Attachment 2 – Hatch Farm, Allington Lane Concept Masterplan Appendices

Representations to the Pre-Submission Local Plan Regulation 19 Consultation

On Behalf of Hallam Land Management

August 2018

Contents

HLM Attachment 2 - Appendix A - Current and Future Bus Route

Footway provision to be provided along Allington Lane, Quob Lane and Burnett's Lane.
On site provision to provide a comprehensive network of walking and cycling routes.
The onsite PRoW network to be incorporated into the site masterplan.

- Public Transport Opportunities

The development can be served by a public transport routes that the development will support.
The service will be self-funded to ensure the long-term viability.

- Sustainable Travel Opportunities

The delivery of a mixed used development will respond to daily demands and reduce the need to travel.
The delivery of the Travel Plan will maximise opportunities for mode shift. A development of this site has the potential to achieve a significant mode shift.

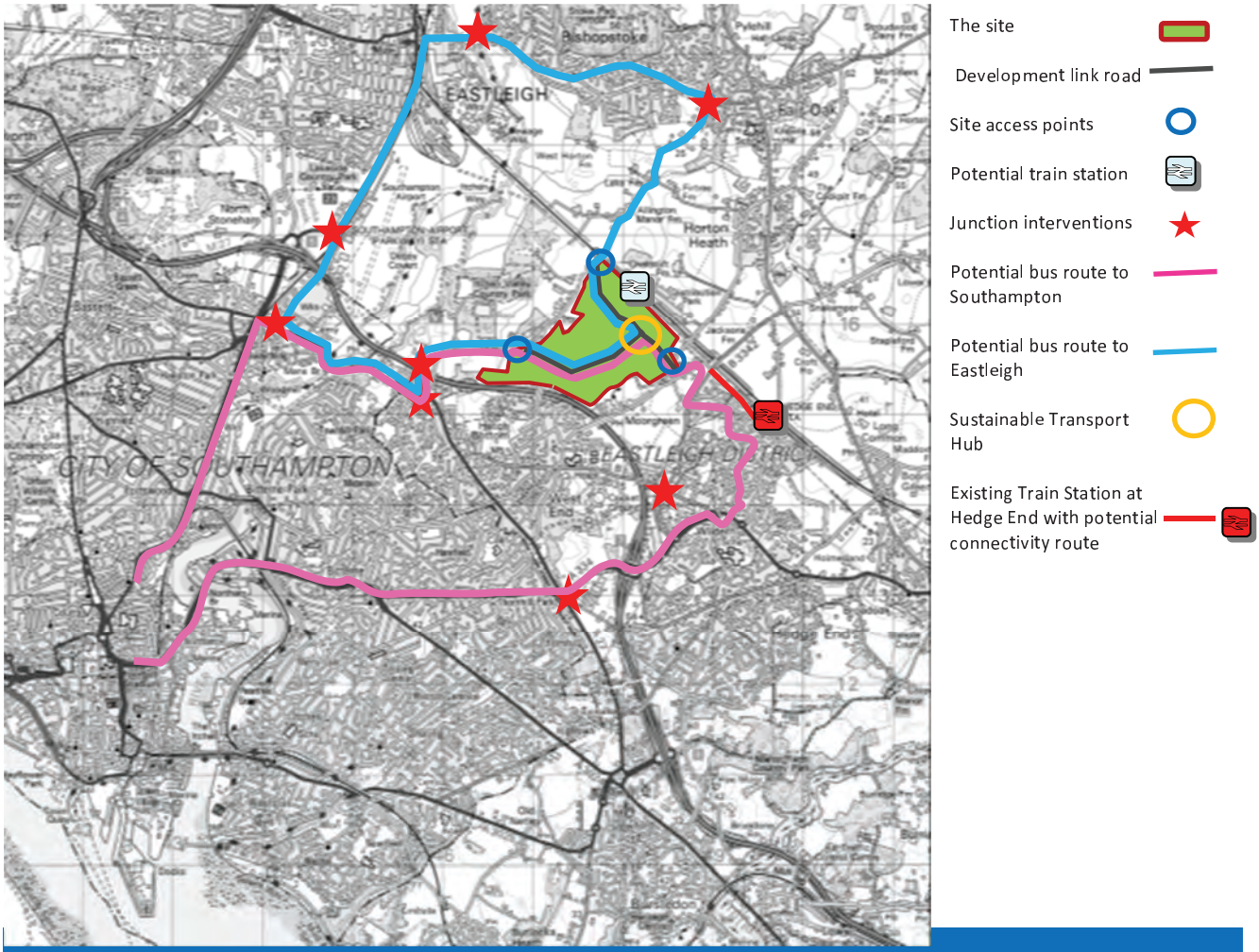
Conclusions: Overall, the development can fully mitigate against any impacts on the transport network and will minimise car travel through the implementation of the Travel Plan to sufficiently minimise the impact of the development on the highway network. Good connectivity is afforded to the surrounding urban area and accessibility to a range of key services, facilities and opportunities has been provided. The development meets all of the Transport Objectives of the draft Local Plan and complies fully with the Polices DM23 and DM24.

Through discussions with Highways England it has been confirmed that Smart Motorways is planned to start construction on the M3/M27 before 2020. This will result in significant benefits to the operation of the SRN. Rather than use local roads to move between neighbouring conurbations, the improved capacity on the motorways has the potential to attract more road users from the local area. This will reduce traffic flows which will result in an improvement to the operation of the local road network.

The development will increase in the number of trips within the road network, however the impacts can be fully mitigated. A transport strategy will be followed that will:

- Minimise the number of external trips through careful consideration of the land uses on site
- Deliver improvements to the walking / cycling / public transport networks that offers alternative to the motorcar
- Identify highway interventions that will mitigate the residual impact and deliver betterment in the operation of the road network

The overall transport strategy is presented below.



In summary, this report demonstrates that a well-considered approach to developing transport and highways solutions for the development is able to ensure the proposals are deliverable and able to meet national, regional and local policy and guidance. This report demonstrates that the development is deliverable, sustainable and fundamentally does not require extensive, costly major highway schemes that require third party land.

Walking and Cycling Opportunities

Footway provision to be provided Allington Lane, Quob Lane and Burnett's Lane.

On site provision to provide a comprehensive network of walking and cycling routes.

The onsite PRoW network to be incorporated into the site masterplan.

7 Public Transport Opportunities

Existing Road Based Facilities

7.1 The existing bus services that operate to the northeast of Southampton are identified in Figure 7a. In addition to these services, further enhancements are likely as a result of other consented developments.

Service	Destination	Frequency
X15	Eastleigh Bus Station– Fair Oak – Horton Heath – Boorley Green – Botley – Hedge End – Tesco – Hamble and Netley Operator – Xelabus	Monday to Friday Every 2 hrs (between 10:33 and 14:43)
X4	Eastleigh Bus Station- Parkway – West End – Moorgreen - Hedge End store and Hedge End Village Operator – Xelabus	Monday to Friday Every 75 mins Saturday Every 2 hours
X9	Eastleigh – Colden Common – Fair Oak – Horton Heath – Hedge End – Botley – Bishops Waltham Operator – Xelabus	Monday to Friday Every 2 hrs Saturday Every 2 hours
X10	Bishops Waltham – Durley – Horton Heath – Chalcroft - Moorgreen – West End – Bitterne- Southampton Operator – Xelabus	Monday to Friday Every 2 hrs Saturdays Only 1 bus service during AM Only 1 bus service during PM
8	Southampton City Centre – Bitterne – West End – Hedge End Rail Station Operator - First in Hampshire & Dorset	Monday to Friday Every 30 mins Saturday Every 40 mins Sunday & Public holidays Every 60 mins
2	Southampton – Eastleigh – Fair Oak Operator – Bluestar	Monday to Friday Every 20 mins during AM Every 60mins during PM Sunday Every 60 mins
M1	Eastleigh – Fair Oak – Marwell zoo Operator – First bus	Only in Summers Monday to Sunday Every 60mins

Figure 7a: Bus Routes closest to the site

Existing Rail Based Facilities

7.2 The closest train station, Eastleigh and Hedge End Rail Station is located close proximity of the site. These cater for the following direct routes which are highlighted below:

Station	To Southampton Airport	To London Waterloo
Hedge End	Two per hour Journey time 36 minutes	Two per hour Journey time 1 hour 27 minutes
Eastleigh	Two per hour Journey Time 6 minutes	Two per hour Journey time 1 hour 20 minutes

Figure 7b: Train services

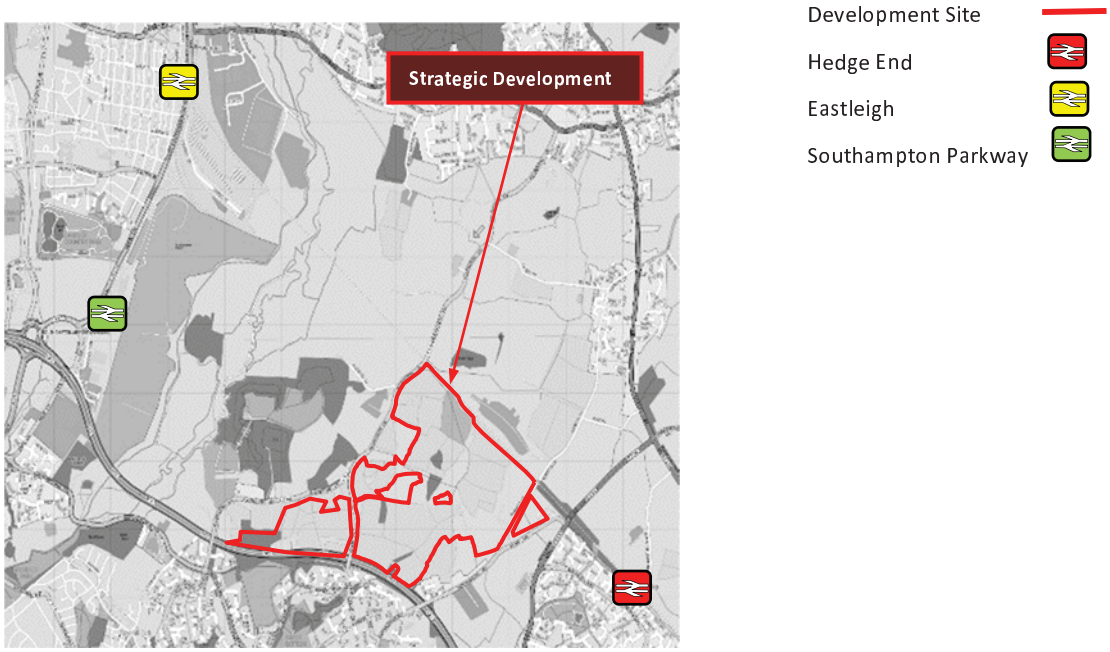


Figure 7c: Location of nearest train stations

7.3 The level of facilities provided at the train stations are highlighted below:

Station	Hedge End	Eastleigh
Car parking places	96 spaces	133 spaces
Cycle parking	Stands for 26 spaces	Stands for 58 spaces
Ticket office	✓	✓
Self-service ticket machines	✓	✓
Manned help desk	✓	✓
Pay phones	✗	✓
Waiting rooms	✓	✓
CCTV coverage	✓	✓
Post box	✗	✓
Telephone	✓	✓
Shops	✗	✓
Toilets	✗	✓
ATM machine	✓	✓

Figure 7d: Facilities at nearest train stations

Public Transport Opportunities

7.4 A fast reliable road based public transport system is able to provide a viable alternative to the motorcar and a shift toward this mode of travel is essential for the development to be considered sustainable. The proposed development due to its scale and mixed uses has the capability to provide substantial improvements to the existing public transport networks. The current services do not operate close to the site and as such will increase the difficulty to divert. Therefore, it is expected that new services will be required.

7.5 The public transport improvements would be phased with development to ensure the long term viability. During the initial phase, it would be expected that the development would deliver a 30-minute peak time service between the site and Southampton, with reduced frequency during all off peak periods.

7.6 The routing of the service would be subject to discussions with local operators and the Council. The provision of a connection between rail and road based public transport is important to provide route choices for the future residents. Hedge End is circa five minutes away to the east of the site and is an important destination. Through initial discussions with the local operators it would be expected that at the very least the initial phase would support a route between the site, Eastleigh, Hedge End and then Southampton. Given the scale of development and proximity of the new community to existing transport networks, we would however anticipate a more bespoke service provision that is implemented during the construction process that provides more direct links to Southampton, Eastleigh, Southampton Airport Parkway and the surrounding communities. In the short to medium term, the proposed development will ensure good links to Hedge End station, which is within easy access of the new community.

7.7 Subject to viability, as the development/revenue increases, the services would be further enhanced to improve peak and off peak frequency. In the event that a reduced quantum is delivered, this could affect viability of public transport services and a reduced/alternative public transport service may need to be considered. This could include reducing off peak frequency.

7.8 The location of the train line provides a real opportunity to affect how people travel and to encourage more sustainable travel habits. The rail line provides an opportunity to locate a new train station / halt that has a potential to significantly alter how people travel. Whilst we do not require a train station to serve / access the new community, the land is ideally placed to make provision / enable a future railway station at (or near to) Allington Lane. The improved patronage and attractiveness of the Eastleigh to Fareham line, linking to both Southampton and Portsmouth is currently being considered by the transport authority. Therefore, looking forward, this railway line will inevitably be a focus for future investment and improvement. Unlike other growth options, this location can assist and facilitate in enabling such improvements to the benefit of the wider area.

7.9 Through discussions with the several local operators, it is considered that the development can be served by a road based public transport strategy. A summary of the discussions with two of the operators is summarised below.

7.10 **Xelabus Limited:** The existing services do not lend themselves to diversion through the site, based on the existing routes and the nature of their procurement. A new service is recommended. This could serve Southampton, Bitterne, West End, Barbe Baker Avenue, New development, Burnetts lane, Bubb Lane, Maunsell Way to Hedge End Station. It is considered that two vehicles would be required to deliver hourly frequency, increasing to three vehicles for half hourly.

7.11 **First:** Current routes do not lend themselves to serve the site. For the size of the development, a new tailor made service would be considered the best option. This would serve the development, exit onto Allington Lane, and then run via Townhill Way into the Bitterne shopping centre, it could then run direct via Northam Road into the City Centre and then onto Southampton Central Station. It is considered that two vehicles would be required initially, potentially increasing to three.

7.12 As demonstrated above, local operators consider that the development can be served by public transport. The benefit of delivering a new service ensures that the demands of the development will be met throughout the build out period of the scheme.

7.13 In order to understand the long term viability, an assessment of the likely revenue against costs has been carried out. This has been based on the route being provided from first occupation, operating at an hourly frequency. The frequency will be increased following the initial build out.

7.14 To identify the potential public transport patronage levels, Tempro planning data has been reviewed which provides an indication of public transport trips generated throughout the week. This has been used to estimate the likely revenue that will be generated. The table below identifies the contribution required to deliver public transport strategy.

Year	Completions	Revenue	Costs	Annual Contribution	Cumulative Contribution
1	60	£24,903	£300,000	-£275,097	£275,097
2	260	£107,915	£300,000	-£192,085	£467,181
3	460	£190,927	£300,000	-£109,073	£576,255
4	660	£273,938	£450,000	-£176,062	£752,316
5	860	£356,950	£450,000	-£93,050	£845,366
6	1060	£439,962	£450,000	-£10,038	**£855,404**
7	1260	£522,973	£450,000	+£72,973	N/A
8	1460	£605,985	£450,000	+£155,985	N/A
9	1660	£688,997	£450,000	+£238,997	N/A
10	1860	£772,008	£450,000	+£322,008	N/A
11	2060	£855,020	£450,000	+£405,020	N/A
12	2260	£938,032	£450,000	+£488,032	N/A
13	2460	£1,021,043	£450,000	+£571,043	N/A
14	2500	£1,037,646	£450,000	+£587,646	N/A

Figure 7e: Public contribution required

7.15 The cost estimate demonstrates that the route will be financially viable in year seven, requiring a contribution totalling £855,000.

7.16 Through discussions with the bus operators, it has been confirmed that the Hedge End train station can be included within the timetable for the bus routes. This will ensure that there will be opportunities for onward travel by sustainable modes.

7.17 Furthermore, the additional strategic public transport initiatives currently being considered by the transport authority, this could include rail improvements / rapid transit, which will only enhance the travel options available for the future occupiers.

Public Transport Opportunities

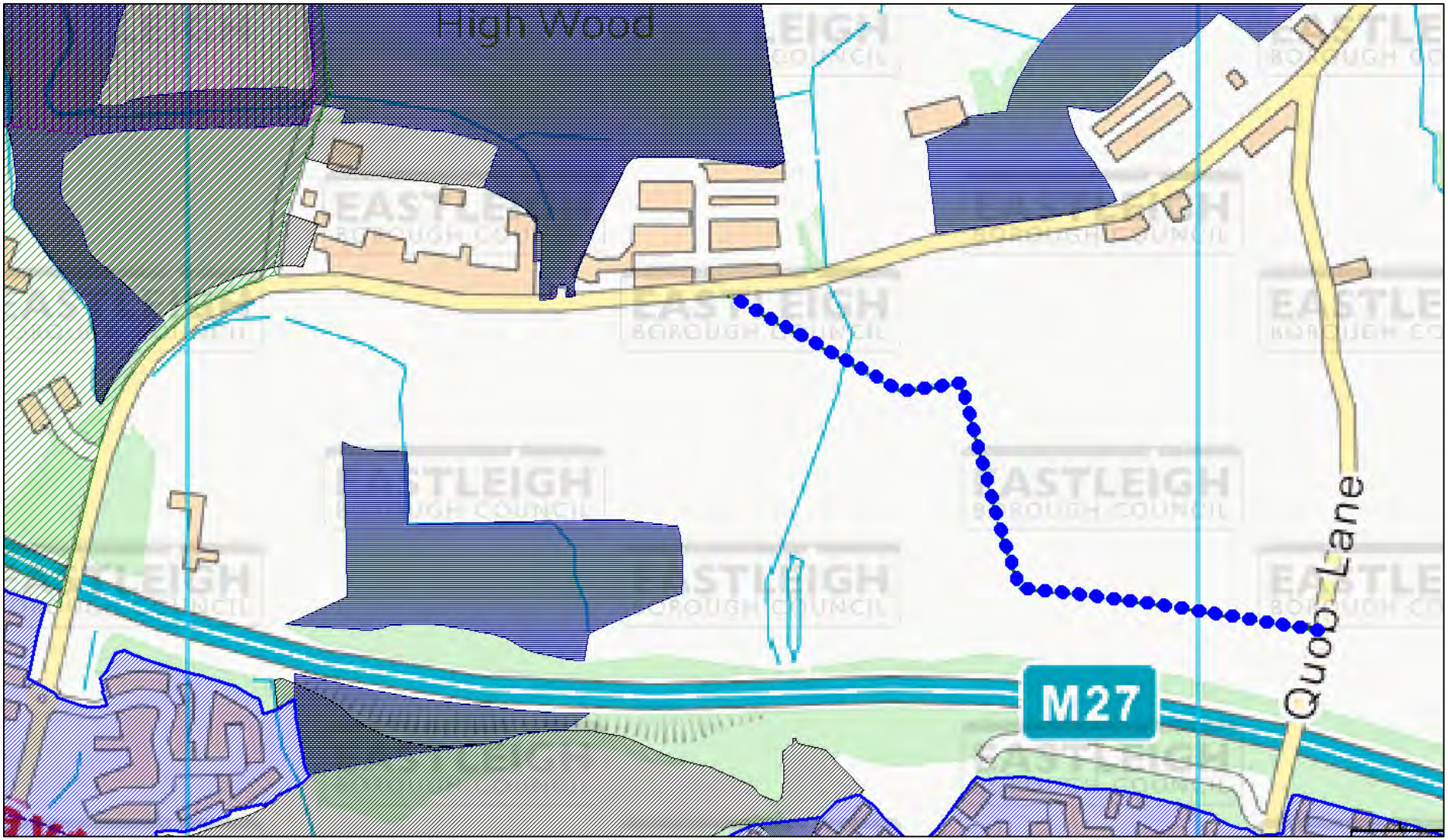
The development can be served by new public transport route.

Provision of connections into Hedge End train station

The service will be self-funded to ensure the long-term viability.

Appendix C – Pedestrian and Cycle Path Along Allington Lane (Entrance to Itchen Park)

EBC Saved Local Plan Policy – New Link from Allington Land and Quob Lane – Policy 152.OS



Rights of Way and Access to the Countryside

9.37 The Borough Council will continue to promote and propose those bridleways and footpaths identified in the Adopted Plan of 1997 but which remain unimplemented. New routes to improve access for cyclists and horse riders are also proposed. Allied to these proposals are the sections of the Countryside and Rights of Way Act which seek to establish public access to certain categories of open land and to improve the public rights of way network. Contributions will be sought for the implementation of these proposals in line with the Background Paper on Developers' Contributions. Under the guidance of the Habitats Regulations, any proposals for cycling or pedestrian links will be required to undertake an appropriate assessment of their potential impacts on the protected Ramsar and SPA nature conservation sites. Policy 152.OS outlines the Strawberry Trail walking route, which links key village and attractions in the Borough (see Plan 49).

152.OS In order to extend and improve access along the Green Network, the following dual purpose cycle and pedestrian links are proposed, as shown on the Proposals Map subject to the undertaking of an appropriate assessment of their potential impacts on areas of nature conservation value.

i. Stoke Common Road, Bishopstoke, via Stoke Park Woods, to Winchester Road, Fair Oak;

ii. Solent link from Weston shore, via Westfield Common, Coach Road and Hamble Lane, to Spitfire Way, Hamble;

iii. Hamble, via Badnam Copse and Mallards Moor, to Bursledon Station;

iv. Bursledon Station, via Manor Farm Country Park, to Botley.

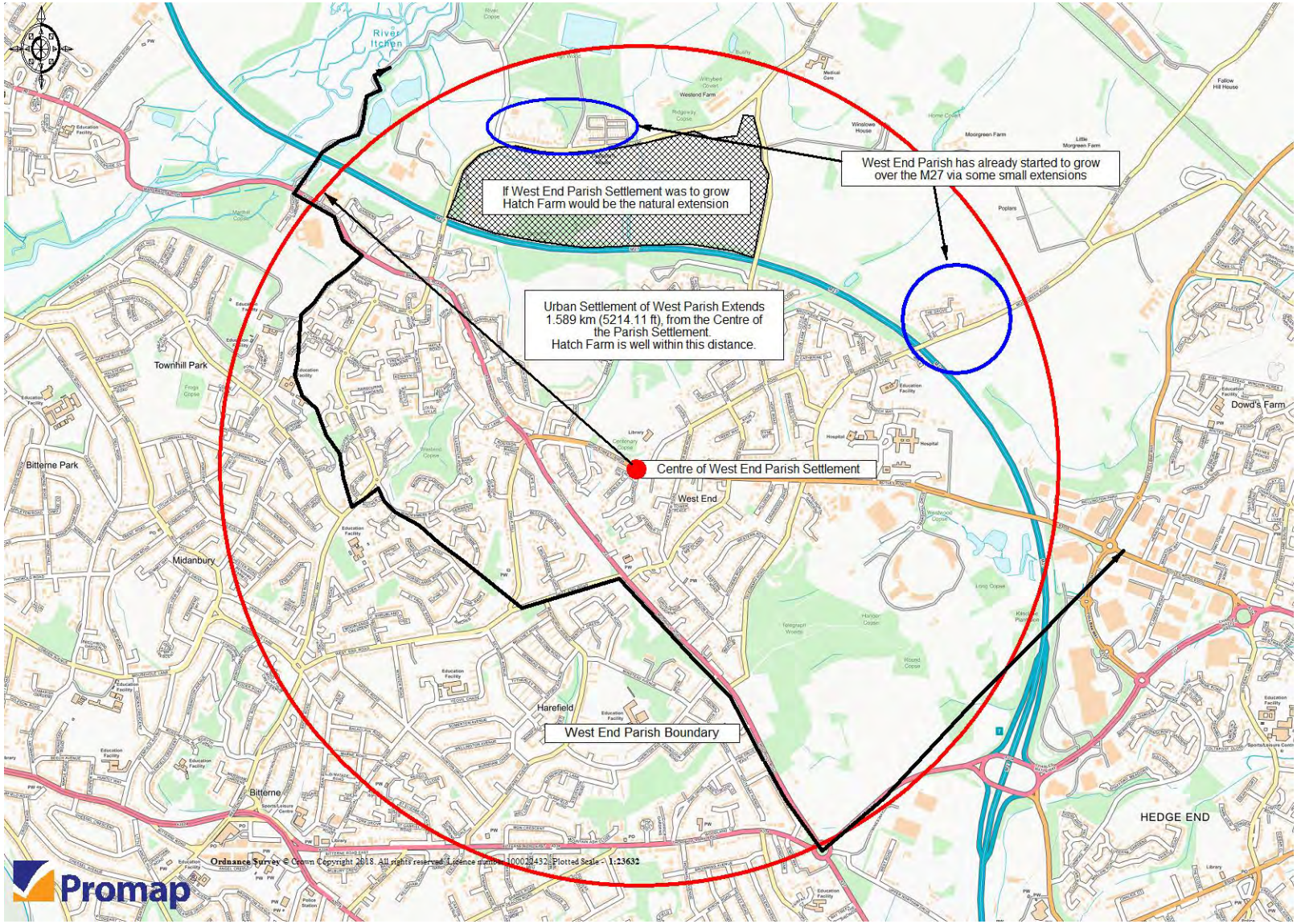
v. Woodhouse Lane to Grange Park estate, Hedge End;

vi. Winchester Road, Boorley Green, to Hedge End station;

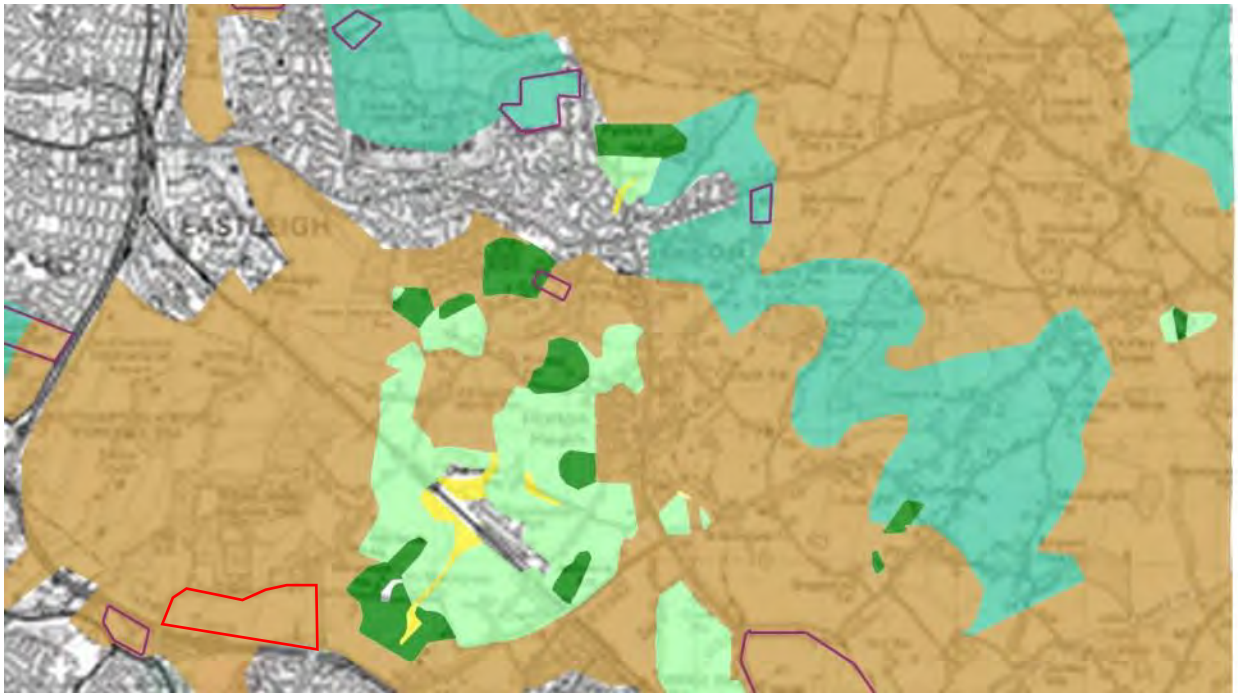
vii. Tollbar Way, Hedge End, to Moorgreen Road; and

viii. Allington Lane to Quob Lane (see Proposals Map).

HLM Attachment 2 - Appendix E - Growth of West End Parish

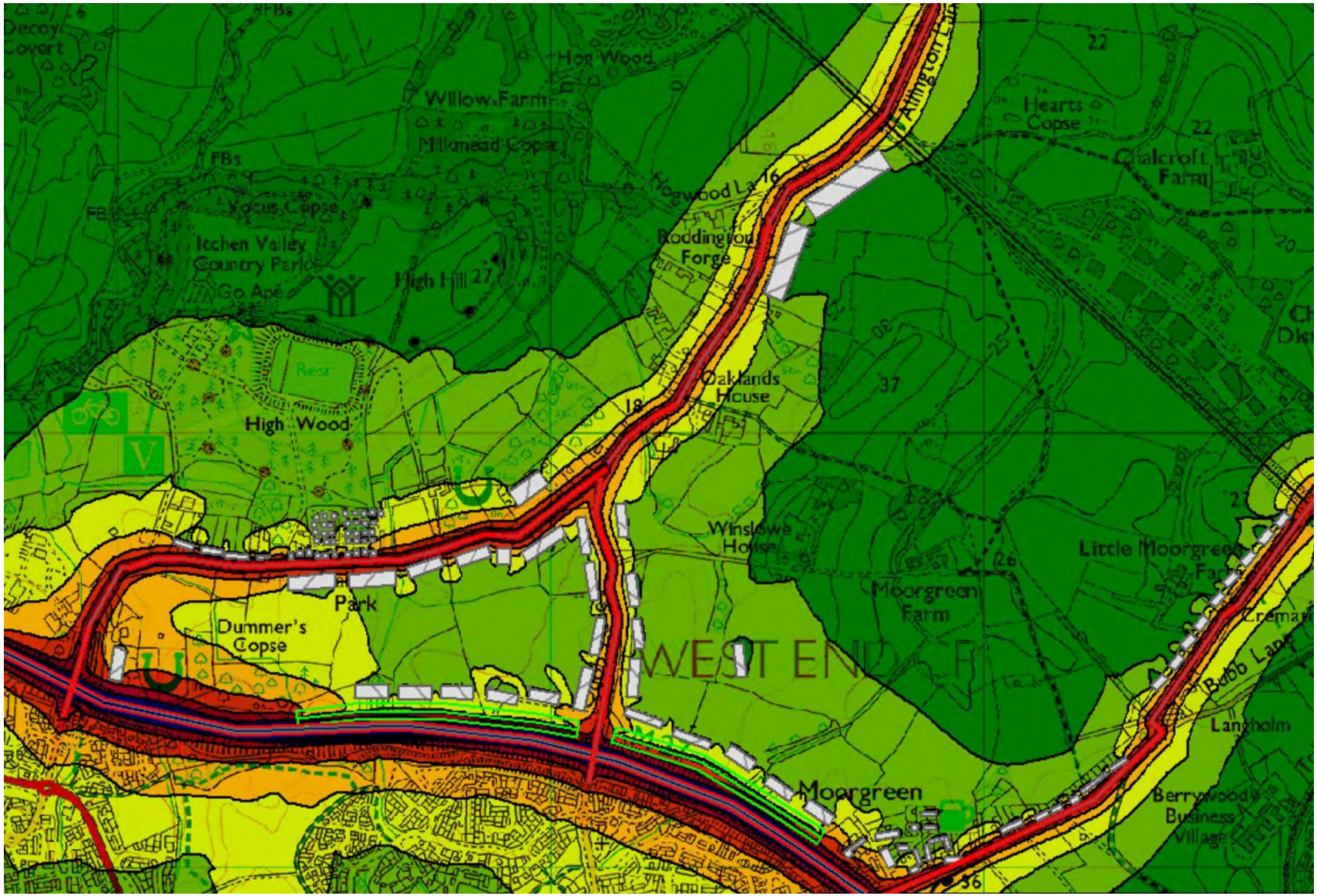


Hatch Farm Agricultural Land Quality



Original Drawing Size A3

HLM Attachment 2 - Appendix G - Noise Plan



Construction Design and Management (CDM) Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

NOTES:

1. Do not scale from this drawing
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
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Scale: NTS	Number: 10440-NM-02
Rev: -	

HLM, Bovis Homes and The Davies Family

Land at Allington Lane Eastleigh

With Development Night-time Noise Contours

Brookbanks

© Brookbanks Consulting Limited 2016

Potential Noise Mitigation Measures – Taken from Brooklands Noise Assessment

Acoustic Screening

Properties requiring ventilation

Properties requiring enhanced glazing

Potential rail screening

Hatch Farm Site

HLM Attachment 2 - Appendix I
Landscape and Ecology Report EDP
Dec 2016

Allington Lane, Eastleigh

Technical Note in Respect of Landscape and Ecological Circumstances

Prepared by:
The Environmental Dimension Partnership Ltd (EDP)

On behalf of
Hallam Land Management, Davies Family and Bovis Homes Ltd.

December 2016
Report Reference
EDP2831_02b

THE ENVIRONMENTAL DIMENSION PARTNERSHIP

ENVIRONMENTAL PLANNING, DESIGN AND MANAGEMENT SERVICES
FOR ALL INVOLVED IN PROPERTY AND DEVELOPMENT

Contents

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For EDP use
Report no. L_C_EDP2831_02a

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Section 1
Introduction

1.1 The Environmental Dimension Partnership Ltd (EDP) has been appointed to undertake preliminary environmental appraisals, with particular regard to landsape and ecological circumstances of potential development land at Allington Lane, Eastleigh (hereafter referred to as 'the Site'). The location and boundaries of the Site are illustrated on **Plan EDP 1**.

1.2 EDP is an independent environmental consultancy providing advice to landowner and property development clients in the public and private sectors in the fields of landscape, ecology, heritage, arboriculture and masterplanning. The Practice operates throughout the UK from offices in Cirencester, Shrewsbury and Cardiff. Details of the Practice can be obtained at www.edp-uk.co.uk.

Context and Purpose

1.3 The Site is currently being promoted through the Local Plan as a sustainable development location on the edge of Eastliegh. The purpose of EDP's work is to deepen the understanding of certain environmental issues which may affect the Site's development capacity and/or layout. To this end, the following specific work items have been undertaken:

- Landscape desk study and initial assessment of the Site's landscape character and visual envelope; and
- Ecological desk study and Extended Phase 1 Habitat Assessment.

1.4 This Technical Note is structured as follows :

- For an abbreviated review of EDP's work, the key findings are set out in **Section 2**;
- **Section 3** provides a brief description of the Site and sets out its landscape context; and
- The ecological context is described in **Section 4**.

1.5 The following appendix and plans are provided to the rear of this report which should be referred to alongside the text:

- **Appendix EDP 1** provides photographic plates illustrating the Site's landscape and ecology context;

- **Plan EDP1** is an aerial photograph of the Site boundary illustrating its current character and local context (all disciplines);

- **Plan EDP 2** illustrates the Site's topographic context;

- **Plan EDP 3** presents the findings of the Phase 1 Habitat Survey; and

- **Plan EDP 4** illustrates the Site's landscape and ecological constraints and the opportunities for development.

Section 2
Summary of Findings and Conclusions

2.1 The findings of EDP's assessments are set out in more detail in the following sections of this Technical Note. However, the key findings can be summarised as follows:

- Our overall conclusion is that the Site is well suited to accommodate development to help meet the region's housing need and is capable of being developed in accordance with relevant environmental policy at local and national levels; and

- EDP has not found any 'in principle' constraints that would preclude the Site's allocation for built development.

Conclusions in Respect of Landscape and Visual Matters

- The Site is, nor has ever been, designated for its landscape or scenic qualities;

- It is relatively unexceptional in terms of landscape fabric and visual amenity and is not especially representative of its host landscape type;

- Development would not change land form or landscape pattern nor is it likely to alter the landscape character adversely. It could offer greater public access to the countryside; and

- Preserving and enhancing gaps between the Site and West End, Hedge End, Fairoak and Horton Heath would prevent coalescence.

Conclusions in Respect of Ecology

- There are no 'in principle' development constraints on ecological grounds. There are no statutory designations within the Site, and whilst there are statutory designations less than 500m away, potential adverse impacts can be avoided or sufficiently mitigated through a standard range of detailed design and construction measures;

- EDP's Extended Phase 1 Habitat Assessment has confirmed that the habitats present within the Site are of generally low intrinsic ecological value thereby providing significant opportunities for biodiversity enhancement;

- Some habitats within the Site are subject to non-statutory SINC designation or are important biodiversity resources at a local level. These will provide the foundation of the Green Infrastructure Strategy for the Site which, through habitat retention, restoration and creation, will maintain and enhance the ecological network;

- Key protected species surveys have been recently commissioned by Eastleigh Borough Council, and further detailed surveys would be undertaken to inform any forthcoming planning application and detailed masterplanning for the Site. Any protected species populations present could be readily accommodated within an appropriate layout and associated green infrastructure; and

- In light of the above, it is clear that a development within the Site is capable of complying with legislative and planning policy requirements regarding ecological features, and delivering a range of benefits for biodiversity.

Section 3
Landscape and Visual Matters

3.1 EDP's landscape studies to date have comprised a site walkover and photographic survey on 13 October 2016 together with a desk study, during which information was collated from the following sources:

- Multi-Agency Geographic Information for the Countryside (MAGIC) website;
- Freely available aerial photography at Google Maps and Ordnance Survey mapping and aerial imagery purchased from emapsite;
- Eastleigh Borough Council; and
- Natural England Character Area Profiles.

3.2 The findings of these preliminary studies are summarised below. The following should also be read in conjunction with **Appendix EDP 1** (photographic plates), **Plan EDP 1** (landscape context), **Plan EDP 2** (topography) and **Plan EDP 4** (constraints and opportunities) appended to this document.

Site Description

3.3 The site boundaries are shown on **Plan EDP 1**, an aerial photograph is included which illustrates the character of the local area.

3.4 The Site is not within any designated landscape. The Site is located adjacent to a 'Strategic Gap' to the east of Bubb Lane as identified in the Eastleigh Borough Council Local Plan (Adopted 2006, Policy 2.CO).

3.5 The landscape fabric predominantly comprises pasture fields subdivided by managed hedgerows or post and wire fencing with regular mature and over mature trees. Across the Site there are a number of significant woodland blocks, copses and stands. There are a number of ancient and candidate veteran trees (see **Appendix EDP 1** - **Plate EDP 1**); study of the Woodland Trust's Ancient Tree Hunt website identified a single unverified record. However, such studies are restricted to publicly accessible locations. The actual Site population therefore is likely to be more extensive. A number of public rights of way cross the Site as shown on **Plan EDP 4**.

Planning Policy

3.6 In addition to Policy 2.CO mentioned above, the following saved policies are relevant to landscape matters:

- 18.CO Protection of the landscape:

  "*Development which fails to respect, or has an adverse impact on the intrinsic character of the landscape, will be refused.";*

- 19.CO Protection of landscape features:

  "Development in the countryside or in urban areas will be refused if it would result in the loss of, or damage to locally important features in the landscape, such as water courses, ponds and lakes. Where the Council is satisfied that the loss or reduction of a feature is fully justified, it will require appropriate replacement features to be included in the proposals";

- 59.BE: Design criteria:

  "Development proposals which are in accordance with the other policies in this plan will be permitted provided they meet all the following criteria: i. they take full and proper account of the context of the site including the character and appearance of the locality or neighbourhood and are appropriate in mass, scale, materials, layout, density, design and siting, both in themselves and in relation to adjoining buildings, spaces and views, natural features and trees worthy of retention;...iv. they provide a high standard of landscape design and appropriate planting where required. Development should use native plants in landscape schemes to benefit biodiversity. Development adjacent to or within the urban edge must not have an adverse impact on the setting of the settlement in the surrounding countryside;..."; and

- 146.OS Green Network:

  "Development proposals which would have a detrimental impact on the green network will be refused. Contributions, where appropriate, from adjoining development proposals will be sought to enhance the environment and facilities within the green network".

3.7 Additionally, Eastleigh Borough Council have prepared a number of background and supplementary planning documents relating to landscape matters. These include:

- Green Infrastructure Background Paper 2012;

- Partnership for Urban South Hampshire (PUSH) Green Infrastructure Strategy; and

- Character Area Appraisal for Hedge End, West End and Botley SPD11.

3.8 The Green Infrastructure Background Paper reviews the existing green infrastructure, open space, public rights of way and green routes and correctly identifies the rights of way on the Site. The strategy proposes the enhancing of woodland links, the creation of new woodland and the provision of a multifunction access and recreation network. A number of 'Proposed Strategic Links' are shown crossing the Site from the north and continuing over the M27. The Strawberry Trail strategic route is shown running from Itchen Valley Country Park along the Site's western boundary.

3.9 The PUSH GI Strategy reviews the existing GI network and considers enhancements within Hampshire. The strategy divides the study area into sub-regions for which specific projects are proposed. The Site falls within 'Area 2: Forest of Bere'. Whilst no specific projects are proposed within the Site, projects F1 (Connecting and enhancing woodlands) and F5 (Improving recreational spaces in settlements) should be considerations for any development proposal.

3.10 The Character Area Appraisal for Hedge End, West End and Botley provides guidance on the character of proposed development within the borough and should be considered during the preparation of the development proposals.

Landscape Character

3.11 The Site extends across three landscape character areas identified in the 'Landscape Character Assessment for Eastleigh Borough 2011':

- Areas 9 Horton Heath Undulating Farmland and Woodland;
- Area 10 Oaklands Woodland and Parkland; and
- Area 11 M27 Corridor.

3.12 Broadly speaking, the Site is well-wooded and has a low-lying undulating topography (**Plate EDP 2**). Much of the land is permanent pasture with areas of horsiculture particularly associated with the settlement fringes (**Plate EDP 3**). Fields are bounded by low clipped hedgerows with frequent individual oak trees and stands throughout (**Plate EDP 4**).

3.13 The wider landscape is generally mixed agriculture with trees and tree belts. Fields are generally rectangular in shape and bounded by thorn hedges. Oak is the dominant hedgerow tree.

Site Topography

3.14 The topography of the Site and surroundings is presented on **Plan EDP 2**. The immediate area is relatively flat, sitting between 20-40m. A subtle ridge of land, which runs from the M27 to the north of Winslowe House, bisects the Site.

Visual

3.15 To the south and south-west, land rises toward Harefield and West End, parts of which are visible as wooded horizons from locally prominent locations across the Site. The upper stands and floodlights of the Ageas Bowl are also visible in views towards West End as shown in **Plate EDP 5** and on **Plan EDP 4**.

3.16 Land to the north drops away to the Itchen Valley and then rises in the vicinity of Fair Oak and continues to rise into the South Down National Park. Stoke Park Wood and Park Hills Wood contribute to the wooded horizons visible from local high points to the north of Winslowe House (**Plate EDP 6**). It is probable that the Site will be visible for receptors within Fair Oak at a distance of between 2km and 3km from the Site.

3.17 From the south, much of the Site is screened by vegetation associated with the M27 motorway (**Plate EDP 7**). Whilst Southampton Airport, Brampton Tower (within Bassett, Southampton) and settlement south of the M27 (Barnsland and Redwood Close) are visible, the aforementioned vegetation and landform makes it unlikely that the proposed development will be visible from similar locations.

3.18 Visibility from the west is constrained by Itchen Valley Country Park and the settlement within Southampton and Eastleigh.

3.19 The railway along the Site's north-eastern edge is a prominent feature within the landscape and prevents visibility of the Site within the wider landscape to the east. There will be change in the views experienced by some receptors within the settlement edge of Hedge End. Such changes, however, will be perceived in addition to settlement at Moorgreen, the Crematorium and the garden centre on Bubb Lane.

3.20 Within the Site's immediate vicinity, a number of minor roads retain a rural character (**Plate EDP 8**), this can be retained in part with the landscaping proposals illustrated on **Plan EDP 4**.

Summary of Landscape Matters

3.21 At this stage it is clear that there are no 'in principle' or other significant development constraints in landscape terms. The landscape surrounding the Site has been subjected to incremental small-scale development following transport corridors, which has created a sense of unbroken and continuous settled development. Cohesive masterplanning

with high quality GI would provide an appropriate landscape response. There are pockets of relatively rural areas within the Site, which are shielded by woodland. Parts of the minor road network also exhibit a rural character.

3.22 There is much visual intrusion from the existing settlement edges of Bishopstoke, Fair Oak, Horton Heath and West End. The railway, motorway and airport exert significant urbanising influences on the landscape. The landscape character is semi-urban and the sensitivity relatively low. As shown on **Plan EDP 4**, key landscape fabric can be retained and enhanced.

3.23 The visual sensitivity of the Site aside from the aforementioned minor road character is derived from its function as a largely undeveloped corridor between the settlements to the south of the M27 (West End) and Fair Oak and Horton Heath to the north. However, due to the existing extensive landscape fabric of woodland, trees, hedgerows and watercourses the Site has capacity to accommodate change.

3.24 If the Site were to come forward, an appropriate landscape response would be required to prevent coalescence with the surrounding settlements of West End, Hedge End, Fair Oak and Horton Heath. Such a response should be in-keeping with the objectives of PUSH by retaining and enhancing the local character to ensure a sense of separation. Importantly, this should take no more land than is necessary. An appropriate landscape response would be specific to the immediate landscape setting and can be summarised as follows:

- Preserve the visual containment of views from West End south of the he M27 corridor with strategic woodland planting, green routes and ecological margins. Additionally this space could have the flexibility of incorporating recreational uses such as areas of informal play interlinked by green routes;

- Preserve the open character of the gap with Hedge End at Bubb Lane, currently achieved with the provision of Policy 2.CO; and

- Preserve and enhance the visual containment of the Site from Fair Oak and Horton Heath by strengthening strategic landscaping along the railway corridor.

3.25 The landscape constraints and opportunities for development are presented at **Plan EDP 4**. This has been guided by the following principles:

- Retain the existing trees and hedgerow network where possible as primary structuring elements of the concept masterplan;

- Provide a high quality connected green infrastructure network with areas of formal and informal play with connectivity into and out from existing settlement;

- Locate open space on the highest and most visually exposed areas of the Site;

- Retain, protect and enhance important ecological assets; and

- Create landscape buffers along the development edge.

3.26 A future planning application would be supported by a full Landscape and Visual Impact Assessment, prepared with reference to *Guidelines for Landscape and Visual Impact Assessment – Third Edition* (LI/IEMA, 2013). This would likely be informed by additional photoviewpoints, the locations of which would be agreed in consultation with Eastleigh Borough Council's Landscape Officer, and potentially digital modelling of the emerging development proposals to assist with the assessment.

3.27 In the process of assessing the effects of, and informing the design of, the Illustrative Masterplan and associated Parameter Plans for a planning application, it is anticipate that a Landscape Strategy (potentially as part of a wider GI Strategy) would also be prepared. This would illustrate how any potentially harmful effects could be avoided or mitigated through planting and other soft landscaping within and around the development.

Section 4
Ecology Matters

4.1 EDP's ecological studies to date have comprised the following:

- A review of freely available online information sources (MAGIC website etc.) and a full data search via the Hampshire Biodiversity Information Centre (HBIC);
- A Phase 1 walkover survey on 13 October 2016; and
- Informal Consultation with Eastleigh Borough Council's (EBC) Biodiversity Officer.

4.2 The findings of these preliminary studies are summarised below. The following should also be read in conjunction with **Appendix EDP 1** (photographic plates), **Plan EDP 3** (Phase 1 habitat survey) and **Plan EDP 4** (constraints and opportunities) appended to this document.

Statutory Designations

4.3 A search has been undertaken for international designations/European sites within 10km of the Site and national statutory designations within 5km. The Site is not covered by any statutory designations, however there are three SACs and one SPA/Ramsar site within 10km, and five SSSIs within 5km. As summarised in **Table EDP 1** below, many of these designations overlap/coincide with each another.

Table EDP 1: Statutory designations within the Site's potential zone of influence

Designation	Distance from site at nearest point	Interest Feature(s)
River Itchen SAC (overlaps with River Itchen SSSI)	440m north west	Chalk river and tributaries, southern damselfly, bullhead, brook lamprey, Atlantic salmon, white-clawed crayfish and otter
Moorgreen Meadows SSSI	445m south east (nearest intact unit)	Neutral meadows and alder woodland (northern-most unit destroyed)
Solent and Southampton Water SPA and Ramsar site (overlaps with Solent Maritime SAC, Lee-On-The Solent to Itchen Estuary SSSI)	3.1km south	Estuarine intertidal habitats including mudflats and saltmarsh, populations of breeding and overwintering birds of European importance

Designation	Distance from site at nearest point	Interest Feature(s)
Upper Hamble Estuary and Woods SSSI (partly overlaps with Solent SPA and SAC)	4km south	Ancient woodland and unimproved grassland in addition to estuarine habitats and species described above
Southampton Common SSSI	4.3km west	Mosaic of woodland, wood pasture, grassland and water bodies, large amphibian population including great crested newt
Emer Bog SAC	9km north west	Transition mires and quaking bogs

4.4 The most pertinent statutory designations, namely those which could be potentially affected by development within the Site, are discussed in turn below. The remainder are not considered to be at risk of any adverse impacts, owing to their separation distance and/or lack of ecological connectivity.

River Itchen Special Area of Conservation

4.5 The SAC is located over 400m from the Site at the nearest point and therefore no direct impacts would result from development within the Site. In terms of potential indirect effects, previous Habitat Regulations Assessment (HRA) Screening Reports prepared by EBC have identified the following as potentially the most significant effects of any increase in housing in the district (not site-specific):

- Air quality effects - increased nitrogen deposition from traffic over the River Itchen either directly harming southern damselfly, or causing habitat changes through nutrient enrichment; and

- Water quality effects - increased phosphates, entering the River Itchen directly or via tributaries from new developments and/or Wastewater Treatment Works, causing habitat changes through nutrient enrichment.

4.6 During consultation in October 2016, EDP was advised by EBC's Biodiversity Officer to disregard the previous HRA reports as the Council's position (together with Natural England and Environment Agency) with regard to potential effects and required mitigation is under review. EDP understands that a revised HRA is in preparation which will reflect the fact that both of the effects identified above are strategic issues for EBC (and beyond) and require strategic solutions.

Air Quality

4.7 At present it is understood that there is no proven link between increased atmospheric nitrogen (from traffic or other sources) and detrimental impacts upon southern damselfly (either through toxic effects, or habitat changes through nutrient enrichment).

However, whilst there continues to be some uncertainty in this regard, it is prudent to exercise the 'precautionary principal' and to consider what increase in atmospheric nitrogen might occur as a direct result of development at the SIte.

4.8 This Technical Note draws on the detailed traffic and air quality modelling recently undertaken for the Site by Brookbanks Consulting (BC), which is described in full within the following reports:

- Air Quality Assessment, November 2016 (report ref. 10440/AQ01); and
- Transport Opportunity Report, November 2016 (report ref. 10440TOR01)

4.9 Using information contained within these reports, specific consideration has been given to the likely changes in traffic flows, and likely changes in nitrogen dioxide (NO_2) concentrations at the three road crossings over the River Itchen SAC, namely:

- M27 (section between junctions 5 and 7);
- A27 (Mansbridge Road); and
- B3037 (Bishopstoke Road/Fair Oak Road)

4.10 These road crossings are discussed in turn below. In all cases, the figures quoted are based on what is referred to in BC's reports as the '2036 Do Minimum + Development' scenario. This is essentially a worst case scenario which does not take account of likely infrastructure improvements funded by future development, or the modal shift away from car travel that the development at Allington Lane is capable of facilitating both through detailed design and preparation of a Travel Plan at the planning application stage. The latter is typically capable of achieving a 10% reduction in trips by car.

M27

4.11 BC's traffic modelling predicts that the proposed development would result no increase (0%) in traffic flows (set against the future baseline) in either direction along the section of the M27 which crosses the River Itchen SAC. On this basis, whilst the M27 was not specifically modelled as a 'receptor' within BC's Air Quality Assessment, it is clear that there would be no 'site-specific' traffic-related air quality effects on the River Itchen SAC around the M27 should the development at Allington Lane come forward.

A27 (Mansbridge Road)

4.12 The section of the A27 which crosses the River Itchen SAC (Mansfield Road) is included within BC's traffic modelling and is also represented by four receptors (no.s 18 to 21) modelled within BC's Air Quality Assessment. Receptor points 20 and 21 are located either side of the bridge over the River Itchen SAC.

4.13 In terms of traffic flows, the predicted worst case scenario is a 28.2% increase in car trips during morning peak, and a 32.3% increase during the afternoon peak. However, when this information is fed into the air quality model, the predicted increase in NO_2 concentration as a result of this traffic is much smaller. This is summarised in respect of receptor points 20 and 21 in **Table EDP 2** below:

Table EDP 2: Predicted changes in NO_2 concentrations at A27 (Mansbridge Road)

Air quality receptor point	**Predicted mean annual NO_2 concentration (µg/m^3)**		**% increase resulting from devmt**	**Increase expressed as % of AQAL***
	***2036 Do Minimum* scenario**	***2036 DM + Devmt* scenario**		
20	26.5	27.1	2.26	1.5
21	27	27.7	2.59	1.75

*'Legal limit' Air Quality Assessment Level (AQAL) = 40 µg/m^3

4.14 As set out above, the predicted increases in NO_2 concentrations where the A27 crosses the River Itchen SAC, as a direct result of the potential development at Allington Lane, is in the region of 2.5%. Bearing in mind that this based on the worst case scenario in terms of traffic generation, this is considered to be an insignificant increase.

B3037 (Bishopstoke Road/Fair Oak Road)

4.15 The section of the B3027 which crosses the River Itchen SAC (Bishopstoke Road/Fair Oak Road) is included within BC's traffic modelling and is also well represented by one receptor (no. 52) within BC's Air Quality Assessment.

4.16 In terms of traffic flows, the predicted worst case scenario is an 8.5% increase in car trips during morning peak, and an 11.1% increase during the afternoon peak. Unsurprisingly, given the relatively small increases described above in relation to the 'busier' A27, NO_2 concentrations at receptor point 52 are predicted to increase from 26.1 to 26.4 µg/m^3, a rise of just 1.15% (or 0.75% of AQAL).

Conclusions in respect of Air Quality

4.17 Based on the evidence summarised above, the increases in NO_2 concentration that would occur as a direct result of the proposed development at the Site would be insignificant. Furthermore, there is a realistic prospect of these increases being reduced further through a range of measures including detailed scheme design, a site-specific Travel Plan, technological advances and improved infrastructure. The Site's proximity to surrounding settlements, and relatively flat topography, would enable the promotion of a significant modal shift towards pedestrian and cycle use. The Site also lends itself to providing other forms of sustainable transport, and the concept masterplan aims to achieve high levels of self-containment by using Garden City/Village principles including a good mix of complimentary land uses (e.g. residential, employment and recreation), all of which would minimise the increase in car traffic and resulting emissions.

4.18 EBC's Biodiversity Officer has indicated that, whilst the effects of individual developments are unlikely to be significant, the cumulative effect of all new housing in Eastleigh Borough (and a related increase in residential population and traffic levels) over the next plan period could result in a harmful effect on the SAC/southern damselfly. On this basis, EBC is developing a Borough-wide Mitigation Strategy whereby new development will be expected to contribute to a formal scheme of new habitat creation and management (wet ditches and grazing marsh) for southern damselfly. This will compensate for potential habitat degradation within the SAC, which is predicted to occur within the 200m zone either side of the three road crossings over the River Itchen which are described above.

4.19 Based on the insignificant increases in NO_2 concentrations predicted in the worst case, together with the scope to deliver further reductions in car traffic/NO2 emissions, there is no doubt that any residual impacts on the River Itchen which would result from development at the Site could be mitigated. Such mitigation could be achieved either through a financial contribution to formal scheme of compensatory habitat creation or by making land within the Consortium's control available for this purpose.

Water Quality

4.20 Potential, Site-specific, development effects on the SAC relate to the presence of water courses within the Site which eventually drain into the River Itchen. Potential effects and avoidance/mitigation are summarised in **Table EDP 3** below.

Table EDP 3: Site-specific effects and mitigation regarding River Itchen SAC

Effect	Summary	Avoidance/Mitigation (Apply to Both Effects)
Hydrological effects on SAC habitats and species	Downstream changes in water quality and flow rates, resulting from development within or near watercourses in the Site	1. Buffer on-site water courses from development, protect during construction and enhance/restore riparian habitat where relevant 2. Incorporate a sustainable drainage system (open swales and attenuation ponds) to ensure no net change in greenfield run-off rate and maintain or improve water quality
Loss/disturbance of otter foraging habitat	Harm to otter population present in the SAC via disturbance or disruption of foraging along watercourses in the Site	

4.21 The primary drainage network within the Site (based on OS MasterMap Water Network) and an appropriate buffer to the water courses (illustrated on **Plan EDP 4**) have been fed into the concept masterplan for the Site, to ensure their retention and protection within a future development.

4.22 By engaging with EBC regarding the strategic solutions relating to air quality and waste water, and by adopting standard mitigation measures in respect of the site-specific

effects, indirect effects on River Itchen SAC can be suitably avoided or mitigated. On this basis it would be possible for development at the Site to ensure that no significant effects would occur, and a site-specific Appropriate Assessment would be screened out in consultation with Natural England.

Moorgreen Meadows SSSI

4.23 Moorgreen Meadows SSSI is over 400m from the Site at the nearest point and there are no direct drainage connections. Therefore no direct or indirect hydrological impacts are anticipated as a result of development within the Site.

4.24 This SSSI is accessible along a public right of way connecting into and running through the Site and there is therefore a minor risk of indirect recreational impacts on the SSSI. However the habitats in question are not especially sensitive to recreational disturbance and, through providing sufficient open space on-site and through encouraging visitors into the nearby Country Park (see below), such impacts would be avoided or reduced to insignificant levels.

Solent European Sites

4.25 The Site lies over 4km away from (but within 5.6km of) two of the Solent European Sites, namely the Solent Maritime SAC and the Solent and Southampton Water SPA and Ramsar site. No direct effects of development at the Site are anticipated, however indirect effects relating to increased recreational impacts and changes in water quality (via the River Itchen) need to be considered.

4.26 In accordance with the Interim Solent Recreation Mitigation Strategy currently in place, new developments within 5.6km of any Solent European Site can avoid harmful recreational impacts by contributing funds to a formal scheme of mitigation and impact management measures. The required contribution to the Mitigation Strategy is determined on a 'per dwelling' basis and, as of 1 April 2016, the required amount was £176 per dwelling.

4.27 Any potential downstream water quality effects of development of the Site on the Solent European Sites would be conveyed via the River Itchen. Therefore, provided the necessary avoidance/mitigation measures to avoid water quality effects on the River Itchen SAC (as described above) are put in place, effects on the Solent European Sites further downstream would be avoided.

4.28 Based on the above it would be possible for development at the Site to ensure that no significant effects would occur, and a site-specific Appropriate Assessment would be screened out in consultation with Natural England.

Local and/or Non-statutory Designations

SINCs

4.29 A search has been undertaken for non-statutory and/or local designations within 2km of the site. Within this search radius there are 51 Sites of Importance for Nature Conservation (SINCs). It should be noted that many of nearest SINCs overlap with the statutory designations (SAC and SSSI) to the north of Allington Lane as described above.

4.30 The SINCs which are considered most pertinent to the Site, namely those located within or directly adjacent to it, are summarised in **Table EDP 4** below.

Table EDP 4: SINCs within or directly adjacent to the Site

SINC ref. no.	Name	Location	Size (ha)	Qualifying Criteria
EA0034	Dummers Copse North	Within Site boundary (west)	3.98	"Ancient semi-natural woodlands"
EA0065	Meadow adjacent to Home Covert	Within Site boundary (central)	2.95	"Semi-improved grasslands which retain a significant element of unimproved grassland"
EA0069	Home Covert, West End	Within Site boundary (central)	1.17	"Ancient semi-natural woodlands"
EA0060	Winslowe House Meadow	Near central area of Site but excluded from Site boundary	2.57	Agriculturally unimproved grasslands
EA0063	Copse by Oaklands House	Adjoins north west Site boundary	1.31	"Ancient semi-natural woodlands; and other semi-natural woodland such alder swamp woods"

4.31 The presence of these non-statutory designations does not represent an in principle constraint to development of the Site. However, information regarding the distribution of these SINCs and appropriate development buffers (illustrated on **Plan EDP 4**) have been fed into the concept masterplan for the Site, to ensure their retention and protection within a future development.

4.32 In addition to avoiding harm, the SINCs within the Site boundary offer opportunities for enhancement through appropriate management in the long-term and for incorporation into the wider GI network within and adjacent to the Site.

Itchen Valley Country Park

4.33 Itchen Valley Country Park lies directly adjacent to the Site on the other side of Allington Lane. The Country Park is not an ecological designation *per se,* although it incorporates some of the River Itchen SAC, Itchen Valley SSSI and several SINCs. The presence of the Country Park in close proximity to the Site does pose any additional constraints; conversely it provides the following opportunities to a future development scheme within the Site:

- The Park is set up to attract visitors whilst at the same time managing public access to protect the most ecologically sensitive areas. The less sensitive parts of the Country Park could therefore act as focus for the some of the increased demand for recreational greenspace generated by new housing development within the Site, thereby avoiding potential recreational disturbance of the more sensitive/designated habitats within the SAC and SSSI; and

- The Park contains a strong and diverse habitat/GI network comprising woodland, grassland and wetland. The GI Strategy for the Site, incorporating both existing and new habitats of ecological and amenity value, could therefore be designed to integrate with this existing resource to achieve greater benefits for biodiversity.

Habitats

4.34 The habitats present within the Site are illustrated on **Plan EDP 3** (Phase 1 Habitat Survey) appended to this document.

4.35 The majority of the Site comprises poor semi-improved grass fields grazed by sheep and horses, which are of limited ecological interest. However, and unsurprisingly for a green field site of this extent, there are a number of locally important habitats present namely:

- Semi-natural woodland and smaller planted woodland copses;

- Mature trees, tree lines and hedgerows;

- Wet/marshy grassland; and

- Ponds and water courses.

4.36 More detailed surveys will be required to confirm the value of certain habitats within the Site, namely woodland, grassland and hedgerows, which will provide further information regarding their priority for retention in the masterplan and any opportunities for their enhancement and restoration.

4.37 The presence of these habitats does not represent an in principle constraint to development of the Site. However, information regarding the distribution of these habitats and appropriate development buffers (illustrated on **Plan EDP 4**) has been fed into the concept masterplan for the Site, so that they can be prioritised for retention and protection within a future development. Any unavoidable losses of such habitats to development could be readily compensated, and further ecological enhancement provided, through additional planting or other forms of habitat creation within the green space associated with a future development.

Protected and/or Priority Species

EBC Surveys 2016

4.38 During 2016 EBC commissioned borough-wide surveys of rare woodland bats and of great crested newts to inform the emerging Local Plan. Copies of these surveys were provided to EDP by EBC's Biodiversity Officer in November 2016. The survey findings are summarised below as far as these relate the Site.

Woodland bat survey

4.39 In May and June 2016 trapping surveys and automated detector surveys were undertaken within 14 different woodlands across Eastleigh Borough. The main purpose of these surveys was to establish the presence/absence of the rare Bechstein's and barbastelle bats which are strongly associated with woodland and which are known to occur in the neighbouring districts around Eastleigh.

4.40 Two of the 14 surveyed woodlands were within Itchen Valley County Park, just to the north of the Site. No Bechstein's or barbastelle bats were recorded within the Country Park, or any other surveyed woodlands within 3km of the Site. Therefore, whilst the presence of these species within the Site cannot be entirely ruled out, the likelihood of a significant or breeding population of either species being present is low. Full bat surveys at the Site would be undertaken in support of any future planning application.

Great crested newt survey

4.41 Between March and June 2016 full great crested newt surveys were undertaken of accessible water bodies across the north-eastern quarter of Eastleigh Borough. 108 water bodies were initially assessed for their suitability to support great crested newts, of which 52 were then subject to six detailed surveys (i.e. torching, trapping, netting and/or egg search).

4.42 Five of the ponds surveyed in detail are located within or directly adjacent to the Site, and none of these were found to contain great crested newts. A further four ponds surveyed in detail are located within 500m of the Site, although two of these are north of Allington Lane and two are to the north-east of the railway line. A small population

of great crested newts was recorded in just one of these ponds; just to the north-east of Chalcroft Distribution Park and approximately 500m from the Site.

4.43 The nearest pond found to contain great crested newts is a significant distance from the Site and separated from the Site by poor quality habitats and various dispersal barriers. Based on these recent survey findings, the likelihood of the great crested newts occurring within the Site is very low. EBC's survey may already provide sufficient information to support any future planning application for the Site, however if any deficiencies in coverage are identified or the surveys become out of date, supplementary surveys may be required.

HBIC Records

4.44 Numerous records of protected and priority species have been received from Hampshire Biodiversity Information Centre within a 2km radius around the Site. This is not surprising, however, given that this search radius incorporates the Itchen Valley Country Park area to the north of Allington Lane, which comprises a diverse range of ecological valuable habitats of varying designatory status, and the majority of received species records are from this area.

4.45 Based on the records received, together with an assessment of the suitability of habitats within the Site, the following species groups could potentially occur within the Site:

- Breeding and wintering birds;
- Bats;
- Otter, water vole and crayfish;
- Dormouse;
- Badger; and
- Reptiles.

4.46 The potential presence of these species does not represent an in principle constraint to development of the Site. The incorporation and buffering of the Site's key habitats within a sensitive masterplan can avoid or mitigate many potential effects on protected species and a number of species populations are likely to benefit from the design and long-term management of informal green spaces. Further survey, assessment and masterplan design would enable the full range of mitigation measures to be identified to ensure compliance with legislation and planning policy.

Summary of Ecology Matters

4.47 At this stage it is clear that there are no 'in principle' or other significant development constraints in ecological terms. Furthermore, the relatively low ecological importance attributed to the majority of the Site presents an opportunity to deliver net biodiversity benefits in accordance with national and local planning policies.

4.48 The ecological constraints and opportunities for development that have been identified through EDP's preliminary studies are presented on **Plan EDP 4**. This plan illustrates the key components of the existing ecological network which should be a priority for retention and buffering within the masterplan and restoration/enhancement as part of the wider Landscape/GI Strategy.

4.49 A future planning application would be supported by a full Ecological Impact Assessment, prepared by EDP with reference to *Guidelines For Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal (CIEEM, 2016)*. The assessment would be informed by detailed surveys to further evaluate the habitats and confirm the presence/absence/abundance/distribution of protected/priority species. The scope of survey work would be agreed in consultation with EBC's Biodiversity Officer and Natural England where appropriate.

4.50 The ecological assessment would inform the masterplan design and the Landscape/GI Strategy referred to in Section 3 above, to avoid harmful effects and provide net gains for biodiversity.

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Appendix EDP 1
Photographic Plates Illustrating Landscape and Ecology Context

Plate EDP 1: Veteran Oak Tree

Plate EDP 2: Example of the Site's undulating topography and wooded character

Plate EDP 3: Areas of horsiculture are associated with the settlement fringes

Plate EDP 4: Example of the Site's boundary treatment

Plate EDP 5: Wooded horizons visible to the south and the Ageas Bowl

Plate EDP 6: Wooded horizons visible to the North toward Fair Oak and the National Park

Plate EDP 7: View from high point within recreational area south of M27

Plate EDP 8: Many minor roads in the locality exhibit a rural character

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Plans

Plan EDP 1 Site Boundaries and Context
(EDP2831/06a 18 November 2016 WG/TW)

Plan EDP 2 Topography Plan
(EDP2831/07a 18 November 2016 WG/TW)

Plan EDP 3 Phase 1 Habitat Survey
(EDP2831/05a 18 November 2016 LB/TW)

Plan EDP 4 Constraints and Opportunities
(EDP2831/03c 18 November 2016 WG/TW)

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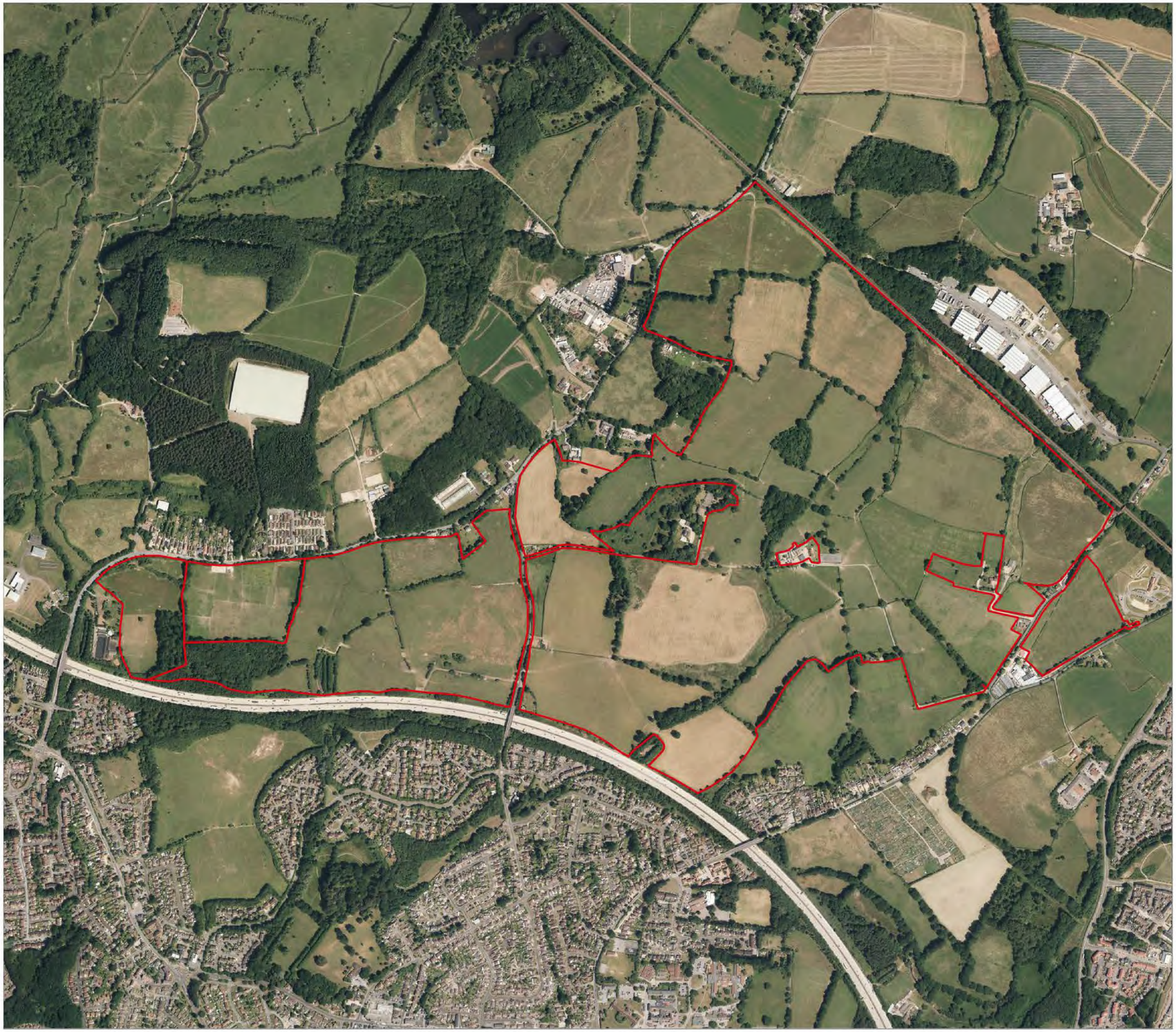

Site Boundary

N

0 100 200 300 400 500 m

THE ENVIRONMENTAL DIMENSION PARTNERSHIP

[redacted]

client

Hallam Land Management, Davies Family and Bovis Homes Ltd.

project title

Allington Lane, Eastleigh

drawing title

Plan EDP 1: Site Boundaries and Context

date	18 NOVEMBER 2016	drawn by	WG
drawing number	EDP2831/06a	checked	TW
scale	1:10,000 at A3	QA	TB

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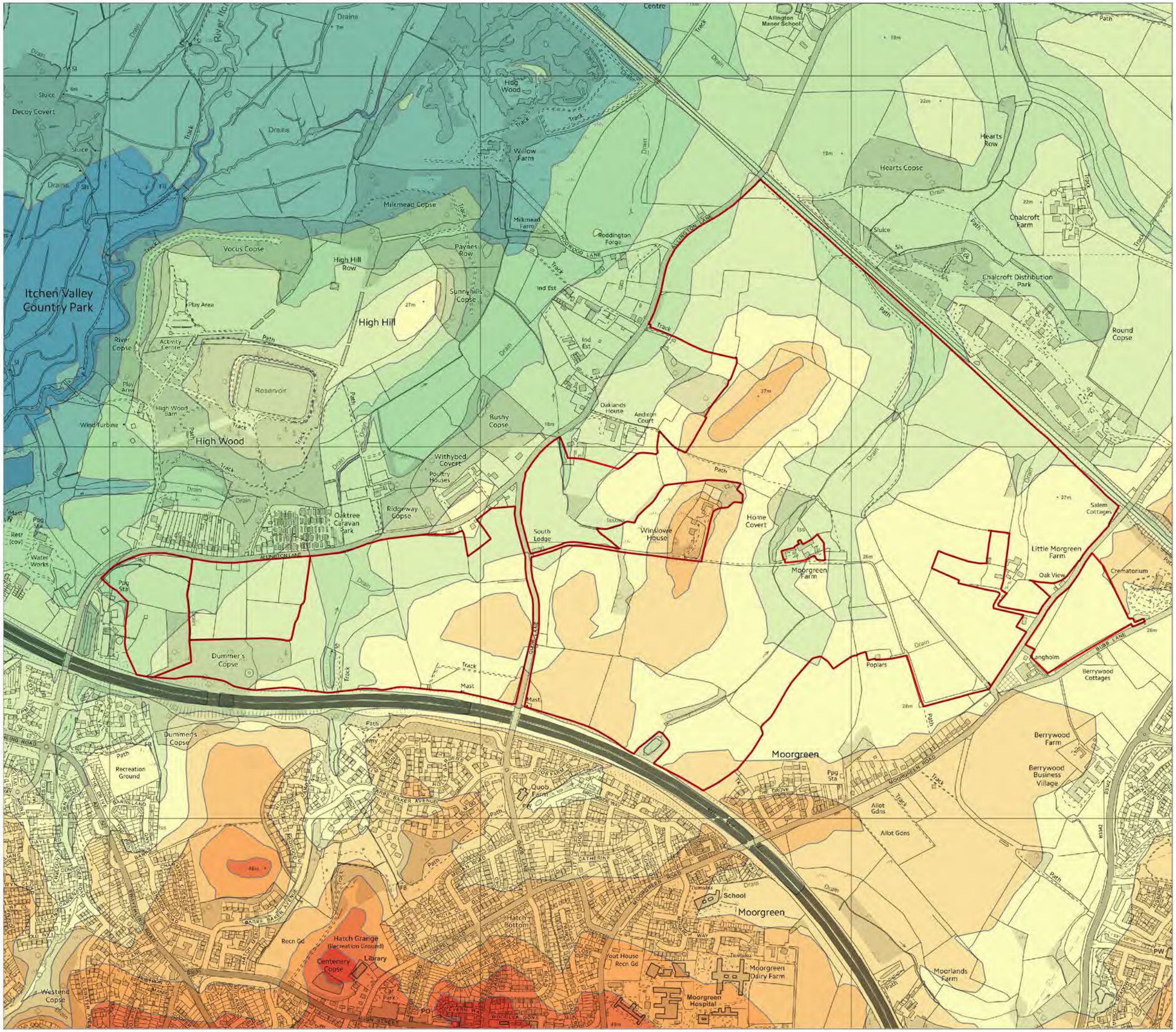

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THE ENVIRONMENTAL DIMENSION PARTNERSHIP

[redacted]

client

Hallam Land Management, Davies Family and Bovis Homes Ltd.

project title

Allington Lane, Eastleigh

drawing title

Plan EDP 2: Topography Plan

date	18 NOVEMBER 2016	drawn by	WG
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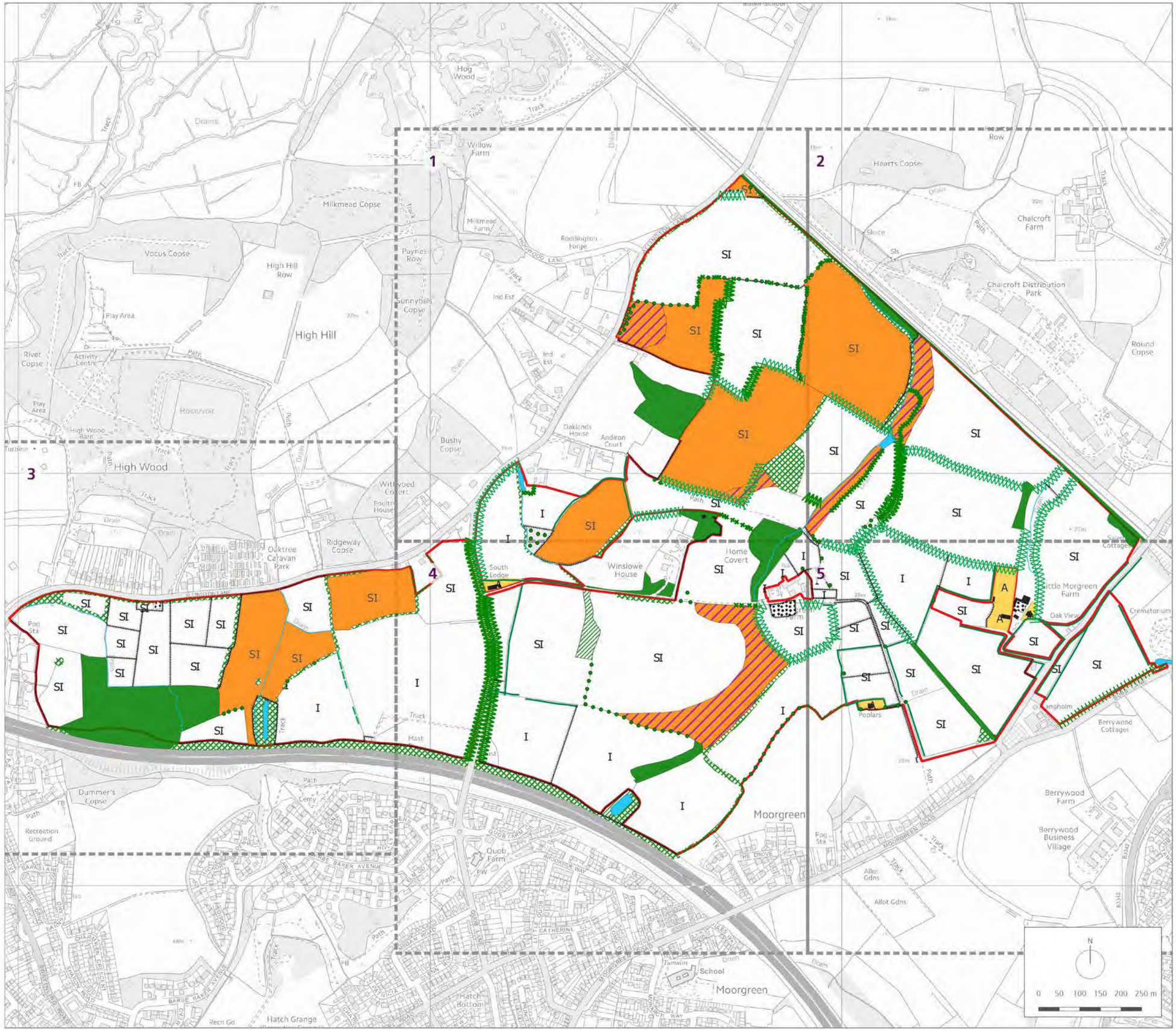
scale	1:10,000 at A3	QA	TB



Survey Area
Broadleaved Woodland Semi-natural
Broadleaved Woodland Plantation
Dense/continuous Scrub
Scattered Tree
Scattered Scrub
Species-rich Hedgerow with Trees
Species-rich Hedgerow
Species-poor Hedgerow with Trees
Species-poor Hedgerow
Species-poor Defunct Hedgerow
I Improved Grassland
SI Semi-improved Neutral Grassland
SI Poor Semi-improved Grassland
Marshy Grassland
A Amenity Grassland
Standing Water
Running Water
Dry Ditch
Fence
Bare Ground
Buildings

[redacted]

client

Hallam Land Management, Davies Family and Bovis Homes Ltd.

project title

Allington Lane, Eastleigh

drawing title

Plan EDP 3: Phase 1 Habitat Survey Overview

date	18 NOVEMBER 2016	drawn by	LB
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scale	1:9,000 at A3	QA	TB

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Survey Area
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Broadleaved Woodland Plantation
Dense/continuous Scrub
Scattered Tree
Scattered Scrub
Species-rich Hedgerow with Trees
Species-rich Hedgerow
Species-poor Hedgerow with Trees
Species-poor Hedgerow
Species-poor Defunct Hedgerow
I Improved Grassland
SI Semi-improved Neutral Grassland
SI Poor Semi-improved Grassland
Marshy Grassland
A Amenity Grassland
Standing Water
Running Water
Dry Ditch
Fence
Bare Ground
Buildings

THE ENVIRONMENTAL DIMENSION PARTNERSHIP

[redacted]

client

Hallam Land Management, Davies Family and Bovis Homes Ltd.

project title

Allington Lane, Eastleigh

drawing title

Plan EDP 3: Phase 1 Habitat Survey (Page 1 of 5)

date	18 NOVEMBER 2016	drawn by	LB
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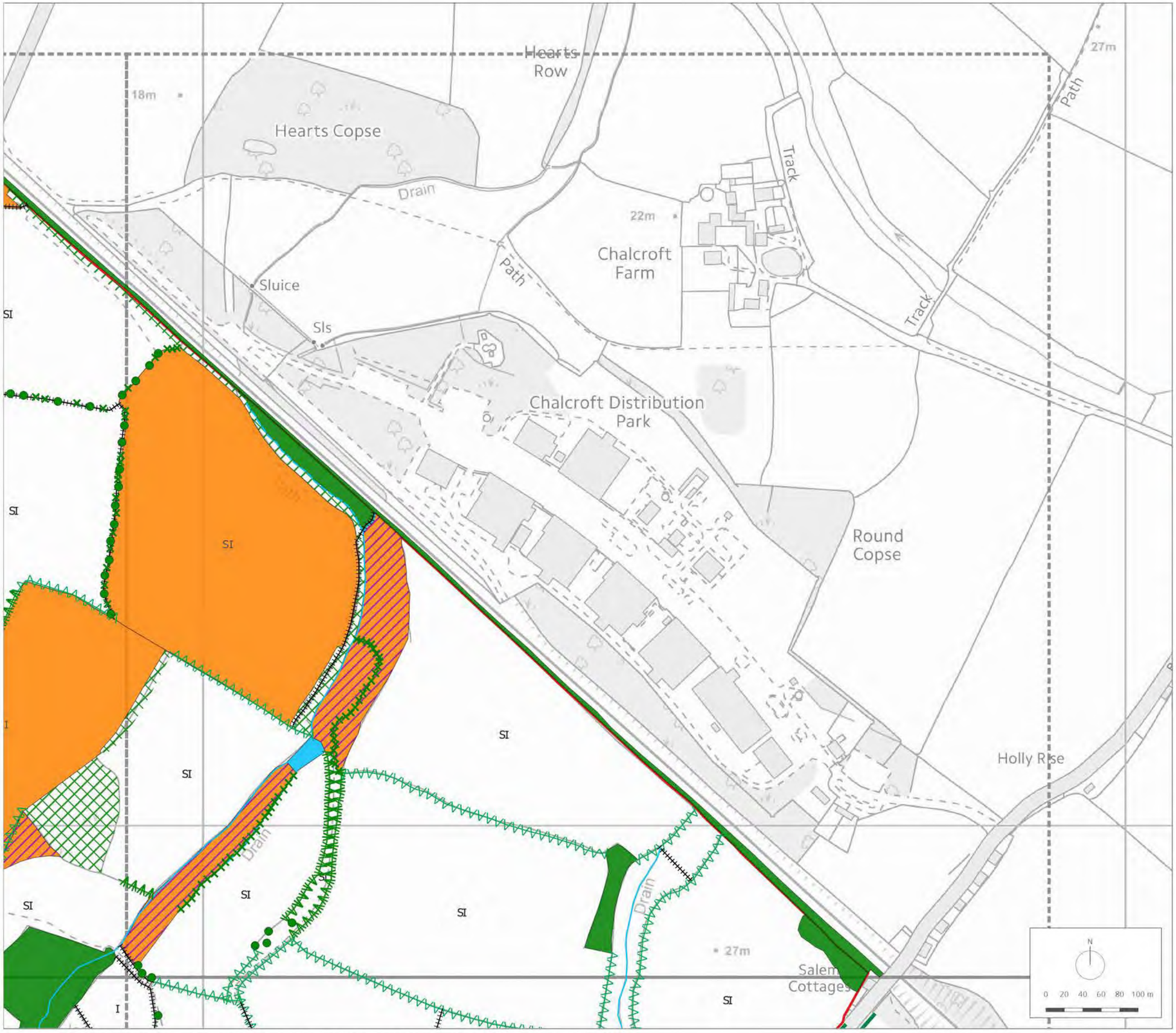

Survey Area
Broadleaved Woodland Semi-natural
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A Amenity Grassland
Standing Water
Running Water
Dry Ditch
Fence
Bare Ground
Buildings

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THE ENVIRONMENTAL DIMENSION PARTNERSHIP
[redacted]

client
Hallam Land Management, Davies Family and Bovis Homes Ltd.

project title
Allington Lane, Eastleigh

drawing title
Plan EDP 3: Phase 1 Habitat Survey (Page 2 of 5)

date	18 NOVEMBER 2016	drawn by	LB
drawing number	EDP2831/05a	checked	TW
scale	1:4,000 at A3	QA	TB

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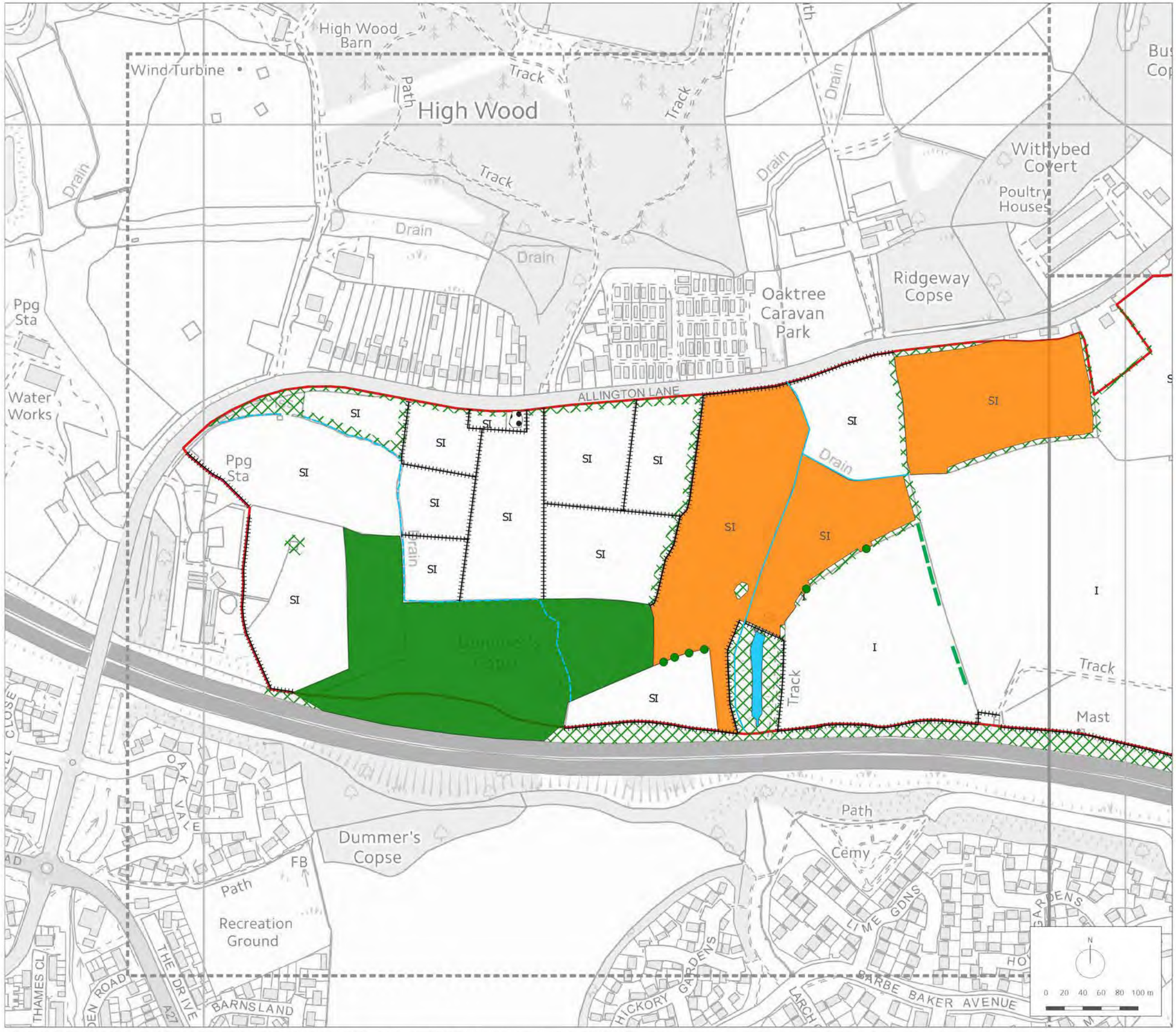

Survey Area
Broadleaved Woodland Semi-natural
Broadleaved Woodland Plantation
Dense/continuous Scrub
Scattered Tree
Scattered Scrub
Species-rich Hedgerow with Trees
Species-rich Hedgerow
Species-poor Hedgerow with Trees
Species-poor Hedgerow
Species-poor Defunct Hedgerow
I Improved Grassland
SI Semi-improved Neutral Grassland
SI Poor Semi-improved Grassland
Marshy Grassland
A Amenity Grassland
Standing Water
Running Water
Dry Ditch
Fence
Bare Ground
Buildings

edp
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Plan EDP 3: Phase 1 Habitat Survey (Page 4 of 5)

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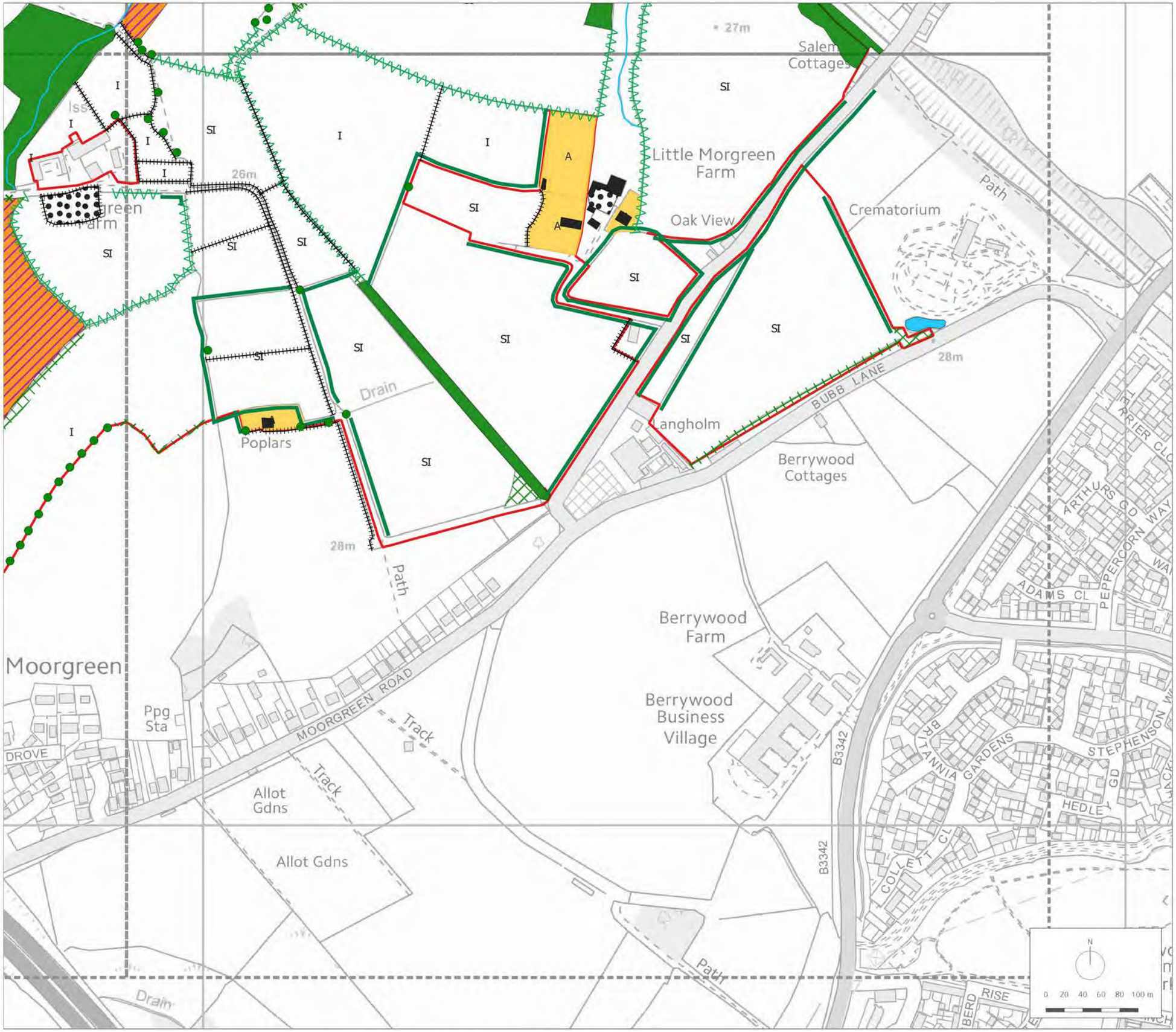

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Plan EDP 3: Phase 1 Habitat Survey (Page 5 of 5)

date	18 NOVEMBER 2016	drawn by	LR
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scale	1:4,000 at A3	QA	TB

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Planting within Itchen Valley Country Park restricts views into site.

Chalcroft Distribution Park and railside vegetation prevents views into site from the northeast.

Views into site from the south of the M27 are restricted by roadside vegetation.

Moorgreen limits views into site from the east and southeast.

Views toward Chilworth

Views toward Fair Oak

Views toward West End and The Ageas Bowl

Views toward West End and The Ageas Bowl

Itchen Valley Country Park

High Hill

High Wood

Moorgreen

Constraints

- Sites of Importance for Nature Conservation
- Itchen Valley Country Park
- Trees and Woodland
- Key Green Infrastructure
- Habitat Buffer
- Rights of Way
- Water Courses
- Listed Buildings

Opportunities

- Long Distance Views out of Site
- Proposed Structural Landscaping
- Proposed Key GI and Access Linkages
- Local High Point - Potential Location of Open Space

N

0 100 200 300 400 500 m

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project title

Allington Lane, Eastleigh

drawing title

Plan EDP 4: Constraints and Opportunities

date	18 NOVEMBER 2016	drawn by	WG
drawing number	EDP2831/04k	checked	TW
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CIRENCESTER (Head Office)

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Allington Lane, Eastleigh
Update Technical Note in Respect of Ecological Circumstances
C_EDP2831_04a_110717

1 Introduction

1.1 This Update Technical Note has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Hallam Land Management and Bovis Homes Ltd. This Note provides an update to EDP's Landscape and Ecology Technical Note (report ref: **L_C_EDP2831_02a**, December 2016), which was prepared in relation to proposed development at land at Allington Lane, Eastleigh (hereafter referred to as 'the Site').

1.2 This note provides an update in respect of two matters, namely:

- Mitigation of potential impacts upon the River Itchen Special Area of Conservation (SAC); and
- Baseline survey information, and strategic mitigation, in relation to great crested newt.

1.3 These matters are discussed in turn below.

2 River Itchen SAC

2.1 EDP attended a meeting with Eastleigh Borough Council's Biodiversity Officer, Deborah Salmon, on 21 February 2017, to discuss the ecological sensitivities of the Site, with a particular focus on potential impacts upon the River Itchen SAC resulting from the required/anticipated new housing in the Borough. The following points were noted from the meeting and following correspondence.

2.2 Eastleigh Borough Council (EBC), Environment Agency and Natural England (NE) are working towards the production of a Strategic Mitigation Strategy to address the effects of increased NO_2 deposition within the River Itchen SAC resulting from increased traffic in the Borough as a whole. Theoretically, this will be a strategy like the Solent Disturbance Mitigation Project, whereby development within an agreed zone will be required to make financial contribution to a defined and costed mitigation project on a cost per dwelling basis. By contributing to such a scheme, development impacts would be avoided, thereby removing the need for a project-specific Appropriate Assessment to be undertaken at the planning application stage.

2.3 Developer contributions would be put towards the creation and maintenance of new breeding/foraging habitat for the southern damselfly (i.e. shallow ditches within marshy grassland). Such mitigation is only effective if this is implemented in locations close to existing southern damselfly colonies. The distribution of southern damselfly within the SAC is currently

unknown; however, EBC has commissioned a detailed survey of this species, which is due for completion by July 2017. The findings of this survey will therefore identify where mitigation would be most effective. At the same time, the feasibility of incorporating suitable adjacent land outside the SAC into the Strategic Mitigation Strategy, rather than restricting mitigation to within the SAC boundary, is being explored by EBC and NE.

2.4 Recognising that traffic generated by new housing in neighbouring local authority areas could also contribute to increased NO_2 deposition within the River Itchen SAC, the Partnership for Urban South Hampshire (PUSH) has commissioned a study to assess potential air quality impacts of new housing in the wider region on Designated Sites. This has the potential to spread the cost of delivering any future River Itchen SAC Strategic Mitigation Strategy across local authority boundaries, thereby reducing the cost per dwelling in any one local authority. The initial results of this study are expected in September 2017.

2.5 Until the full Strategic Mitigation Strategy has been put in place, EBC intends to operate an Interim Mitigation Strategy, which is likely to be rolled out in October/November 2017. Under this interim strategy, any new planning applications would be assessed for in-combination impacts on air quality, and contributions would be levied at the s106 stage.

2.6 EBC's position remains that the previous Habitats Regulations Assessment (HRA) reports prepared for the Local Plan and Spatial Options should be disregarded. EBC expect to publish an updated HRA document for the Spatial Options in September/October 2017.

2.7 Considering the update information summarised above, it remains EDP's conclusion that the Site is capable of accommodating development whilst avoiding significant effects on the River Itchen SAC, and that a site-specific Appropriate Assessment would be screened out in consultation with Natural England at the planning application stage.

3 Great Crested Newt

Strategic Mitigation

3.1 As summarised within EDP's Landscape and Ecology Technical Note, EBC commissioned a strategic great crested newt survey covering the north of Eastleigh Borough (undertaken by WYG in 2016). This revealed that this part of the Borough supports a small number of relatively isolated great crested newt populations, which will require a network of aquatic and terrestrial habitats to be maintained to ensure their long-term survival. In this context, EBC's Biodiversity Officer arranged a Great Crested Newt Workshop on 21 February 2017, which was attended by planning officers, developers and ecologists including EDP, Hallam Land Management and Bovis Homes Ltd.

3.2 As noted previously and discussed at the Workshop, the Site is currently on the very edge of one great crested newt 'territory' located at West Horton Heath (north of the railway line), and just over 500m from another great crested newt territory (Hog Woods and Gravel Pits), just

north of Itchen Country Park (the other side of Allington Lane). The movement of great crested newt into the Site from either populations would be impeded by the road and railway; however, these are not complete barriers. As described in more detail below, three ponds within the Site were not covered by WYG's 2016 survey; however, EDP surveyed these in 2017 and confirmed that the species is absent in two of these, and very unlikely to be present in the third pond.

3.3 Based on the 2016 and 2017 survey information, there is currently a very low likelihood of great crested newt occurring within the Site. However, proposed mitigation associated with proposed development at West Horton Heath may result in there being great crested newt breeding in new ponds just north of the railway, i.e. closer to the Allington Lane site than is currently the case. On this basis, the Site has potential to make a positive contribution to the overall great crested newt strategy for Eastleigh Borough.

3.4 The early concept masterplan for the Site incorporates generous open space and a strong Green Infrastructure network following existing ecological and landscape features, which offer opportunities to facilitate the expansion and enhancement of the local great crested newt population. In particular, the potential landscape buffer along the railway line on the Site's north eastern boundary would provide an optimal location for targeted landscape enhancements for great crested newt, including new ponds (both within SuDS basins and 'off-line') linked by informal areas of scrub and rough grass.

3.5 EBC has recently commissioned WYG to prepare a great crested newt mitigation strategy for the Borough that reflects the latest survey information and the outcomes of the February Workshop. However, at this stage is clear that development at Allington Lane could deliver benefits to the local great crested newt population.

Additional Baseline Survey

3.6 As noted above, three of the ponds/waterbodies within the Site were not covered by WYG's strategic great crested newt survey in 2016. In addition, according to OS mapping, two other ponds within 250m of the Site (to the north) were not covered by the 2016 survey. In order to provide greater certainty regarding the likely presence/absence of great crested newt within or near the Site, EDP was commissioned to undertake a survey of these ponds using environmental DNA (eDNA) sampling. The survey methodology employed and survey findings are set out below.

Methodology

3.7 eDNA is DNA that is collected from the environment in which an organism lives. In aquatic environments, animals including amphibians shed cellular material into the water via their saliva, urine, faeces, skin cells, etc. This DNA may persist for several weeks, and can be collected through a water sample and analysed to determine if the target species of interest (great crested newt) is or has been present in the water body.

3.8 The ponds targeted for survey are labelled P1, P2 etc. are shown in **Appendix EDP 1** (*Great Crested Newt Overview*) appended to this note. All three on-site waterbodies, labelled P1-P3, were surveyed. However, the owner of P4 confirmed that it is now just a damp depression rather than a pond and access to P5 was not permitted by the landowner.

3.9 Water samples were taken from the three on-site waterbodies on 21 April 2017 by a great crested newt licenced ecologist and assistant, in accordance with those methodologies set out by the Freshwater Habitats Trust[1] and using separate sterile equipment packs provided by Fera for the collection of eDNA samples. Briefly, the protocol involves:

- Collecting 20 water samples from selected areas evenly spread around the accessible perimeter pond including both open water and vegetated areas;
- At each sampling location, a ladle of water is collected by stirring the water column without stirring up sediment, and poured into the provided sampling bag. When all 20 ladles are collected, the bag is shaken thoroughly;
- 15ml of this mixed sample is then pipetted into each of six conical tubes containing preserving fluid and each tube is shaken thoroughly to homogenize the sample. There are six tubes per pond; and
- These tubes are then labelled appropriately and couriered to the laboratory for real-time polymerase chain reaction (PCR) analysis as detailed within Biggs *et al.* (2014)[2].

Findings

3.10 No evidence of great crested newt eDNA was found in any of the waterbodies surveyed. Analysis was conducted in the presence of the following controls: extraction blank, appropriate positive and negative PCR controls for each of the TaqMan assays (great crested newt, inhibition, and degradation). All controls performed as expected for ponds P2 and P3. However, for the samples collected from P1, Fera detected degradation of the internal control. Therefore, due to the risk of any eDNA also being degraded resulting in a false negative, Fera have issued an inconclusive result.

3.11 A summary of the results is provided in **Table EDP 3.1** below.

[1] GCN eDNA protocol, P. Williams, Freshwater Habitats Trust. August 2013

[2] [redacted] Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford

Table EDP 3.1: Summary of eDNA Results

Pond	Detection of great crested newt	No. of positive repetitions	Inhibition	Degradation
P1	Inconclusive	0/12	No	Yes
P2	Negative	0/12	No	No
P3	Negative	0/12	No	No

Conclusions

3.12 The confirmed absence of great crested newts within ponds P2 and P3 is consistent with the negative survey results for all other ponds within the Site from WYG's survey in 2016, as illustrated on the *Great Crested Newt Overview* plan appended to this note. Whilst the eDNA result for pond P1 was 'inconclusive', the pond is of low suitability for great crested newt and the context of this species being absent from the surrounding ponds it is concluded that it is very unlikely that this pond supports great crested newts.

3.13 These findings support the conclusion there is currently a very low likelihood of great crested newt occurring within the Site, but that there is an opportunity to enhance the suitability of the Site for great crested newt as part of a future development and associated Green Infrastructure strategy.

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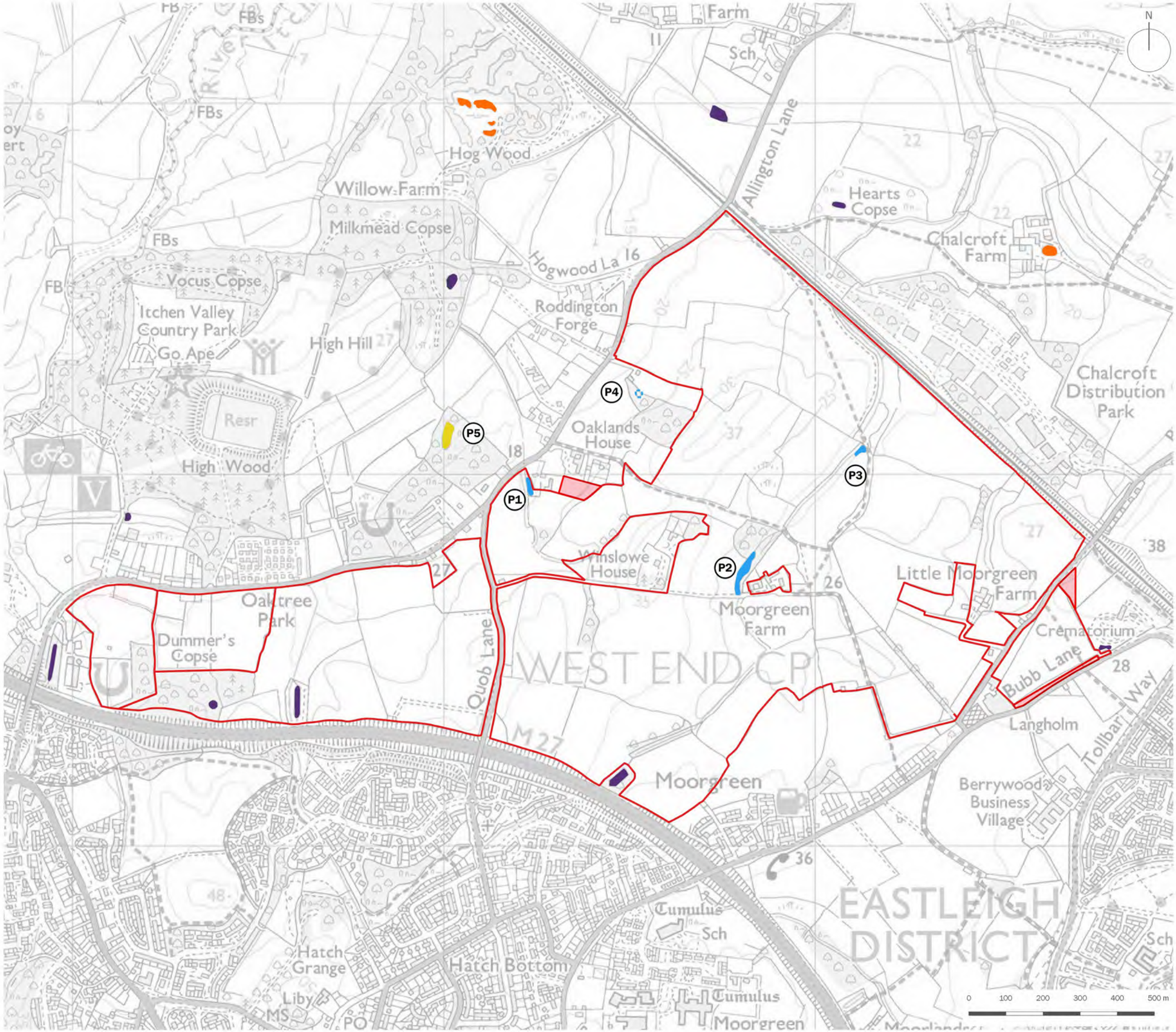
Appendix EDP 1
Great Crested Newt Overview
(EDP2831/17a 12 July 2017 HS/TW)



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client

Hallam Land Management and Bovis Homes Ltd

project title

Allington Lane, Eastleigh

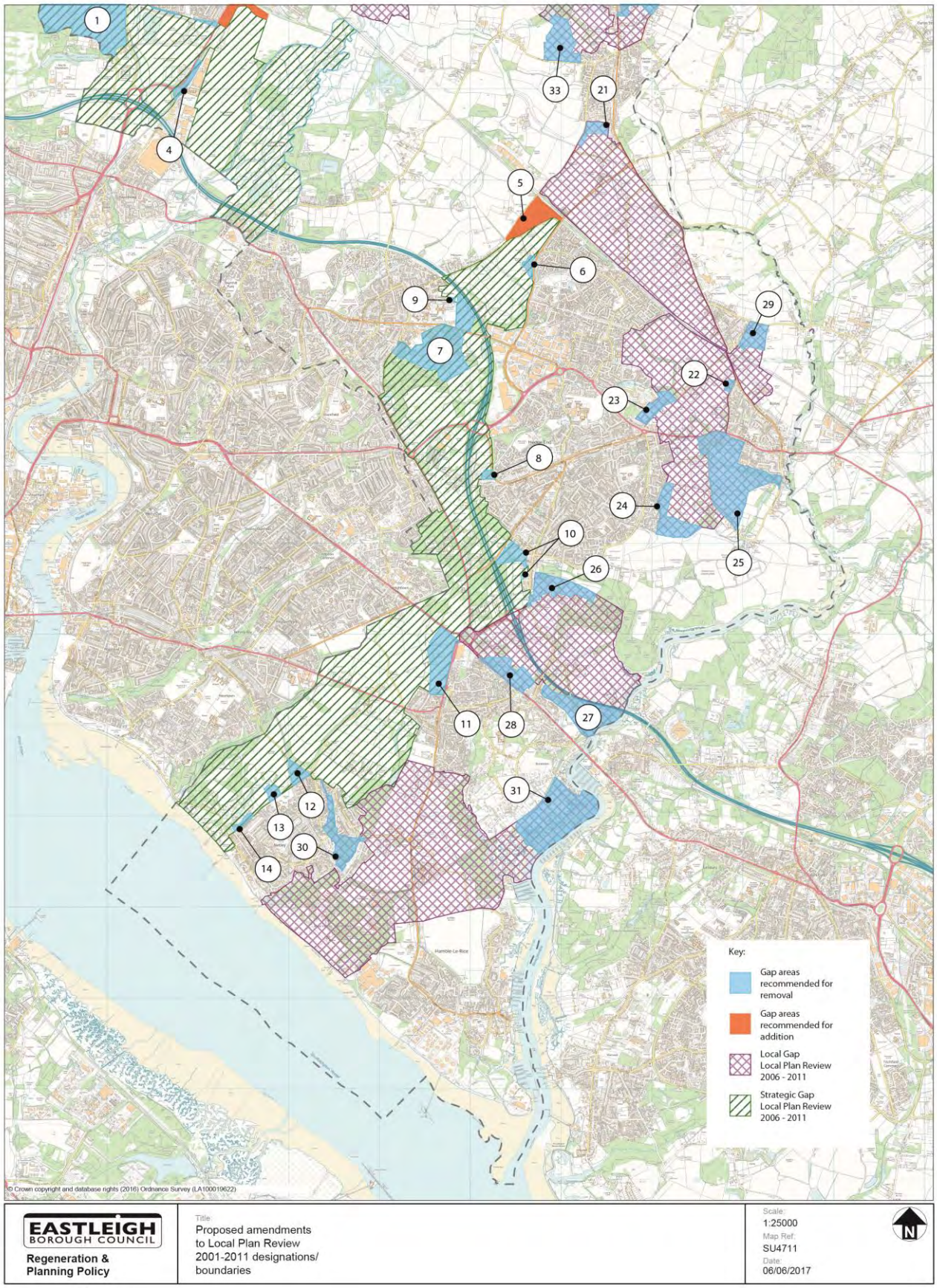
drawing title

Great Crested Newt Overview

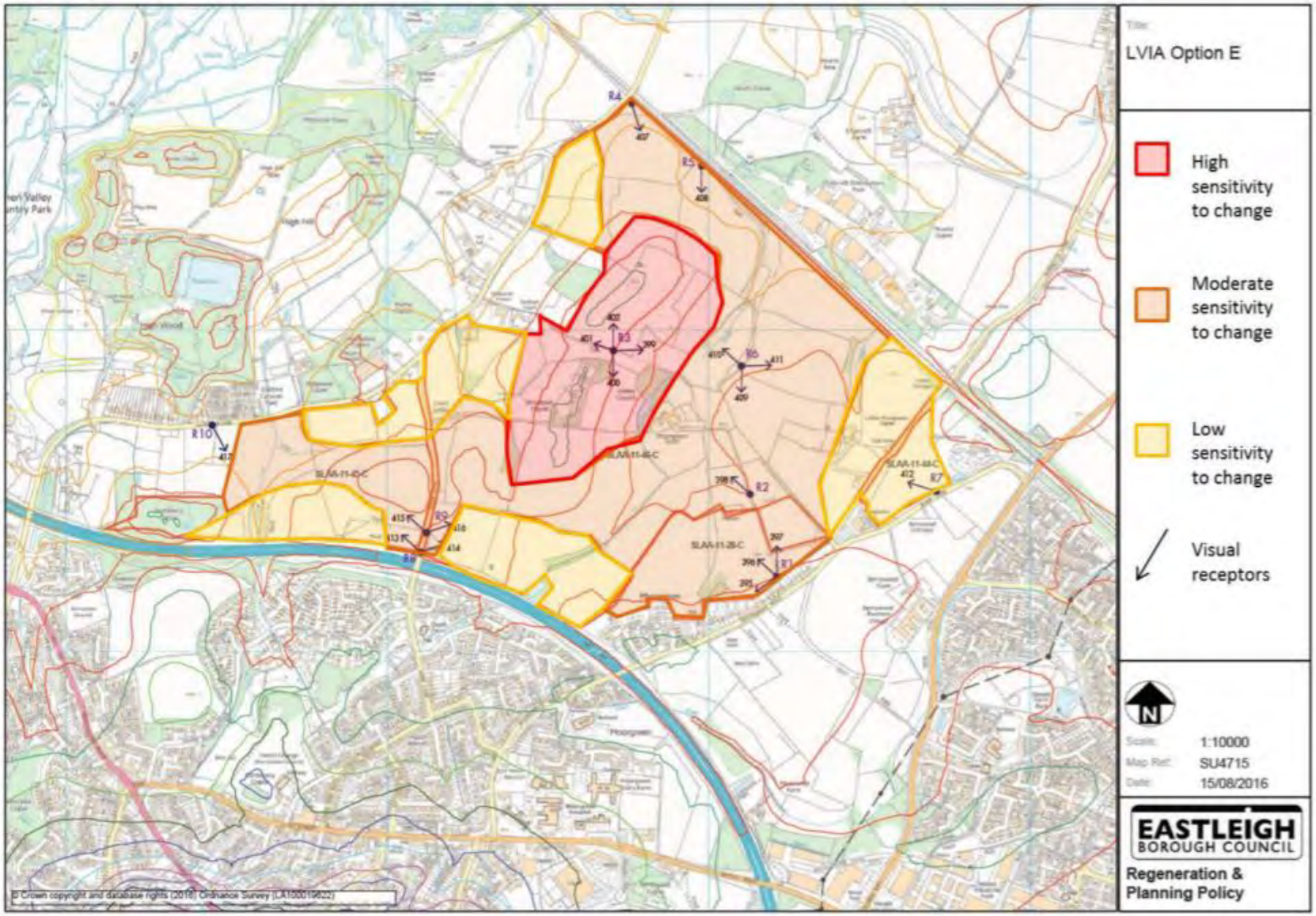
date	12 JULY 2017	**drawn by**	HS
drawing number	EDP2831/17a	**checked**	TW
scale	1:10,000 @ A3	**QA**	LH

the environmental dimension partnership

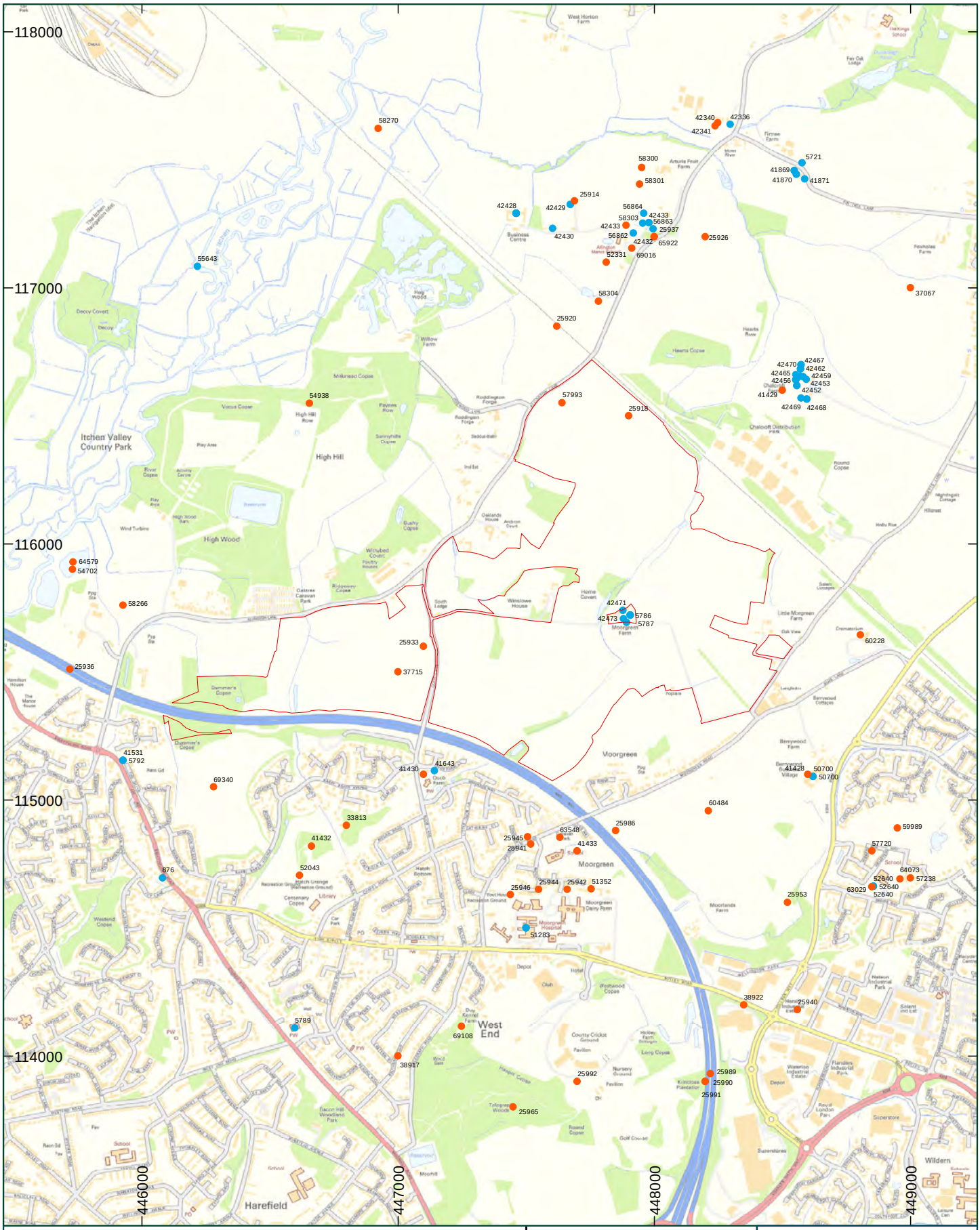
Figure 2 shows the location of changes to existing Gaps in the south of the Borough:



Landscape Sensitivity Appraisal of Sites being considered for Strategic Development as part of the EBLP 2011-2036



Landscape Sensitivity and Location of Visual Receptors



Legend

Site

Archaeology

Historic Buildings

1:20,000 at A4

0 650m

N

Title:

Fig.2: HER Data Plot

Address:

Land at Allington Lane, Eastleigh

orion.

Land South of Allington Lane
Eastleigh

Service Supply Statement

Hallam Land Management

Brookbanks

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Document Control Sheet

Document Title: Service Supply Statement

Document Ref: 10440 SS 01

Project Name: Land South of Allington Lane, Eastleigh

Project Number: 10440

Client: Hallam Land Management Ltd

Document Status

Rev	Issue Status	Prepared / Date	Checked / Date	Approved / Date
0	Draft	AM 14.11.16	LW 15.11.16	PAB 15.11.16

Issue Record

Name / Date & Revision	15.11.16					
[redacted] – Hallam Land Management Ltd	0					

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Contents

Appendix

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Executive Summary

The proposed development lies south of Allington Lane. The north-east of the Site is bound by an existing railway line. The M27 is south of the proposed Site, with Moorgreen Road to the east of the Site. Quob Lane and Moorgreen Road run through the proposed development, which divides the proposed development.

Southern Water (SW) operate potable water distribution mains and foul water sewers, **SSE** operate High Voltage (HV) and Low Voltage (LV) networks, **SGN** operate Low Pressure (LP) and Medium Pressure (MP) gas mains and **BT Openreach** operate networks to the west and north-west along Allington Lane (with some assets potentially crossing the wider development Site). Additionally, SW operate potable water mains, SSE operate LV networks and BT Openreach operate networks to the north-east along Allington Lane. Along Quob Lane, which bisects the centre of the Site, and Burnetts Lane to the south-east, LP, LV, potable water mains and BT Openreach apparatus are shown.

The following assets are shown to potentially cross the proposed development site: A **Portsmouth Water (PW)** 42" potable water main through the south of the Site, a SGN Intermediate Pressure (IP) gas main through the south of the Site and a High Pressure (HP) gas main through the east of the Site, overhead 11kV networks and BT Openreach apparatus. Once at the detailed design stage, the companies which are affected by the proposed development can be contacted to determine whether any diversions and/or protection works of their existing apparatus are required.

Each incumbent company, along with the multi-utility companies GTC, TriConnex and Dragon Infrastructure, have been consulted in regards to supplying the proposed development. A summary of their indicative costings is provided below:

Utility Company	Service	Budget Estimate
Southern Water	Potable Water	TBC
Southern Water	Foul Sewerage	Initial assessment and discussions with SW has confirmed that additional modelling would be required to confirm their capability to supply the proposed development. However, SW has confirmed that a recent review of the design standards has been completed and adopted for all future modelling works. The modelling procedures are also been reviewed and are currently being updated. Pending this review, SW has temporarily withdrawn their Level 2 Sewerage capacity checks, with SW seeking to simplify their procedures to improve transparency. Further options are currently being reviewed to progress the Site.
SSE	Electricity	Budget estimate of £3,200,000 to £3,750,000 to supply the proposed development and will install new 11kV ringed feeder from the primary substation at Hedge End, east of the proposed development. £350,000 has been advised for any likely diversionary works on Site.
SGN	Gas	Capacity within the Intermediate Pressure Network and have provided a budget estimate of £1,837,000 to supply the proposed development.
GTC (Multi Utility)	Electricity and Gas	TBC
TriConnex (Multi Utility)	Potable Water, Electricity and Gas	TBC
Dragon Infrastructure (Multi Utility)	Electricity and Gas	TBC

Table 1a: Summary of Supply Budget Estimates

This statement demonstrates that the Proposed Development has the potential to be supplied with normal network service supplies. Some localised, non-prohibitive reinforcements may be necessary along with protection or diversions where existing plant apparatus is affected. This will be confirmed once all enquiries have been completed by each respective utility company and once at the detailed design stage.

1 Introduction

1.1 Brookbanks Consulting Limited is appointed by Hallam Land Management Ltd to complete a Service Supply Statement for a proposed mixed use development at Land South of Allington Lane, Eastleigh.

1.2 The objective of the study is to demonstrate that the development proposals may adequately be provided with service supplies and to identify the outline requirement for any necessary reinforcements to existing networks.

1.3 This report presents the findings of the study and specifically addresses the following issues:

- Existing network apparatus
- Supply requirements for the Proposed Development
- Consultations with the incumbent supply network operators
- Development of outline proposals to supply the Proposed Development.

2 Background Information

Location & Details

2.1 The proposed development lies south of Allington Lane. The north-east of the Site is bound by an existing railway line. The M27 is south of the proposed Site, with Moorgreen Road to the east of the Site. Quob Lane and Moorgreen Road run through the proposed development, which divides the proposed development.

2.2 The Site location and boundary are shown below on Figure 2a:

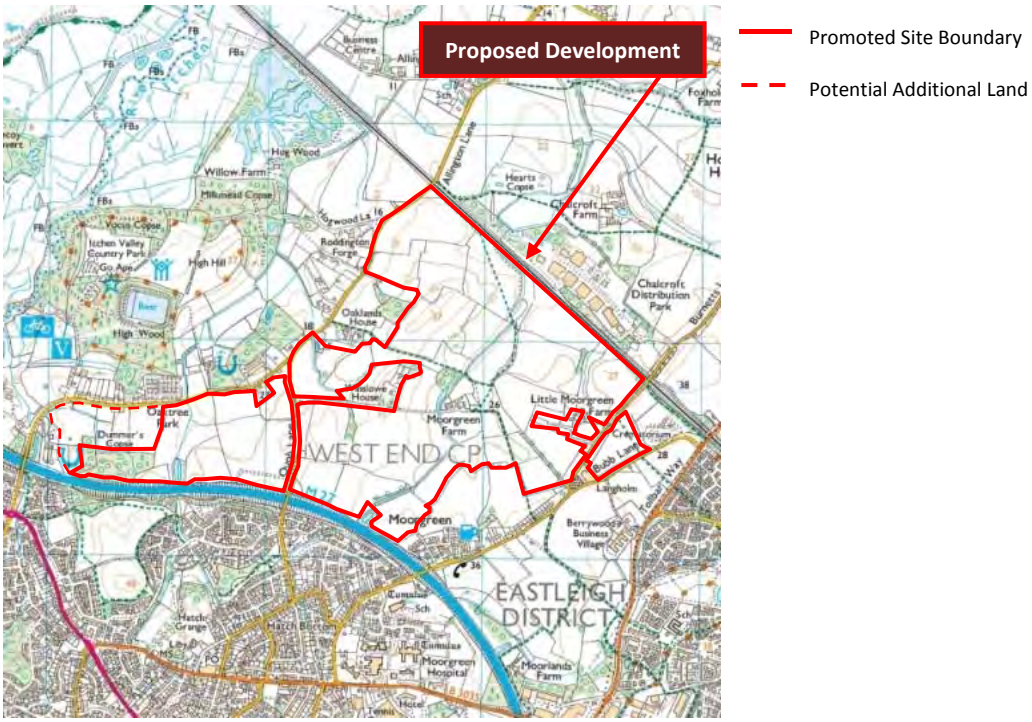

Figure 2a: Site Location

Development Criteria

2.3 The Proposed Development is to comprise up to 2,500 homes, 10,000m^2 of B1 Employment, two 2 Form Entry Schools and a Local Centre, which can deliver a broad range of house types, tenures and amenities to meet the future needs of the Local Planning Authority, Eastleigh Borough Council.

Supply Loading

2.2 The following loading assumptions in Table 2b, have been made to determine the Supply loadings to provide to the incumbent potable water, electricity and gas suppliers:

Development Type	Potable Water Assumptions	Foul Water Assumptions	Electricity Assumptions	Peak Gas Assumptions	Annual Gas Assumptions
2,500 Residential Dwellings	Daily Water Demand of 125l/person/day over an 18 hour day Peaking Factor of 3	Assuming 95% of the Potable Water Demand	2kW/Dwelling	23kW/Dwelling	17,000kWh/Dwelling
B1 Employment	Daily Water Demand of 45l/person/day over an 8 hour day. Peaking Factor of 3	Assuming 95% of the Potable Water Demand	87W/m^2	70W/m^2	120kW/m^2
2 Form Entry School (and Additional 2FE School)	Daily Water Demand of 15l/person/day over an 8 hour day. Peaking Factor of 3	Assuming 95% of the Potable Water Demand	50W/m^2	87W/m^2	150kW/m^2
Local Centre	Using a Mix of Daily Water Demands of; 45l/person/day 7l/person/day 15l/person/day over a 12/10/8 hour day. Peaking Factor of 3	Assuming 95% of the Potable Water Demand	Using a Mix of; 160W/m^2 225W/m^2 87W/m^2 50W/m^2	Using a Mix of; 100W/m^2 250W/m^2 70W/m^2 87W/m^2	Using a Mix of; 105kW/m^2 370kW/m^2 120kW/m^2 87kW/m^2

Table 2b: Supply Loading Assumptions

2.3 Following the assumptions made above, Table 2c outlines the supply loadings which have been provided to each incumbent utility company (Southern Water, SSE and SGN) in order for them to confirm whether they have capacity in their existing network to supply the proposed development.

Development Type (Area)	Peak Potable Water Demand (l/s)	Peak Foul Water Demand (l/s)	Electricity Demand (kVA)	Peak Gas Demand (kWh)	Annual Gas Demand (kWh)
2,500 Residential Dwellings	33.28	31.61	5,000	57,500	42,500,000
B1 Employment	3.91	3.71	870	700	1,200,000
2 Form Entry School	0.87	0.82	138	239	412,500
Additional 2FE School	0.87	0.82	138	239	412,500
Local Centre	1.41	1.36	300	289	420,000
Total	**40.34**	**38.32**	**6,446**	**58,967**	**44,945,000**

Table 2c: Supply Loadings

Sources of Information

2.4 The following bodies have been consulted whilst completing this study:

- Southern Water - Potable Water
- Southern Water - Foul Water Sewerage
- SSE - Electricity
- SGN - Gas
- BT Openreach - Telecommunications
- Sam Knows Website - Broadband Availability
- Multi Utility Company – TriConnex - Potable Water, Gas and Electricity, Fibre
- Multi Utility Company – GTC - Gas and Electricity
- Multi Utility Company – Dragon Infrastructure - Gas and Electricity

3 Water Supply

Existing Conditions

3.1 **Southern Water (SW)** has been consulted regarding the location and capacity of their existing network within the vicinity of the Site. Existing details of their water supply network has been provided and transferred to a composite existing services plan, which is contained in the Appendix.

3.2 SW operate 15" CI and 400mm DI potable water mains west and north of the proposed development along Allington Lane. A potable water main is also shown along Quob Lane which bisects the proposed development. A 4" CI and a 400mm Di/15" CI potable water main is shown along Moorgreen Road to the south-east of the proposed development.

3.3 In addition SW operate potable water mains south of the proposed development along individual roads supplying the proposed development.

3.4 **Portsmouth Water (PW)** also operate a 42" potable water main which is shown to run across the south of the proposed development from west to east.

Supply Loading

3.5 To assist Southern Water in their capacity assessment of their existing network, a total Peak Clean Water Demand of 40.34l/s was provided. Further details of the supply loadings and assumptions are outlined in Tables 2b and 2c.

Network Requirements

3.6 An enquiry has been made to Southern Water to determine their requirements to supply the proposed development with potable water. SW are currently assessing their network.

Diversions – onsite

3.7 A potable water main operated by SW is shown along Quob Lane which bisects the proposed development along with mains which cross the proposed development off Allington Lane in the north-west. Once confirmed at the detailed design stage, SW could be contacted to confirm whether any necessary diversions will be required.

3.8 Additionally PW 42" potable water main is shown to run across the proposed development. An enquiry has been made to PW to obtain any associated easements for this main.

Diversions – offsite

3.9 SW operate assets within close proximity of the proposed development, along Allington Lane to the north and Burnetts Lane/Moorgreen Road to the south-east and once confirmed at the detailed design stage, SW could be contacted to confirm whether any necessary diversions will be required

Regulatory Background

3.10 The introduction of the Water Act 2003 has:

- Formalised the procedures for developers wishing to complete self-lay schemes through multi-utility businesses.
- Implemented revised financial procedures, being more developer focused by offsetting capital costs of infrastructure against supply revenue.

3.11 The result is that the provision of water and drainage infrastructure for new developments is now cheaper.

3.12 Under current regulations, the new off-site and on-site infrastructure can be implemented by multi-utility contractors, with the exception of a small element of non-contestable works where the new supply is connected to the existing network. Alternative asset owning businesses are able to implement and supply a strategic area through an Inset Appointment. Alternative asset owners normally procure the water supply through a bulk supply contract with the incumbent business or by an alternative means of supply such as a borehole.

3.13 The Water Act 2003 allows two principal options in terms of financial arrangement between the developer and water infrastructure business. Both take into account the revenue earned by the business as a result of the new supplies.

- The Discounted Aggregate Deficit (DAD) / Commuted Sum method calculates the cost of implementing and funding the required infrastructure over a ten year period. The year on year income from new supplies is then offset against the funding, which when brought forward to an equivalent present day cost, identifies the contribution attributed to the developer. The mains are then installed by the water infrastructure company.

- The Asset Value method, whereby the mains may be laid by a multi-utility contractor, calculates the year on year income generated from the water supply, which is then paid back to the developer on the adoption of the mains. As a multi-utility contractor generally completes the work at a lower cost than the water supplying company, the Asset Payment method can often be the most cost effective.

3.14 The procedures outlined in the Water Act 2003 should result in all water businesses (including the incumbent operator) giving similar rebates through either the Asset Value or Commuted Sum procedures. The Asset Value method generally offers a cheaper scheme for site developers wishing to procure services through a multi-utility contract.

4 Foul Water Sewerage and Storm Water Drainage

Existing Conditions

4.1 **Southern Water (SW)** has been consulted regarding the location and capacity of their existing sewerage network within the vicinity of the Site. Existing details of their foul network has been provided and transferred to the composite existing services plan, contained in the Appendix.

4.2 SW operate Foul Water, Surface Water and Foul Rising Mains within the vicinity of the proposed development.

4.3 SW operate a 300mm CP Foul Water main along a track crossing the west of the proposed development. A Foul Water 225mm VC / 300mm CP Foul Water main is shown to the west and north of the proposed development along Allington Lane. An additional 150mm SI Foul Water main is shown to the south-east along Moorgreen Road.

4.4 SW operate Foul Water, Surface Water and Foul Rising Mains south and south-east of the proposed development along individual roads supplying the adjacent residential dwellings. A Foul Rising Main is operated by SW crossing the M27.

Supply Loading

4.5 To assist Southern Water in their capacity assessment of their existing foul network, a total Foul Water demand for the site of 38.32 l/s was provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

4.6 Initial assessment and discussions with SW has confirmed that additional modelling would be required to confirm their capability to supply the proposed development. However, SW has confirmed that a recent review of their design standards has been completed and adopted for all future modelling works. The modelling procedures have also been reviewed and are currently being updated. Pending this review, SW has temporarily withdrawn their Level 2 Sewerage capacity checks, as they are seeking to simplify their procedures to improve transparency.

4.7 However, further options are currently being reviewed to progress the Site.

4.8 There are two sewage treatment works within 3km of the Proposed Development area and to the west of the River Itchen. The closest is Eastleigh Sewage Treatment Works approximately 2.5km north of the site, whilst Portswood Waste Water Treatment Works is situated approximately 2.9km south-west of the Site.

Diversions – onsite

4.9 An existing Foul Water main operated by SW is shown to cross the east of the proposed development. Once confirmed at the detailed design stage, SW could be contacted to confirm whether any necessary diversions will be required.

Diversions – offsite

4.10 SW operate Foul Water mains along Allington Road to the north-west and west of the proposed development. Once confirmed at the detailed design stage, SW could be contacted to confirm whether any necessary diversions will be required.

Storm Drainage

4.11 The means to discharge storm water drainage on site will be dealt with via Sustainable Drainage Systems (SuDS) and therefore no connection to Southern Water storm water drainage is proposed. Further information can be provided within a Flood Risk Assessment report.

5 Electricity Supply

Existing Conditions

5.1 **Scottish and Southern Energy (SSE)** has been consulted regarding their existing network locations. Existing details of the electricity supply network have been provided and transferred to a composite existing services plan, which is contained in the Appendix.

5.2 SSE operate existing 11kV overhead lines which are shown to cross the proposed development in the north-west, centre and east.

5.3 SSE also operate High Voltage (HV) and Low Voltage (LV) networks along Allington Lane west and north of the proposed development. LV networks are shown to the south-east of the proposed development along Moorgreen Road.

5.4 Additionally, SSE operate HV and LV networks to the south of the proposed development, along individual roads, supplying the residential dwellings.

Supply Loading

5.5 To assist SSE in their capacity assessment of their existing network, a total Electricity Demand for the Site of 6,446kVA was provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

5.6 SSE has provided a budget estimate of £3,200,000 to £3,750,000 to supply the proposed development.

5.7 SSE will install new 11kV ringed feeder from the primary substation at Hedge End, east of the proposed development, to service the entire development form the local network.

5.8 SSE have also allowed for £350,000 for any likely diversionary works on Site.

Diversions – onsite

5.9 SSE operate an existing HV overhead networks which cross the proposed development in a number of locations. Once at the detailed design stage, SSE could be contacted to confirm whether any necessary diversions will be required. However SSE have provided a budget indication of £350,000 for likely diversionary works of their apparatus, including the HV overhead cables.

Diversions – offsite

5.10 SSE operate HV and LV cables along Allington Lane to the west and north-west, with LV cables along Allington Lane in the north-east. Once at the detailed design stage, SSE could be contacted to confirm whether any necessary diversions will be required.

Regulatory Background

5.11 Competition in the electrical market is now reasonably mature and a developer is free to procure third party DNOs to provide an embedded network, or indeed multi-utility / third party installations. The likes of Metropolitan and GTC take a holistic view in putting together infrastructure reinforcements, site distribution and supply packages and off-set the costs with anticipated future revenue through the transmission and supply of service to give a better financial arrangement and single point of responsibility for the developer.

6 Gas Supply

Existing Conditions

6.1 **SGN** has been consulted regarding the location of their existing network in the vicinity of the Site. Existing details of the gas supply network have been provided and transferred to composite existing services plan, which is contained in the Appendix.

6.2 SGN operates an Intermediate Pressure (IP) gas main crossing the south of the proposed development, along with a High Pressure Gas main crossing the east of the proposed development.

6.3 Additionally, SGN operates a Medium Pressure (MP) gas main to the west of the propose development along Allington Lane. SGN operate Low Pressure (LP) gas mains to the west and north-west along Allington Lane, and to the east along Moorgreen Lane. Also a LP gas main shown along Quob Lane which bisects the Site, and continues along an access road.

6.4 Further LP gas mains are shown to the south of the proposed development, along individual roads supplying the adjacent residential dwellings.

6.5 **ES Pipelines** operate a LP gas main to the south-east of the Site off the M27. **GTC** also operate LP gas mains south of the proposed development off Quob Lane.

Supply Loading

6.6 To assist SGN in their capacity assessment of their existing network, a Total Peak Gas Demand for the Site of 58,967kWh and an annual gas demand of 44,945,000kWh was provided. Further details of the supply loading and assumptions are outlined in Tables 2b and 2c.

Network Requirements

6.7 SGN confirm that there is sufficient capacity in its Intermediate Pressure network to accommodate the proposed development. SGN has provided a budget estimate of £1,837,000 to supply the proposed development.

6.8 SGN will install appropriately sized gas infrastructure to suitable locations.

Diversions/Consultation Distances – onsite

6.9 SGN operate an IP crossing the south of the proposed development, and a HP gas main crossing the east of the proposed development. SGN has advised that the IP gas main has an easement of 6 metres (3 meters either side of the gas main). Consultation with the HSE has confirmed that the HP gas main which crosses the east of the Site, is the Lordswood/Purbrook Pipeline, which has an Inner Zone of 3m and an Outer Zone of 165m either side of the pipeline.

6.10 Once at the detailed design stage, SGN may be contacted to confirm whether any necessary diversions or protective measures of their existing assets are required.

Diversions – offsite

6.11 SGN operate MP gas mains and LP gas mains along Allington Lane and LP gas mains along Quob Lane and the access road bisecting the Site. Once at the detailed design stage, SGN may be contacted to confirm whether any necessary diversions of their existing assets are required.

Regulatory Background

6.12 Early deregulation in the gas infrastructure market has led to a competitive environment. Third party shippers are permitted to offset the capital cost of infrastructure against the income generated from conveying the gas which may reduce future development costs.

7 Telecommunications

Existing Conditions

7.1 The main incumbent telecommunications provider is **BT Openreach**. An extract from their asset plans is shown within the Appendix, which shows an existing network to potentially cross the centre of the Site off Quob Lane (and the along the access road), which divides the Site and along Burnetts Lane to the south-east, which also divides the Site. BT Openreach also operate apparatus along Moor Green Road to the east of the proposed development and along Allington Lane to the west, north and north-east of the Site.

7.2 BT Openreach also operate apparatus south and north-east of the proposed development along individual roads supplying the residential dwellings and commercial areas respectively.

7.3 Virgin Media are still to confirm their location for their apparatus.

Supply Requirements

7.4 A development of this nature will require a suite of communication services, typically being:

FTTP: Fibre to the Premises (FTTP) technology, where the fibre runs all the way to the home or business, from the local exchange is being deployed in certain areas. FTTP will offer the top current download speed of 330Mbp for residential properties and 1Gbps for commercial properties. This is labelled ‘Ultrafast Broadband’ by BT Openreach.

ADSL: Asymmetric Digital Subscriber Line (ADSL) is the basic broadband service delivered over the traditional copper network and predominately in use in rural areas offering up to 24Mbps

downloads, and up to 2.5Mbps upstream. This is adversely affected by distance from the exchange.

Cable Television: Cable television services provide an option for the proposed domestic dwellings to replace the need for satellite dishes. Cable Television is provided by Virgin Media, BT (BT Vision) and GTC.

FTTC: Fibre to the Cabinet (FTTC) relies on the existing copper network between the telephone cabinets but is then fed by fibre optic cables to the local exchange. This reduces the loss experienced over the copper network. Download speeds offered can be up to 80Mbps.

LLU: Local Loop Unbundling (LLU) is the process of opening up a telephone exchange so that it can be used by a number of different broadband providers. These broadband providers are then able to use connections from the telephone exchange through to the customer's homes to deliver home broadband.

ISP: Internet Service Providers (ISP) supplies the end user with internet access services over the telecom network. The speeds offered by the ISP are restricted by the physical network. The available ISPs delivering services over FTTP are currently limited but will increase as it is rolled out to more customers to increase the market.

Network Requirements

7.5 A Connectivity Assessment can be applied for through BT Openreach to confirm supply requirements for the proposed development. BT Openreach advise the ideal time for this request is at land purchase stage. The proposed development is covered by the Moorhill exchange. In addition to BT Openreach, ADSL, Virgin Media an initial review has identified the following LLU operators are present in the Moorhill exchange: Sky and Talk Talk (CPW) and Vodafone.

7.6 The Moorhill exchange (approximately 1.7km south of the proposed development) can offer FTTC in some areas.

Diversions – onsite

7.7 BT Openreach operate apparatus which cross the proposed development in the centre of the Site, and potentially off Quob Lane. Once at the detailed design stage, BT Openreach and Virgin Media may be contacted to confirm whether any necessary diversions of their existing assets are required.

Diversions –offsite

7.8 BT Openreach own apparatus to the west of the Site along Allington Lane, along Quob Lane and to the south-east along Moorgreen Road and Burnetts Lane. Once at the detailed design stage, BT Openreach and Virgin Media may be contacted to confirm whether any necessary diversions of their existing assets are required

Regulatory Background

7.9 BT Openreach is the incumbent national communications business throughout most of the country, with the exception of K-Com in the Hull area. They own and operate the majority of fibre and copper telecoms networks in the country.

7.10 With BT Openreach controlling the existing cables feeding residential development, and the exchange (what is known as the 'local loop' or 'last mile'), they have maintained a dominant position in controlling the communications sector.

7.11 The industry regulator, Ofcom has completed much work in unbundling the local loop and bringing competition into the residential market. Following this deregulation, Virgin Media, TalkTalk and Vodafone are undertaking major investment to place switch equipment into BT's existing exchanges and hence allow direct access to their network. This system, known as Carrier Pre-Selection is becoming increasingly popular, although wholesale line provision down at local loop level, within the residential market, has yet to develop. Accordingly, BT or local cable franchise cable operators are the prime source of network connections on residential sites.

7.12 Virgin Media and GTC offer rival options to supply telecoms to residential developments, although the choice of alternative ISPs is more restricted than via the BT Openreach network.

8 Multi Utility Companies

8.1 The Multi Utility Companies **GTC, TriConnex and Dragon Infrastructure** have been consulted to provide a budget estimate for supplying the proposed development with gas and electricity (and Potable Water if possible).

Supply Loading

8.2 The same gas loading assumptions that were provided to SGN and electrical loading assumptions that were provided to SSE have been provided to GTC, TriConnex and Dragon Infrastructure in order for them to provide their connection budget estimate costs.

Network Requirements

GTC

8.3 GTC are still currently assessing their capability in supplying the proposed development with electricity and gas.

TriConnex

8.4 TriConnex are still currently assessing their capability in supplying the proposed development with electricity and gas and potable water.

Dragon Infrastructure

8.5 Dragon Infrastructure are still currently assessing their capability in supplying the proposed development with electricity and gas.

9 Service Supply Competition

9.1 The traditional procurement route, up until recently, had been to provide service supplies to a new development through a local network operator. With the incumbent companies having somewhat of a monopoly, competition in the market was poor.

9.2 However, following deregulation of the service supply networks, through the likes of Ofgem, Ofcom and Ofwat, independent network operators have been able to enter the market and provide new service supplies to developments.

9.3 Companies such as GTC and Connect take a holistic view in putting together infrastructure reinforcements, site distribution and supply packages and off-set the costs with anticipated future revenue through the transmission and supply of service to give a better financial arrangement and single point of responsibility for the developer.

9.4 These businesses use a multi-utility approach to implement the infrastructure. The independent companies are still regulated by the relevant office of regulation and subsequently asset owners must:

- Ensure that the installed network meets regulated standards
- Design to an operating lifetime of 40+ years
- Manage a return on their investment
- Ensure that the existing network performance is not compromised

9.5 Throughout this document a review has been completed for the provision of service supply infrastructure at the site through the local network operators. This approach provides a good indication as to the likely upgrading requirements for the local infrastructure, but at this stage, does not demonstrate a competitive cost for services procurement.

9.6 Multi-utility companies provide significant investment to the provision of services at a development based on a whole life financial model, considering revenue from supply conveyance. Due to these investments, large reductions can be achieved to the capital cost for the provision of services at a site.

9.7 A development of this size has the potential to benefit a great deal from the financial investment of companies such as Connect and GTC. As such independent companies may be utilised to provide final network supplies for the Site.

9.8 This report summarises the details relating to the current network conditions outlining the requirements for reinforcements and provision of supply through the existing network.

10 Summary

10.1 This Services Statement has demonstrated that the proposed development on the Site has the potential to be supplied with normal network service supplies, without prohibitive reinforcements to the existing networks.

10.2 However, some localised, non-prohibitive reinforcements may be necessary together with protections or diversions where existing plant is affected by the proposals. This will be confirmed once all enquiries have been completed by each respective utility company.

10.3 Table 10a below outlines the supply requirements for each incumbent company, along with the multi-utility company:

Utility Company	Service	Budget Estimate
Southern Water	Potable Water	TBC
Southern Water	Foul Sewerage	Initial assessment and discussions with SW has confirmed that additional modelling would be required to confirm their capability to supply the proposed development. However, SW has confirmed that a recent review of the design standards has been completed and adopted for all future modelling works. The modelling procedures are also been reviewed and are currently being updated. Pending this review, SW has temporarily withdrawn their Level 2 Sewerage capacity checks, with SW seeking to simplify their procedures to improve transparency. Further options are currently being reviewed to progress the Site.
SSE	Electricity	Budget estimate of £3,200,000 to £3,750,000 to supply the proposed development and will install new 11kV ringed feeder from the primary substation at Hedge End, east of the proposed development. £350,000 has been advised for any likely diversionary works on Site.
SGN	Gas	Capacity within the Intermediate Pressure Network and have provided a budget estimate of £1,837,000 to supply the proposed development.
GTC (Multi Utility)	Electricity and Gas	TBC
TriConnex (Multi Utility)	Potable Water, Electricity and Gas	TBC
Dragon Infrastructure (Multi Utility)	Electricity and Gas	TBC

Table 10a: Summary of Supply Budget Estimates

11 Limitations

11.1 The conclusions and recommendations contained herein are limited to those given the general availability of background information and the planned usage of the Site.

11.2 Third Party information has been used in the preparation this report, which Brookbanks Consulting Ltd, by necessity assumes is correct at the time of writing. While all reasonable checks have been made on data sources and the accuracy of data, Brookbanks Consulting Ltd accepts no liability for the same.

11.3 Existing network appraisals and proposed reinforcements are based on current infrastructure. Ongoing load growth will occur that may feasibly affect network availability. It is therefore necessary to monitor and review the existing networks capacity regularly.

11.4 The benefits of this report are provided solely to Hallam Land Management Ltd for the proposed development on the Site only.

11.5 Brookbanks Consulting Ltd excludes third party rights for the information contained in the report.

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Appendix

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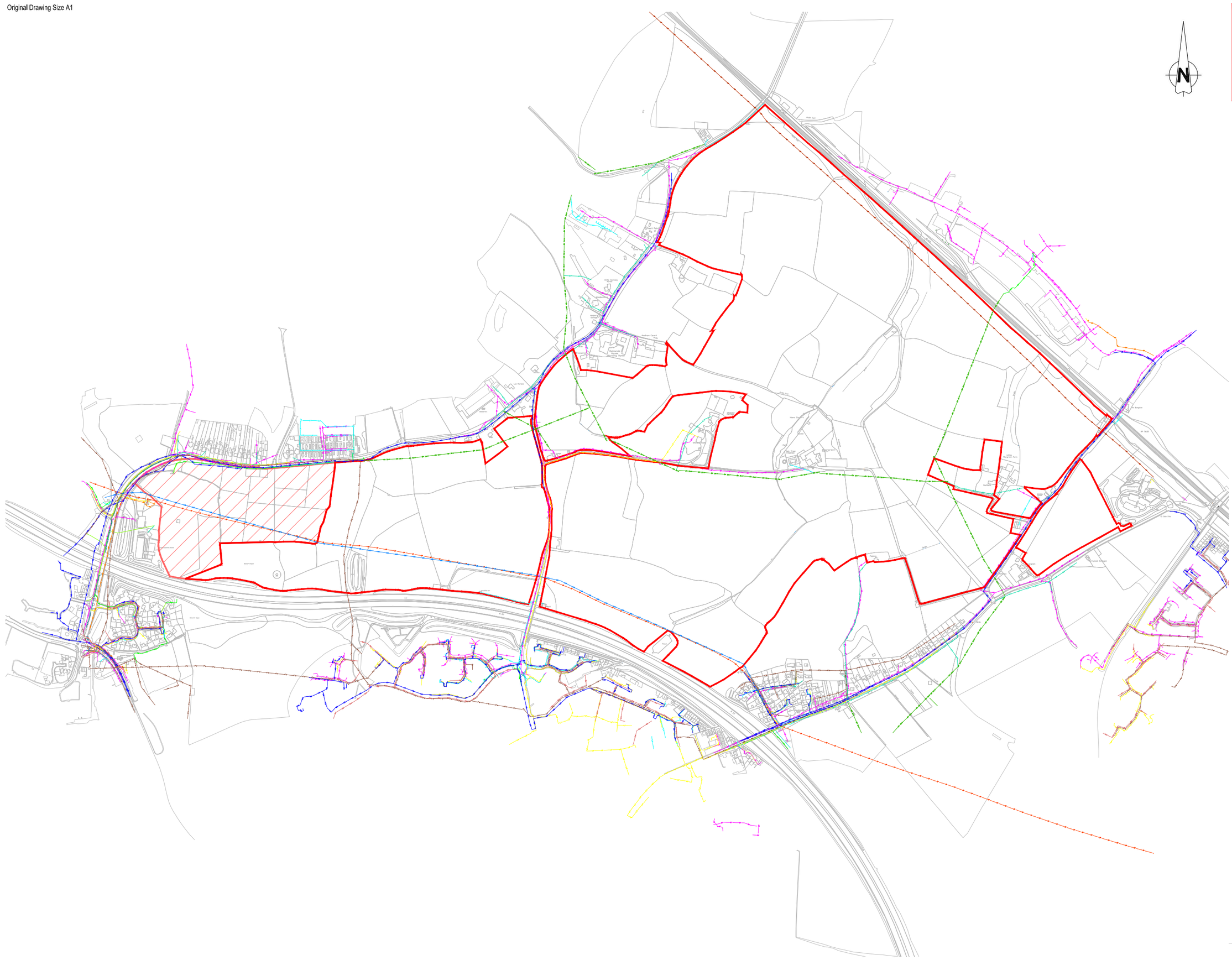

Construction Design and Management (CDM) Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

NOTES:

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2. All dimensions are in metres unless otherwise stated.
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KEY:

- Site Boundary
- Wider Site Boundary
- High Voltage (SSE)
- High Voltage Assumed Route (SSE)
- 11kV Overhead (SSE)
- Low Voltage (SSE)
- Low Voltage Assumed Route (SSE)
- Low Voltage Service Route (SSE)
- Low Voltage Overhead (SSE)
- High Pressure Gas (SGN)
- Intermediate Pressure Gas (SGN)
- Medium Pressure Gas (SGN)
- Low Pressure Gas (SGN)
- Low Pressure Gas (GTC)
- Low Pressure Gas (ESPipelines)
- BT Openreach
- Potable Water (Southern Water)
- Potable Water (Portsmouth Water)
- Foul Water Sewer (Southern Water)
- Rising Main (Southern Water)
- Surface Water Sewer (Southern Water)

*Virgin Media assets to be confirmed

B	Additional Utilities Added	AM	LW	PAB 16.11.16
A	Wider Site Boundary Added	AM	LW	PAB 02.11.16
-	First Issue	AM	LW	PAB 21.10.16

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[redacted]

Hallam Land Management

Land South of Allington Road Eastleigh

Existing Utilities Location Plan

Status	Status Date
DRAFT	October 2016

Drawn	Checked	Date
AM	LW	19.10.2016

Scale	Number	Rev
1:5000m	10440-SU-01	B

0 100 200 300 400 500
METRES

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

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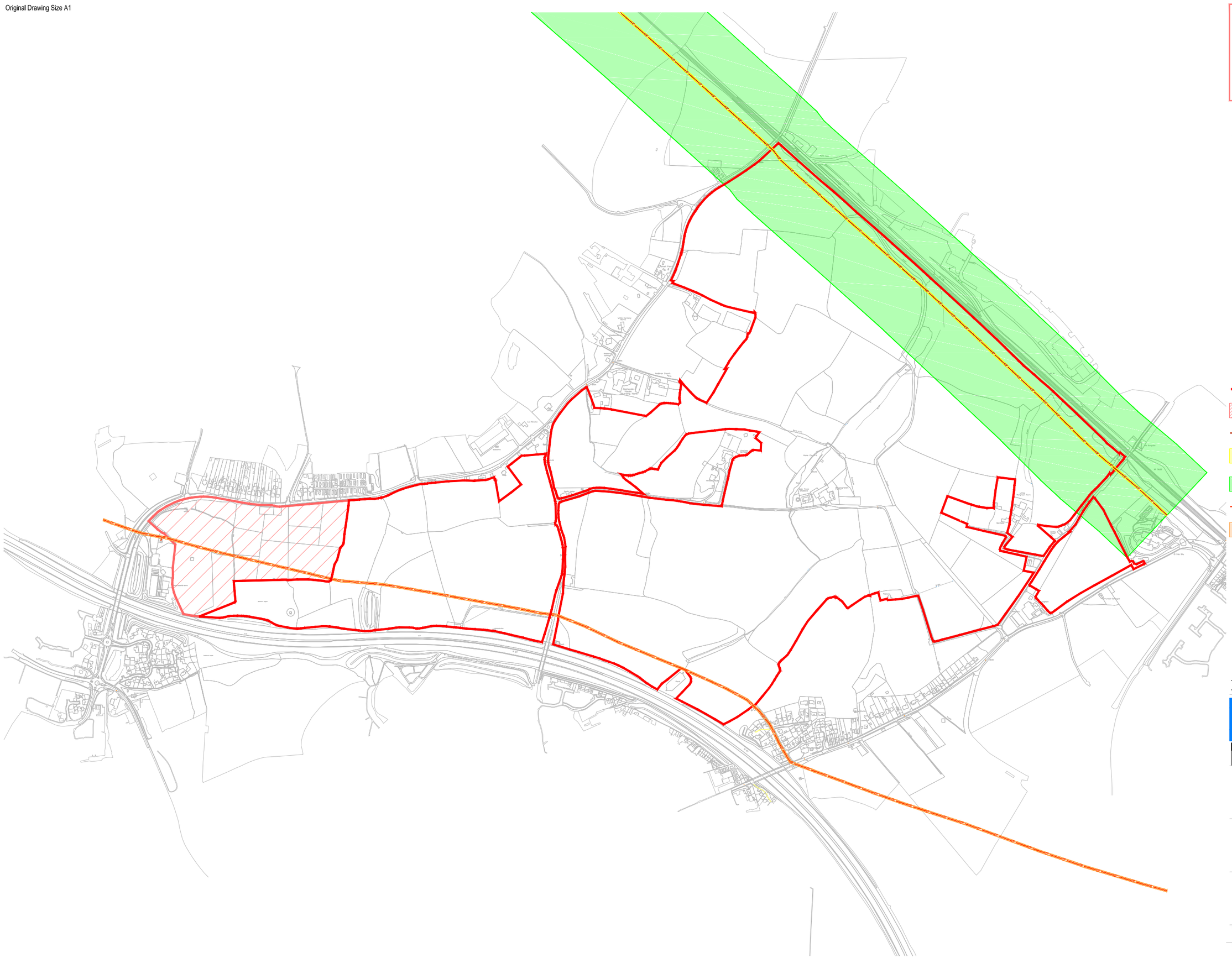
Original Drawing Size A1



Construction Design and Management (CDM) Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

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KEY:

- Site Boundary
- Wider Site Boundary
- High Pressure Gas Main (Lordswood/Purbrook Pipeline)
- HSE Inner and Middle Consultation Zone (3m)
- Outer Zone Consultation Zone (165m)
- Intermediate Pressure Gas
- Intermediate Pressure Gas Easement (6m)

N

-	Wider Site Boundary Added	AM LW PAB 02.11.16
-	First Issue	AM LW PAB 21.10.16

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[redacted]

Hallam Land Management

Land South of Allington Road Eastleigh

Consultation Zones and Safe Working Distances

Status		Status Date
DRAFT		October 2016
Drawn	Checked	Date
AM	LW	19.10.2016
Scale	Number	Rev
1:5000m	10440-SU-02	A

0 100 200 300 400 500
METRES

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

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HLM Attachment 2 - Appendix O - Environmental Flood Map - Hatch Farm