



**Land Parcels LC1
and LC2, Jubilee
Park, Rogerstone**

**Ecological
Appraisal**

Prepared by
**The Environmental
Dimension
Partnership Ltd**

On behalf of:
**Walters Land
(Rogerstone) Limited**

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Executive Summary

- S1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Walters Land (Rogerstone) Limited (hereafter referred to as 'the Applicant') to inform the proposed residential development of Land Parcels LC1 and LC2, Jubilee Park, Rogerstone (hereafter referred to as 'the Application Site'). This report provides an assessment of the Application Site with respect to identifying key ecological constraints and opportunities to its proposed development.
- S2 To establish the ecological baseline of the Application Site and subsequently inform a planning application submission for proposed development, a desk study, Extended Phase 1 habitat survey and a detailed survey with respect to badger (*Meles meles*) were completed by EDP during September 2020.
- S3 With respect to designated sites, a number lie within the Application Site's potential Zone of Influence, with the River Ebbw Site of Importance for Nature Conservation (SINC) being the closest, situated circa 230m to the south. Given the distance and spatial separation of designated sites from the Application Site however, combined with the nature and small scale of development, no direct impacts to designated sites and their qualifying features are anticipated. With respect to habitats, the Application Site mostly consists of bare ground, hardstanding, and spoil piles, with smaller areas of ephemeral/short perennial grassland, improved grassland, and dense and scattered patches of scrub. A line of young trees runs along part of the southern boundary of the western parcel, LC1, and the north-western boundary of the eastern parcel, LC2. Such habitats are considered to be of limited/negligible ecological importance. As such and in respect of the scale of proposed development impacts associated with their loss are considered negligible. Such habitats, do, however, have the potential to support protected species including nesting birds, badger and notable mammals such as European hedgehog (*Erinaceus europaeus*).
- S4 Accordingly, recommendations for the avoidance, mitigation and compensation of any predicted impacts have been provided and include the retention, protection and enhancement of those features of ecological importance. This is in addition to recommendations for the creation of new habitats through planting to maximise habitat connectivity through the Application Site to the wider landscape. The implementation of sensitive working methodologies and best working practices during the construction phase are also recommended to minimise impacts upon any retained habitats and ensure the avoidance of harm/injury and disturbance to protected and priority species present/potentially present.
- S5 Subject to the implementation of the inherent and recommended mitigation and enhancement measures therefore, EDP's desk and field-based baseline investigations consider that those habitats and species supported by the Application Site do not pose a significant constraint to proposed development. It is therefore considered that development can proceed in accordance with all relevant wildlife legislation and planning policy.

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Section 1

Introduction, Purpose and Context

- 1.1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Walters Land (Rogerstone) Limited (hereafter referred to as 'the Applicant') to inform the proposed development of Land Parcels LC1 and LC2, Jubilee Park, Rogerstone (hereafter referred to as 'the Application Site'). The location and boundaries of these parcels are illustrated at **Appendix EDP 1**, with the Illustrative Masterplan provided at **Appendix EDP 2**.
- 1.2 EDP is an independent environmental planning consultancy with offices in Cirencester, Cheltenham and Cardiff. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website www.edp-uk.co.uk.

Site Context

- 1.3 The Application Site consists of two land parcels, LC1 and LC2, separated by Jubilee Way, measuring approximately 1.36 hectares (ha) in total. They are centred at approximate Ordnance Survey Grid Reference (OSGR) ST 26984 87830 and lie within the administrative boundary of Newport City Council (NCC). The location and extents of the Application Site are illustrated at **Appendix EDP 1**. The Application Site mostly consists of bare ground, hardstanding, and spoil piles, with smaller areas of ephemeral/short perennial grassland, improved grassland, and dense and scattered patches of scrub. A line of trees runs along part of the southern boundary of Parcel LC1 and north-western boundary of Parcel LC2. Existing residential development otherwise surrounds both parcels.
- 1.4 With respect to the wider landscape, the Application Site is located within Rogerstone, a suburb to the west of Newport, with existing residential and industrial development occurring within its immediate surrounds. The Ebbw river flows circa 230m to the south of the Application Site, beyond which lies open countryside supporting agricultural fields, hedgerows and woodland to the south-west.

Development Proposals

- 1.5 The Application Site forms part of the wider Jubilee Park development site and benefits from outline planning consent previously granted by Newport City Council (NCC) (reference 12/0886) on 06 August 2013, allowing for a comprehensive, mixed-use development on the former Novelis/Alcan aluminium factory site, with commercial development across land parcels LC1 and LC2 previously proposed.
- 1.6 New, outline planning consent is therefore sought to allow for the provision of residential development and associated works, including access, car parking and landscape works, across the Application Site. The Illustrative Masterplan is provided at **Appendix EDP 2**.

Scope of Appraisal

- 1.7 This Ecological Appraisal describes the current ecological interest within and around the Application Site, which has been identified through standard desk-based and field-based investigations. It then considers the potential ecological impacts and opportunities for ecological enhancement based on the final masterplan (incorporating inherent mitigation) in the context of relevant legislation and planning policy. This Appraisal then goes on to identify the necessary additional measures to avoid, mitigate or provide compensation for potential impacts, and the mechanisms for securing such measures.
- 1.8 The remainder of this report is structured as follows:
- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Application Site (with further details provided within Appendices and on Plans where appropriate);
 - **Section 3** summarises the findings of the baseline ecological conditions collated to date (with further details also provided within Appendices and on Plans where appropriate) and identifies and evaluates any pertinent ecological features/receptors;
 - **Section 4** describes the development proposals, how the design has been influenced by ecological factors, EDP's input to the design process and key components of inherent mitigation;
 - **Section 5** considers the potential impacts of the proposal on pertinent ecological features in the context of legislative, planning policy and biodiversity action planning considerations. Recommended mitigation and enhancement measures are provided for the current and possible future planning stages; and
 - **Section 6** summarises the inherent and recommended additional mitigation measures and provides the overall conclusions of the Appraisal.

Section 2

Methodology (Baseline Investigations)

- 2.1 This section of the Ecological Appraisal summarises the methodologies employed in determining the baseline ecological conditions within and around the Application Site. This Appraisal has been undertaken by appropriately qualified ecologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology are given and normally relate to the timing of EDP's commission and/or the availability of access to parts of the Application Site or wider survey area. Full details of the techniques and processes adopted are, where appropriate, provided within Appendices and on Plans to the rear of this report.

Desk Study

- 2.2 The desk study is an important element of undertaking an initial Ecological Appraisal of a site proposed for development, enabling the initial collation and review of contextual information such as designated sites, together with known records of protected and priority¹ species.
- 2.3 The desk study involved collating biodiversity information from the following sources:
- South East Wales Biodiversity Records Centre (SEWBRc); and
 - Multi-Agency Geographic Information for the Countryside (MAGIC) website².
- 2.4 The desk study was undertaken in February 2021 and involved obtaining the following information:
- International statutory designations (10km radius) (**Plan EDP 1**);
 - National statutory designations (2km radius) (**Plan EDP 1**);
 - Non-statutory local sites (2km radius) (**Plan EDP 2**);
 - Annex II bat species³ records (6km radius); and
 - All other protected/notable species records (2km radius).

¹ Species of principal importance listed under Section 7 of the Environment (Wales) Act 2016 which are considered to be of key significance to sustain and improve biodiversity in relation to Wales.

² www.magic.gov.uk

³ Bat species listed in Annex II of the EC Habitats Directive, namely: greater horseshoe; lesser horseshoe; barbastelle; and Bechstein's bat

- 2.5 The above search areas are considered sufficient to cover the potential Zones of Influence⁴ of the proposed development in relation to designated sites, habitats and species.

Extended Phase 1 Survey

- 2.6 The survey technique adopted for the initial habitat assessment was at a level intermediate between a standard Phase 1 survey technique⁵, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. Commonly known as an Extended Phase 1 survey, this level of survey does not aim to compile a complete floral and faunal inventory for the Application Site.
- 2.7 The level of survey involves identifying and mapping the principal habitat types and identifying the dominant plant species present therein. Additionally, any actual or potential protected species or priority species⁶ are identified and scoped.
- 2.8 The Extended Phase 1 survey was undertaken by a suitably experienced surveyor on 29 September 2020.

Limitations

- 2.9 The Extended Phase 1 survey was undertaken in September which is within the optimal time period for this type of survey. Therefore, there are not considered to be any limitations due to the survey timing.

Detailed (Phase 2) Surveys

- 2.10 The scope of the Phase 2 surveys undertaken was defined following the initial studies described above (desk study and Extended Phase 1 survey). Those surveys 'scoped in' as part of the Ecological Appraisal are summarised in turn below. Other survey types which were not considered necessary/appropriate in this case, albeit commonly required as part of an Ecological Appraisal to inform development, are also discussed.

Badger

- 2.11 Badger activity within the Application Site was assessed during the initial Extended Phase 1 survey on 29 September 2020. Any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, the following signs of badger activity were searched for in order to determine whether they were currently in active use:

⁴ Zone of Influence - the areas and resources that may be affected by the proposed development

⁵ Joint Nature Conservation Council (2004) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication).

⁶ Species considered of key significance to sustain and improve biodiversity in Wales, as defined under Section 7 of Part 1 of the Environment (Wales) Act 2016

- Fresh spoil outside entrances;
- Old bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter;
- Badger guard hairs; and
- Fresh tracks leading to/from the holes.

Limitations

- 2.12 Badger surveys can be undertaken at any time of year and all areas of the Application Site were accessible for assessment, therefore there were no seasonal or climatic constraints to this survey.

Surveys Scoped Out

- 2.13 **Table EDP 2.1** below summarises other survey types which, whilst commonly required to inform a planning submission for development, were not considered necessary/appropriate in this case.

Table EDP 2.1: Ecology surveys scoped out.

Survey Type	Reasons for scoping out
Breeding Birds	Given the small extent of the Application Site and nature of those habitats supported therein, no further breeding or wintering bird surveys are recommended in this instance. Precautionary measures of clearance during the pre-construction phases of development are instead recommended to ensure no harm/disturbance to any nesting birds during the breeding bird season.
Bats (Roosting)	There are no trees or buildings onsite to provide roosting potential for bat species. Roosting bats are therefore presumed absent from the Application Site itself.
Bats (Commuting/Foraging)	Given the relatively small size of the Application Site and absence of suitable foraging habitat onsite, the Application Site is considered to be of negligible importance to support commuting/foraging bats such that no further survey is proposed. Highways planting and woodland to the north offer suitable, albeit limited, commuting and dispersal habitats for the local bat assemblage but is otherwise fragmented from semi-natural habitat in the wider landscape.

Survey Type	Reasons for scoping out
Dormouse (<i>Muscardinus avellanarius</i>)	No records for dormouse within 2km of the Application Site were returned during the desk study. No suitable habitats for dormouse occur onsite, whilst the Application Site is relatively isolated from suitable habitat within the wider landscape, being surrounded by roads and houses on all sides. As such, no further surveys with respect to this species is required in this instance.
Otter (<i>Lutra lutra</i>)/ Water Vole (<i>Arvicola amphibius</i>)	Five records of otter were returned during the desk study. No records were returned in respect of water vole. Suitable habitat is absent both on and immediately adjacent to the Application Site for these species. Both species are thus presumed absent from the Application Site and no further survey is recommended.
Great Crested Newt (<i>Triturus cristatus</i>)	There are no records for great crested newt within 2km of the Application Site. Aquatic habitat for this species is absent onsite, with existing terrestrial habitat considered largely unsuitable, offering limited refugia and foraging. Additionally, main roads and hardstanding immediately adjacent to the Application Site and within the wider area are considered significant barriers to dispersal of this species across the wider landscape. This species is thus presumed absent from the Application Site.
Common Reptiles	Two records of slow-worm (<i>Anguis fragilis</i>) were returned by the desk study. Onsite habitats have limited potential to support common reptile species. In particular, there is a lack of suitable foraging habitat. Furthermore, main roads and hardstanding bordering the Application Site and within the wider area are considered significant barriers to dispersal of reptile species between the Application Site and semi-natural habitat within the wider landscape. This species group is, therefore, presumed absent.
Invertebrates	Habitats present onsite are considered likely to support a limited assemblage of common and widespread invertebrate species only. As such and in respect of the relatively small size of the Application Site, no further survey is considered necessary in this instance.

Section 3 Results (Baseline Conditions)

- 3.1 This section of the Ecological Appraisal summarises current ecological conditions determined through the course of update field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors considered within this report and which are pertinent in the context of the proposed development. Further technical details are, where appropriate, provided within Appendices and on Plans to the rear of this report.

Designated Sites

- 3.2 Information regarding designated sites was obtained during the Desk Study from the MAGIC website and SEWBRc. Statutory designations (those receiving legal protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

- 3.3 Statutory designations represent the most significant ecological receptors, being of recognised importance at an international and/or national level. International designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites. National designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).
- 3.4 No part of the Application Site is covered by any statutory designations. There are two international designations within 10km of the Application Site, but no national designations within 2km of the Application Site, as summarised in **Table EDP 3.1** and illustrated at **Plan EDP 1**.

Table EDP 3.1: Statutory designations within the Application Site's potential Zone of Influence.

Designation	Distance from Application Site	Interest Feature(s)
International (within 10km of the Application Site)		
River Usk SAC	4.1km east	An important wildlife corridor, an essential migration route and key breeding area for many nationally and internationally important species including twaite shad (<i>Alosa fallax</i>), sea lamprey (<i>Petromyzon marinus</i>), river lamprey (<i>Lampetra fluviatilis</i>), brook lamprey (<i>Lampetra planeri</i>), Atlantic salmon (<i>Salmo salar</i>) and bullhead (<i>Cottus gobio</i>). Other species of importance include water crowfoot (<i>Ranunculus</i> sp.) beds and European otter. Principal sensitivities relate to long term aquatic and riparian habitat degradation and localised changes in water quality from sewage discharges.

Designation	Distance from Application Site	Interest Feature(s)
Severn Estuary SAC/SPA/RAMSAR	5.4km south/ south-east	The site supports several internationally important species such as Bewick's swan (<i>Cygnus columbianus bewickii</i>), greater white-fronted goose (<i>Anser albifrons</i>), dunlin (<i>Calidris alpina</i>) and gadwall (<i>Anas strepera</i>). The estuary is also an important run for numerous migratory fish including the internationally important allis shad (<i>Alosa alosa</i>), twaite shad, sea lamprey and river lamprey. Additionally, this site supports notable estuarine assemblages of vascular plants and several nationally scarce plant species. Principal sensitivities include dredging, erosion and recreational/tourism disturbance.

Non-Statutory Designations

- 3.5 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although in fact these designations are typically considered to be of importance at County level. In Newport, such designations include SINC. Additional designated sites which should be considered at this level include Local Nature Reserves (LNRs) and Ancient Woodland sites where these are not covered by other designations. These include Ancient Semi-Natural Woodland (ASNW), Plantation on Ancient Woodland Sites (PAWS) and Restored Ancient Woodland Sites (RAWS).
- 3.6 The Application Site does not overlap with any non-statutory sites of conservation interest; however, there are 24 SINC within the zone of influence of the Application Site. A summary of these SINC is provided within **Table EDP 3.2**. In addition, 76 Ancient Woodland Units are also present within 2km of the Application Site, including 42 Ancient Semi-natural Woodland units, 27 Plantations on Ancient Woodland Sites, 3 Restored Ancient Woodland Sites, and 4 Ancient Woodland Sites of Unknown Category.

Table EDP 3.2: Non-statutory designations within the site's potential Zone of Influence.

Designation	Distance from Application Site	Interest Feature(s)
River Ebbw SINC	230m south	This relatively unpolluted main river contains resident populations of several protected fish species and is used as a regular migratory route by many anadromous species. It is also a significant wildlife corridor and a probable site for breeding otters, plus comprises areas for otter foraging, laying up and territorial use.
Garth Wood	280m south	Ancient semi-natural woodland.
Cefn Wood (East and West) SINC	570m north and north-east	Ancient semi-natural woodland (split into two sites by Chartist Drive).

Designation	Distance from Application Site	Interest Feature(s)
Monmouthshire and Brecon Canal (Crumlin Arm) SINC	820m north	Comprises standing open water; it is a disused linear waterway with a variety of adjacent habitats and associated species including.
Fourteen Locks Fields SINC	1.2km north-east	Comprises an area of neutral grassland.
Court Wood SINC	1.2km south	Ancient semi-natural woodland dominated by oak (<i>Quercus robur</i>) and ash (<i>Fraxinus excelsior</i>).
Llwyn Deri SINC	1.4km north-west	Species rich semi-improved neutral grassland.
Oaktree Cottage Fields SINC	1.4km north-west	Species rich semi-improved neutral grassland with areas of marshy grassland, bracken, and woodland.
Coed Ffynon-Oer SINC	1.5km south	Ancient semi-natural woodland dominated by oak and ash.
Ynys-y-fro Reservoir (East and West) SINC	1.5km north-east	Large reservoir with areas of reed bed, marginal vegetation and semi-improved neutral grassland, identified as a key site for nesting and wintering wildfowl.
Pontymason Lane Field SINC	1.5km north-west	Comprises an area of neutral grassland.
Allt-yr-Yn SINC LNR	1.6km east	Mosaic of ancient semi-natural woodland, recent woodland, ponds, semi- and unimproved neutral grasslands; notable for its invertebrate and amphibian populations.
Llwyni Wood SINC	1.6km north	Consists of predominantly ancient semi-natural woodland.
Mescoed Mawr/Mescoed Bach SINC	1.6km north	Large complex of ancient semi-natural woodland with areas of replanted ancient semi-natural woodland.
Coed y Glasllwch SINC	1.7km east	Ancient semi-natural woodland.
Gaer Fort SINC	1.7km south-east	Large mosaic area of unimproved neutral and semi-improved acid grassland with areas of lowland heath, bracken and scrub.
Park Wood SINC	1.8km south-west	Ancient semi-natural woodland notable for its mammal populations.
Ty-Coch Grasslands SINC	1.8km west	Unimproved neutral grasslands.

Habitats

- 3.7 The main habitat types present within and immediately adjacent to the Application Site, and their dominant/characteristic plant species, are described in turn below. These descriptions should be read in conjunction with **Plan EDP 3** which illustrates their distribution and the illustrative site photographs provided at **Appendix EDP 3**.

Ephemeral/Short Perennial Vegetation

- 3.8 Land parcel LC2 comprises a large area of ephemeral/short perennial vegetation growing on bare ground. Species recorded include: buddleia (*Buddleja davidii*), hawkweed (*Pilosella aurantiaca*), broad-leaved dock (*Rumex obtusifolius*), pineapple weed (*Matricaria discoidea*), bristly ox-tongue (*Helminthotheca echioides*) and ribwort plantain (*Plantago lanceolata*).
- 3.9 Ephemeral/short perennial vegetation occurring onsite is considered of negligible ecological importance given its low species diversity, limited extent and distinctiveness.

Bare Ground and Hardstanding

- 3.10 The Application Site comprises predominantly of bare ground and hardstanding, having been subject to past ground remediation works and subsequent use for storage and use as a site compound by adjacent housing developers.
- 3.11 Areas of hardstanding and bare ground onsite are considered of negligible ecological importance.

Improved Grassland

- 3.12 A small area of improved grassland occurs in the far north-west corner of parcel LC2, in addition to a grass verge aligning Jubilee Way. Species recorded include common bent (*Agrostis capillaris*), Yorkshire fog (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*), ragwort (*Jacobaea vulgaris*), creeping buttercup (*Ranunculus repens*), spear thistle (*Cirsium vulgare*), white clover (*Trifolium repens*) and vetch (*Vicia* sp.). The western corner of LC2 also supports patches of soft rush (*Juncus effusus*).
- 3.13 Due to its limited extent and low botanical diversity, improved grassland occurring in association with the Application Site is considered of negligible ecological importance.

Scattered/ Dense Continuous scrub

- 3.14 Scattered scrub occurs along the far western boundary of parcel LC1, with patchy distribution across the northwest of LC2. Dense, continuous scrub otherwise occurs along a steep bank forming the northern boundary of LC2. Bramble (*Rubus fruticosus* agg.), young buddleia saplings and common nettle (*Urtica dioica*) occur in these areas, with such habitats limited extent.
- 3.15 Of limited extent and low botanical diversity, scattered and dense scrub is considered to be of low ecological importance.

Introduced Shrubs and Trees

- 3.16 The Application Site sits within the wider Jubilee Park development site, with newly planted shrubs and individual trees establishing along Jubilee Way, adjacent to the Application Site.
- 3.17 Introduced planting, limited in extent and comprising recent planting located offsite, is considered to be of negligible ecological importance.

Spoil Piles and Storage Containers

- 3.18 LC1 is currently being utilised for the storage of construction materials sat upon bare earth alongside spoil piles, with several large metal containers serving as storage units also present. Spoil piles also occur within land parcel LC2, adjacent to its south-western boundary.
- 3.19 The Application Site's regular use for construction purposes, with heavy machinery (LC1) and areas of material storage and spoil piles (LC1 & LC2) present onsite. Such features therefore remain predominantly unvegetated are considered of negligible ecological importance.

Table EDP 3.3: Summary of habitats within the Application Site.

Habitat or feature	Distribution within Application Site	Intrinsic ecological value
Ephemeral/short perennial vegetation	The dominant habitat present within LC2.	Negligible , given its low species diversity, limited extent and distinctiveness.
Bare ground and hardstanding	The dominant habitat present within LC1.	Negligible , owing to low ecological value.
Improved grassland	A small area occurs in the far north-west of parcel LC2, in addition to a grass verge aligning Jubilee Way, delineating the western boundary of the land parcel.	Negligible , given its limited extent and low species diversity.
Scattered/ dense continuous scrub	Scattered scrub occurs along the far western boundary of parcel LC1 and in a patch in the northwest of LC2.	Site , owing to its limited extent and low botanical diversity.
Introduced shrubs and trees	Recently been planted and establishing along Jubilee Way, adjacent to the Application Site	Negligible , given its limited extent and comprising recent planting.
Spoil piles and storage containers	Large expanses of spoil piles in LC1 and smaller piles in LC2.	Negligible , owing to low ecological value as well as regular use for construction purposes.

- 3.20 As noted within **Table EDP 3.3**, the vast majority of habitats comprising the Application Site are considered to be of negligible ecological value or important at the site level only. Nevertheless, such habitats have the potential to support a range of protected and notable species, albeit limited, as further discussed below.

Protected and/or Notable Species

- 3.21 The likelihood of presence, or confirmed presence, of protected/and or notable wildlife species within the Application Site is summarised below, with reference to desk study records, habitat suitability and detailed surveys where relevant.
- 3.22 Where a particular species or taxonomic group has been confirmed to be present, or presence is inferred based on habitat suitability, the ecological value or significance of the population or assemblage is assessed on a geographical scale.

Breeding Birds

- 3.23 The desk study undertaken in February 2021 returned numerous records of birds within 2km of the Application Site including species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and Birds of Conservation Concern in Wales 3 (BoCC3)⁷.
- 3.24 Schedule 1 listed species recorded within 2km of the Application Site include: common scoter (*Melanitta nigra*), goshawk (*Accipiter gentilis*), red kite (*Milvus milvus*), hobby (*Falco subbuteo*), peregrine (*Falco peregrinus*), barn owl (*Tyto alba*), kingfisher (*Alcedo atthis*), Savi's warbler (*Locustella luscinioides*), redwing (*Turdus iliacus*), fieldfare (*Turdus pilaris*), and brambling (*Fringilla montifringilla*).
- 3.25 Red list species returned include pochard (*Aythya ferina*), great black-backed gull (*Larus marinus*), herring gull (*Larus argentatus*), common gull (*Larus canus*), black-headed gull (*Chroicocephalus ridibundus*), lapwing (*Vanellus vanellus*), redshank (*Tringa totanus*), ringed plover (*Charadrius hiaticula*), woodcock (*Scolopax rusticola*), starling (*Sturnus vulgaris*), whitethroat (*Sylvia communis*), willow warbler (*Phylloscopus trochilus*), bullfinch (*Pyrrhula pyrrhula*), yellowhammer (*Emberiza citrinella*), and linnet (*Linaria cannabina*). There were 26 amber-listed species of BoCC3 including red-breasted merganser (*Mergus serrator*), house sparrow (*Passer domesticus*), lesser redpoll (*Acanthis cabaret*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), and reed bunting (*Emberiza schoeniclus*).
- 3.26 The Application Site itself is considered to be of limited value to a notable breeding bird population, given its small size and limited diversity of habitats supported. Nonetheless, small numbers of common and widespread bird species may utilise the Application Site opportunistically for foraging and breeding purposes during the breeding season.
- 3.27 Overall, the Application Site is considered to be of Site level importance with respect to its potential to support a breeding bird assemblage.

⁷ Bladwell S, Noble DG, Taylor R, Cryer J, Galliford H, Hayhow DB, Kirby W, Smith D, Vanstone A, Wotton SR (2018) *The state of birds in Wales 2018*. The RSPB, BTO, NRW and WOS. RSPB Cymru, Cardiff.

Bats

- 3.28 SEWBRc returned numerous records of bats within 2km of the Application Site including records of common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*P. pygmaeus*), brown long-eared bat (*Plecotus auritus*), Daubenton's bat (*Myotis daubentonii*), Natterer's bat (*M. nattereri*), Whiskered/Brandt's bat (*M. mystacinus/brandtii*), greater horseshoe bat (*Rhinolophus ferrumequinum*), lesser horseshoe bat (*R. hipposideros*), and noctule (*Nyctalus noctula*). The closest record was 240m north-east from the Application Site for a passing common pipistrelle, whilst the only roost identified was an unidentified pipistrelle sp. roost, 450m north-west.
- 3.29 A ground level assessment of all offsite trees associated with the boundaries of the Application Site confirmed such features to be of negligible potential for roosting bats given their relative immaturity and/or absence of suitable roosting features.
- 3.30 With respect to foraging and commuting bats, highways planting to the north of the Application Site and a small parcel of woodland offsite to the north-east of LC2, relating to Tregwilym Castle remains, is considered to be of some, albeit limited, importance to a local bat population for foraging and dispersal. In contrast, habitats present onsite are significantly limited, being dominated by hardstanding and ephemeral/short perennial vegetation.
- 3.31 Overall, the Application Site is considered to be of Site level importance with respect to its potential to support a foraging and commuting bat assemblage.

Badger

- 3.32 The desk study assessment returned 23 records for European badger within 2km of the Application Site. The closest record is approximately 780m south-west of the Application Site. A badger survey undertaken during the Extended Phase 1 survey did not identify any setts or evidence of badger activity within the Application Site.
- 3.33 A block of woodland situated to the north-east of LC2, relating to Tregwilym Castle remains, is considered to provide some suitable habitat for badger foraging and sett building; however, the surrounding development and main roads are a limitation to its utilisation by badger. Habitats present within the Application Site are furthermore largely isolated from suitable semi-natural habitat within the wider landscape by existing development and main roads. Given the current absence of badger activity and limited foraging habitat available onsite, this species is considered of Site importance only.

Dormouse

- 3.34 No records for this species within 2km of the Application Site were returned by SEWBRc during the desk study.
- 3.35 Ephemeral/short perennial vegetation which dominates the Application Site comprise habitats of negligible importance for dormouse, whilst scattered/dense scrub is

considered largely sub-optimal for foraging and breeding, given its relative isolation from more suitable habitats present offsite and poor botanical and structural diversity. The main road to the north and the river to the south, and residential housing surrounding the Application Site, are also considered to be significant barriers to the dispersal of dormouse between the Application Site and suitable habitat within the wider landscape. As such, dormouse is presumed absent from the Application Site and is not considered further within this assessment.

Otter and Water Vole

- 3.36 SEWBRc returned no records of water vole within 2km of the Application Site. There were, however, five records of otter within 2km of the Application Site, with the closest located 570m to the west, on the banks of the River Ebbw.
- 3.37 There is no suitable habitat for either species on or adjacent to the Application Site. As such, otter and water vole are thus presumed absent from the Application Site and not considered further within this assessment.

Great Crested Newt

- 3.38 There are no records for great crested newt within 2km of the Application Site. Likewise, there are no records for smooth newt (*Lissotriton vulgaris*) or palmate newt (*L. helveticus*) within 2km of the Application Site. 16 records of common frog (*Rana temporaria*) were returned with the closest located 820m north-east of the Application Site. There was one record of common toad (*Bufo bufo*), located 1.9km to the north-east.
- 3.39 The Application Site itself is unsuitable for great crested newt given the absence of waterbodies onsite and suitable terrestrial vegetation. Whilst a pond is present within the wider Development Site, circa 40m south-west of parcels LC1 and LC2, the Application Site is relatively isolated, being surrounded by recently constructed development and a network of roads, which together pose a significant barrier to the dispersal of great crested newt across the Application Site and wider landscape.
- 3.40 Given the absence of desk study records for great crested newt, the presence physical barriers to dispersal and unsuitability of habitats present within and adjacent to the Application Site, this species is presumed absent from the Application Site.

Common Reptiles

- 3.41 SEWBRc returned two records of slow-worm (*Anguis fragilis*) within 2km of the Application Site, the closest of which was located approximately 220m to the north. There are no records for common lizard (*Zootoca vivipara*), adder (*Vipera berus*), or grass snake (*Natrix helvetica*) within 2km of the Application Site.
- 3.42 Habitat within and adjacent to the Application Site is limited to small, isolated patches of ephemeral/short perennial vegetation which offer no cover for common reptile species and is of limited foraging value. Scattered/dense scrub along the Application Site

boundaries may offer some, albeit limited cover and foraging opportunities for common reptiles but is very limited in extent. Bare ground also provides suitable basking locations; however, ongoing disturbance from construction activities coupled with the relative isolation of the Application Site from suitable habitat within wider landscape precludes presence of common reptile species. The Application Site is therefore considered to be of Site level importance only to this species group.

Other Notable Mammals

- 3.43 SEWBRc returned 17 records of European hedgehog (*Erinaceus europaeus*) occurring within 2km of the Application Site, the closest of which is approximately 100m to the north-east.
- 3.44 No evidence of European hedgehog was identified on-site during the field survey. However, improved grassland and scattered scrub alongside the ephemeral vegetation provides some, albeit sub-optimal, foraging habitat. The Application Site is therefore considered to be of Site level importance only to this species.

Notable Invertebrates

- 3.45 In respect of records of invertebrates, SEWBRc returned a single record for mole cricket (*Gryllotalpa gryllotalpa*), an invertebrate listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), situated circa 1.3km to the south-east of the Application Site.
- 3.46 Ephemeral/short perennial vegetation and scattered scrub habitat within the Application Site may provide some, albeit limited, habitat for a range of generalist invertebrate species. Such habitats are, however, limited in extent such that the Application Site is considered unlikely to support notable populations of invertebrate species.

Notable Plants

- 3.47 Regarding notable plants, SEWBRc returned only three records, all relating to bluebell (*Hyacinthoides non-scripta*), occurring as close as circa 1.3km to the south-west of the Application Site.
- 3.48 In addition, numerous records were returned for invasive species, including records of Japanese knotweed (*Fallopia japonica*), occurring as close as 70m to the north-east, and Himalayan balsam (*Impatiens glandulifera*), occurring as close as 530m to the south-west of the Application Site. Both species are listed on Schedule 9 of the Wildlife and Countryside Act (1981), making it an offence for any person to plant or otherwise cause such plants in the wild.
- 3.49 No notable plant species were identified on or immediately adjacent to the Application Site during the Extended Phase 1 survey.

Summary of Key Issues Arising from Survey Findings

- 3.50 Based on the survey findings described above, the key ecological features/receptors pertinent to the development proposals are as follows:

Table EDP 3.4: Key ecological features pertinent to the development proposals.

Receptor	Key Attributes	Nature Conservation Importance
Non-statutory Designations		
River Ebbw SINC	230m west/south, this SINC is designated as a relatively unpolluted main river with resident populations of several protected fish species and is used as a regular migratory route by many anadromous species.	Local
Habitats		
Scattered/ Dense Continuous scrub	Scattered scrub offer foraging and nesting opportunities, albeit limited, for birds and European hedgehog.	Site
Fauna		
Breeding bird assemblage	Scrub habitat considered likely to support low numbers of common and widespread bird species.	Site
Foraging and Commuting Bats	Whilst limited onsite, some foraging habitat and suitable commuting routes occur adjacent.	Site
Badger	Potential for limited foraging/dispersal opportunities onsite.	Site
Common Reptiles		Site
European Hedgehog		Site

Section 4

Details of Proposed Development

- 4.1 Having reviewed the baseline conditions, this section of the Ecological Appraisal provides pertinent details of the proposed development, in particular those aspects which have potential implications for the ecological features/receptors identified in **Section 3**. Where relevant, reference is made to the influence that ecological considerations have had in the scheme's design and any inherent mitigation which avoids or reduces the severity of potential ecological impacts.

Development Proposals

- 4.2 Outline planning consent is sought for residential development and associated works including access, car parking and landscape works. The illustrative masterplan is provided at **Appendix EDP 1**.

Proposed Habitat Loss

- 4.3 The Application Site totals approximately 1.36ha. Land take associated with the proposed built development, to include residential units and gardens, access roads and associated infrastructure, equates to circa 1.12ha, totalling circa 82% of the total Application Site area. The remainder of the Application Site, totalling circa 0.24ha/18%, will accommodate open space and sustainable drainage features.
- 4.4 Habitats to be lost to facilitate the development primarily comprise those of limited botanical interest, relating to areas of ephemeral/short perennial vegetation establishing over previously cleared land, in addition to small sections of improved grassland and scattered/dense scrub associated with the peripheries of the Application Site. Such habitats are predominantly of negligible ecological importance, with areas of scattered/dense scrub offering considered to be of importance at the Site level given its potential, albeit limited, to support protected and priority species.

Proposed Habitat Gain

Habitat Retention, Protection & Creation

- 4.5 Green infrastructure provision in the form of open space and sustainable drainage assets has focussed on the peripheries of the development parcels so as to maximise habitat connectivity across the Application Site to the wider landscape, whilst providing consideration to retained/newly created green infrastructure assets occurring adjacent within the wider Jubilee Park development, such as the pond situated to the south/west,

and woodland and trees associated with Tregwilym Castle remains located to the north-east.

- 4.6 EDP has provided input during the iterative design process, such that the proposed detailed and illustrative layouts for the Application Site reflect key measures to avoid, mitigate or compensate for ecological impacts as well as other measures designed to provide long-term ecological enhancements. Such measures are discussed further in **Section 5** of this Appraisal.

Section 5

Predicted Impacts and Mitigation

- 5.1 This section of the Ecological Appraisal considers the likely impacts of proposed development, as illustrated at **Appendix EDP 2**, on the existing ecological resource. Where impacts cannot be avoided by inherent mitigation alone, additional mitigation or enhancement measures are recommended which, if implemented, would as a minimum enable the proposed development to meet legislative and/or planning policy requirements.
- 5.2 EDP's overall summary and conclusions, based upon the above, are given in **Section 6**.

Designated Sites

Statutory Designations

- 5.3 Statutory designations receive legal protection under various international and national legislative instruments. This protection is also reflected in policies included within *Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning* (TAN5), which are given material consideration during the planning application process.
- 5.4 In addition, Strategic Policy SP9 of NCC's Local Development Plan 2011-2026 (LDP) (adopted January 2015) requires for the conservation, enhancement and management of recognised sites within the natural environment, whilst General Policy GP5 requires for development proposals to only be permitted where no significant adverse effects upon areas of nature conservation interest including designated sites.
- 5.5 The River Usk SAC and Severn Estuary SAC/SPA/Ramsar are located circa 4.1km to the east and 5.4km to the south/south-east of the Application Site respectively. A Habitats Regulation Assessment (HRA) previously undertaken in 2015⁸ of NCC's Local Development Plan considered those likely significant effects to arise through policies inherent within the LDP, including Policy H1 - Housing Sites, on European sites within the Zone of Influence. Potential impacts identified in respect of housing development upon the Severn Estuary Ramsar/SAC/SPA and River Usk SAC include the following:
- Barriers to migration/movement for fish species and mammals;
 - Flow depletion/abstraction;
 - Habitat loss;

⁸ Newport City Council/Atkins Limited (2015) Habitats Regulations Assessment Screening Report. Available at: <http://www.newport.gov.uk/documents/Planning-Documents/LDP-2011-2026/Habitats-Regulation-Assessment-final.pdf>

- Disturbance including recreation, noise, lighting and vibration;
- Water quality and diffuse pollution;
- Increase in suspended solids;
- Aerial pollution; and
- Coastal squeeze.

5.6 In respect of the Application Site, given its distance and spatial separation from the River Usk SAC and Severn Estuary SAC/SPA/Ramsar, combined with the localised scale/nature of proposed development, no likely significant effects arising from barriers to movement, abstraction, habitat loss, disturbance, air quality or coastal squeeze are anticipated.

5.7 However, indirect impacts associated with a deterioration in water quality and increase in suspended solids could occur during the construction phase, as a result of the discharge of contaminated run-off and deposition of material following periods of heavy rainfall into the Ebbw river situated 230m to the south of the Application Site, which could be transferred further downstream to the River Usk SAC and Severn Estuary SAC/SPA/Ramsar. Pollution incidents could also arise as a result of leaks and spills from construction activities, resulting in the introduction of hydrocarbons and other contaminants from demolition activities, site plant or of sediment loads arising from dust deposition or spoil movement.

5.8 Given the small scale of the development proposals, its spatial separation and distance from such designated sites, and in consideration of the existing drainage strategy previously implemented in respect of the wider Jubilee Park development within which the Application Site sits, no significant effects are considered likely. Nevertheless, the implementation of appropriate pollution control measures and a sensitive drainage strategy specific to the Application Site throughout the construction phase is recommended, as further detailed below in respect of the Ebbw River SINC.

Non-Statutory Designations

5.9 Non-statutory designations do not receive any formal legal protection. However, they do receive planning policy protection, as reflected in Technical Advice Note 5 (TAN5), Nature Conservation and Planning (2009). In addition, Strategic Policy SP9 and General Policy GP5 of the LDP requires for development proposals to be designed and managed to protect and encourage biodiversity, ensuring no significant adverse effects upon locally protected sites. Policy CE8 further seeks to ensure no overall loss of the nature conservation resource for which local sites are designated, requiring for appropriate mitigation or compensatory measures to be delivered.

5.10 In respect of non-statutory designations identified within 2km of the Application Site, the vast majority are not considered likely to be directly or indirectly impacted by the

development proposals given their spatial separation from the Application Site, consideration of their interest features and/or the lack of any habitat or hydrological connections.

- 5.11 However, the Ebbw River SINC is located circa 230m south of the Application Site. Given its proximity to the Application Site, there is the potential for increased surface water runoff and deposition of material into the drainage network following periods of heavy rainfall, resulting in deterioration in water quality. Pollution incidents could also arise as a result of accidental leaks and spills from construction activities, resulting in the introduction of hydrocarbons and other contaminants from site plant or of sediment loads arising from dust deposition or spoil movement.
- 5.12 Given the small scale of the development proposals, however, and in consideration of the existing drainage strategy previously implemented in respect of the wider Jubilee Park development within which the Application Site sits, such effects are considered unlikely. Nevertheless, in accordance with best practice, the following avoidance/protection measures should be implemented during construction:
- i) When working near water, appropriate pollution control measures will be employed with reference to Environment Agency standards⁹ relating to *Pollution Prevention Guidelines (PPGs)* published by the Environment Agency, namely PPG1, *General guide to the prevention of pollution*, PPG5 *Works and maintenance in or near water*, PPG6 *Pollution prevention guidance for working at construction and demolition sites* and PPG21 *Pollution incident response planning*, to ensure that detrimental impacts to local watercourses as a result of surface run-off, spillage and pollution arising throughout the construction are avoided;
 - ii) No machinery or plant should be parked within 5m of field drains and refuelling should take place within a protected bund at a designated point well away from the any watercourse; and
 - iii) There should be no storage of material, machinery, plant or spoil adjacent to, and within proximity of the field drains. This includes any waste material, earth, debris or other materials which may enter the stream.
- 5.13 The above should be combined with implementation of a sustainable drainage strategy to manage and remediate surface water runoff so as to ensure no detrimental impacts upon the water quality and hydrological regime of statutory designated sites during the operational phase of proposed development.

⁹ As part of the Government's 'Smarter Guidance Project', all pollution prevention guidance notes and publications previously maintained by the Environment Agency were withdrawn in December 2015 to simplify and streamline guidance provided. Pollution Prevention Guidelines (PPGs) are currently archived on the National Archives website but remain downloadable and represent the most up to date good practice guidance notes.

Habitats

- 5.14 There are several mechanisms through which habitats receive protection without the statutory and non-statutory designated site frameworks. Priority habitats comprise those listed by the Welsh Government as being of key significance to sustain and improve biodiversity in Wales, as defined under Section 7 of Part 1 of the Environment (Wales) Act 2016, with local authorities having a duty to seek to maintain and enhance biodiversity. Priority habitats receive protection as identified within policies set out in TAN5. Additionally, at the local level General Policy GP5 of NCC's LDP requires the protection and enhancement of biodiversity including green infrastructure, biodiversity networks and priority habitats.
- 5.15 In respect of those habitats present onsite, habitat loss required to facilitate development is confined to ephemeral/short perennial vegetation establishing over previously clearer land, areas of improved grassland and scattered/dense scrub associated with the peripheries. Such habitats are predominantly of negligible ecological importance, other than scattered/dense scrub which is considered to be important at the Site level only.
- 5.16 The proposals will therefore provide opportunities for biodiversity enhancement onsite, including the provision of areas of open space and sustainable drainage features accommodating new landscape planting around the peripheries of the Application Site.
- 5.17 Such provision will further maximise habitat connectivity across the Application Site to the wider landscape, with newly created green corridors linking to surrounding green infrastructure features including significant areas of green space associated with the central pond to the south of the Application Site, and an area of woodland and trees associated with Tregwilym Castle remains to the north-east.
- 5.18 New planting should include native species including those of local provenance and which focus on the provision of native and or nectar/pollen rich varieties to promote and enhance biodiversity and provide an additional foraging resource for bats, birds and invertebrates. A network of rain gardens and planting beds are also proposed, alongside tree and shrub planting across the street scene, which will further promote biodiversity and habitat connectivity across the Application Site.
- 5.19 In addition to the above, there are opportunities to further enhance biodiversity and mitigate for habitat loss through the provision of species-rich wildflower meadow and bulb planting across the areas of open green space, such as the attenuation features. Such habitats should be subject to sensitive management over the long-term necessary to maximise the value of this resource for protected/notable species through the implementation of, for example, a sensitive hay cutting regime, so as to promote a structurally diverse and species-rich grassland sward to benefit local wildlife.
- 5.20 The installation of protective fencing and appropriate signage is also recommended across the construction footprint to ensure the avoidance of impacts arising from physical damage/degradation and disturbance during the construction phase upon retained woodland habitat adjacent, relating to Tregwilym Castle remains.

- 5.21 In addition, construction should be limited to daylight hours as far as possible to mitigate the effects of increased visual and noise disturbance, with the use of temporary, artificial lighting avoided during the hours between dusk and dawn as far as possible. Where temporary night-time lighting is required, such lighting should incorporate directional and low-level lighting to minimise light spill upon habitats adjacent.
- 5.22 Taken together, the above recommendations should ensure that no significant detrimental impacts upon those habitats of ecological value supported by the Application Site will arise as a result of the proposals.

Protected and/or Notable species

- 5.23 Certain species receive legal protection in the United Kingdom and are commonly known as 'protected species'. In reality, the level of protection for different species varies considerably, from protection solely against 'killing and injury' to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.
- 5.24 In addition to protected species, there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status as priority species or other status.
- 5.25 With respect to planning policy, protected and notable species are also afforded policy protection at a national level by TAN5, which requires planning authorities to ensure that such species are protected from the adverse effects of development. In addition, Policy GP5 of the LDP states that all development proposals are to be designed and managed to protect and encourage biodiversity, ensuring no significant adverse effects on areas of nature conservation interest including locally protected species and features of importance for ecology.
- 5.26 Baseline investigations have identified the need to consider certain protected and notable species occurring or potentially occurring across the Application Site, each of which are discussed in turn below.

Breeding Birds

Legislation

- 5.27 All wild birds, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:
- Intentionally kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take, damage or destroy the egg of any wild bird; or

- To have in one's possession or control any wild bird (dead or alive) or egg, or any part of a wild bird or egg.
- 5.28 In addition, further protection is afforded to those wild bird species listed on Schedule 1, prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. A number of species are also included as priority species.
- 5.29 Those habitat retention, mitigation and enhancement measures to be incorporated into the proposed site layout, as previously detailed above in respect of designated sites and habitats, are also considered to ensure that impacts upon the local breeding bird assemblage are minimised as far as possible, given their likely continued association with those habitats retained within and adjacent to the Application Site.
- 5.30 However, given the protection afforded to all breeding birds, their nests, eggs and young, sensitive vegetation clearance required during the pre-construction and construction phases of development should be timed to avoid the main bird breeding season (i.e. March to August inclusive). Should this seasonal constraint prove impracticable, then vegetation clearance outside of this period should only commence following the advice and under supervision of a suitably qualified ecologist. Pre-commencement checks for active nests will be required prior to any vegetation clearance occurring during the main bird breeding season, with appropriate buffers marked out around active nests or nests under construction, until all eggs have hatched, and chicks fledged. Such protection measures in relation to breeding birds should be included within an ECMS for the Application Site.
- 5.31 In addition, it is further recommended that bird boxes be installed/integrated within new buildings and/or upon suitable retained trees adjacent to the Application Site where appropriate. Bird box installation will be undertaken in accordance with manufacturer's specifications and will be sited carefully in relation to aspect so as to be protected from strong wind, rain and sunlight (not south facing), and at suitable heights above ground (circa 3-6m above ground).

Badger

Legislation

- 5.32 Badger and their setts receive protection under the Protection of Badgers Act 1992, which protects badgers from deliberate harm and injury. The protection afforded to badgers is primarily due to animal welfare issues and not due to concerns over their unfavourable nature conservation status. Restrictions under this act which apply to development include any killing, injuring, possession or cruel treatment to badgers, any interference to a sett through damage or destruction, any obstruction of access to any entrance of a sett, or any disturbance to a badger whilst it is occupying a sett.
- 5.33 No impacts to active badger setts are predicted given their presumed absence from the Application Site. Given the mobility and widespread nature of these species however an

update walkover prior to commencement of construction or site clearance works is recommended to determine whether any new setts have been established during the interim period.

Reptiles

Legislation

- 5.34 All species of common reptile (including common lizard, slow-worm, grass snake and adder, receive at least limited protection from harm under the Wildlife and Countryside Act 1981 (as amended), making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.
- 5.35 The proposed development will result in the loss of circa 0.5ha of secondary broadleaved woodland and scrub habitat. Whilst its interiors are considered sub-optimal with respect to common reptiles, habitat edges are considered likely to offer suitable dispersal, foraging and refuge opportunities should a local population be present.
- 5.36 Habitat within and adjacent to the Application Site are considered sub-optimal to support a common reptile population, particularly in light of ongoing construction activities within and adjacent to the Application Site itself. Nevertheless, in the event a small reptile population is present within the locality, sensitive habitat clearance methodologies should be employed, as follows:
- Any suitable refugia present onsite will be subject to a prior finger-tip search by a suitably experienced ecologist, with any reptiles identified re-located to areas of retained vegetation adjacent. Thereafter, refugia will be dismantled by hand; and
 - Following dismantling and removal of suitable refugia, remaining scrub, tall ruderal, ephemeral and grassland vegetation will be subject to phased cutting, as follows:
 - A first cut should aim to reduce vegetation height to no less than 200mm, and should be undertaken through the use of a hand-held strimmer or brush cutter;
 - The second cut should be undertaken immediately thereafter and within 24 hours of the initial cut, during which the vegetation should be reduced to ground level; and
 - Both cuts should be undertaken during the reptile active season (i.e. between April and mid-October), and in a direction towards retained habitats, i.e. towards habitat buffers to be retained along the northern, western and eastern boundaries, so as to allow for any reptiles and wildlife present to disperse safely towards this resource.

Summary of Predicted Impacts and Principal Mitigation Measures

- 5.37 The potential impacts upon valued ecological features (accounting for inherent mitigation), and recommended additional mitigation measures, in line with legislative and planning policy requirements, are summarised in **Table EDP 5.1**.

Table EDP 5.1: Summary of Ecological Impacts and Proposed Mitigation Measures.

Feature	Impacts in Absence of Inherent Mitigation	Inherent Mitigation	Additional Mitigation and/or Enhancement
Statutory and Non-Statutory Sites			
Ebbw River SINC	Surface/ground water run-off and pollution during construction and operation; degradation post-development.	Implementation of a sustainable drainage strategy to include the provision of sustainable drainage features.	Protection of sensitive habitats during construction and adherence to sensitive working methodologies and pollution prevention guidelines. Implementation of a sustainable drainage strategy.
Habitats			
Scrub and Trees	Loss, damage and degradation during the construction phase and following occupation.	New tree and shrub planting proposed across areas of informal open space.	Installation of protective fencing and signage across the construction footprint. Delivery of new planting comprising native species of local provenance, as detailed within a soft landscape scheme prepared for the Application Site. Planting to include fruiting and flowering species of benefit to wildlife.

Feature	Impacts in Absence of Inherent Mitigation	Inherent Mitigation	Additional Mitigation and/or Enhancement
Species			
Breeding Birds	Loss, damage and degradation of habitats during the construction phase; further damage and degradation of habitats following occupation. Elevated lighting and noise during construction phase and following occupation. Killing, injury and disturbance during construction phase and following occupation.	Habitat retention and buffering. New tree, shrub and grassland planting proposed across areas of open space and across sustainable drainage features.	Protection of sensitive habitats and adoption of sensitive working methodologies during the construction phase. Delivery of new planting comprising native species of local provenance, as detailed within a soft landscape scheme prepared for the Application Site. Planting to include fruiting and flowering species of benefit to wildlife.
Badger	Killing, injury and disturbance during construction phase and following occupation.		
Common Reptiles	Killing, injury and disturbance during construction phase and following occupation.		

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Section 6

Summary and Conclusions

- 6.1 This section of the Ecological Appraisal summarises the Ecology Strategy for the proposed development, in terms of inherent and recommended additional mitigation measures, and then provides the overall conclusions of the Appraisal.

Summary of Ecology Strategy

Inherent Avoidance, Mitigation and Enhancement Measures Proposed and Further Recommended Detailed Design Measures

- 6.2 Proposed inherent avoidance, mitigation and enhancement measures incorporated within the development proposals include the following:
- The sensitive arrangement of residential units and associated infrastructure across the development footprint to maximise the provision of open space along the peripheries of the Application Site necessary to maintain and further enhance connectivity to existing green infrastructure assets adjacent, including the central pond and associated public open space to the south, and area of woodland and trees associated with Tregwilym Castle remains to the north east;
 - The provision of new tree, shrub and grassland planting across such areas of public open space proposed, to strengthen habitat corridors across the Application Site whilst maximising biodiversity onsite;
 - The inclusion of formal tree and shrub planting across the street scene to further maximise opportunities for wildlife through the provision of stepping stone habitat across the development footprint;
 - The provision of sustainable drainage features including attenuation basins and rain gardens as part of a wider sustainable drainage strategy, with such features accommodating additional tree, shrub and grassland planting; and
 - The sensitive management and maintenance of all retained, enhanced and newly created habitats onsite by a Private Management Company over the lifetime of the development.
- 6.3 Additional detailed design measures recommended include:
- New planting should include appropriate native tree, shrub and scrub species of local provenance and/or those resilient to climate change, including species considered to be favourable to bats, birds and other wildlife, chosen to maximise structural and species diversity, fruiting/flowering potential and seasonal availability;

- Grassland planting should include the provision of species-rich wildflower meadow and bulbs across the areas of open green space including sustainable drainage features. Such habitats should be subject to sensitive management over the long-term necessary to maximise the value of this resource for protected/notable species through the implementation of, for example, a sensitive hay cutting regime, so as to promote a structurally diverse and species-rich grassland sward to benefit local wildlife; and
- Provision of nesting features for birds across the Application Site for installation/integration into new buildings, with such features erected away from sources of artificial lighting, thereby further enhancing roosting opportunities for the local bird assemblage.

Construction Measures

6.4 Standard precautionary measures previously recommended in respect of sensitive habitats and species are summarised below:

- The installation of protective fencing and signage to physically protect retained habitats on and immediately adjacent to the Application Site, such as the woodland parcel offsite to the north-east comprising Tregwilym Castle remains;
- The employment of appropriate pollution control measures necessary to minimise the risk of potential pollution events to ensure that detrimental impacts to the watercourse as a result of surface run-off, spillage and pollution arising throughout the construction are avoided; and
- The implementation of precautionary working methodologies and sensitive timings to be employed in relation to breeding birds, badger and common reptiles, to ensure the avoidance of harm to wildlife, for implementation/consideration throughout the pre-construction and construction phases.

Restoration, Enhancement and Maintenance Measures

6.5 A future Management Strategy should also be prepared for the Application Site and tailored to a detailed soft landscape scheme prepared for the Application Site, detailing the following:

- Management and maintenance prescriptions to be delivered over the long term for all habitats and green infrastructure features to be created and enhanced across the Application Site;
- The monitoring of biophysical changes to sensitive habitat features including; terrestrial succession and scrub encroachment within all retained, enhanced and newly created habitats; and the management of recreational impacts including littering, erosion and damage, with identified remedial measures to address any significant issues; and

- Any additional monitoring requirements of species and habitats where required/identified.

6.6 It is anticipated for the prescribed management and maintenance regime of those habitats retained onsite and across adjacent land within control of the Applicant to be delivered by a Private Management Company over the lifetime of the development.

Overall Conclusions

6.7 EDP's desk-based and field-based baseline investigations have demonstrated that the habitats and species present within and around the Application Site do not pose an 'in principle' constraint to the proposed development that is the subject of this Appraisal.

6.8 However, EDP's surveys have identified notable habitat features supported by the Application Site or adjacent with the potential to support protected species, which will require further consideration. The scrub habitat onsite is considered to provide suitable habitat for breeding birds and other wildlife.

6.9 Whilst land take associated with the proposals will result in habitat loss, the majority of habitats to be impacted have negligible ecological importance whilst the sensitive design and layout of the proposed development footprint provides opportunities for significant biodiversity enhancement. This includes the provision of green infrastructure features across the Application Site and particularly along its peripheries, incorporating new tree, shrub and grassland planting alongside sustainable drainage features, thereby strengthening habitat connectivity across the Application Site to existing areas of public open space located adjacent and to the wider landscape.

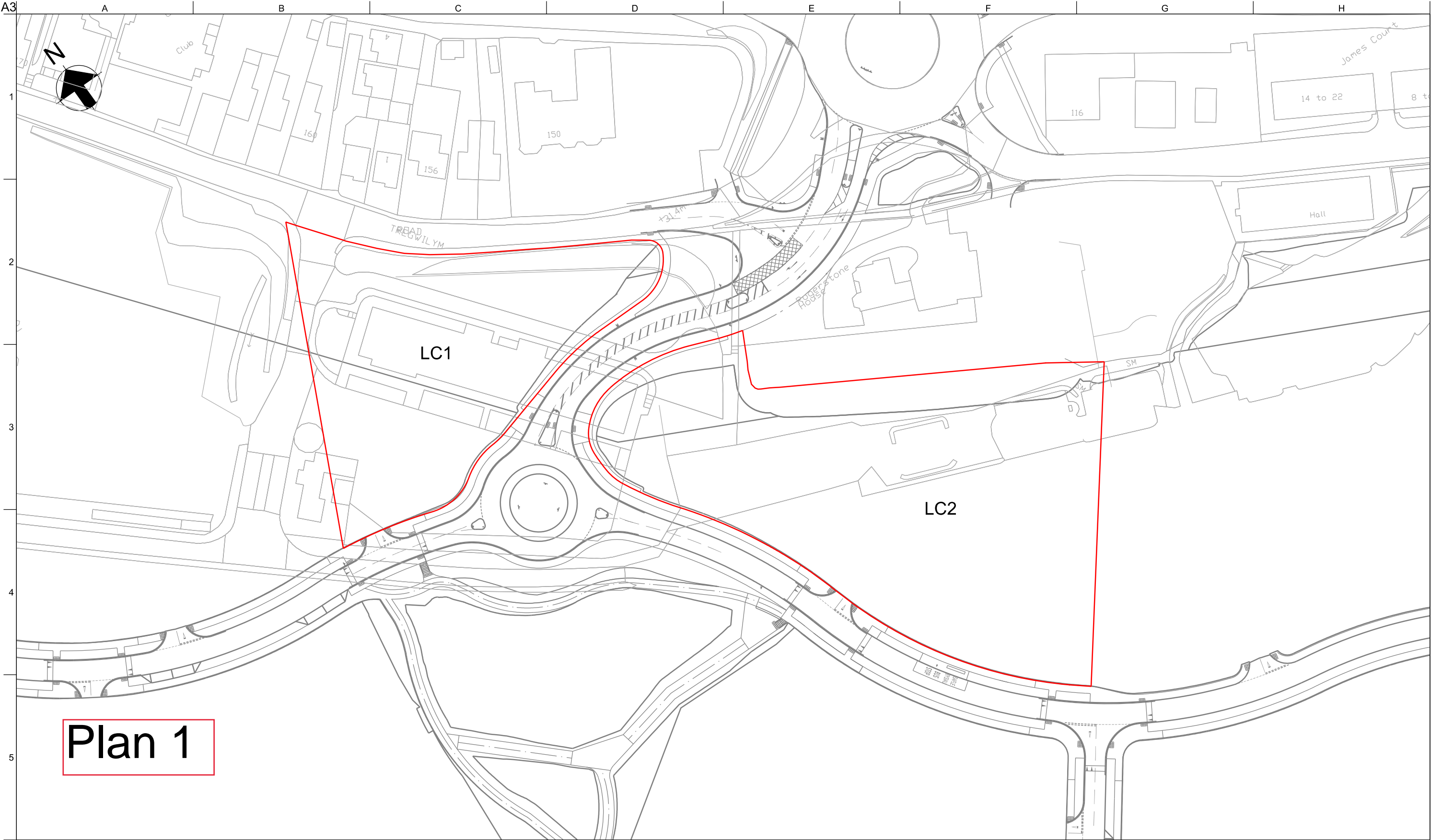
6.10 Accordingly, from the outset of the design process, EDP has contributed to the layout and design of the illustrative masterplan which accompanies the planning application. Specific proposals for the avoidance, mitigation and compensation of any predicted impacts have been provided. These measures include those already embedded within the development proposals; measures recommended for incorporation at the construction stage; those which should be designed and specified within the landscaping scheme; and management measures to ensure that the design vision is achieved in the long term.

6.11 Overall therefore, in consideration of the scale and extent of the development proposals, alongside the proportional scope of avoidance, mitigation and compensation measures proposed, EDP considers that the scheme is capable of delivering opportunities for biodiversity enhancement over the long term.

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Appendix EDP 1
Plot Boundaries LC1 and LC2
(Drawing Reference 229671-CG642-P0, Arup 14/10/16)

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Legend

Plot Boundary

P0	14/10/16	DS	JS	JS
Preliminary Issue				
Issue	Date	By	Chkd	Appd

Client
Walters Land (Rogerstone) Ltd.

Job Title
Jubilee Park - Infrastructure

Scale at A3
1:1000

Discipline
Civil

ARUP

4 Pierhead St, Capital Waterside
Cardiff, CF10 4QP
T +44(0)29 20473727 F +44(0)29 20472277
www.arup.com

Drawing Title
Plot Boundaries LC1 and LC2

Drawing Status
Preliminary

Job No
229671

Drawing No
CG642

Issue
P0

Appendix EDP 2
Illustrative Masterplan
(Drawing Number: 2105 IMP-01, Hammond Architectural Ltd., April 2021)

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Key Urban Design Principles:

Movement & Access

- 1 Pedestrian and vehicular access achieved via existing connections off Jubilee Way and Castle Way, seamlessly connecting with the existing 2m footway and green infrastructure.
- 2 Strong connectivity with the existing network of footpaths and cycleways that link to local amenities.
 - a. Central Pond Area
 - b. Jubilee Park
 - c. Green Link leading to Linear Park
 - d. Shops shops and services
- 3 Good public transport connections (bus, cycle and rail links) offering sustainable travel mode choices.
- 4 High-quality public realm with distinctive surface treatments and high-quality landscape designed to reduce vehicular speeds, encourage walking and promote social interaction.
- 5 Existing foul easement access safeguarded

Environmental Sustainability

- 6 A mixed tenure development, offering high quality, sustainable homes and lifestyles that encourage energy and resource efficiency

- 7 Multifunctional green infrastructure, with high quality landscape design, fronting, permeating and connecting the development for people and nature.
- 8 Attractive, multifunctional landscape/attenuation areas to manage surface water and enhance biodiversity; planted with a custom designed wet meadow mix and providing a space for the community to enjoy.
- 9 An internal network of biodiverse rain gardens and raised planters, managing surface water and promoting wildlife connectivity within the site.
- 10 Attractive street planting, with ornamental/fruit trees, hedgerows, shrubs, grasses and ferns softening and animating the streetscene; managing surface water, enhancing wildlife habitat connectivity and supporting health and well-being.
- 11 Integration of a green link, aligned with the key view corridor between the Central Pond and Tregwylm Castle area. The link will connect to the wider footpath network and be punctuated by trees, planting.
- 12 Wildlife corridor along the eastern boundary linking to the Tregwylm Castle remains woodland.

- 13 Permeable block paving shared surface / parking pays offering SUDS potential and introducing attractive variations within the streetscene.

Community Safety

- 14 Careful detailing of the public realm to help promote safe connectivity, linked back into the wider context
- 15 High-quality boundary treatments to create attractive spaces whilst managing changes in level and restricting access where necessary.
- 16 Varied front garden setbacks, with carefully designed boundary enclosures to manage access and create attractive streets.
- 17 Provision of private amenity space, providing residents with private, secure space with opportunities for growing food.

- 18 Private, secure amenity space, providing opportunity for small fruit trees, growing vegetables/fruit encouraging healthy living.
- 19 Considerate of existing residents with proposed units, elevations and gardens and boundary treatment carefully positioned to respect residents right to privacy.

Character

- 20 Attractively landscaped, tree-lined streets and spaces forming and linking the gateway arrival routes and spaces seamlessly with the wider Jubilee Park neighbourhood.
- 21 Key focal buildings positively addressing and animating key routes and view corridors.
- 22 Strong street and frontage treatments encourage a strong, legible sense of place. Simple forms and repetitive features serve to enhance character.



DRAFT



Project Title		Rev.:	Scale	Date	Drawn by
Jubilee Park, Rogerstone			1:500@A1	April 2021	HAL
Drawing Title		Project No.	Drawing No.		Revision.
Illustrative Masterplan		2105	IMP-01		-

Date : .

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Appendix EDP 3 Illustrative Photographs



Photo EDP 1: Spoil piles in LC1, view to north-west.



Photo EDP 2: Material storage and metal containers in LC1, view to west.



Photo EDP 3: Bare ground/hardstanding on Parcel LC2, view to south.



Photo EDP 4: Ephemeral/short perennial grassland, with scattered scrub on the banks of LC2, view to north.



Photo EDP 5: Improved grassland in LC2, view to west.



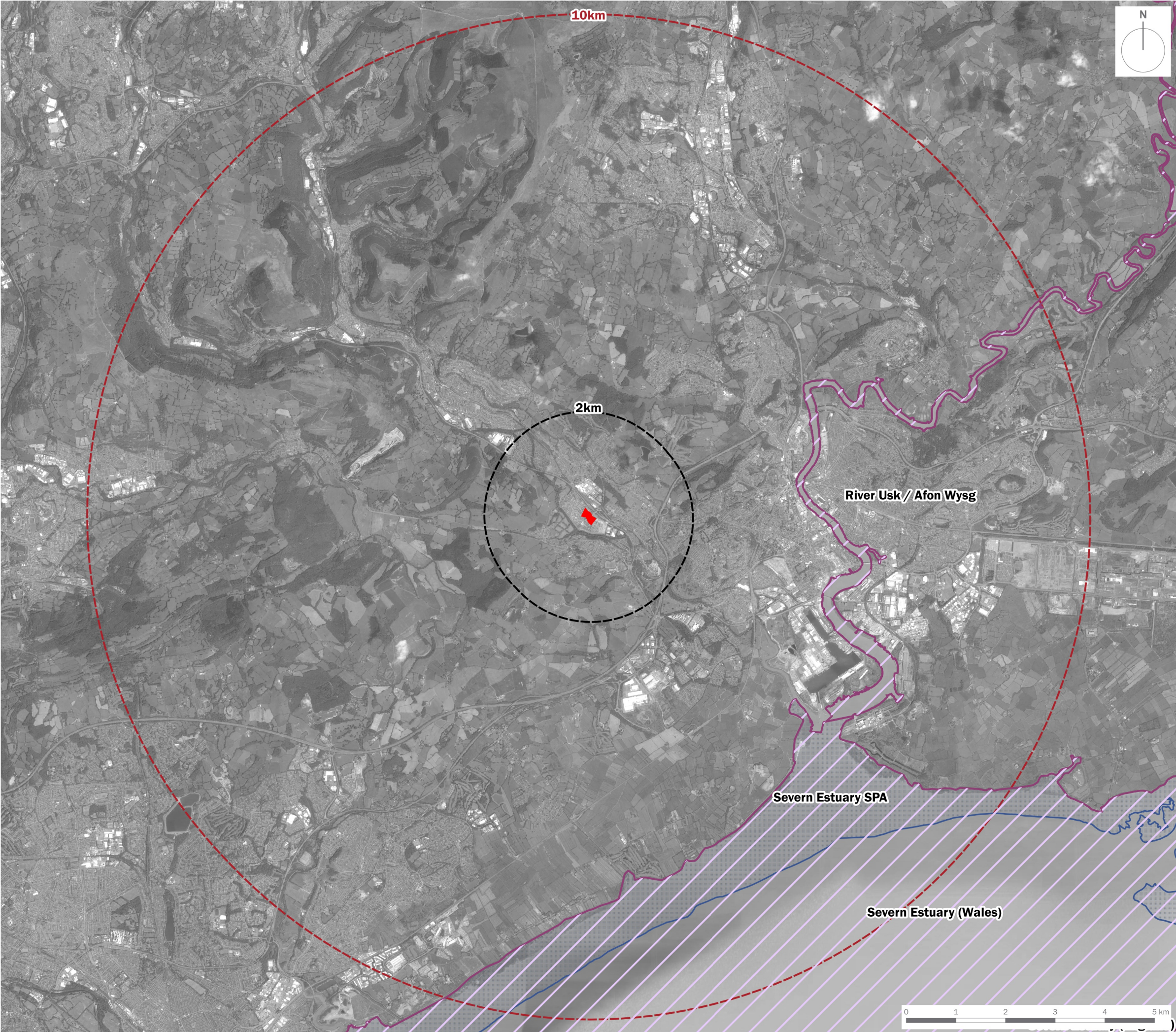
Photo EDP 6: Line of immature trees around the northern perimeter of Parcel LC2, view to west.

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Plans

Plan EDP 1	Statutory Designated Sites (edp6721_d002 04 March 2020 MJC/KH)
Plan EDP 2	Non-statutory Designated Sites (edp6721_d003 04 March 2020 MJC/KH)
Plan EDP 3	Phase 1 Habitat Plan (edp6721_d001 13 October 2020 JTF/EM)

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Site Boundary

10km Range Ring

2km Range Ring

Special Area of Conservation (SAC)

Special Protection Area (SPA)

client			
Walters Land (Rogerstone) Limited			
project title			
Land Parcels LC1 and LC2 at Jubilee Park, Rogerstone			
drawing title			
Plan EDP 1: Statutory Designated Sites			
date	04 MARCH 2021	drawn by	MJC
drawing number	edp6721_d002	checked	KH
scale	1:75,000 @ A3	QA	RB



Site Boundary

2km Range Ring

Ancient Semi Natural Woodland

Ancient Woodland Site of Unknown Category

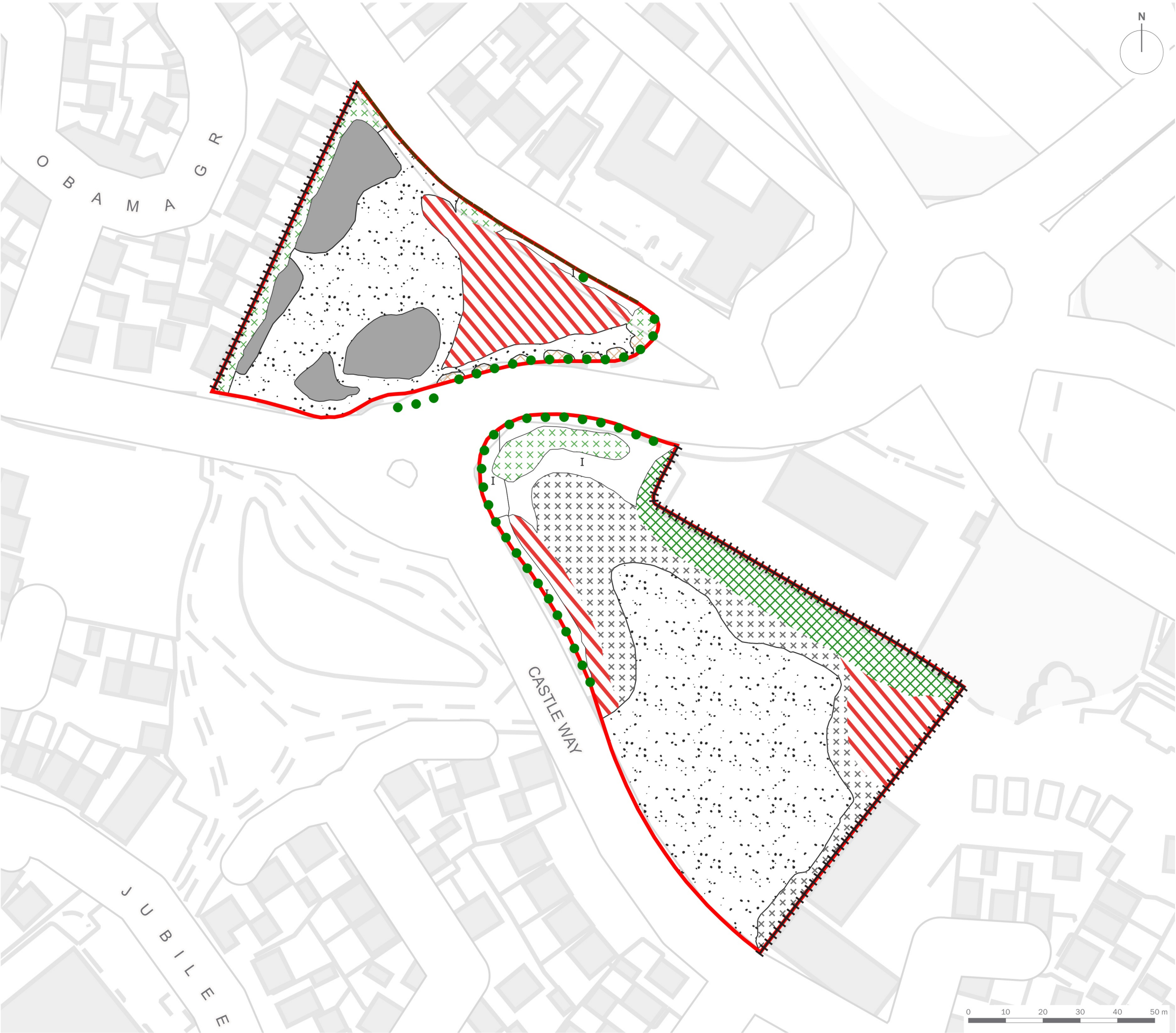
Plantation on Ancient Woodland Site

Restored Ancient Woodland Site

Local Nature Reserve

Wildlife Site / SINC (Adopted)

client			
Walters Land (Rogerstone) Limited			
project title			
Land Parcels LC1 and LC2 at Jubilee Park, Rogerstone			
drawing title			
Plan EDP 2: Non-statutory Designated Sites			
date	04 MARCH 2021	drawn by	MJC
drawing number	edp6721_d003	checked	KH
scale	1:17,500 @ A3	QA	RB



- Site Boundary
- Bare Ground/Hardstanding
- Ephemeral/short Perennial
- Improved Grassland
- Spoil Piles
- Material Storage and Metal Containers
- Dense Continuous Scrub
- Introduced Shrub
- Scattered Scrub
- Line of Trees
- Fence
- Wall

client			
Walters Land (Rogerstone) Limited			
project title			
Land Parcels LC1 and LC2 at Jubilee Park, Rogerstone			
drawing title			
Plan EDP 3: Phase 1 Habitat Plan			
date	13 OCTOBER 2020	drawn by	JTF
drawing number	edp6721_d001	checked	EMc
scale	1:1,000 @ A3	QA	RB



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