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Shadow HRA: Test of Likely Significant Effects & Appropriate Assessment

Client

Highwood Ventures 7 Limited

Project

Land East of Chickenhall Lane,

Eastleigh

Date

May 2025

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Rev	Issue Status	Prepared/Date	Reviewed / Date	Approved / Date
-	Issue	LON / 04.04.25	PJP / 07.04.25	APD / 02.05.25

1.0 INTRODUCTION

- 1.1 The following shadow Habitats Regulations Assessment (HRA) Test of Likely Significant Effect and Appropriate Assessment (AA) has been prepared by FPCR Environment and Design Ltd., on behalf of Highwood Ventures 7 Limited, in relation to a full planning application at land east of Chickenhall Lane, Eastleigh (central OS grid reference: SU 46160 19138) hereafter referred to as the 'Site'.
- 1.2 The aim of this document is to respond to Eastleigh Borough Council's comments in relation to Full submission (ref: F/24/98678), which outlined the position of the Environment Agency and Local Planning Authority (LPA) ecologist with regards to the potential effects of the proposals on the European / Natura 2000 designated site listed in *Table 1*, line with the tests under Regulation 63 of the Habitat and Species Regulations 2019 (the Habitat Regulations) (as amended) so that planning consent can be granted. Following a meeting between the LPA Ecologists, FPCR and the Applicant, held online on 4th March 2025, further clarification on the potential likely significant effects of the application on the River Itchen SAC was sought and it was agreed that a shadow HRA should be submitted to assist Eastleigh Borough Council in their assessment as the Competent Authority.

2.0 THE PROJECT

Proposals and Site Context

- 2.1 The site spans an area of 0.6ha and forms part of a larger field area to the south. The site is currently largely utilised for personal recreational use including dog walking and storage of aggregates and firewood by the landowner, with a small building being present, and a small section is managed as a hay meadow in line with the larger field area to the south. The site sits in a green corridor for the River Itchen between the large town of Eastleigh and smaller settlement of Bishopstoke.
- 2.2 The Site is subject to a full planning application for a proposed 70-bed care home (Use Class C2), associated parking, landscaping, access, drainage, and other associated works following demolition of existing structures. A submission was made on the 20th December 2024 and consultee comments have followed from Natural England and Eastleigh Borough Council Ecology team.

Natura 2000 Sites Considered

- 2.3 All European Sites within 10km of the proposed residential development were considered within this assessment (Figure 1). For a summary of the European sites considered within this assessment please refer to Table 1 below:

Table 1- Statutory Protected Natura 2000 sites

Site Name	Site Reference	Proximity to site (approximate)	Reason for designation
River Itchen SAC	UK0012599	0 km East	Annex I Habitats: 3260 Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachium vegetation Annex II Species: 1044 Southern damselfly Coenagrion mercuriale 1163 Bullhead Cottus gobio
Emer Bog SAC	UK0030147	6.4 km Northwest	Annex I Habitats: 7140 Transition mires and quaking bogs
Solent & Southampton Water SPA	UK9011061	6.4 km Southwest	Annex I Species: A176 Mediterranean gull Ichthyophaga melanocephala A191 Sandwich tern Thalasseus sandvicensis A193 Common tern Sterna hirundo A195 Little tern Sternula albifrons A192 Roseate tern Sterna dougallii Internationally important regularly occurring migratory species: A675 Dark-bellied brent goose Branta bernicla bernicla A052 Eurasian teal Anas crecca A137 Ringed plover Charadrius hiaticula A616 Black-tailed godwit Limosa limosa islandica Regularly supporting in winter: 51,361 waterfowl In 1992/93 to 1996/97 the average peak count was 51,361 waterfowl, comprising 21,401 wildfowl and 29,960 waders.
Solent & Southampton Water Ramsar	UK11063	6.4 km Southwest	Criterion 1: One of few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. Criterion 2: Important assemblage of rare plants and invertebrates—at least 33 British Red Data Book invertebrates and at least eight British Red Data Book. Criterion 5: Assemblages of international importance: Species with peak counts in winter: 51,343 waterfowl (5-year peak mean 1998/99–2002/2003). Criterion 6: Species/populations occurring at levels of international importance. Species with peak counts in spring/autumn: Ringed plover Charadrius hiaticula Species with peak counts in winter: Dark-bellied brent goose Branta bernicla bernicla Eurasian teal Anas crecca Black-tailed godwit Limosa limosa islandica
Solent Maritime SAC	UK0030059	8.3 km Southwest	Annex I Habitats: 1130 Estuaries 1320 Spartina swards (Spartinion maritima) 1330 Atlantic salt meadows (Glaucopuccinellietalia maritima)

3.0 THE HRA PROCESS

3.1 The HRA process has developed into a four-stage process summarised as follows:

- **Stage One: Screening** – also known as the Test of Likely Significant Effect (TOLSE). If the Competent Authority cannot screen out a likely significant effect, an Appropriate Assessment is required.
- **Stage Two: Appropriate Assessment** – the Competent Authority will only agree to plans or projects that will not affect the integrity of a European site also known as the “Integrity Test”.
- **Stage Three: Alternative Solutions** – assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed to and it will either need to be changed or refused.
- **Stage Four:** The final stage may allow a plan or project to proceed if after failing stage three if it is for Imperative Reasons of Overriding Public Interest, and only if suitable compensatory measures are secured.

3.2 A note on the people Over Wind Judgement in relation to the HRA process is provided in Appendix A Section 1.17 to 1.20, and in relation to the ‘Dutch Nitrogen Cases’, outlined in Appendix A paragraphs 1.21-1.25.

3.3 This report identifies and considers ecological pathways between the Site and the Natura 2000 site(s) within the Zone of Influence identified, specific to each and its qualifying feature(s). Each was screened with a TOLSE for standalone effects, and then the effect in-combination with other plans or projects was considered. Where there are any ecological pathways that could not be screened without mitigation alone or in-combination, a Stage 2 Appropriate Assessment was conducted and is included in this HRA.

Consultation

3.4 A large range of information sources have been consulted to prepare this report. The following listed sources represent a detailed baseline sufficient with which to undertake HRA Stages 1 and 2:

- JNCC, 12/2015. Natura 2000 – Standard Data Form UK0012599 River Itchen SAC.
- JNCC, 12/2015. Natura 2000 – Standard Data Form UK0030147 Emer Bog SAC.
- JNCC, 12/2015. Natura 2000 – Standard Data Form UK0030059 Solent Maritime SAC.
- Natural England European Site Citation – UK9011061 Solent & Southampton Water SPA.
- JNCC, 13/06/2008. Information Sheet on Ramsar Wetlands (RIS) UK11063 Solent & Southampton Water Ramsar.
- Natural England, 27/11/2018. European Site Conservation Objectives for River Itchen SAC Site Code: UK0012599.
- Natural England, 07/10/2014. Site Improvement Plan: River Itchen (SIP193).
- Natural England, 16/01/2015. Site Improvement Plan: Emer Bog (SIP074).

- Natural England, 07/10/2014. Site Improvement Plan: Solent (SIP043).
- Natural England, 03/2020. Advice on Achieving Nutrient Neutrality for New Development in the Solent Region.
- FPCR, 03,2025. Nutrient_Calculator_Itchen_SAC_V_03_01_3 (2) Chickenhall Lane-28.11.24.xlsx

4.0 STAGE 1: TEST OF LIKELY SIGNIFICANT EFFECT (SCREENING)

River Itchen SAC (UK0012599)

Qualifying Features

4.1 Annex I habitats that are a primary reason for selection of this site:

- 3260 Water courses of plain to montane levels with the *Ranuncion fluitantis* and *Callitricho-Batrachion* vegetation

The Itchen is a classic example of a sub-type 1 chalk river. The river is dominated throughout by aquatic *Ranunculus* spp. The headwaters contain pond water-crowfoot *Ranunculus peltatus*, while two *Ranunculus* species occur further downstream: stream water-crowfoot *R. penicillatus* ssp. *pseudofluitans*, a species especially characteristic of calcium-rich rivers, and river water-crowfoot *R. fluitans*.

4.2 Annex II species that are a primary reason for selection of this site:

- 1044 Southern damselfly *Coenagrion mercurial*
- 1163 Bullhead *Cottus gobio*

4.3 Annex II species present as a qualifying feature, but not a primary reason for site selection:

- 1092 White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
- 1096 Brook lamprey *Lampetra planeri*
- 1106 Atlantic salmon *Salmo salar*
- 1355 Otter *Lutra lutra*

Conservation Objectives

4.4 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

Threats and Pressures

4.5 Site Improvement Plans (SIPs) were developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 Sites (IPENS). Table 2 shows the threats and pressures identified in the River Itchen SAC Site Improvement Plan (2014).

Table 2: Threats and pressures: River Itchen SAC Site Improvement Plan 2014

Priority & Issue	Threat/Pressure	Measure
1. Water pollution	Pressure	Environment Agency to implement actions from DWP plans; review of consents, and any identified for the introduction into wastewater treatment
2. Physical modification	Pressure	Implement River Restoration Strategy
3. Siltation	Pressure	Implement diffuse water pollution plan actions and River Restoration Strategy actions along with land management advice
4. Overgrazing	Pressure	Establish favourable grazing throughout the floodplain and riparian corridor
5. Water abstraction	Pressure	Reduce water abstraction to sustainable levels
6. Inappropriate weed control	Pressure	Quantify impacts of weed-cutting, assess whether a weed management plan is required, and liaise with fisheries on appropriate management
7. Hydrological changes	Threat	Investigate causes of floodplain dryness, in particular, impacts of boreholes, but also water level management
8. Inappropriate water levels	Pressure	Implement viable Water Level Management Plan projects after appraisal of options
9. Change in Land Management	Threat	Monitor HLS compliance with grazing prescriptions and amend if necessary
10. Inappropriate cutting/mowing	Pressure	Quantify the impacts of fisheries riverbank management and liaise with fisheries on appropriate management through the River Restoration Strategy
11. Invasive species	Pressure	Implement control measures for invasive non-native species (INNS)
12. Under grazing	Pressure	Establish favourable grazing via existing local mechanisms and agri-environment agreements
13. Inappropriate ditch management	Pressure	Establish appropriate management of ditches through agri-environment agreements and advice
14. Inappropriate scrub control	Pressure	Manage scrub appropriate for southern damselfly through (amending) agri-environment agreements
15. Forestry and Woodland Management	Pressure	Implement the River Restoration Strategy

SAC Qualifying Features Condition Assessment

- 4.6 Natural England have published¹ a basic condition summary that relates specifically to the component Sites of Special Scientific Interest (SSSI) units that comprise the SAC, which has been reproduced in *Table 3*.

Table 3: River Itchen SSSI Units Condition Assessment. (F = favourable condition, UR = favourable recovering, UN = unfavourable no change, (?) = not recorded)

Feature	003	004	023	027	039	053	055	058	081	082	083	084	087	088	090	092	095	097	098	099	101	105	106	107	108	142	143	
H3260																						UN	UN	UN	UN			
S1044									F	UR	UN	UR	UR	UR	UR	UR	UR	UR	UR	UR	UR		UN	UN	UN	UN		
S1092																						UN	UN					
S1096																						F	F	UN	UN	UN	F	
S1106																						UN	UN	UN	UN			
S1163																						F	F	F	F			
S1355	F	F	UR	?	?	UN	F	UN	F	F	F	F	F	UR	UR	F	F	F	F	UR	F	UR	UR	UR	UR	?	?	

¹ Natural England. <https://designatedsites.naturalengland.org.uk/SiteSACFeaturesMatrix.aspx?SiteCode=UK0012599>

Ecological Pathways and Screening Conclusions

- 4.7 In the interest of brevity, only ecological pathways relevant to residential developments are included in the screening conclusions tables, as many of the ecological pathways are not of relevance to a development of this nature and scale (such as under grazing and forestry management, which are not anticipated to be impacted by a new care home).

Table 4: Ecological Pathway and HRA Screening Conclusions – River Itchen SAC

Ecological Pathway	Assessment applied	Likely Significant Effect
Physical modification	The development is not anticipated to require any direct modification of the watercourse, or result in loss or fragmentation of qualifying habitat. The proposed surface water drainage system includes a headwall set back approximately 5m from the top of the bank, with water flowing over habitat into the river. At the proposed maximum discharge rates, this will not result in a loss of habitat. Inherent mitigation will be implemented in the design of the scheme through the inclusion of riparian habitat creation, comprised of marginal and aquatic forb planting and willow and alder carr, in green infrastructure provision. These habitats will be planted along the edge of the section of river that passes alongside the site, enhances the habitat available for riparian species, which is currently intensely overshadowed by non native planting, intensively mown, compacted modified grassland of limited value to riparian fauna. Given the buffer area along the river will be enhanced and protected (see Appendix B), and will be removed from its current recreational uses, it is likely there will be an overall positive impact on the status of this section of the river which benefits the protected site overall.	No LSE alone or in combination Screened out
Water pollution	As the surface water drainage discharges into the River Barton, which forms part of the River Itchen SAC, this would have a likely significant effect without appropriate mitigation.	Uncertain Appropriate Assessment Required
Siltation	Will there be a likely significant effect on the SPA from temporary dust generated during construction on the site? Assessment: The distance dust particles are likely to travel is between 350-400m^{2,3} with the negative effects of dust on habitats and flora greater in magnitude the closer to the source of release (mostly within 100m from source). The site lies directly adjacent to SAC and therefore lies inside this 300-400m zone.	Uncertain Appropriate Assessment Required
Hydrological changes	The surface water drainage discharges directly into the River Barton, which forms part of the River Itchen SAC, it not possible to determine this would have no likely significant effect without further assessment.	Uncertain Appropriate Assessment Required

² Guidance on the assessment of dust from demolition and construction. 2014. Institute of Air Quality Management.

³ Guidance on the Assessment of Mineral Dust Impacts for Planning. 2016. Institute of Air Quality Management.

Ecological Pathway	Assessment applied	Likely Significant Effect
Inappropriate water levels	The surface water drainage discharges directly into the River Barton, which forms part of the River Itchen SAC, it not possible to determine this would have no likely significant effect without further assessment.	Uncertain Appropriate Assessment Required

Emer Bog SAC (UK0030147)

Qualifying Features

- 4.8 Annex I habitats that are a primary reason for selection of this site
- 7140 Transition mires and quaking bogs
- 4.9 Emer Bog lies in a wet infilled hollow on the developed eastern hinterland of the New Forest. Apart from scattered willow *Salix* scrub, it is largely open and dominated by bottle sedge *Carex rostrata* and marsh cinquefoil *Potentilla palustris*, with frequent common cottongrass *Eriophorum angustifolium*, and occasional pools with bogbean *Menyanthes trifoliata*. White sedge *Carex curta* and the bog-mosses *Sphagnum fimbriatum* and *S. squarrosum* become common at the edge of the bog, with the rushes *Juncus effusus* and *J. acutiflorus*. There are also patches of common reed *Phragmites australis*. The basin is surrounded by more mature willow *Salix* woodland and open heathland.

Conservation Objectives

- 4.10 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
- The extent and distribution of the qualifying natural habitat
 - The structure and function (including typical species) of the qualifying natural habitat
 - The supporting processes on which the qualifying natural habitat rely

Threats and Pressures

- 4.11 Published threats and pressures on Emer-Bog SAC are listed below.

Table 5: Threats and pressures: Emer Bog SAC Site Improvement Plan 2015

Priority & Issue	Threat/Pressure	Measure
1. Public Access/Disturbance	Threat	Study of site management in context of urban growth and recreational pressure
2. Hydrological changes	Pressure/Threat	Hydrological investigation and monitoring
3. Air Pollution: impact of atmospheric nitrogen deposition	Pressure	Control, reduce and ameliorate atmospheric nitrogen impacts

SAC Qualifying Features Condition Assessment

- 4.12 Natural England have published⁴ a basic condition summary that relates specifically to component Site of Special Scientific Interest (SSSI) that comprises the SAC, which has been reproduced in *Table 6*.

Table 6: Emer-Bog SSSI Units Condition Assessment. (UN = unfavourable no change)

Feature	Baddesley Common SSSI
	002
H7140 Transition mires and quaking bogs	UN

Ecological Pathways and Screening Conclusions

- 4.13 All three ecological pathways are assessed in this screening and are included in the screening conclusions tables.

Table 7: Ecological Pathway and HRA Screening Conclusions – Emer Bog SAC

Ecological Pathway	Assessment applied	Likely Significant Effect
Public Access/ Disturbance	The proposed development consists of a 70-bed care home. As this will result in a relatively low number of residents once completed, and most residents are expected to have limited mobility or lack access to private transport, it is unlikely that the development will contribute to any significant increase in recreational pressure.	No LSE alone or in combination Screened out
Hydrological changes	The proposed development lacks hydrological linkage to Emer Bog and consequently, nutrient input from surface water run-off and wastewater to Emer Bog is not anticipated.	No LSE alone or in combination Screened out

⁴ Natural England. <https://designatedsites.naturalengland.org.uk/SiteSACFeaturesMatrix.aspx?SiteCode=UK0012599>

Ecological Pathway	Assessment applied	Likely Significant Effect
Air Pollution: impact of atmospheric nitrogen deposition	Guidance from Natural England⁵ on air quality provides a four-step process for HRA assessments. Where a road, likely to be receive increased traffic flow from a development, falls within 200m of a European site, then an impact is possible. The 200m distance criteria is based on the often-quoted evidence⁶ that shows pollutant concentrations fall away steeply with distance from the road. Natural England 4 step Guidance⁷ on traffic emissions— Will there be a likely significant effect from nitrogen deposition on the SAC from increased traffic as a result of the proposals? Step 1: Does the proposal give rise to emissions which are likely to reach a European site? No Step 2: Are the qualifying features of sites within 200m of a road sensitive to air pollution? No The nearest strategic roads to the SAC are the A27 and A3-090, both of which are over 200m from the site. In-combination effects on the SAC can also be scoped out on a similar basis due to being over 200m from a strategic road. Additionally, the increase in traffic from a 70-bed care home and its construction is unlikely to be significant in combination with the existing traffic levels.	No LSE alone or in combination Screened out

Solent & Southampton Water SPA (UK9011061), and Ramsar (UK11063)

Qualifying Features (SPA)

4.14 Annex I Species:

- A176 Mediterranean gull *Ichthyiaetus melanocephalus*
- A191 Sandwich tern *Thalasseus sandvicensis*
- A193 Common tern *Sterna hirundo*
- A195 Little tern *Sternula albifrons*
- A192 Roseate tern *Sterna dougallii*

4.15 Internationally important regularly occurring migratory species:

- A675 Dark-bellied brent goose *Branta bernicla bernicla*
- A052 Eurasian teal *Anas crecca*
- A137 Ringed plover *Charadrius hiaticula*

⁵ Natural England. 2018. Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations

⁶ Design Manual for Roads and Bridges. Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques. Part 1: Air Quality.

⁷ Natural England. 06.2018. Internal Guidance – Approach to Advising Competent Authorities on Road Traffic Emissions and HRAs V1.4 Final.

- A616 Black-tailed godwit *Limosa limosa islandica*

4.16 Regularly supporting in winter:

- 51,361 waterfowl

4.17 In 1992/93 to 1996/97 the average peak count was 51,361 waterfowl, comprising 21,401 wildfowl and 29,960 waders.

Conservation Objectives (SPA)

4.18 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features
- The distribution of the qualifying features within the site

Qualifying Features (Ramsar)

4.19 The area covered extends from Hurst Spit to Gilkicker Point along the south coast of Hampshire and along the north coast of the Isle of Wight. The site comprises of estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. The diversity of habitats supports internationally important numbers of wintering waterfowl, important breeding gull and tern populations and an important assemblage of rare invertebrates and plants.

4.20 **Ramsar Criterion 1** - The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.

4.21 **Ramsar Criterion 2** - The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.

4.22 **Ramsar Criterion 5** - Assemblages of international importance: Species with peak counts in winter: 51343 waterfowl (5-year peak mean 1998/99-2002/2003).

4.23 **Ramsar Criterion 6** – Species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

- Ringed plover, *Charadrius hiaticula*, 397 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1998/9- 2002/3)

Species with peak counts in winter:

- Dark-bellied brent goose, *Branta bernicla bernicla*, 6456 individuals, representing an average of 3% of the population (5-year peak mean 1998/9- 2002/3)
- Eurasian teal, *Anas crecca*, NW Europe 5514 individuals, representing an average of 1.3% of the population (5-year peak mean 1998/9-2002/3)
- Black-tailed godwit, *Limosa limosa islandica*, 1240 individuals, representing an average of 3.5% of the population (5-year peak mean 1998/9-2002/3)

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

- Mediterranean gull, *Larus melanocephalus*, Europe 11 apparently occupied nests, representing an average of 10.1% of the GB population (Seabird 2000 Census)
- Black-headed gull, *Larus ridibundus*, N & C Europe 6911 apparently occupied nests, representing an average of 5.4% of the GB population (Seabird 2000 Census)
- Sandwich tern, *Sterna (Thalasseus) sandvicensis sandvicensis*, W Europe 268 apparently occupied nests, representing an average of 2.5% of the GB population (Seabird 2000 Census)
- Roseate tern, *Sterna dougallii dougallii*, W Europe 1 apparently occupied nests, representing an average of 1.9% of the GB population (Seabird 2000 Census)
- Common tern, *Sterna hirundo hirundo*, N & E Europe 192 apparently occupied nests, representing an average of 1.8% of the GB population (Seabird 2000 Census)
- Little tern, *Sterna albifrons albifrons*, W Europe 22 apparently occupied nests, representing an average of 1.1% of the GB population (Seabird 2000 Census)
- Species with peak counts in spring/autumn:
- Little egret, *Egretta garzetta*, West Mediterranean 115 individuals, representing an average of 6.9% of the GB population (5-year peak mean 1998/9- 2002/3)
- Spotted redshank, *Tringa erythropus*, Europe/W Africa 13 individuals, representing an average of 9.5% of the GB population (5-year peak mean 1998/9- 2002/3)
- Common greenshank, *Tringa nebularia*, Europe/W Africa 58 individuals, representing an average of 9.7% of the GB population (5-year peak mean 1998/9- 2002/3)

Species with peak counts in winter:

- Little grebe, *Tachybaptus ruficollis ruficollis*, Europe to E Urals, NW Africa 105 individuals, representing an average of 1.3% of the GB population (5-year peak mean 1998/9- 2002/3)
- Slavonian grebe, *Podiceps auritus*, Northwest Europe 12 individuals, representing an average of 1.6% of the GB population (5-year peak mean 1998/9- 2002/3)
- Black-necked grebe, *Podiceps nigricollis nigricollis*, Europe, N Africa 3 individuals, representing an average of 2.5% of the GB population (5-year peak mean 1998/9- 2002/3)
- Great cormorant, *Phalacrocorax carbo carbo*, NW Europe 247 individuals, representing an average of 1% of the GB population (5-year peak mean 1998/9- 2002/3)

- Common shelduck, *Tadorna tadorna*, NW Europe 964 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1998/9- 2002/3)
- Eurasian wigeon, *Anas penelope*, NW Europe 7907 individuals, representing an average of 1.9% of the GB population (5-year peak mean 1998/9- 2002/3)
- Northern pintail, *Anas acuta*, NW Europe 359 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1998/9- 2002/3)
- Northern shoveler, *Anas clypeata*, NW & C Europe 267 individuals, representing an average of 1.8% of the GB population (5-year peak mean 1998/9- 2002/3)
- Red-breasted merganser, *Mergus serrator*, NW & C Europe 142 individuals, representing an average of 1.4% of the GB population (5-year peak mean 1998/9- 2002/3)
- Water rail, *Rallus aquaticus*, Europe 17 individuals, representing an average of 3.7% of the GB population (5-year peak mean 1998/9- 2002/3)
- Grey plover, *Pluvialis squatarola*, E Atlantic/W Africa -wintering 1171 individuals, representing an average of 2.2% of the GB population (5-year peak mean 1998/9- 2002/3)
- Dunlin, *Calidris alpina alpina*, W Siberia/W Europe 10417 individuals, representing an average of 1.8% of the GB population (5-year peak mean 1998/9-2002/3)
- Eurasian curlew, *Numenius arquata arquata*, N. a. arquata Europe (breeding) 1766 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1998/9- 2002/3)

Conservation Objectives (Ramsar)

- 4.24 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;
- The extent and distribution of the habitats of the qualifying features
 - The structure and function of the habitats of the qualifying features
 - The supporting processes on which the habitats of the qualifying features rely
 - The population of each of the qualifying features
 - The distribution of the qualifying features within the site

Threats and Pressures (SPA)

- 4.25 Published threats and pressures on Solent and Southampton Water SPA are listed below.

Table 8: Threats and pressures: Solent Site Improvement Plan 2014

Priority & Issue	Threat/ Pressure	Measure
1. Public Access/Disturbance	Threat	Reduce disturbance through access management, awareness raising and wardening
2. Coastal squeeze	Threat	Investigate options to create alternative habitat
3. Fisheries: Commercial marine and estuarine	Threat	Introduce appropriate management measures where required and ensure compliance

Priority & Issue	Threat/ Pressure	Measure
4. Water Pollution	Threat	Implement actions in the Diffuse Water Pollution Plan, and investigate further pollution
5. Changes in species distributions	Threat	Investigate the causes of change
6. Climate change	Threat	Investigate the effects of climate change
7. Change to site conditions	Threat	Investigate the reasons for change
8. Invasive species	Threat	Implement the management options to control invasive non-native species (INNS)
9. Direct land take from development	Threat	Option appraisal for private coastal defences
10. Biological resource use	Threat	Appropriate egg collection licensing
11. Change in land management	Threat	Ensure appropriate ditch management, and assess the effects of tidal sluice operation
12. Inappropriate pest control	Threat	Increase control of foxes
13. Air Pollution: Impact of atmospheric nitrogen deposition	Pressure	Reduce the impacts of air pollution
14. Hydrological changes (water abstraction)	Threat	Review abstraction licenses
15. Direct impact from third party	Threat	Assess the activities and their effects
16. Extraction: non-living resources	Threat	Investigate the extent and impact of shingle extraction
17. Other	Threat	Consider/explore boundary change to amend the SAC / SPA designations, to include habitats outside of the existing boundaries

Ecological Pathways and Screening Conclusions

- 4.26 In the interest of brevity, only ecological pathways relevant to residential developments are included in the screening conclusions tables, as many of the ecological pathways are not of relevance to a development of this nature and scale (such as egg collection, pest control, shingle extraction, fisheries mismanagement, and management of invasive species, which are not anticipated to be impacted by a new care home).

Table 9: Ecological Pathway and HRA Screening Conclusions – Solent & Southampton Water SPA

Ecological Pathway	Assessment applied	Likely Significant Effect
Public Access/ Disturbance	The proposed development consists of a 70-bed care home. As this will result in a relatively low number of residents once completed, and most residents are expected to have limited mobility or lack access to private transport, it is unlikely that the development will contribute to any significant increase in recreational pressure. The scheme does not require a contribution to the Bird Aware Solent mitigation scheme.	No LSE alone or in combination Screened out

Ecological Pathway	Assessment applied	Likely Significant Effect
Water Pollution	The Itchen flows directly into Southampton Water to the south, where the water mixes with estuarine and marine waters at the coast. Solent Maritime forms part of the Southampton Water coast and may be exposed to nutrient input from the development, via surface water run-off or wastewater effluent, that has passed down the river. While the extent of nutrient input from a development of this scale and type is likely to be minimal, diffusing sparsely by the time it enters Southampton Water, there remains a residual possible impact on the nutrient balance of the marine habitat for which the Solent Maritime SAC qualifies, particularly cumulatively with other sources.	Uncertain Appropriate Assessment Required
Air Pollution: impact of atmospheric nitrogen deposition	Natural England 4 step Guidance⁸ on traffic emissions— Will there be a likely significant effect from nitrogen deposition on the SPA from increased traffic as a result of the proposals? Step 1: Does the proposal give rise to emissions which are likely to reach a European site? Yes Step 2: Are the qualifying features of sites within 200m of a road sensitive to air pollution? Yes Step 3: Could the sensitive qualifying features of the site be exposed to emissions? Yes Step 4: Application of screening thresholds. An AADT figure has not been calculated, but we can confidently conclude a 70-bed care home will not reach the 1000 AADT threshold. In-combination effects on the SPA can also be scoped out on a similar basis. While the SPA has been identified as situated within 200m of strategic roads (A3024, A3051), the increase in traffic from a 70-bed care home and its construction is very unlikely to be significant in combination with the existing traffic levels.	No LSE alone or in combination Screened out

Solent Maritime SAC (UK0030059)

Qualifying Features

4.27 Annex I habitats that are a primary reason for selection of this site:

- 1130 Estuaries

The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries and four bar-built estuaries. The Solent and its inlets are unique in

⁸ Natural England. 06.2018. Internal Guidance – Approach to Advising Competent Authorities on Road Traffic Emissions and HRAs V1.4 Final.

Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area.

- 1320 *Spartina* swards (*Spartinion maritimae*)

Solent Maritime is the only site for smooth cord-grass *Spartina alterniflora* in the UK and is one of only two sites where significant amounts of small cord-grass *S. maritima* are found. It is also one of the few remaining sites for Townsend's cord-grass *S. x townsendii* and holds extensive areas of common cord-grass *Spartina anglica*.

- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. In contrast to the Severn estuary, the salt meadows at this site are notable as being representative of the ungrazed type and support a different range of communities dominated by sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and thrift *Armeria maritima*.

4.28 Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- 1110 Sandbanks which are slightly covered by sea water all the time
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1150 Coastal lagoons
- 1210 Annual vegetation of drift lines
- 1220 Perennial vegetation of stony banks
- 1310 *Salicornia* and other annuals colonizing mud and sand
- 2120 "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")"

4.29 Annex II species present as a qualifying feature, but not a primary reason for site selection

- 1016 Desmoulin's whorl snail *Vertigo moulinsiana*

Conservation Objectives

4.30 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Threats and Pressures

- 4.31 Published threats and pressures on Solent Maritime SAC are the same as those for Solent & Southampton Water SPA—please refer to *Table 8*.

Ecological Pathways and Screening Conclusions

- 4.32 Only ecological pathways relevant to residential developments are included in the screening conclusions tables. These pathways are the same as those for Solent & Southampton Water SPA due to the SIP covering both sites, so will be given the same screening assessments, but are recorded again below for easier reviewing.

Table 10: Ecological Pathway and HRA Screening Conclusions – Solent Maritime SAC

Ecological Pathway	Assessment applied	Likely Significant Effect
Public Access/ Disturbance	The proposed development consists of a 70-bed care home. As this will result in a relatively low number of residents once completed, and most residents are expected to have limited mobility or lack access to private transport, it is unlikely that the development will contribute to any significant increase in recreational pressure.	No LSE alone or in combination Screened out
Water Pollution	The Itchen flows directly into Southampton Water to the south, where the water mixes with estuarine and marine waters at the coast. Solent Maritime forms part of the Southampton Water coast and may be exposed to nutrient input from the development, via surface water run-off or wastewater effluent, that has passed down the river. While the extent of nutrient input from a development of this scale and type is likely to be minimal, diffusing sparsely by the time it enters Southampton Water, there remains a residual possible impact on the nutrient balance of the marine habitat for which the Solent Maritime SAC qualifies, particularly cumulatively with other sources.	Uncertain Appropriate Assessment Required

Ecological Pathway	Assessment applied	Likely Significant Effect
Air Pollution: impact of atmospheric nitrogen deposition	Natural England 4 step Guidance⁹ on traffic emissions— Will there be a likely significant effect from nitrogen deposition on the SAC from increased traffic as a result of the proposals? Step 1: Does the proposal give rise to emissions which are likely to reach a European site? Yes Step 2: Are the qualifying features of sites within 200m of a road sensitive to air pollution? Yes Step 3: Could the sensitive qualifying features of the site be exposed to emissions? Yes Step 4: Application of screening thresholds. An AADT figure has not been calculated, but we can confidently conclude a 70-bed care home will not reach the 1000 AADT threshold. In-combination effects on the SAC can also be scoped out on a similar basis. While the SAC has been identified as situated within 200m of strategic roads (M27, A27, A3051), the increase in traffic from a 70-bed care home and its construction is very unlikely to be significant in combination with the existing traffic levels.	No LSE alone or in combination Screened out

Screening Conclusion

- 4.33 Table 11 provides a summary of the screening assessment of the proposed development for all of the European designated sites identified.

Table 11: Ecological Pathway and HRA Screening (TOLSE) Conclusions for all European designated sites identified

Site	Qualifying Feature	Potential Impact Pathway – alone and in-combination	Likely Significant Effect?
River Itchen SAC	Water courses of plain to montane levels Southern damselfly Bullhead	Water pollution	Uncertain – AA required
		Siltation	Uncertain – AA required
		Hydrological changes (floodplain dryness)	No LSE – screened out
		Inappropriate water levels	Uncertain – AA required
Emer Bog SAC	Transition mires and quaking bogs	Public Access/ Disturbance	No LSE – screened out
		Hydrological changes (nutrient influx)	No LSE – screened out
		Air Pollution	No LSE – screened out
Solent & Southampton Water SPA / Ramsar	Waterbird populations/species occurring at levels of international importance Important assemblages of rare plants and invertebrates	Public Access/ Disturbance	No LSE – screened out
		Water pollution	Uncertain – AA required
		Air Pollution	No LSE – screened out
		Hydrological changes (water abstraction)	No LSE – screened out

⁹ Natural England. 06.2018. Internal Guidance – Approach to Advising Competent Authorities on Road Traffic Emissions and HRAs V1.4 Final.

Site	Qualifying Feature	Potential Impact Pathway – alone and in-combination	Likely Significant Effect?
Solent Maritime SAC	Estuaries, mudflats, sandbanks, coastal lagoons, stony banks, shifting sand dunes Spartina swards Atlantic salt meadows	Public Access/ Disturbance	No LSE – screened out
		Water pollution	Uncertain – AA required
		Air Pollution	No LSE – screened out
		Hydrological changes (water abstraction)	No LSE – screened out

5.0 STAGE 2: APPROPRIATE ASSESSMENT

Water Impact Pathways

River Itchen SAC, Solent & Southampton Water SPA/Ramsar, and Solent Maritime SAC

- 5.1 The Site Improvement Plans for the European Sites scoped in for further Appropriate Assessment detail three key Impact Pathways associated with water. These were as follows:
- Water Pollution (water quality and nutrient input),
 - Hydrological Changes (water levels, flow rate, and water temperature), and;
 - Siltation (suspended particulate matter)

1. Water Pollution

- 5.2 Water pollution is identified in the SIP for the River Itchen SAC Site as a 'pressure', rather than a 'threat', suggesting that this issue is already acting on the qualifying habitats/features within the component SSSI units. As the condition of the units related to rivers and streams (105–108, 142–143), associated with the Itchen, are currently in 'unfavourable – no change' condition, it can be inferred that water pollution is currently affecting the integrity of these European sites or preventing them from reaching favourable conservation status. This means every effort must be made in new developments to mitigate for the impacts of foul and surface water drainage on the SAC.

Nutrient neutrality

- 5.3 As outlined in more detail within *Appendix A*, the 'Dutch Nitrogen Cases' have placed emphasis on plans or projects that are likely to, either directly, or indirectly, increase the nutrient loads to international sites of nature conservation importance. The cause for unfavourable condition of component SSSI units is an excess of a particular pollutant(s), which in the case of the River Itchen, concerns phosphorus. In freshwater ecosystems, phosphorus is the key driver for eutrophication, as it is often the limiting nutrient that controls algal growth.
- 5.4 There are differing nutrient dynamics in marine environments, that determine which pollutant has the greatest impact on ecological health. The main driver for eutrophication in marine environments (i.e. Solent Maritime SAC and Solent & Southampton Water SPA) is typically nitrogen, in contrast to freshwater environments (i.e. River Itchen SAC), where the main driver is phosphorus.
- 5.5 The SIPS for the Solent European Sites (which includes Solent & Southampton Water and Solent Maritime SACs, as well as Portsmouth Harbour and Chichester & Langstone Harbours) indicates that input of excess nitrogen from various point sources, including residential development, sewerage systems, agricultural run-off, and erosion and leaching from historic landfill sites all require monitoring and control measures. Such influx of nitrogen has resulted in excessive macroalgae cover and detrimental effects on SAC qualifying habitats, and habitats which support SAC/SPA qualifying species.
- 5.6 As any new development is likely to introduce additional nitrogen and/or phosphorus to European sites with hydrological connectivity to the application site, through both wastewater treatment effluent and surface water runoff. Impacts of this nutrient influx, via hydrological pathways, have the potential to result in eutrophication of freshwater or and/or marine habitats for which the European sites qualify, and in view of the site's proximity to the River Itchen, and the river's connectivity to the Solent coast, it cannot be concluded that that there

would be no likely significant effect. It would therefore also have to be concluded that in-combination effects would also be likely.

- 5.7 The schemes Nutrient Neutrality impact is assessed within the FPCR EcIA (December 2024)¹⁰ and associated River Itchen Neutrality metric¹¹ completed for the scheme. The pre-2030 nutrient budget to offset for the scheme was calculated to the following values for phosphorous and nitrogen.

The total annual phosphorus load to mitigate is (kg TP/yr):	2.15
The total annual nitrogen load to mitigate is (kg TN/yr):	88.27

- 5.8 Eastleigh Borough has a Nutrient offset mitigation scheme, to which the project will contribute. With nutrient mitigation contributions made to the scheme, there will be no likely significant effect on the River Itchen or Solent Protected sites network in relation to the scheme's nutrient neutrality budget.

Surface Water Run-off Mitigation

- 5.9 In line with Eastleigh Borough Local Plan policy DM6, these will include a minimum of three stages of naturalised filtration from Sustainable Drainage Systems (SuDS), as follows. These systems will be implemented as required by the Lead Local Flood Authority (LLFP) (and following CIRIA guidance).

- Hydro-filter channel drain,
- Permeable sub-base, and;
- SPEL Smartceptor.

- 5.10 The hydro-filter channel drain will pick up drainage directly off the surface of the car park and be convey the water via the permeable sub-base and SPEL Smartceptor to the outfall over habitat into the watercourse. At each stage the water draining from the impermeable surfaces of the development will be subject to treatment, ensuring it is effectively filtered to remove excess nutrients, chemicals, and sediments, before entering the watercourse. The water run-off from the car park (and roofing) will be treated to >0.95 pollution indices, well in excess of the 0.5 index level required.

- 5.11 With the implementation of these filtration systems, no net increase in pollutant level is expected from surface water run-off from the development.

2. Hydrological Changes

- 5.12 Impacts from changes in water temperature, flow rate, and water level are possible from potential increases in surface water run-off input to the river. These changes alter the microclimate of the river and shift the conditions required by qualifying habitats and species away from their optimum, potentially negatively impacting on their survival and breeding fecundity.

- 5.13 As stated in the Flood Risk Assessment & Drainage Strategy Report¹², runoff rates will be limited as close to rates equivalent to greenfield sites (2.0l/s) as possible, for all storms up to and including 1 in 100 + 45% Climate Change. Attenuation will be provided via permeable paving and

¹⁰ FPCR Ecological Impact Assessment, Chickenhall Lane, Eastleigh, December 2024

¹¹ Nutrient_Calculator_Itchen_SAC_V_03_01_3 (2) Chickenhall Lane-28.11.24

¹² Flood Risk Assessment & Drainage Strategy Report, Land East of Chickenhall Lane-24305_FRA01. 2024. Jubb Consulting Engineers Ltd.

French drains. These limitations in flow rate ensure that the development will not result in any material change in water flow into the river to that already experienced under current greenfield conditions.

- 5.14 Water passing through the surface-water filtration systems will exit the drainage system at the outfall at ground temperature, having passed slowly through the underground permeable sub-base and is consequently not expected to enter the riparian habitat at a different ambient temperature to the river.

3. Sedimentation and Particulate Matter

- 5.15 A Construction and Environmental Management Plan (CEMP) will form a standard pre-commencement condition for submission and approval prior to the commencement of works. The CEMP will feature a strategy for minimising dust and particle release from construction works into the watercourse. This will include:

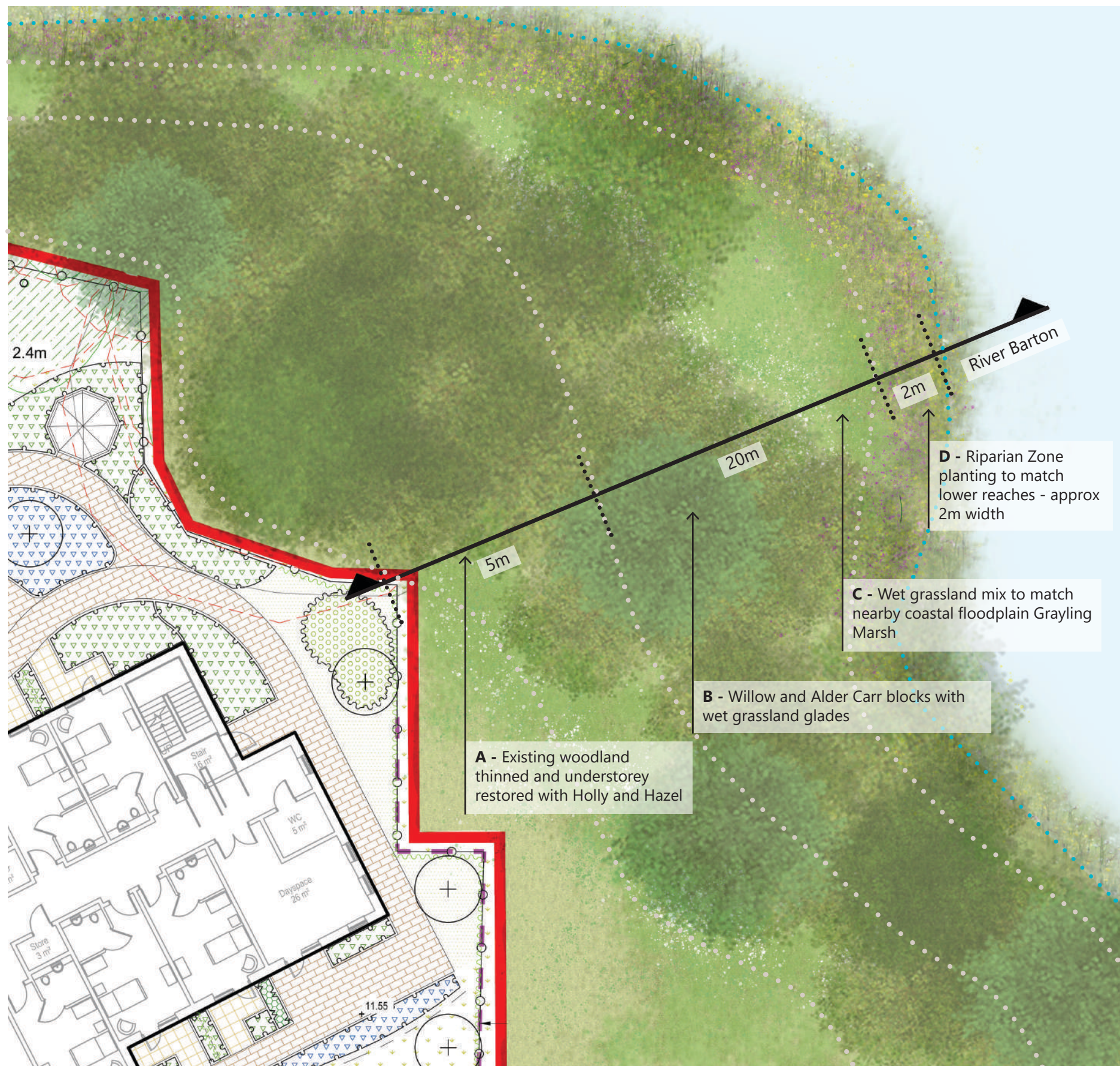
- Use of clean water for dust suppression, to avoid re-circulating fine material,
- High standards of housekeeping that will help minimise tracked out and wind-blown dust,
- A preventative maintenance programme, including readily available spares, to ensure efficient operation of plant and equipment; and,
- Effective staff training in respect of the causes and prevention of dust.

- 5.16 As an additional overriding consideration, during dry or windy weather, if any operations are identified as causing, or likely to cause, visible emissions across the site boundaries, or if abnormal emissions are observed within the site, then the Site Manager will immediately modify, reduce, or suspend those operations, until effective remedial actions can be taken, or the weather conditions giving rise to emissions have moderated.

- 5.17 Given the significant level of treatment that surface water is subjected to prior to discharge, the overall discharge rates being similar to greenfield sites and the design of the discharge which utilises improved bankside habitat, it can be concluded that there will be no likely significant effects on the River Itchen SAC from surface water discharge from the proposals. A detailed CEMP document will secure safe working practices for ecological receptors during the construction phase.

IN-COMBINATION EFFECTS

- 5.18 The effects of the development should be considered 'in-combination' with the effects of other developments or projects on the same internationally designated sites. With regards to the site in isolation, all effects have been scoped out or adequately mitigated so that the proposals will not significantly impact the integrity of any of the nearby internationally designated sites. As such, the Site would not be considered to result in any in-combination effects with other plans or projects.



Specification notes (indicative only)

A - Existing woodland thinned and understorey restored with Holly and Hazel:

Existing woodland will be selectively thinned to reduce overcrowding and improve light penetration to the woodland floor. This will support the natural regeneration of native species and encourage a more diverse ground flora. The understorey will be restored and enhanced through targeted planting of Holly (*Ilex aquifolium*) and Hazel (*Corylus avellana*), both of which provide valuable wildlife habitat and contribute to the structural diversity and resilience of the woodland.

Outline specification

Thinning: Selective removal of overcrowded or poor-quality trees to increase light penetration.

Understorey planting:

- Holly (*Ilex aquifolium*) – 60%
- Hazel (*Corylus avellana*) – 40%

Spacing: approx. 1.5–2m centres

Planting as 60–90cm transplants with guards if required.

B - Willow and Alder Carr blocks with wet grassland glades:

Blocks of Willow and Alder carr will be retained and enhanced as key wet woodland habitats, supporting high biodiversity value in areas of seasonal or permanent waterlogging. These areas will be managed to maintain open structure and connectivity with surrounding habitats. Within and between the carr blocks, wet grassland glades will be created or maintained to increase habitat diversity, benefiting amphibians, invertebrates, and ground-nesting birds. Management will include periodic coppicing and careful control of scrub encroachment to preserve the mosaic of woodland and open wetland.

Outline specification

Coppicing cycle: Every 5–7 years in rotation

Species (indicative):

- Alder (*Alnus glutinosa*)
- Crack Willow (*Salix fragilis*)
- Goat Willow (*Salix caprea*)

Wet grassland glade management: Light grazing or late summer cut (1 cut/year).

C - Wet grassland mix to match nearby coastal floodplain Grayling Marsh:

Wet grassland glades will be sown and managed to reflect the species composition and character of the nearby coastal floodplain habitat at Grayling Marsh. The seed mix will prioritise native species suited to seasonally wet, nutrient-rich soils, supporting a range of invertebrates, waders, and other wetland wildlife. Management will include low-intensity mowing or grazing to prevent scrub encroachment and maintain sward diversity, contributing to the wider ecological network and continuity of coastal floodplain habitats.

Outline specification

Seed mix basis: Emulate nearby Grayling Marsh community

Indicative species:

- Tufted Hair-grass (*Deschampsia cespitosa*)
- Meadow Buttercup (*Ranunculus acris*)
- Marsh Marigold (*Caltha palustris*)
- Ragged Robin (*Lychnis flos-cuculi*)

Establishment: Emorsgate EM8 or bespoke mix

D - Riparian Zone planting to match lower reaches - approx 2m width:

A 2m-wide riparian planting zone will be established along the watercourse to reflect the character and species composition of the lower reaches. This zone will include native moisture-loving species such as Pendulous Sedge (*Carex pendula*), Yellow Flag Iris (*Iris pseudacorus*), and Meadowsweet (*Filipendula ulmaria*) to stabilise banks, filter runoff, and enhance biodiversity. Planting will be designed to create a naturalistic, structurally diverse edge, supporting aquatic and marginal wildlife and linking with adjacent habitat corridors.

Outline specification

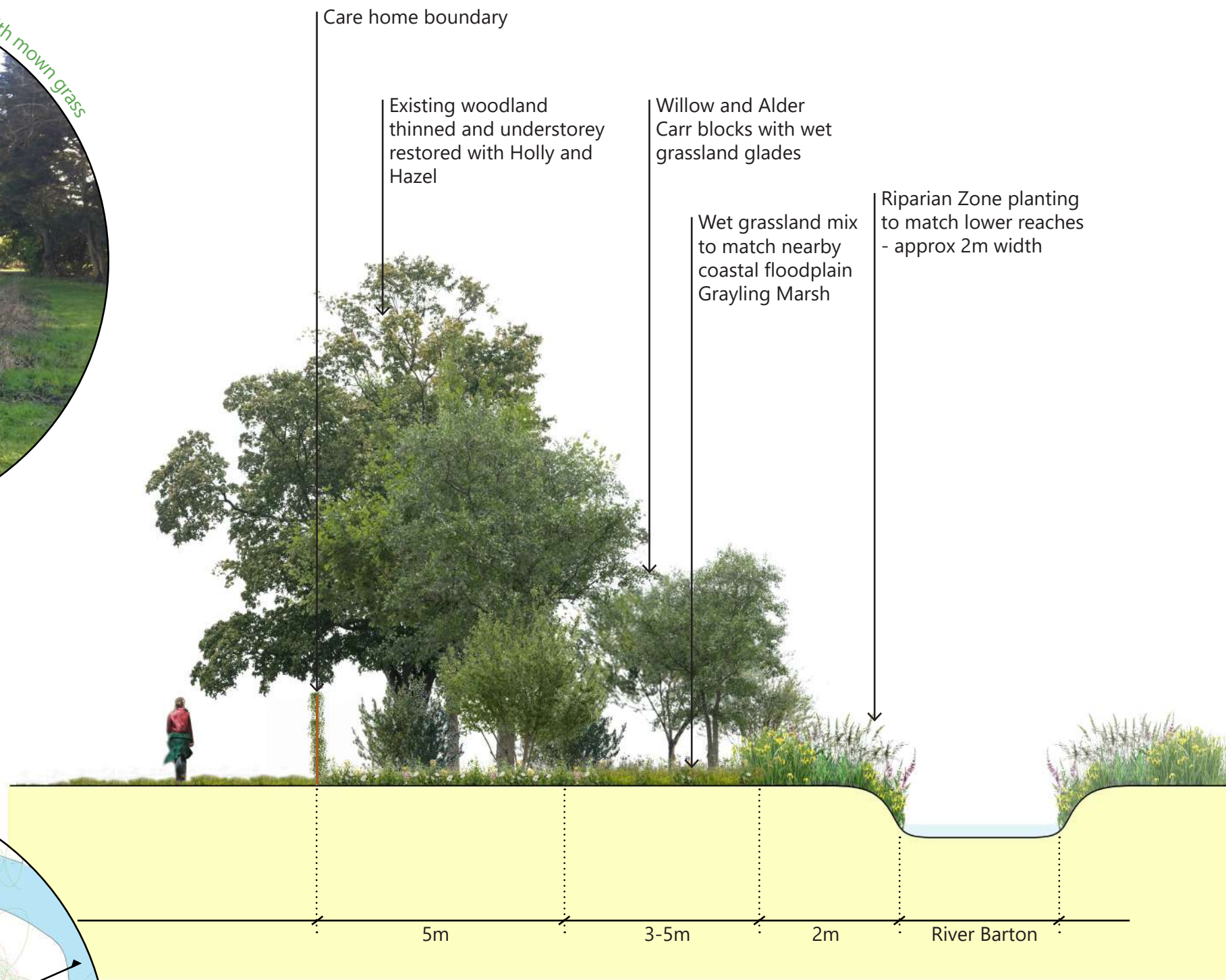
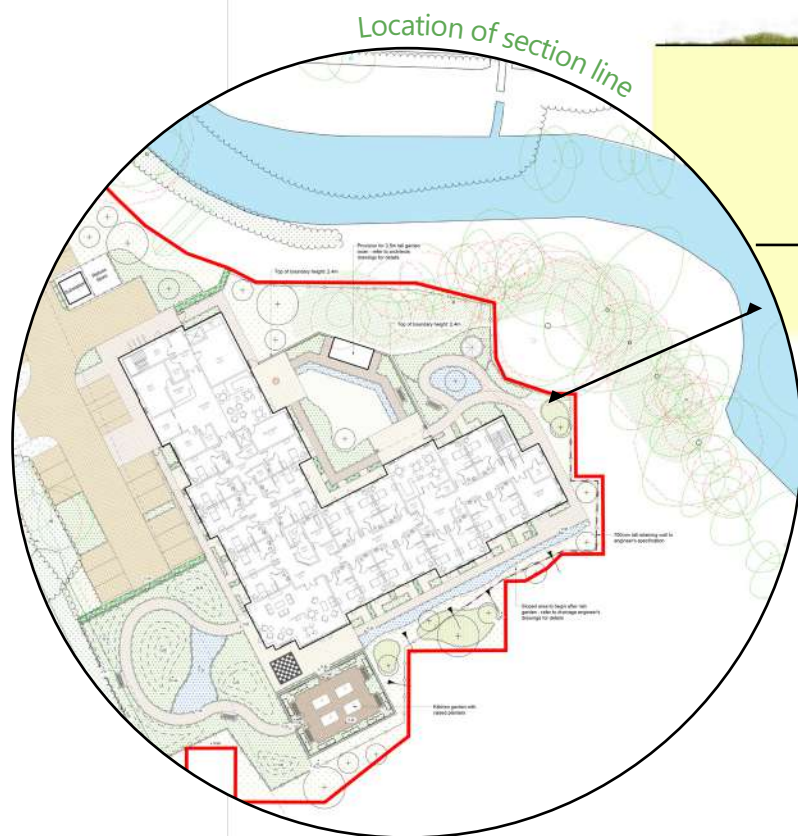
Indicative species mix:

- Pendulous Sedge (*Carex pendula*) – 40%
- Yellow Flag Iris (*Iris pseudacorus*) – 30%
- Meadowsweet (*Filipendula ulmaria*) – 30%

Spacing: Planted in informal drifts at 3–5 plants/m² (approx. 450–600mm centres).

Final species and methods subject to ground conditions and detailed design.

Chickenhall Lane, Eastleigh
Proposed River Barton Buffer zone
Scale 1:200 @A3



Chickenhall Lane, Eastleigh
Proposed River Barton Buffer zone