

Preliminary Ecological Appraisal

Survey site:

Eastleigh Leisure Centre, Passfield Avenue, Eastleigh, Hampshire, SO50 9NL

Client:

Places for People Leisure Management Limited

Survey date:

15/03/2024

Project:

This report is prepared to inform a planning application with the Eastleigh Borough Council. The proposal is described as:

Construction of four floodlit padel courts with open sided canopy

Survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

Version control			
Status	Issue	Name	Date
Draft	1	Anna Dolby, BSc (hons), Graduate Ecologist	26/03/2024
Reviewed	1.1	Jonathan Stuttard BSc (Hons) MSc, Principal Ecologist	27/03/2024
Final	2	Anna Dolby, BSc (hons), Graduate Ecologist	02/04/2024

The site survey was undertaken by Anna Dolby, BSc (Hons),					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
15/03/2024	14.7	86	100	3.4	Light drizzle

Ecological Survey Factor	Detailed using desk study and site survey. Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, planning proposal in appendix 3 and photos in appendix 4).	
Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
Summary of Survey Findings (UKHab codes used)	Site Context The site is located in Eastleigh, Southampton at the National Grid Reference SU 44335 19122 and has an area of approximately 0.22ha comprising of developed land, modified grassland and introduced shrub. It is surrounded by urban developments, Eastleigh leisure centre and bike shelters with parcels of grassland and scattered trees. The wider

	landscape consists of the m3 motorway, Eastleigh Leisure Centre, urban properties and deciduous woodland. A site location plan is provided in Appendix 2. <i>Site Habitats</i> The habitats present on site include: • Developed land, sealed surface (u1b) • Modified grassland (g4) • Introduced shrub (847) <u>Developed land, sealed surface (Shown in photo 1)</u> Within the eastern column of site includes a hard standing carpark, which will be used as access for the proposed plan. <u>Modified grassland (Shown in photos 2, 3 and 4)</u> The majority of the site comprises species poor modified grassland, with a sward height of ~7cm. However, there is an area of modified grassland with tussocks towards the north boundary where management appears to have recently lapsed, just below the area of introduced shrub. This area had a mixed sward height with the shortest areas being ~7cm and tallest above 20cm, but still maintained a poor species diversity. Species comprise: D: Perennial rye-grass <i>Lolium perenne</i> A: Cock's foot <i>Dactylis glomata</i>, meadow grass <i>Poa spp.</i>, daisy <i>Bellis perennis</i>, broad leafed dock <i>Rumex obtusifolius</i>. F: Ribwort plantain <i>Plantago lanceolata</i>, red fescue <i>Festuca rubra</i>. O: White clover <i>Trifolium repens</i>, beaked hawk's beard <i>Crepis vesicaria</i>, buttercup <i>Ranunculus acris</i>, dandelion <i>Taraxacum officinale</i> agg., common yarrow <i>Achillea millefolium</i>, cleaver <i>Galium aparine</i>, common St. Johns wort <i>Hypericum perforatum</i>.
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	R: Creeping thistle <i>Cirsium arvense</i>, purple dead nettle <i>Lamium purpureum</i>, spear thistle <i>Cirsium vulgare</i>. Condition assessment: There were ~4-5 vascular plant species per m² present. The majority of the grassland is homogenous with a height of ~7cm, the small area with tussocks is ~16% of the grassland. Scrub present on site is less than 20% of the total site. Physical damage is less than 5%. Bare ground makes up ~2% of the total grassland. No bracken <i>Pteridium aquilinum</i> on site. No invasive species were found within the grassland during the survey. <u>Introduced shrub (Shown in photos 5, 6, 7 and 8)</u> An area of ornamental planting is located along the northern boundary, this includes the schedule 9 invasive species Cotoneaster <i>Cotoneaster horizontalis</i>. Species comprise: D: Cherry laurel <i>Prunus laurocerasus</i>, common ivy <i>Hedera helix</i> A: Japanese barberry <i>Berberis thunbergii</i>, bramble <i>Rubus fruticosus</i>, leatherleaf mahonia <i>Berberis bealei</i>, myrtle spurge <i>Euphorbia myrsinites</i>. O: Stinging nettle <i>Urtica dioica</i> <u>Scattered trees - adjacent habitat (shown in photos 1, 3 and 9)</u> There are a number of scattered trees within the adjacent locality, these are near the northern, eastern and southern boundaries. The trees along the southern and eastern boundary are early mature, the majority of these trees had a Diameter at Breast Height (DBH) of <7.5cm with one along the eastern boundary categorised as small (DBH >7.5cm). There are three semi-mature trees located adjacent to the northern boundary.
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	<i>The Wider Landscape</i> There are no notable habitats present within the site boundary, however there are notable habitats within 2km of the site, the closest being coastal and floodplain grazing marsh located 0.31km south of the site. The intervening habitats between the site and closest notable habitat is comprised of amenity grassland used for sports, Eastleigh leisure centre and hard standing – as such, the coastal and floodplain grazing marsh is not considered to have suitable connectivity to the site.
<i>Foreseen Impacts</i>	<i>Site Habitats</i> The proposal will result in a net gain with suitable compensatory habitat creation. <i>The Wider Landscape</i> None.
<i>Recommendations</i>	<i>Site Habitats</i> To reach the 10% biodiversity net gain goal, it is recommended that areas of modified grassland are enhanced to include species rich grass and increased number of vascular plant species. With the creation of native scrub or other neutral grassland. <i>The Wider Landscape</i> None.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	<i>On Site</i> The site is not subject to any statutory designations. <i>The Wider Landscape</i>

	The site located within 2km of two statutory designated sites: <u>River Itchen Site of Special Scientific Interest (SSSI) ~1.72km east</u> The site is notified due to the presence of a chalk stream and river, fen meadow, flood pasture and swamp habitats, particularly formations of in-channel vegetation dominated by water crowfoot, riparian vegetation communities (including wet woodlands) and side channels, runnels and ditches associated with the main river and former water meadows. Notable species include nationally rare and scarce freshwater and riparian invertebrates, including the white-clawed crayfish. Also including otters, water vole and freshwater fish. <u>River Itchen Special Areas of Conservation (SAC) ~ 1.72km east</u> Annex I habitats that are a primary reason for selection of this site • 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation The Itchen is a classic example of a sub-type 1 chalk river. The river is dominated throughout by aquatic <i>Ranunculus</i> spp. The headwaters contain pond water-crowfoot <i>Ranunculus peltatus</i>, while two <i>Ranunculus</i> species occur further downstream: stream water-crowfoot <i>R. penicillatus</i> ssp. <i>pseudofluitans</i>, a species especially characteristic of calcium-rich rivers, and river water-crowfoot <i>R. fluitans</i>. Annex II species that are a primary reason for selection of this site • 1044 Southern damselfly <i>Coenagrion mercuriale</i> Strong populations of southern damselfly <i>Coenagrion mercuriale</i> occur here, estimated to be in the hundreds of individuals. The site in central southern England represents one of the major population centres in the UK.
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	It also represents a population in a managed chalk-river flood plain, an unusual habitat for this species in the UK, rather than on heathland. • 1163 Bullhead <i>Cottus gobio</i> The Itchen is a classic chalk river that supports high densities of bullhead <i>Cottus gobio</i> throughout much of its length. The river provides good water quality, extensive beds of submerged plants that act as a refuge for the species, and coarse sediments that are vital for spawning and juvenile development. Annex II species present as a qualifying feature, but not a primary reason for site selection • 1092 White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i> • 1096 Brook lamprey <i>Lampetra planeri</i> • 1106 Atlantic salmon <i>Salmo salar</i> • 1355 Otter <i>Lutra lutra</i> The site lies within the impact risk zone for River Itchen Sites of Special Scientific Interest (SSSI). Proposed development type is not listed as a possible high risk with regard to this designation. The presence of non-statutory designated sites within 2km cannot be established without biological records data from the Local Biological Records Centre.
<i>Foreseen Impacts</i>	Given the small scale of the proposed development and the distance between the site and nearest designation, no impacts to statutory designated sites are anticipated. Whilst it is acknowledged that the location of non-statutory designations cannot be determined without data from the local environmental records centre, the site is located

	centrally within a leisure centre and is enclosed by a large car park and sports fields. As such, it is considered highly unlikely that the enclosing land would be subject to a non-statutory designation for the ecological value.
<i>Recommendations</i>	None required.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	Cotoneaster <i>Cotoneaster horizontalis</i> (shown in photo 7) was found on site during the survey, located at the northern boundary (see Appendix 1. Habitat/survey map).
<i>Foreseen Impacts</i>	This is not set to be removed in accordance with the proposed development, however, this species spreads quickly and out-competes native plants.
<i>Recommendations</i>	Cotoneaster should be sensitively removed using hand tools, including roots, and disposed of in line with appropriate controlled waste measures. The cotoneaster should be replaced using native species of local provenance, such as hawthorn, blackthorn, elder, field maple, and hazel.
Invertebrates	
<i>Summary of Survey Findings</i>	Habitats recorded on site are suitable to support low numbers of common invertebrates. However, given the absence of any notable habitat structure of species diversity the site is not considered suitable to support a protected and/ or notable invertebrate assemblage.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	No further surveys.
Bats	
<i>Summary of Survey Findings</i>	Desk Study There are four granted European Protected Species Licence (EPSL) records or bats within a 2km radius of site: <i>Table 1. Bat European Protected Species Licences (EPSL) within a 2km radius.</i>

	EPSL Licence	Bat species affected	Roost records
	EPSM2009-1058 ~ 0.73km west	Common pipistrelle	Destruction of a resting place
	2014-148-EPS-MIT ~ 0.91km west	Common pipistrelle	Destruction of a resting place
	2018-37589-EPS-MIT ~ 1.1km east	Common pipistrelle	Destruction of a resting place
	2014-5470-EPS-MIT ~ 1.53km southeast	Brown long-eared, Common and Soprano pipistrelle	Destruction of a resting place
	On Site <u>Roost value</u> There are no bat roosting habitats on site. Off site <u>Roost value</u> There are trees adjacent to the north, east and south boundaries of site. The trees along the east and south are early mature trees with no roosting potential due to age of the trees and lack of roosting features. There are three semi mature trees adjacent to the northern boundary, these trees had a notable absence of structural features typically utilised by roosting bats, such as rot holes, linear faults, branch wounds, and woodpecker holes. Thin ivy cladding surrounded the base of one of the semi mature trees, however this was considered to be unsuitable for roosting bats due to thin layer of ivy. The trees adjacent to site are assessed to fall into PRF – None category. However, these trees are off site and will not be removed.		

	<u>Foraging and commuting value</u> Habitats recorded on site are assessed to provide foraging and commuting value for bats in the form of modified grassland, ornamental shrubs, and adjacent trees. These habitats are likely to attract invertebrate prey species and could be utilised by commuting bats travelling between resources. However, given the limited type and extent of habitat recorded and the presence of better quality habitat locally, the site is not assessed to represent a significant resource in the context of wider landscape.
<i>Foreseen Impacts</i>	The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
<i>Recommendations</i>	No further surveys are required. The proposed development includes the construction of open sided, flood-lit sports courts. Whilst it is acknowledged that requirements to effectively illuminate the sports courts will be over the recommended maximum lux levels detailed within sensitive lighting guidance pertaining to bats (GN08/23), mitigation can be included to reduce impacts insofar as is possible. Specifically, it is likely that use of the floodlights will be limited during periods of higher bat activity (i.e. May - August) given the longer daylight hours as thus impacts during these months is likely to be limited. Although lighting may be required for short periods in the evening during the shoulder seasons (i.e. early spring and later Autumn), the lighting will be used for short periods in an area devoid of optimal foraging and commuting opportunities. Flood lighting will be used mostly during the winter months during prolonged periods of darkness; bats will be torpid/ mostly inactive during this period. As such, no significant impacts with regards to lighting are anticipated. However, it would be beneficial to produce a flood light timetable, which will define periods when lighting will be used most to ensure the above assessment is correct.

	https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2
Birds	
<i>Summary of Survey Findings</i>	No evidence of nesting birds was found on site during the surveys; however, birds could use the scattered trees in the surrounding area for nesting. No habitat for schedule 1 birds was observed.
<i>Foreseen Impacts</i>	Homogenous grassland will be removed to facilitate the proposed plan, this is likely to be inconsequential for the local bird population, due to the low value and presence of more extensive habitat locally.
<i>Recommendations</i>	No further surveys, however the grassland will be maintained at ~7cm to prevent increase in suitability.
Reptiles	
<i>Summary of Survey Findings</i>	Desk Study A search of the magic database returned no EPSLs for rare reptile species within a 2km radius. On Site The grassland on site provides suitable habitat for basking and commuting reptiles, however, the majority of the grassland is homogenous at ~7cm, whereby there is an absence of refugia. Whilst it is acknowledged that the area of longer grassland and ornamental shrubs provide a better habitat structure, these features are enclosed by extensive suboptimal habitat including frequently managed sports fields and a hardstanding car park. Given this, connectivity between the site and wider landscape for reptiles is considered to be very poor and the presence of reptiles within the site is considered highly unlikely.
<i>Foreseen Impacts</i>	Homogenous grassland will be removed to facilitate the construction. The site has a dominance of suboptimal grassland and poor connectivity to the wider landscape, due to the site being enclosed by the leisure centre with sporting areas and car parks. Due to this, the site is assessed to have likely absence of reptiles.
<i>Recommendations</i>	No further surveys required.

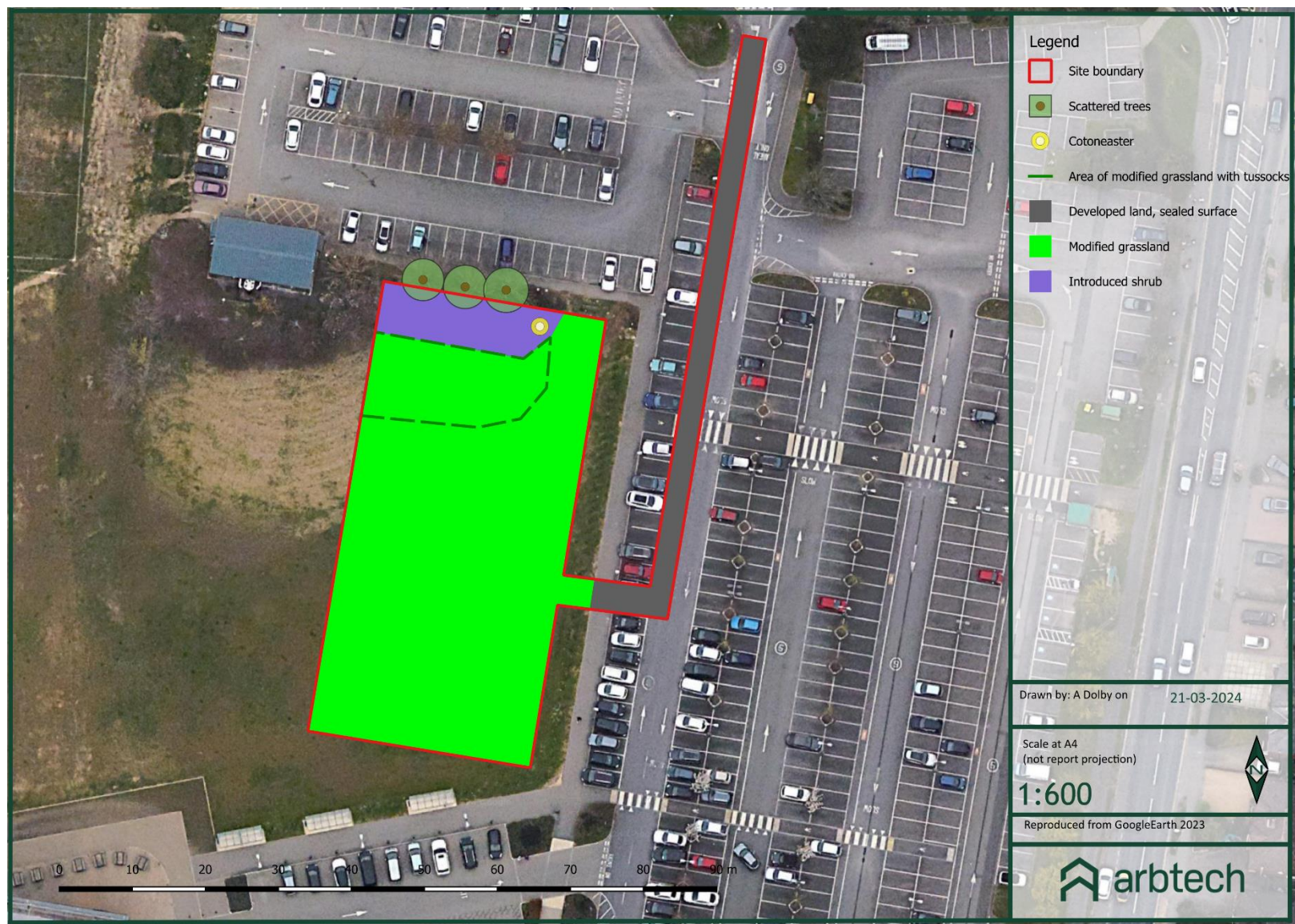
	The site could be enhanced for reptile's post development with the inclusion of log piles and a compost heap.
Amphibians	
<i>Summary of Survey Findings</i>	Desk Study A search of the magic database returned no EPSLs for great crested newts within a 2km radius. On Site There are no ponds on site. Furthermore, a review of aerial imagery and the Magic.gov.uk database indicates that there are no ponds within 500m with suitable terrestrial connectivity to the site. Habitat present on site could provide opportunities for great crested newts and other common amphibians within a different landscape context. The grassland could provide some commuting and foraging value, whilst longer sections of grassland and ornamental shrubs could provide refuge value. However, given the absence of ponds with connectivity within 500m of the site, the presence of great crested newts and other common amphibians is considered highly unlikely.
<i>Foreseen Impacts</i>	None foreseen
<i>Recommendations</i>	No further surveys are required.
Badger	
<i>Summary of Survey Findings</i>	Habitats on site are assessed to provide absence of notable sett building opportunities for badgers. However, no evidence indicating the presence of badgers, or their setts was recorded on or within 30m of the site. Furthermore, given the homogenous topography and absence of any notable cover, the site is not considered to provide any

	notable sett building opportunities. However, the presence of badgers for transient periods whilst foraging and commuting cannot be discounted.
<i>Foreseen Impacts</i>	Grassland will be removed to facilitate the proposed plan; this is likely to be inconsequential to the local badger population due to the low value and presence of more extensive habitat locally. However, foraging and commuting badgers may be harmed during the construction.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Riparian animals	
<i>Summary of Survey Findings</i>	Monk's brook is located 0.21km west of the site, with grassland and trees connecting it to the site. However, there is a high level of footfall from dog walkers and public commuting to the leisure centre which is likely to deter riparian animals from using the site.
<i>Foreseen Impacts</i>	Modified grassland will be removed to facilitate the construction; however, this is likely to be inconsequential to the local riparian populations due to the low value and presence of more extensive habitat locally. No works will be completed within 10m of a watercourse.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.

	• The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to the watercourse and any retained habitats which riparian animals could use. • Best practice pollution prevention measures will be implemented to minimise impacts to the watercourse and any retained habitats that riparian animals could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that riparian animals or evidence of riparian animals is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Hazel dormouse	
<i>Summary of Survey Findings</i>	Desk study A search of the magic database returned no EPSLs for dormice within a 2km radius. On site The site consists of grassland with adjacent trees. The area of grassland with tussocks could provide suitable habitat for nesting. However, there are no hedgerows on site and the adjacent scattered trees have no connection to pockets of woodland. Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites, whilst avoiding predation. Due to the lack of hedgerows and trees the site does not support this habitat structure.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	No further surveys required.
Other e.g. hedgehog	

<i>Summary of Survey Findings</i>	The grassland onsite provides foraging and commuting opportunities for hedgehogs. However, there is a high level of footfall by dog walkers and public using the leisure centre, which may deter hedgehogs from using the site.
<i>Foreseen Impacts</i>	Grassland will be removed to facilitate the construction; however, this is maintained at ~7cm and likely to be inconsequential to the local hedgehog population due to the low value and presence of more extensive habitat locally. However, a foraging or commuting hedgehog could be harmed during the construction.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.

Appendix 1: Survey/Habitat map



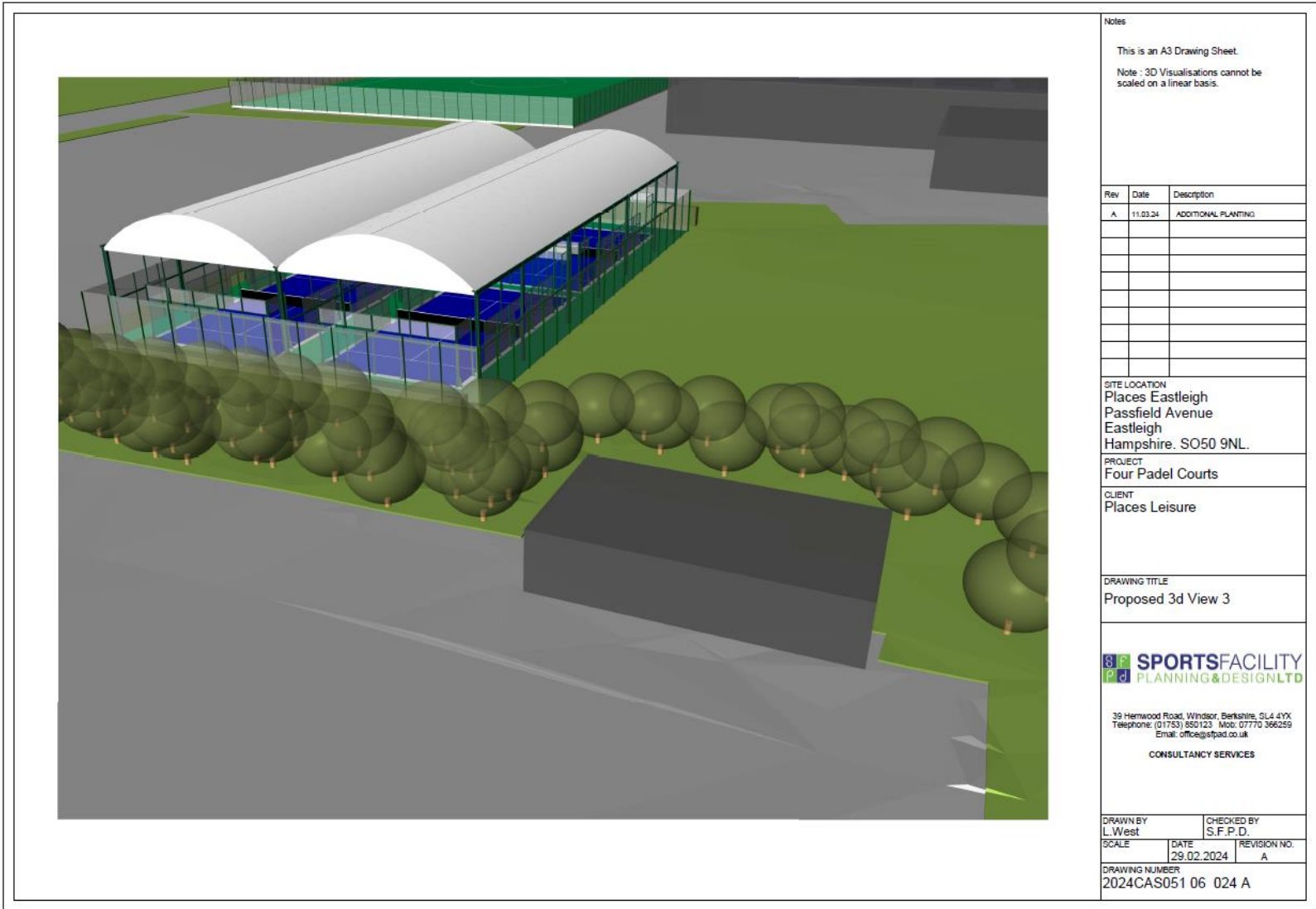
Appendix 2: Location map



Appendix 3a: Proposed plan



Appendix 3b: Proposed plan



Appendix 4: Photos



Photo 1: A view of the site, looking north.
Showing the hard standing car park, with
eastern adjacent trees.



Photo 2: A view of the site, looking north.
Showing the modified grassland.



Photo 3: A view of the site, looking southwest, with trees adjacent to the eastern boundary.



Photo 4: The area of modified grassland with tussocks.



Photo 5: The area of introduced shrub,
looking north.



Photo 6: The area of introduced shrub,
looking southwest.



Photo 7: The cotoneaster *Cotoneaster horizontalis* located within the introduced shrub.



Photo 8: The area of introduced shrub, looking northeast.



Photo 9: The scattered trees adjacent to the northern boundary.



Photo 10: Bike shelters adjacent to the southern boundary.

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