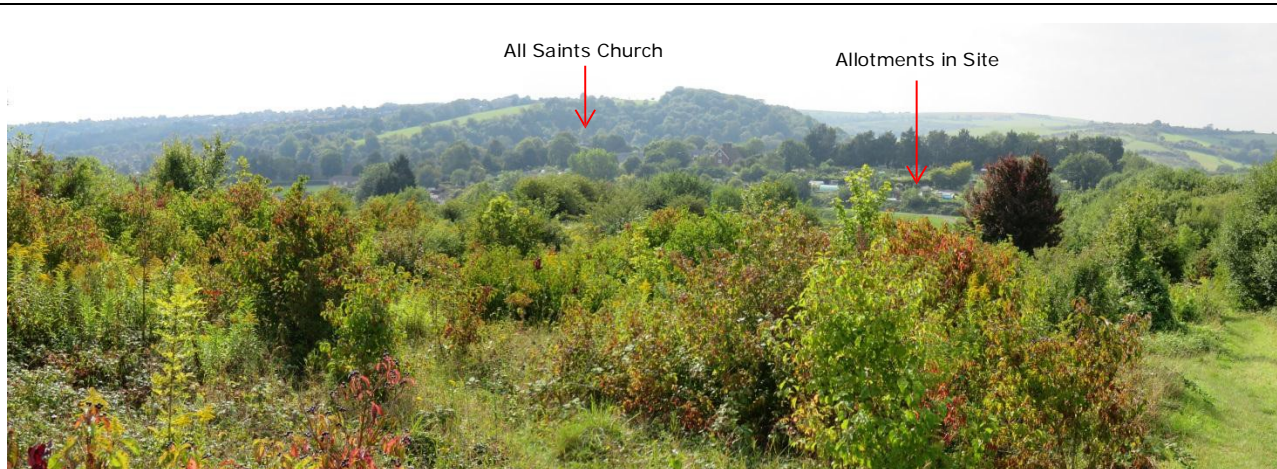
The 2014 UFA suggested a potential development area on the middle and lower slope of the rough grassland to the east of the recreation ground.



Representative Views – local



View 1: looking east across the Recreation Ground at the scrub-covered potential development area



View 2: looking west over the potential development area towards Coney Hill in the background

Overall Conclusions of the 2014 Assessment

“The site is suitable for some low density residential development on the lower slope of natural semi natural greenspace in the eastern third of the site. Development would need to be sited and designed sensitively to protect important views to the Conservation Area and listed buildings that lie to the south west of the site.

There are no significant ecological or other environmental constraints within the site, but some potential for archaeology; however, the entire site does perform an important role as publically accessible open space. Development of the allotments in the western part of the site would result in a significant loss of an open space which is under provided in the ward. The sport fields represent an important city-wide resource.


There is currently an over provision of natural and semi-natural urban greenspace in the area. Therefore, residential development on the areas of the site containing such open spaces would have a more minimal negative effect on open space provision, and potentially a positive effect, if new open spaces for which there is currently an under provision in the area could be provided on the eastern slope.

There is scope to provide access to the site by extending Barrhill Avenue north. It would be beneficial to retain a belt of green space around the footpath that provides access across the A27 to the SDNP. Development should be restricted to the lower part of the eastern slope to protect the wider landscape character.”

Overall Site Area	5.8ha	Area with development potential	1.25ha	Suitable dwelling density	Low: 25 per ha	Potential number of dwellings	30
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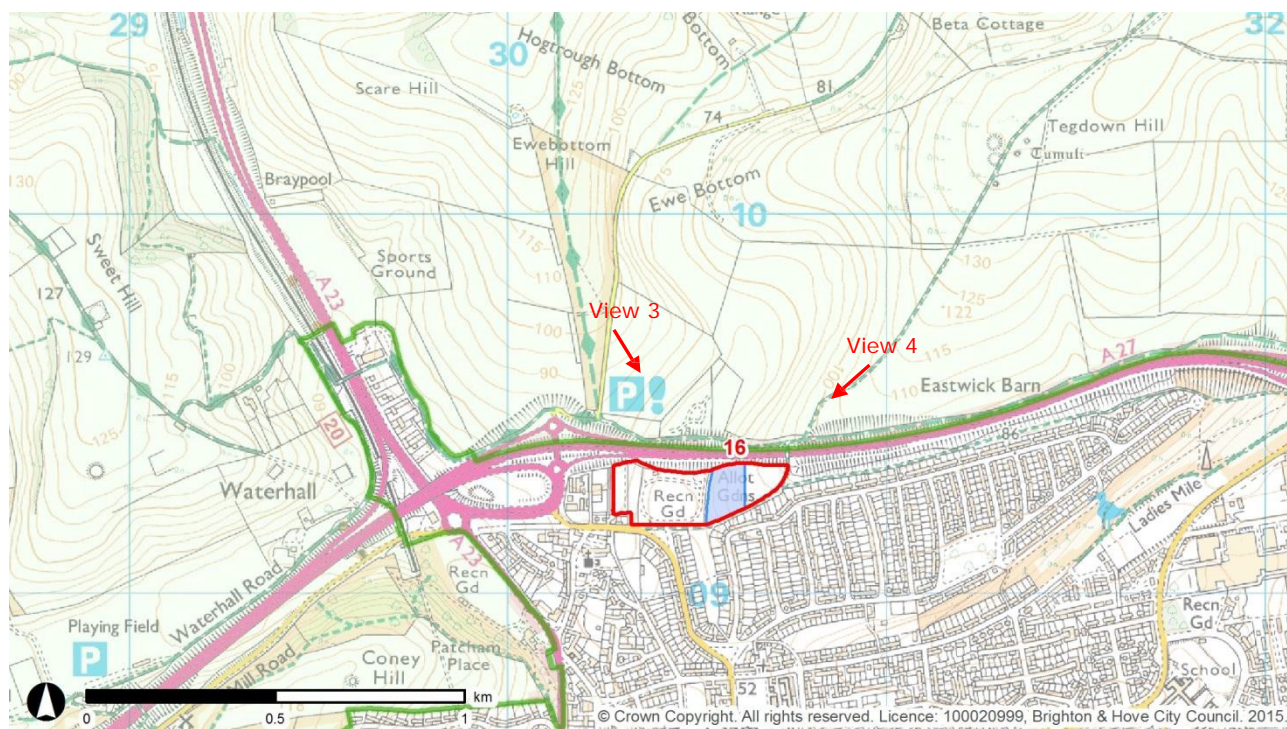
Landscape Assessment

Landscape Sensitivity Assessment	
Physical character	The Study Area as a whole occupies the base and sides of a fairly steep-sided valley, with the potential development area lying on the eastern side of the valley. The slope would increase the likely visibility of any development, but in the local context, where many houses are situated on varied, sloping terrain, this does not make the location particularly sensitive.
Settlement form	The Study Area occupies a small open area between the A27 and housing in Patcham. Development here would have no significant effect on the form of the urban area.
Settlement setting	The urban fringe is separated from the A27 (which is cut into the hillside) by a belt of scrub extending westwards from Ladies Mile around to Coney Hill and beyond, broken only by the roads and roundabouts forming the A27-A23 junction. In views from elevated ground to the south of the A27, such as Coney Hill or, further south, the high ground around Hollingbury, housing for the most part has a backdrop formed by this scrub belt. Development on the west-facing slope of the potential development area would sit up within or above the scrub belt, and therefore be more intrusive in terms of its relationship with the SDNP beyond, but there are a limited number of locations from which this would be perceived. In a more local context, viewed from lower ground, the Study Area doesn't connect to the wider landscape to form a significant setting.
SDNP setting	There is no strong landscape relationship between the scrub-covered Study Area and the open downland of the SDNP to the north, separated by the A27, but the lack of development in the Study Area does increase the sense of separation between the SDNP and the urban area, despite visibility of the latter from the former (see View 3). Coney Hill and the narrow ridge running south-west to Red Hill, although south of the A27, are included in the SDNP, and there is a degree of landscape character connectivity between the wooded slopes of Coney Hill and the Study Area, via the scrub belt alongside the A27 and also via the well-treed area around Church Lane, at the heart of old Patcham village (see View 4).
Visual receptors	<p>There are rights of way on Ewebottom Hill (View 3), Tegdown Hill (View 4) and from the Open Access land on Coney Hill in which upper parts of any new development are likely to be visible above perimeter vegetation (or in the latter case above the woodland belt that fringes Coney Hill). In all these cases adverse impact is reduced by the proximity of modern housing development, and by clear differences in character between the landscapes to the north and south of the A27, but the upper parts of buildings in the potential development area would still be intrusive particularly in the middle-distance of views between Tegdown Hill and Coney Hill (View 4), where despite the proximity of the urban area the core of Patcham retains something of its original village character.</p> <p>Users of the sports ground and the allotments will also have clear views of any new houses where currently the outlook is largely undeveloped (View 1).</p>
Perceptual qualities	Noise from the A27 is a detracting feature, and this location is clearly associated with the urban area, but the scrub vegetation and elevation create a degree of separation which, together with views of Coney Hill, adds to the informal recreational qualities of the potential development area. From the sports ground the enclosure created by uphill slopes to three sides adds to its character, and being overlooked by housing would detract from this to an extent.
Cultural & historic value	The tower of All Saints Church is a noticeable feature in views from the SDNP, and the area around it has a significant amount of tree cover which helps to



retain the village character of the older part of Patcham, but the potential development area is unlikely to form a significant element in the setting of any listed properties, due to the extent of tree cover and the extent of existing development in the wider landscape.

Representative Views – wider area



View 3: looking south from Sussex Border Path, on southern slope of Ewebottom Hill (in SDNP)



View 4: Looking south-west from public footpath on southern slope of Tegdown Hill (in SDNP)

Potential Level of Landscape Effect

None of the individual adverse effects noted above are likely to be considered significant in their own right, but they could, as a result of the creation of 30 low-density dwellings within the potential development area, cumulatively amount to a level of landscape impact that might be considered significant.

Avoidance, Mitigation and Enhancement Options

Any development is likely to cause a degree of intrusion for recreational users of the Study Area and on SDNP views, but limiting the scale of development by avoiding the lowest slopes close to the sports ground, and by retaining and enhancing a screen of vegetation, would help to reduce effects on users of the sports ground. Maintaining a wide belt of public access to the north of new development, with associated tree planting to add screening in the longer term, would reduce effects on recreational use of the Study Area and on SDNP views. This is likely to reduce the indicative development yield in this location.

Conclusion

Overall Conclusion

In conclusion it is considered that housing can be delivered across some of the Potential Development Area within Study Area L4 without significant landscape impacts, on the assumption that:

- Vegetated buffers and public access are retained to reduce the potential for cumulative significant landscape impacts.

This is likely to result in a reduction in yield.