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environmental consultants



Construction Environmental Management Plan

Land off Rockingham Roundabout
for:

Hartwood Estates

CRM.1122.004.EC.R.001

'Experience and expertise working in union'

enzygo.com

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Construction Environmental Management Plan

Project:	Land off Rockingham Roundabout
For:	Hartwood Estates
Status:	Final
Date:	1st August 2017
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1 Introduction

1.1 Commission

1.1.1 In July 2017 Enzygo Ltd was commissioned by Hartwood Estates to produce a Construction Environmental Management Plan (CEMP) for land off Rockingham Roundabout/Dearne Valley Parkway, Birdwell, Barnsley, S70 5TW (central grid reference: SE 34967 00561), located within Barnsley Council planning authority.

1.1.2 The proposed works involve site clearance, with retention of boundary features, followed by the erection of an employment led mixed use scheme. Refer to Appendix A for proposed site layout.

1.2 Aims and Objectives

1.2.1 A reserved matters application is to be submitted and Condition 10 of planning application 2014/1452 (Barnsley Council) needs to be discharged. This condition stipulates:

Notwithstanding the details submitted within the ecological assessment detailed plans shall be submitted with the Reserved Matters application indicating biodiversity mitigation and enhancement measures. Thereafter the development shall proceed in accordance with the approved details. Reason: To conserve and enhance biodiversity in accordance with Core Strategy Policy CSP 36.

1.2.2 The aim of the CEMP is to provide documentation in accordance with BS42020:2013: Biodiversity – Code of Practice for Planning and Development (BSI, 2013), and to provide clear information for contractors to follow when undertaking construction works on site, whilst providing details of ecological enhancements which are to be incorporated. The CEMP includes:

- Risk assessment of potentially damaging construction-type activities;
- Identification of 'biodiversity protection zones' and areas where invasive species have been identified;
- Inclusion of or reference to details for implementation of method statements required to achieve specific biodiversity outcomes, and particularly mitigation/enhancement measures;
- Practical measures (both physical measures and sensitive working practices) to avoid or mitigate impacts during construction, and those to enhance the site;
- The location and timing of sensitive works to avoid harm to/enhance biodiversity features;
- Type and source of materials to be used where appropriate;
- Timetable for implementation, and the times during construction when specialist ecologists need to be present on site to oversee works;
- Responsible persons and lines of communication;
- The role and responsibilities on site of an Ecological Clerk of Works (ECoW) or similarly competent person responsible for managing biodiversity issues on site; and
- Use of protective fences, exclusion barriers and warning signs.

1.2.3 Condition 12: Landscape Management Plan, is covered within a separate document, and provides details of: initial aftercare and long-term maintenance; and monitoring and remedial measures.

1.2.4 Conditions 17 & 18 relating to the protection of trees and hedgerows in accordance with BS5837:2012, is covered within a separate arboricultural report.

1.2.5 This report remains valid for 2 years from the date of publication, or until conditions across the site should substantially alter.

1.3 Background

1.3.1 The following ecological reports have been referred to:

- Preliminary Ecological Appraisal (Enzygo, 2014); and
- Arboricultural Constraints Appraisal (Bowland Tree Consultancy, 2014).

1.4 Site Context

1.4.1 The approximately 3.1ha site comprises an area of unmanaged reclaimed colliery land, now colonised by improved grassland, bordered by bands of trees. An industrial estate extends to the west with Dean Valley Parkway delineating the eastern boundary, with pasture fields beyond this.

Figure 1.1: Surveyed Area



Image curtesy of Google Earth Pro 7.1.5.1557, 53°30'02.17"N 1°28'28.79"W Elev.135m. Imagery date 5th June 2016. Image sourced 1st August 2017.

1.5 Nomenclature

1.5.1 The English names of flora and fauna species are given in the main text of this report. Scientific names are used alongside the English name where this first occurs. Vascular plants and Charophytes follow the nomenclature of The Botanical Society for the British Isles database (BSBI, 2007) with all other flora and fauna following the National Biodiversity Network (NBN) Gateway (NBN, 2014).

2 Ecological Features

2.1.1 The following ecological features have been identified on site. This information is taken from each corresponding historical ecological report as detailed within section 1.3. Refer to Drawing CRM.1122.004.EC.D.001 for location and extent, where applicable:

- Trees – Category B (moderate quality) and Category C (low quality) trees/groups present around the site boundary. Within zone of influence value only;
- Birds- General nesting opportunities around site boundaries within scrub, tall ruderal, and trees, for a restricted range of common bird species. Within zone of influence value only.

2.1.2 The following have not been identified as ecological features requiring avoidance/mitigation measures during construction activities as; surveys have indicated that habitats are not suitable and/or not of significant extent; surveyed species are likely absent; and/or no impacts have been identified: Statutory Designated sites; Locally designated wildlife site; England HPI/Local BAP Habitats; Ancient Woodland, Important Hedgerows, Veteran Trees, TPOs or Conservation Areas; Bats; Badger; Dormouse; Otter, Water Vole or White-clawed Crayfish; Other Protected Mammals; Specially Protected Birds; Common Reptiles; Great Crested Newt; Other Protected Herpetofauna; Fish/Marine; Protected Invertebrates; Protected Flora; England SPI/Local BAP and Notable species; Invasive Flora; Invasive Fauna; and Green/Blue Infrastructure.

3 Biodiversity Objectives

3.1.1 Biodiversity objectives are detailed within Table 3.1. These have been determined through consideration of the following, with information collated from historical ecological reports as detailed within section 1.3:

- Ecological Features identified on site and within the zone of influence;
- Historical records of protected species/habitats present within the locality;
- National planning policy, including UK Biodiversity Action Plan (BAP) Species of Principal Importance (SPI) and Habitats of Principal Importance (HPI);
- Local planning policy, including Local BAP species and habitats (Barnsley Biodiversity Action Plan, 2016);
- Barnsley's Local Plan (currently under review) (Barnsley Council, 2017), including consideration of Green/Blue Infrastructure Resource;
- Consultation with third parties/stakeholders including County Ecologist; and
- Other influencing factors such as, Geology, Hydrology, intended operational activities, and existing disturbance activities within the locality (i.e. semi-urban location).

Table 3.1: Biodiversity Objectives

Ecological Feature	Target
Trees	No net loss of habitat. Maintain and strengthen network of natural habitats to create a network of Green Infrastructure assets. Create mixed deciduous woodland/hedgerow Local BAP
Birds	No disturbance of active nests, and increase in availability of suitable nesting habitat (to be of benefit to a range of common bird species). Specifically, the 25 national priority bird species found breeding in Barnsley, including 20 red listed (i.e. Lesser spotted Woodpecker, Starling, Song Thrush, House Sparrow, Fieldfare and Redwing)
Bats	Increase available opportunities for roosting and foraging/commuting bats
Common Reptiles & Amphibians	Increase available opportunities for common reptiles (Grass Snake, Common Lizard, Slow-worm, and Adder), Great Crested Newt, and common amphibians (Common Toad, Common Frog, Smooth Newt, and Palmate Newt)
England SPI/Local BAP and Notable species	Increase available opportunities for a range of England SPI/Local BAP and Notable species

4 Relevant Legislation and Policy

4.1 Legislation

4.1.1 Wildlife legislation and policy relevant to the proposed works, based on the findings of the desk study and field surveys are set out below. This legal information is a summary only, and the original legal documents should be consulted for definitive information.

Table 4.1: Legislation Protection Afforded to Sites/Habitats that could Potentially be Affected by the Proposed Works

Designated Site/Habitat	Legal Status
None	-

Table 4.2: Legislation Protection Afforded to Species that could Potentially be Affected by the Proposed Works

Species	Legal Status
European Protected	
None	-
Nationally Protected	
Nesting Birds (general)	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Invasive Species	
None	-

4.1.2 Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a legal duty on public bodies, including planning authorities, to 'have regard' to the conservation of biodiversity when carrying out their normal functions, which includes consideration of planning applications.

4.1.3 In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI), of which there are 56 habitats and 943 species. The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

4.2 National Planning Policy

4.2.1 The NPPF set out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined.

4.2.2 The NPPF states that:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'

4.2.3 Under the NPPF, the Planning Authority has a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan.

4.2.4 Also under the NPPF the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

4.3 Local Planning Policy

4.3.1 Policies: CSP 33 Green Infrastructure; CSP 34 Protection of Green Belt, CSP 35 Green Space, and CSP 36 Biodiversity and Geodiversity, of Barnsley Adopted Core Strategy (currently under review) are applicable (Barnsley Council, 2017).

5 Impacts

5.1.1 Potentially damaging construction-type activities are listed below. These have been identified from: the proposed site layout as detailed within Appendix A; proposed construction practices; and current guidance on activities/operations likely to result in impacts to ecological features (CIEEM, 2016):

- Movement of machinery and vehicles;
- Site clearance;
- Strimming of vegetation; and
- Tree felling/surgery works.

5.1.2 Taking into consideration the expected zone of influence of each of these activities, potential direct or indirect impacts resulting from the proposed construction activities have then been identified. This includes (but is not limited to): short-term impacts: disturbance; and long-term impacts: modification, loss, and fragmentation/ isolation. Aspects of ecological structure and function considered when predicting impacts includes: available resources; environmental processes; ecological processes; human influences; historical context; ecological relationships; ecological role or function; ecosystem properties; and other environmental influences (CIEEM, 2016).

Table 5.1: Potential Impacts to Ecological Features

Ecological Feature	Potential Impact
Trees	Yes – a) majority of boundary trees to be retained, but likely degradation if works within root zones, and from felling/surgery works to specific trees during site clearance. Minor, adverse, permanent, reversible impact
Birds (general nesting)	Yes – a) potential disturbance of active nesting birds during site clearance. Minor adverse, temporary, irreversible impact.

6 Mitigation and Enhancement

6.1 Mitigation

6.1.1 For each potential impact identified, all mitigation options provided follow the established mitigation hierarchy as set out in BS42020:2013 (BSI, 2013). This seeks as a preference to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. All recommended mitigation measures follow current best practice guidance as identified by CIEEM (CIEEM, 2014), and is proportionate to the level of impact identified and to the nature and scale of the proposed works. A clear and valid justification of methods has been provided where necessary. Where applicable, mitigation measures should make reference to the Construction (Design and Management) Regulations 2015 (CITB, 2016).

Trees

6.1.2 To avoid impacts to retained trees appropriate root protection zones will be established in accordance with BS5837:2012. Refer to arboricultural report.

Birds

6.1.3 To avoid the disturbance of active nesting birds, suitable habitat will be cleared from September to February, outside of the bird nesting season. As timing constraints associated with other factors will also need to be taken into consideration, it may be necessary to clear suitable bird nesting habitat between March and August. In this instance, a suitably qualified Ecological Clerk of Works (ECoW) will survey habitat immediately prior to its removal. If an active nest is present, at least a 5m radius buffer area (or wider as appropriate and dependent upon the species identified) will be set out, or the vegetation retained until any young have fledged. To prevent contractors accidentally straying into the buffer area, these will be clearly marked out i.e. with high visibility fencing.

6.2 Enhancement

6.2.1 Opportunities for biodiversity enhancement (above and beyond those required to mitigate for any identified impacts) have been determined through consideration of: Ecological Features identified on site and within the zone of influence; Historical records of protected species/habitats present within the locality; National and Local planning policy including UK BAP SPI/HPI and Local BAP species/habitats; Local Development Plan including consideration of Green/Blue Infrastructure Resource; Consultation with third parties/stakeholders where applicable; and Other influencing factors such a Geology/Hydrology, intended operational activities, and existing disturbance activities within the locality. Where necessary, proposed enhancements should refer to the Construction (Design and Management) Regulations 2015 (CITB, 2016).

Trees

6.2.2 Refer to Appendix A proposed landscape plan and landscape specification for details of new tree, shrub and hedgerow planting which will help improve green infrastructure and connectivity across the site.

Birds

6.2.3 As above, new planting will provide replacement nesting opportunities for a range of common bird species. Additionally, 3x Schwegler 3S Starling Boxes (or alternative box with an entrance hole of at least 45mm) shall be placed approx. 3-4m above ground level on an undisturbed

building facade away from human disturbance with approx. 50cm between each box. Whilst designed for Starling (*Sturnus vulgaris*) use, the large entrance hole does provide opportunity for a range of other Red Listed bird species including Lesser Spotted Woodpecker (*Dryobates minor*). A single standard nest box (i.e. basic box with 32mm entrance hole) will also be installed on a tree in a quiet un-disturbed location approx. 2-3m above ground level which will offer nesting opportunities for a wide variety of common garden birds.

Bats

6.2.4 As above, new planting will enhance invertebrate habitat and therefore improve foraging opportunities for bat species (which feed on invertebrates). A single basic Schwegler 2F Bat Box (or similar product) will be hung on a south facing tree in an open, sunny location between 3-6m in height close to treelines or hedgerows, and away from lighting and human disturbance.

Common Reptiles & Amphibians

6.2.5 To enhance the site for any common reptile population (and other wildlife such as common amphibians and invertebrates), 3 informal reptile hibernacula (i.e. brash piles) will be created along site boundaries. This will make use of materials generated from site clearance.

England SPI/Local BAP and Notable species

6.2.6 As above, new planting and brash piles will provide shelter and foraging opportunities for Hedgehog (*Erinaceus europaeus*) and a range of invertebrate and amphibian UK and Local BAP species.

7 Scope of Works and Schedule

7.1 Scope of Works

7.1.1 Refer to Appendix A for proposed site layout (and working footprint), along with Drawing CRM.1122.004.EC.D.001 for the proposed location of mitigation prescriptions.

7.2 Works Schedule

7.2.1 The mitigation and enhancement works will be undertaken in accordance with the proposed programme of works. The programme takes into account: seasonal constraints; the expected timetable of works (i.e. when site clearance needs to be undertaken, and when construction works are due to commence); and any other timing considerations.

Table 7.1: Works Schedule

Recommendation	2017/18											
	J	F	M	A	M	J	J	A	S	O	N	D
ECoW required to inspect suitable bird nesting habitat												
New Planting (as construction works progress)	Refer to arboricultural report & landscape plan											
Installation of 3x Schwegler 3S Starling Boxes and 1x Standard Nest Box												
Installation of 1x Schwegler 2F Bat Box												
Creation of 3 informal hibernacula												

8 Mechanisms to Secure Delivery

8.1 General

8.1.1 Prior to the commencement of any works on site, including the setting up of site compounds and access onto the site, the principle contractor (and any relevant personnel appointed by the principle contractor) will receive a formal briefing by the main ecologist or their appointed representative. This briefing will detail all relevant protected species issues as set out within this CEMP. A copy of this document must be read and understood by all contractors conducting the works.

8.1.2 The principle contractor will be responsible for relaying any necessary information to contractors on site, either employed by them directly or third parties. Advice should be sought from Enzygo's Director of Ecology in the event of complex issues arising or in cases where there is any doubt as to the action to be taken. Deviation from this CEMP will only be undertaken upon written agreement for the Planning Authority.

8.2 Contact Details

8.2.1 Details of each party are as follows:

- Main Ecologist/point of contact – Derek Allan, Director of Ecology c/o Enzygo Ltd: 01454 269237 or 07398 663744 derek.allan@enzygo.com;
- Ecological Clerk of Works (ECoW) - Josh Richardson, Graduate Ecologist c/o Enzygo Ltd: 01454 269237 or 07545 927532;
- Principle Contractor/point of contact – TBC; and
- Site Manager – TBC.

8.2.2 The Principal Contractor for these works is to be confirmed, who will be responsible for ensuring that all works are undertaken in accordance with the Construction (Design and Management) Regulations 2015 (CITB, 2016).

8.2.3 The site is currently owned by Hartwood Estates.

8.3 Role of Client/Third Party Contractors

8.3.1 The client, or a third party employed to undertake specific services, will be responsible for implementing all of the aforementioned mitigation and enhancement measures. These will proceed under ecological supervision where relevant. Additionally, Enzygo can provide materials where necessary (i.e. bat & bird boxes) or direct the principle contractor where to obtain these.

8.4 Role of Ecological Clerk of Works

8.4.1 A suitably qualified and experienced ecologist, licensed/accredited where necessary, will be provided and act as an ECoW. The role of the ECoW is in accordance with BS42020:2013 (BSI, 2013) and will satisfy the following requirement:

'An ecological clerk of works should be able to demonstrate a level of experience and competence commensurate with the complexity of the role needed on site to deal with the wide range of ecological issues likely to be encountered and to adapt to new and unforeseen challenges raised by development activities'.

9 References

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Drawing CRM.1122.004.EC.D.001 – Mitigation and Enhancement



Single 1 x Standard Bird Nest Box



3 x Schwegler 3S Starling Boxes



3 x Informal Reptile Hibernacula



1 x 2F Schwegler 2F Bat Box

Key

Site Boundary

enzygo environmental consultants

Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT: Hartwood Estates

SCALE: 1:1,500@A3

PROJECT NO: CRM.1122.004

DRAWN: MG

DRAWN: KR

DATE: Aug 2017

PROJECT: Land off Rockingham Roundabout

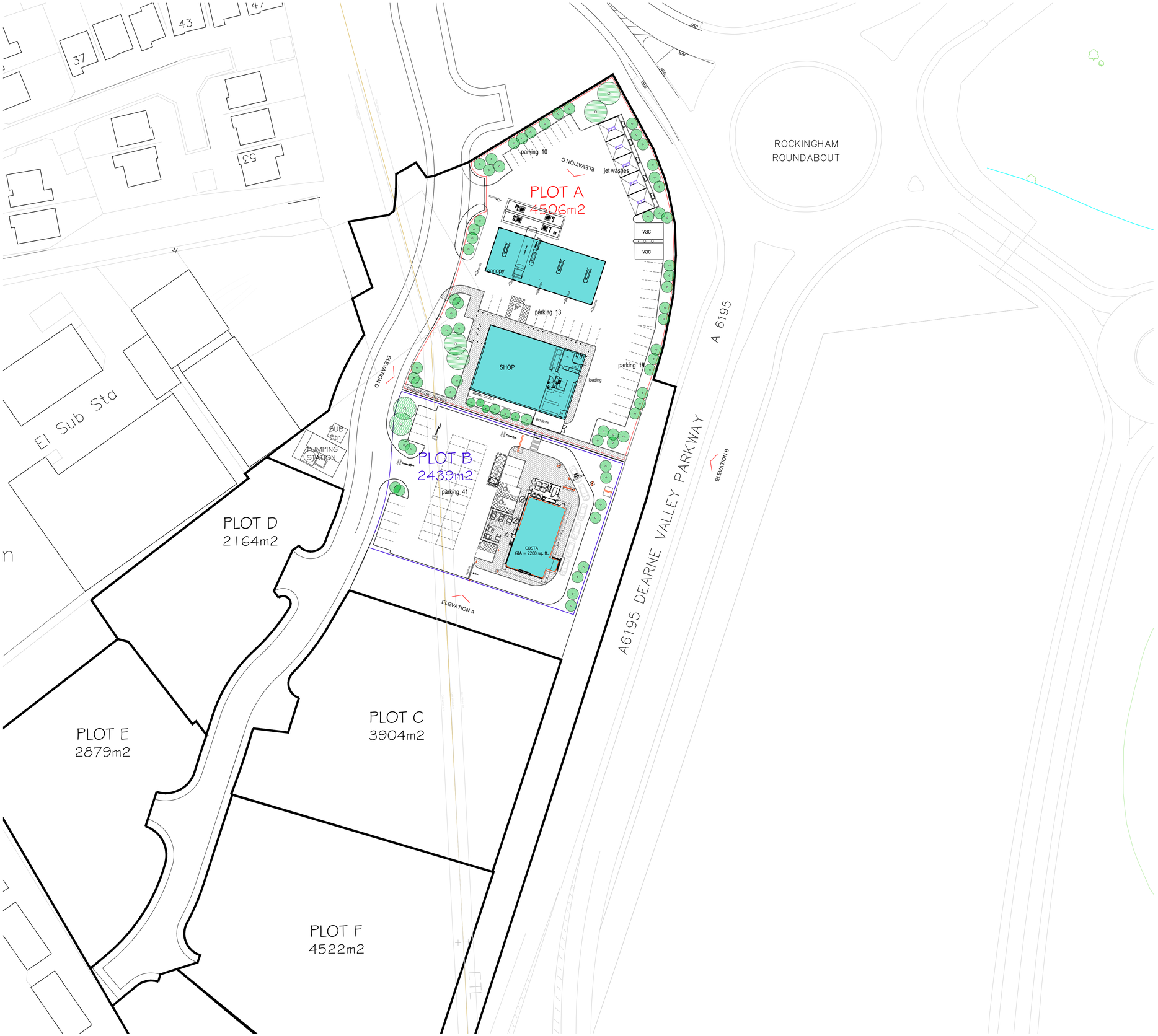
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Appendix A – Proposed Site Layout

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