



Andrew Scott Ltd

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# HARBOURSIDE ENABLING WORKS

Biodiversity Mitigation Strategy







Andrew Scott Ltd

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# **HARBOURSIDE ENABLING WORKS**

Biodiversity Mitigation Strategy

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Andrew Scott Ltd

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# HARBOURSIDE ENABLING WORKS

## Biodiversity Mitigation Strategy

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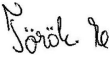
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# 1. INTRODUCTION

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## 1.1. PROJECT BACKGROUND

1.1.1. WSP UK Limited (hereafter referred to as 'WSP') was commissioned by Andrew Scott Ltd on behalf of Neath Port Talbot County Borough Council (NPTCBC) to prepare a Biodiversity Mitigation Strategy. The Biodiversity Mitigation Strategy, hereafter referred to as 'the Strategy' is required to fulfil pre-commencement planning conditions of an approved planning application. The planning application is for enabling works to support the proposed regeneration of the Harbourside Strategic Employment Site in Port Talbot, South Wales, hereafter referred to as 'the Site'. The enabling works scheme involves the construction of an access road, flood mitigation and remediation works and improvements to the load capacity of the ground, hereafter referred to as 'the Proposed Development'. The Proposed Development is being implemented to enable future enterprise development at the Site and to provide future business and employment opportunities.

1.1.2. A planning application (with application number P2020/0294) has been approved subject to the planning conditions by NPTCBC for the Proposed Development. The planning conditions relevant to the Strategy includes Condition 9, which states:

*'Notwithstanding the submitted information, no development shall commence until a scheme is submitted to and approved in writing by the Location Planning Authority detailing landscaping and biodiversity mitigation measures along with a timescale for their implementation and completion. The mitigation shall be implemented in accordance with the agreed timescale and maintained as such thereafter'.*

1.1.3. And Condition 10, which states:

*'Prior to the commencement of development, a landscape management plan, including management responsibilities and maintenance, for all landscaped areas, to include how the site will be managed post construction, shall have been submitted to and approved in writing by the Local Planning Authority. The landscape management plan shall be implemented and adhered to in accordance with the approved details thereafter'.*

## 1.2. ECOLOGICAL BACKGROUND

1.2.1. The Site is currently a derelict brownfield site near the South Wales coast centred at National Grid Reference: SS 76577 89506 and displayed by the red line boundary on Figure 1. The Site is dominated by ephemeral/short perennial vegetation, bare ground and hardstanding features. There are areas of scattered scrub and improved grassland mainly around the Site's perimeter, with patches of fly tipped material and broken fence lines throughout the Site.

1.2.2. This Site has been subject to an ecological assessment by the Countryside and Wildlife Team at NPTCBC in May 2017, with a follow up assessment undertaken in November 2019 (NPTCBC, 2019). The ecological assessment was supported by a Phase 1 habitat survey and a desk study which included a search for biodiversity records that include protected species and protected sites (obtained from South East Wales Biodiversity Records Centre (SEWBRc)).

1.2.3. No statutory designated sites were identified within the Site or within 5 km of the Site. Although not currently located within a non-statutory site, the Site has been assessed as meeting the criteria for a

Site of Importance for Nature Conservation (SINC). The Phase 1 habitat survey recorded the following habitats:

- § Dense scrub;
- § Scattered scrub;
- § Ephemeral/short perennial; and
- § Bare ground.

1.2.4. As part of the Phase 1 habitat survey an assessment of the habitat suitability for protected species within the Site was undertaken. The Site was assessed as having suitability for the following species:

- § Bats (foraging only);
- § Reptiles;
- § Amphibians (terrestrial only)
- § Breeding birds; and
- § Invertebrates.

1.2.5. Invasive non-native species were identified on Site; these include Japanese knotweed *Reynoutria japonica*, *Cotoneaster* sp. and *Buddleja davidii* and were recorded within scrub boundaries.

1.2.6. A reptile survey was undertaken at the Site following the Phase 1 habitat survey. A total of 70 artificial refugia were deployed in suitable habitat within the Site and checked seven times. A total of three slow worms *Anguis fragilis* were recorded. Information on the results of the reptile survey results can be seen in the ecological assessment report (NPTCBC, 2019).

### 1.3. PURPOSE AND STRUCTURE OF THE STRATEGY

1.3.1. The purpose of the Strategy is to discharge Planning Condition 9 and provide information to support the discharge of Condition 10 by providing a mitigation scheme for biodiversity including a management and monitoring plan for created habitats and landscaping. The Strategy provides the measures required to mitigate the effects of the Proposed Scheme on identified biodiversity features and to enhance the value of such features in accordance with the Environment (Wales) Act 2016, Section 6 of Planning Policy Wales (ed 10) and planning policies SP15<sup>1</sup>, BE1<sup>2</sup> and I1<sup>3</sup> of the Neath Port Talbot Local Development Plan (2011 – 2026).

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<sup>1</sup> Strategic Policy SP15 Biodiversity and Geodiversity - Important habitats, species and sites of geological interest will be protected, conserved, enhanced and managed.

<sup>2</sup> Policy BE1 Design - All development proposals will be expected to demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places.

<sup>3</sup> Policy I1 Infrastructure Requirements - In addition to infrastructure improvements necessary to make a development acceptable in health, safety and amenity terms, additional works or funding may be required to ensure that, where appropriate, the impact of new development is mitigated

1.3.3. Planning Policy Wales (Edition 10, 2018) Section 6.4.9 states:

*'A proactive approach towards facilitating the delivery of biodiversity and resilience outcomes should be taken by all those participating in the planning process. In particular, planning authorities must demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions.'*

1.3.4. Policy BE1 of the Neath Port Talbot Local Development Plan states:

*'All development proposals will be expected to demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places... Important local features (including buildings, amenity areas, green spaces and green infrastructure, biodiversity and ecological connectivity) are retained and enhanced as far as possible'*

1.3.5. The Strategy is supported by a Landscape Design (displayed on two drawings in Appendix A) and a planting palette produced by NPTCBC (listed in Appendix B).

1.3.6. The Strategy is based upon habitat creation, enhancement and management proposals requested by NPTCBC. These proposals have been set out to enhance and manage two areas referred to as Location 1 and Location 2 (see Landscape Design drawing 0602 in Appendix A). Location 1 has been identified as linear sections of connected land located on the perimeter of the Site for use as on-Site mitigation and enhancement. Location 2 has been identified as an area of off-Site mitigation and enhancement, which includes an existing receptor site specifically for small blue butterfly *Cupido minimus*.

1.3.7. General measures to protect biodiversity and other environmental features are documented in the Construction Environmental Management Plan (CEMP) (WSP, 2021) for the Proposed Development.

## **1.4. NOTES AND LIMITATIONS**

1.4.1. It should be noted that the management and monitoring proposals within the Strategy are based on the Landscape Design as displayed on drawings in Appendix A. The Strategy has been produced for the Proposed Development only and does not cover further landscaping proposals for future development at the Site.

1.4.2. The Landscape Design drawings are considered final and no significant changes are anticipated, however should alterations occur to the drawings, it may be necessary to revisit the Strategy to confirm the content remains valid.

1.4.3. All management, maintenance and monitoring proposals set out in the Strategy will be undertaken for a period of 10 years as stipulated by NPTCBC. It should also be noted that Andrew Scott Ltd are responsible for implementing, maintaining and monitoring the Landscape Design for the first three years upon completion of the Proposed Development with NPTCBC taking over the responsibilities thereafter. Management and maintenance after the three-year period will be included as part of NPTCBC's Streetcare Maintenance Rota and will be implemented as per recommendations made by a Suitably Qualified Ecologist (SQE) or designated ECoW.

## 2. THE STRATEGY

- 2.1.1. The Strategy has been produced in accordance with BS42020:2013: Biodiversity – Code of Practice for Planning and Development.
- 2.1.2. The biodiversity elements of the Strategy have been produced based on information and mitigation proposals stated in the ecological assessment produced by NPTCBC (NPTCBC, 2019).

### 2.2. EXISTING BIODIVERSITY FEATURES AND DEVELOPMENT IMPACTS

#### ON-SITE BIODIVERSITY FEATURES

- 2.2.1. A range of biodiversity features have been identified on Site during the ecological assessment undertaken by NPTCBC (NPTCBC, 2019). Table 1 below summarises all biodiversity features relevant to the Site including nature of impact and the appropriate mitigation required. Habitat creation and enhancement measures are detailed in section 2.5.

**Table 2-1 – Summary of Biodiversity Features on Site and Impact Assessment (as per NPTCBC, 2019)**

Biodiversity Feature (as recorded by NPTCBC)	Nature of Impact	Mitigation
<b>Habitat identified as meeting SINC criteria (as per NPTCBC Local Development Plan) – Open Mosaic Habitats on Previously Developed Land</b>	Removal of habitat (due to contamination of ground)	Habitat creation and enhancement measures at Location 1 and Location 2.  Includes grassland creation with wildflower seeding, wildflower plug planting and a wetland area created at Location 1.  Wildflower seeding, plug planting and management of undesirable species at Location 2.
<b>Bats (foraging)</b>	Reduction in foraging habitat	Foraging habitat and corridors created by habitat creation and enhancement of Location 1 and Location 2.  Includes creation of a wetland area, new grasslands with wildflower planting and butterfly banks at Location 1. Tree planting may be included as part of future development at the Site
<b>Reptiles and Amphibians</b>	Risk of killing/injury of individuals,  Reduction in suitable habitat	ECoW to supervise vegetation clearance works and apply method to conserve amphibians and reptiles during site clearance works.  Vegetation and Site clearance should be undertaken between August and October (to

		<p>prevent impacts to breeding birds and manage disturbance to reptiles).</p> <p>Habitat creation and enhancement at Location 1 which includes creation of new wetland area and grasslands with wildflower planting.</p>
<b>Birds</b>	<p>Risk of killing/injury of individuals and destruction of nests</p> <p>Loss of breeding and foraging habitat</p>	<p>Avoid vegetation clearance during period March - July.</p> <p>Habitat creation and enhancement measures at Location 1 and Location 2.</p> <p>Includes creation of wetland area, new grasslands with wildflower planting. Tree planting may be included as part of future development at the Site.</p>
<b>Invertebrates</b> Small blue butterfly and shrill carder bee <i>Bombus sylvarum</i>	<p>Loss of suitable breeding and foraging habitat</p>	<p>Habitat creation and enhancement at Location 1 and Location 2.</p> <p>Includes wetland area, new grasslands with wildflower planting and butterfly bank at Location 1. Wildflower seeding, plug planting and management of undesirable species at Location 2.</p>

## OFF-SITE BIODIVERSITY FEATURES

- 2.2.2. Biodiversity features off-Site pertains to the habitats and features specifically at Location 2 (as displayed on Landscape Design drawing 0602 in Appendix A). Location 2 is an area of semi-improved grassland and scrub mosaic to the south east of the Site. The area was previously used as a receptor site for the translocation of small blue butterfly.
- 2.2.3. Location 2 comprises a grassland with a varying sward height, pockets of willow *Salix* sp. scrub and other small trees. The Site has been colonised by *Buddleja davidii* and *Cotoneaster horizontalis*. The Strategy sets out proposals to enhance this area as part of the Proposed Development.

## 2.3. PRE-CONSTRUCTION MEASURES

### AVOIDANCE

- 2.3.1. Site and vegetation clearance should avoid being undertaken within sensitive ecological periods. The breeding bird season is March – September, with main breeding activity being undertaken typically between March and July. The reptile active season is late March/April – October. Excavation and below ground works should also be avoided during the reptile hibernation period (November – early March). This is to prevent disturbance to reptiles potentially hibernating below ground on Site during this period.
- 2.3.2. The optimal months to prevent disturbance to breeding birds and to allow reptiles to move into adjacent habitat are between August and October (as per the ecology report by NPTCBC). This

would cause minimal disturbance to breeding birds as most of the breeding activity has finished and would also allow habitat to be manipulated so that reptiles can move into areas of cover.

- 2.3.3. The necessity for an ECoW is advised due to the confirmed presence of reptiles on Site and potential presence of nesting birds and amphibians. It is recommended that an ECoW is present on Site during all vegetation clearance and excavation works prior to construction.

## **SITE AND VEGETATION CLEARANCE**

- 2.3.4. It is understood that part of the Site's vegetation has previously been cleared. A competent and suitably experienced ecologist will act as an ECoW and oversee all further vegetation and Site clearance work. The ECoW will provide toolbox talks to all site operatives on their responsibilities to ensure the protection of biodiversity, ecological risks and legal requirements especially in relation to bats, reptiles, amphibians, nesting birds and invertebrates. During all work on Site, if any Site operative encounters a protected species work will stop immediately, and further advice sought from the ECoW.
- 2.3.5. All vegetation clearance for scrub and grassland should be undertaken carefully and methodically and directed towards adjacent habitat off-Site.
- 2.3.6. If clearance is to be undertaken between August – October, a three-staged approach (as outlined in the ecology report by NPTCBC) should be implemented as follows:
- § All vegetation will be cut to a height of 300mm above ground and left for a period of 24 hours;
  - § The clearance will be undertaken following a north west to north east regime (to allow wildlife to move towards suitable habitat);
  - § Should reptiles or presence of other wildlife be discovered, they will be captured and taken to an area where clearance is not planned to take place;
  - § Once 24 hours has elapsed, vegetation will then be cut to a height of 100mm with measures undertaken as above, and left for a further 24 hours; and
  - § All remaining vegetation will be cut to ground level in the direction as indicated above and as per the same methods. The area will then be left again for a further 24 hours before any further clearance takes place.
- 2.3.7. All clearance will be supervised by the ECoW. If an active bird nest is found within vegetation, the nest will be demarcated by a 5-metre exclusion buffer until the nest becomes inactive or nestlings have fledged.
- 2.3.8. For reptiles, all excavation work should be undertaken during the reptile active season (April-October). Excavation works should not be undertaken in the reptile hibernation period (November – March) due to the risk of killing or injuring reptiles that could be hibernating underground. Hibernacula such as brash, stone piles, root systems or earth mounds should be checked thoroughly and then moved or dismantled in the reptile active season, before clearance.
- 2.3.9. Storage of materials, such as soils, rubble etc. should be taken off-Site or if this is not feasible should be placed within storage containers or skips within a designated Site compound. This will ensure that such storage does not attract animals, such as reptiles, as refugia/hibernacula. All locations will be agreed with the ECoW.
- 2.3.10. All trenches, pits and holes in the ground should be covered overnight. Should there be a requirement for trenches and/or pits be left uncovered or open overnight, a ramp should be

deployed to allow animals to escape. All trenches and pits should be routinely checked by the ECoW.

- 2.3.11. Roles and responsibilities of the ECoW are documented in the CEMP (WSP, 2021).

### **UNIDENTIFIED PROTECTED SPECIES**

- 2.3.12. Where unidentified protected species are discovered after clearance work, the following measures must be implemented:

- § All work in the area must stop immediately;
- § The ECoW will demarcate the area and restrict access to ensure that there is no disturbance to the habitat or species;
- § The ECoW will decide as to whether the protected species should be moved to an area away from impact if it is considered to be at risk of killing or injury at the time of discovery;
- § Natural Resources Wales (NRW) are to be contacted if necessary, to advise on the situation and to indicate whether a protected species licence is required to cover works;
- § Andrew Scott Ltd.'s construction manager will be informed who will seek guidance on how to proceed;
- § Site personnel will not recommence work until the necessary measures have been put in place; and
- § Details of the incident, including photos and relevant information on the environmental Incident will be recorded and reported.

### **INVASIVE NON-NATIVE AND UNDESIRABLE SPECIES**

- 2.3.13. Japanese knotweed and *Cotoneaster* sp. are Invasive Non-Native Species (INNS) as listed on the Wildlife and Countryside Act 1981 (as amended). It is illegal to cause the spread of these species in the wild. These species have been identified as present on Site within scrub boundaries as recorded by NPTCBC (NPTCBC, 2019),
- 2.3.14. Japanese knotweed is a prolific species; most commonly spread by fragments of rhizome or stems which can be as little as 10mm in length. Rhizomes can remain dormant in soil for as long as 20 years. As a result, Japanese knotweed must be treated in line with current best practice methodologies (CIRIA, 2020).
- 2.3.15. All *Cotoneaster* sp. stands should be removed as a part of vegetation clearance works, with arisings safely taken off-Site. If not cleared as part of vegetation clearance, all stands that are likely to be impacted by the Proposed Development must be removed prior to construction.
- 2.3.16. Should the above INNS be identified within the construction footprint and up to 20m beyond the footprint, it will be necessary to produce a specific INNS management plan. INNS mapping should be undertaken prior to construction with a specialist contractor commissioned to remove all stands. General measures to control hazardous waste are documented in the CEMP (WSP, 2021).

Although not listed as INNS on the Wildlife and Countryside Act 1981 (as amended), *Buddleja davidii* is a non-native shrub species that rapidly spreads and colonises brownfield sites, outcompeting native species. *Buddleja davidii* stands should be removed and taken off-Site with routine control to prevent future colonisation.

## 2.4. DURING CONSTRUCTION

- 2.4.1. Once the Site has been cleared sensitively and methodically and is ready for construction, the ECoW will provide a toolbox talk (TBT) to all Site personnel and remain on Site as required. The CEMP will be followed throughout the construction period to ensure precautionary working methods for wildlife are adhered to.

## 2.5. POST-CONSTRUCTION MEASURES

### HABITAT CREATION AND ENHANCEMENT

- 2.5.1. Habitat creation and enhancement measures are to be implemented at both Biodiversity Mitigation Areas, Location 1 and Location 2 on completion of the Proposed Development. These measures will be implemented in Year 1, as set out by NPTCBC. Creation and enhancement measures for both Locations are displayed on Landscape Design drawings in Appendix A.
- 2.5.2. Management and monitoring measures for created habitats are set out in section 2.6.
- 2.5.3. The wildflower seed mixes below can be used as a basis for the habitat creation and enhancement at Location 1 and 2 and includes:
- § Emorsgate EM3 Special General Purpose Meadow Mixture or similar; and
  - § Emorsgate EP1 Pond Edge Mixture or similar
- 2.5.4. EM3 contains kidney vetch *Anthyllis vulneraria* but all seed mixes can be amended to include kidney vetch and red bartsia *Ondontites vernus* if necessary. Plug plant species should be obtained from a local propagation nursery.
- 2.5.5. It should be noted that red bartsia may not be available as a plug plant at the time of habitat creation and enhancement. Alternatives plug plant species to be sourced instead could include common restharrow *Ononis repens* or field scabious *Knautia arvensis*.
- 2.5.6. The full planting palette can be seen in Appendix B.

### BIODIVERSITY MITIGATION AREA: LOCATION 1

- 2.5.7. Location 1 comprises connected areas of hardstanding, improved grassland, bare ground and scattered scrub habitat measuring approximately 11,80575m<sup>2</sup> within and adjacent to the Site's perimeter. This area includes an unused/abandoned strip of hardstanding referred to as Dock Road. At Location 1, landscaping, habitat creation and enhancement measures are proposed as follows:
- § Existing areas of grassland will be sown with wildflower seed mix suitable for invertebrates to enhance to species-rich grassland (listed in Appendix B);
  - § All areas of existing, unused hardstanding (such as Dock Road) will be broken up (where possible), covered with topsoil and sown and plug planted with kidney vetch and red bartsia, with surrounding areas seeded with wildflower seed mix to create species-rich grassland for invertebrates;
  - § Should red bartsia not be available as a plug plant, common restharrow or field scabious should be obtained instead (these species are late flowering and beneficial to invertebrates);
  - § Hibernacula/butterfly bank in the form of subsoil, stones, wood and stone chippings, logs and/or brash will be created along Dock Road at a length of approximately 235m. This hibernaculum is to be created to provide refuge for invertebrates, particularly butterflies but could provide



opportunities for reptiles and amphibians. Once the bank has been constructed, it should then be sown with a wildflower seed mix or planted with scrub saplings.

- § The hibernacula/butterfly bank should be created as per NPTCBC's Butterfly Hibernacula design (as displayed on Landscape Design drawing 0602 in Appendix A);
- § Maintain small areas of bare ground to provide optimum habitat preferences for small blue butterfly and shrill carder bee;
- § Verges of newly constructed road and embankments of Sustainable Drainage Systems (SUDS) to be landscaped with species rich wildflower seed mix;
- § Creation of an attenuation pond in the east of the Site to serve as drainage and a new wetland area;
- § The attenuation pond will be wedge shaped and designed with 1.3m progressive slopes to allow for marginal and emergent vegetation and other aquatic plants to be planted; and
- § Species rich grasslands created using wildflower seed mix will be implemented adjacent to the wetland area and distinct areas plug planted with kidney vetch and red bartsia.

2.5.8. Additional tree planting could be included as part of the Site's future development, which would form part of a new planning application. Specific areas and lengths of plug planting are displayed on Landscape Design drawings 2601 in Appendix A.

2.5.9. Management and monitoring of these proposals are documented in section 2.6.

### **BIODIVERSITY MITIGATION AREA: LOCATION 2**

2.5.10. Location 2 is an area of species rich grassland/scrub mosaic to the south east of the Site, off Harbour Way centred at National Grid Reference SS 7727888732 and measures approximately 6,125m<sup>2</sup>.

2.5.11. Location 2 comprises patches of scrub that include silver birch *Betula pendula*, spindle *Euonymus europaeus* and willow *Salix* sp within a grassland comprising meadow buttercup *Ranunculus acris*, creeping buttercup *Ranunculus repens* and grass species such as common bent *Agrostis capillaris* and cock's foot *Dactylis glomerata*.

2.5.12. As mentioned, Location 2 comprises an area previously set aside as a receptor site for the translocation of small blue butterfly and requires enhancement measures for it to be restored. Location 2 will be retained and enhanced with the following measures:

- § Control and removal of INNS such as *Cotoneaster* sp. and undesirable species such as *Buddleja davidii* from all areas including the small blue butterfly receptor site;
- § Bramble *Rubus fruticosus* scrub is to be removed between and around all entrance gates;
- § Control of general weed species such as ragworts *Jacobaea* sp, docks *Rumex* sp. and thistles *Cirsium* sp to ensure wildflowers can thrive;
- § Six areas to be plug planted and sown with kidney vetch and red bartsia (or alternative species such as common restharrow or field scabious if red bartsia is unavailable) as per Landscape Design drawing 2601;
- § The grassland should be re-seeded with a wildflower mix (as per wildflower species in Appendix B) to ensure viability of grassland;
- § The specific fencing currently in place to demarcate the small blue butterfly translocation site is to be repaired and/or replaced;
- § Scrub and woody vegetation cleared (excluding INNS, which is to be taken off-site) should be chipped and laid out in bunds to provide hibernation opportunities; and

§ Existing scrub lines in the south west of Location 2 are to be retained.

2.5.13. Specific areas and lengths of plug planting are displayed on Landscape Design drawings 2601 in Appendix A.

## 2.6. HABITAT MANAGEMENT AND MONITORING

### MANAGEMENT

2.6.1. The implementation and management of measures at Location 1 and Location 2 will be undertaken at the same time to ensure both biodiversity mitigation areas are maintained as contiguous areas. It is understood that all habitat creation proposals are to be implemented upon completion of the Proposed Development. The following management and monitoring measures should be implemented over a 10-year period (as stated by NPTCBC). Management and maintenance will form part of NPTCBC's Streetcare Maintenance Rota once responsibilities have been transferred after the initial three-year period. Management and maintenance will be implemented as per recommendations made by the SQE or ECoW.

2.6.2. A management and monitoring programme for created and enhanced habitats and landscaping at Location 1 and Location 2 has been produced and is in Appendix C.

2.6.3. Management measures are to be implemented as follows:

- § Once established, species rich grassland (excluding plug planted kidney vetch and red bartsia or alternative species if red bartsia is not available) should be cut twice per year, once in late July/August and a final cut towards the end of October;
- § Grassland should be cut to a level of 100mm (including the small blue butterfly receptor site) or as required (to prevent injury or killing of reptiles) using a small-scale mower or brushcutters;
- § Kidney vetch and red bartsia (or alternative species) plug planting should be routinely managed as distinct areas to ensure a high density of both species, with the routine removal by hand of general weeds such as ragworts *Jacobaea* sp. and thistles *Cirsium* sp. and other outcompeting wildflowers;
- § Scrub development within newly created and enhanced species rich grasslands should be controlled and kept clear of large scrub species;
- § Scrub should be allowed to colonise grassland borders with a maximum coverage of up to 10% for Location 1. Scrub growth and coverage in Location 2 should be managed following monitoring results;
- § Various areas to be flailed to ground on rotation to disturb and open small patches of bare ground for small blue butterfly and shrill carder bee;
- § Hibernacula/butterfly banks to be created as per NPTCBC Butterfly Hibernacula design (see Landscape Design drawing 0602);
- § Hibernacula/butterfly banks should be created and/or modified every three-four years to ensure habitat rotation and successful breeding;
- § Undesirable species such as *Buddleja davidii* to be removed and taken off-Site;
- § INNS to be managed by removal or treated in line with industry best practice specific to each species (Japanese knotweed removal must follow a strict management plan and be removed by a specialist contractor);
- § When creating hibernacula from cut vegetation, consideration must be given to the placement to prevent over-fertilising grasslands; and
- § Post and wire fences to be replenished, specifically at Location 2 where fences are damaged.

## SITE MONITORING

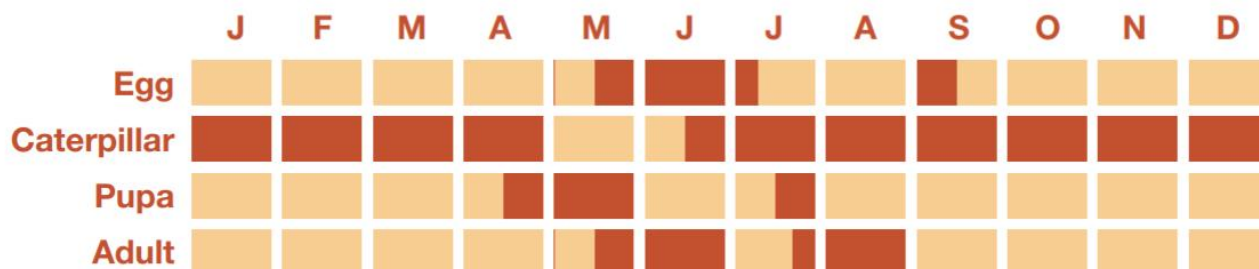
- 2.6.4. As indicated by NPTCBC, monitoring of the created habitat should be undertaken over a period of 10 years. Year 1 is regarded as the active or growing season after the Proposed Development has been completed. General Site monitoring should take place in Years 1, 2, 3, 5 and 10 as stated by NPTCBC. Monitoring should be undertaken by the SQE or ECoW.
- 2.6.5. Andrew Scott Ltd. are to maintain the biodiversity mitigation areas for a period of three years after the completion of the Proposed Development. NPTCBC will then take over the management and maintenance after the three-year period. The management and maintenance throughout the 10-year period will be implemented based on recommendations made by the SQE or ECoW.
- 2.6.6. A short report detailing the findings at the end of each monitoring year should be produced by the SQE or the ECoW. The measures listed below outline the approach to monitoring the success of habitat creation and enhancement including specific methods for small blue butterfly, shrill carder bee and reptiles.
- § A Site walkover should be undertaken in Year 1 to assess the establishment and success of all habitat creation and enhancement measures of both Location 1 and Location 2.
  - § The Site walkover should be undertaken at least once a year during late spring or early summer for the first five years to assess the condition of the created and enhanced habitats and to inform further management;
  - § Information collected on the abundance and distribution of wildflowers, density of plug planted species, wetland habitat condition and the coverage of INNS and general weeds will be collected to measure the success of the measures implemented; and
  - § Scrub monitoring will also form part of the Site walkover to understand how much scrub needs to be managed.

## MONITORING FOR SMALL BLUE BUTTERFLY

- 2.6.7. It is important for both Location 1 and Location 2 to maximise the density and success of kidney vetch. Kidney vetch is the sole foodplant of the small blue butterfly and is a poor botanical competitor among other wildflowers and so requires regular provision. Areas of tall grasses and butterfly banks are essential as this provides shelter and roosting sites. The measures below should be undertaken by the SQE or ECoW as stated to monitor small blue butterfly habitat and determine success and functionality:
- § A survey within created habitat, specifically kidney vetch plug planted areas to search for signs and evidence of small blue butterfly. This should be undertaken each year for the first three years of the monitoring period;
  - § Prior to the survey taking place, an assessment of the habitat value for small blue butterfly should be undertaken, which includes assessing the density of kidney vetch and the condition of butterfly banks;
  - § During the survey signs of presence of small blue butterfly at various life stages (as per Table 2.2 below) should be noted;
  - § At least one survey should be undertaken per year, with survey timing changing every year to capture each life stage of the small blue butterfly. This is due to population fluctuations per year and the possibility of not recording adults; and
  - § If small blue butterfly evidence is not recorded, or recorded infrequently, updated management measures and/or reseeded and new plug planting should be implemented.

2.6.8. Information about specific small blue surveys including recording forms can be obtained from the Butterfly Conservation website, with specific information on small blue surveys located at <https://butterfly-conservation.org/in-your-area/east-scotland-branch/small-blue-surveys>.

**Table 2-2 - Lifecycle of Small Blue Butterfly (Butterfly Conservation Factsheet, n.d)**



### MONITORING FOR SHRILL CARDER BEE

2.6.9. The shrill carder bee is a late emerging species. It relies on flower rich habitats that continue or start to bloom during late summer through to late September/early autumn. Populations thrive on brownfield sites with a mosaic of habitats that offer forage and nesting opportunities. The shrill carder bee prefers a range of legume species such as birds-foot trefoil *Lotus corniculatus*, tubular species such as white dead-nettle *Lamium album* and other late flowering species such as red bartsia, common knapweed *Centaurea nigra* and scabious *Knautia* species.

2.6.10. The butterfly bank and rotational cutting would provide suitable foraging opportunities for bee populations at both Location 1 and Location 2. The measures below should be undertaken by the SQE or ECoW as stated to monitor shrill carder bee:

- § A survey to search for nests and colonies of shrill carder bee should be undertaken at least once every year for the first three years of the monitoring period;
- § Surveys should be undertaken within grasslands and plug planted areas where nesting sites and foraging areas can be found;
- § To maximise the chance of recording presence of shrill carder bee, surveys should begin from June onwards where nest sites are located by queens and worker bees have emerged;
- § A survey for shrill carder bee can be carried out alongside the Site walkover in late spring/early summer if appropriate;
- § The presence of shrill carder bee will depend on availability of suitable nesting sites within grassland tussocks and the availability of late emerging wildflowers; and
- § If shrill carder bee evidence is not recorded, or recorded infrequently, updated management measures and/or reseeded and new plug planting should be implemented

### MONITORING FOR REPTILES

2.6.11. Habitat created and enhanced for small blue butterfly and shrill carder bee would be suitable for reptiles and would provide basking, refuge and hibernation opportunities. Reptiles require a mosaic of habitats which include alternative grassland sward heights, scrub and earth banks.

2.6.12. Although a low population of slow worm was recorded during previous reptile surveys at the Site, it is recommended that monitoring surveys for reptiles are undertaken in Year 2 and 5 to understand if reptiles have recolonised after Site clearance. Monitoring measures for reptiles are outlined below and should be undertaken by the SQE or ECoW:

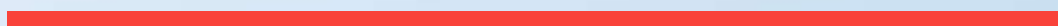
- § Incidental visual surveys for reptiles can be undertaken alongside all surveys mentioned above to record presence of reptiles at Location 1 (and Location 2 if required);
- § To monitor longer term presence and allow for natural fluctuations in population dynamics at Location 1, a targeted reptile presence/absence survey could be undertaken during suitable months (April, May and September) of Years 2 and 5.
- § The survey methodology should follow techniques detailed in the Froglife Advice Sheet 10. This includes deploying artificial refugia within suitable habitat such as along scrub and grassland interfaces, wetland and grassland interfaces and grassland tussocks;
- § Artificial refugia should then be lifted and checked over the course of seven visits; and
- § If reptile presence is not recorded after monitoring surveys in Year 5, updated management measures should be implemented at Location 1 to enhance the Site for reptiles as well as further monitoring.

### 3. REFERENCES

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- § Butterfly Conservation (n.d.) Small Blue Butterfly Factsheet. Accessed December 2020.  
<https://butterfly-conservation.org/sites/default/files/1.small-blue-psf.pdf>
- § Wade, M, Booy, O, White, V. (2008) CIRIA Invasive species management for infrastructure managers and the construction industry.
- § Froglife (1999) Froglife Advice Sheet 10: Reptile Survey. Froglife, London.
- § Neath Port Talbot County Borough Council (2019) Harbourside Strategic Employment Site (Platform Preparation) Ecological Assessment.
- § WSP (2021) Harbourside Enabling Works. Outline Construction and Environmental Management Plan.


# FIGURES



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File:



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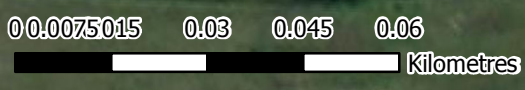
 Site Boundary



TITLE:  
Harbourside Enabling Works  
Biodiversity Mitigation Strategy  
Andrew Scott LTD

FIGURE No:  
Figure 1  
Site Location

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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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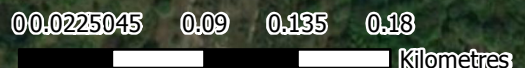
-  Site Boundary
-  Biodiversity Mitigation Areas



TITLE:  
Harbourside Enabling Works  
Biodiversity Mitigation Strategy  
Andrew Scott LTD

FIGURE No:  
Figure 2  
Biodiversity Mitigation Areas

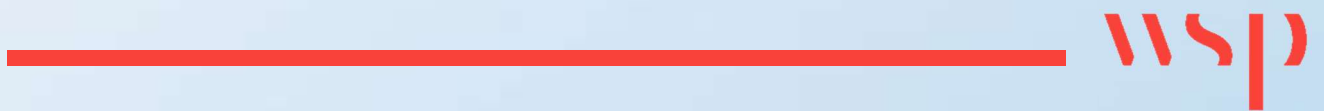
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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# Appendix A

## LANDSCAPE DESIGN DRAWINGS



1. All dimensions are in millimetres unless otherwise stated.
2. Drawing to be read in conjunction with NPT Biodiversity Ecological Assessment Report 2017.

**KEY**

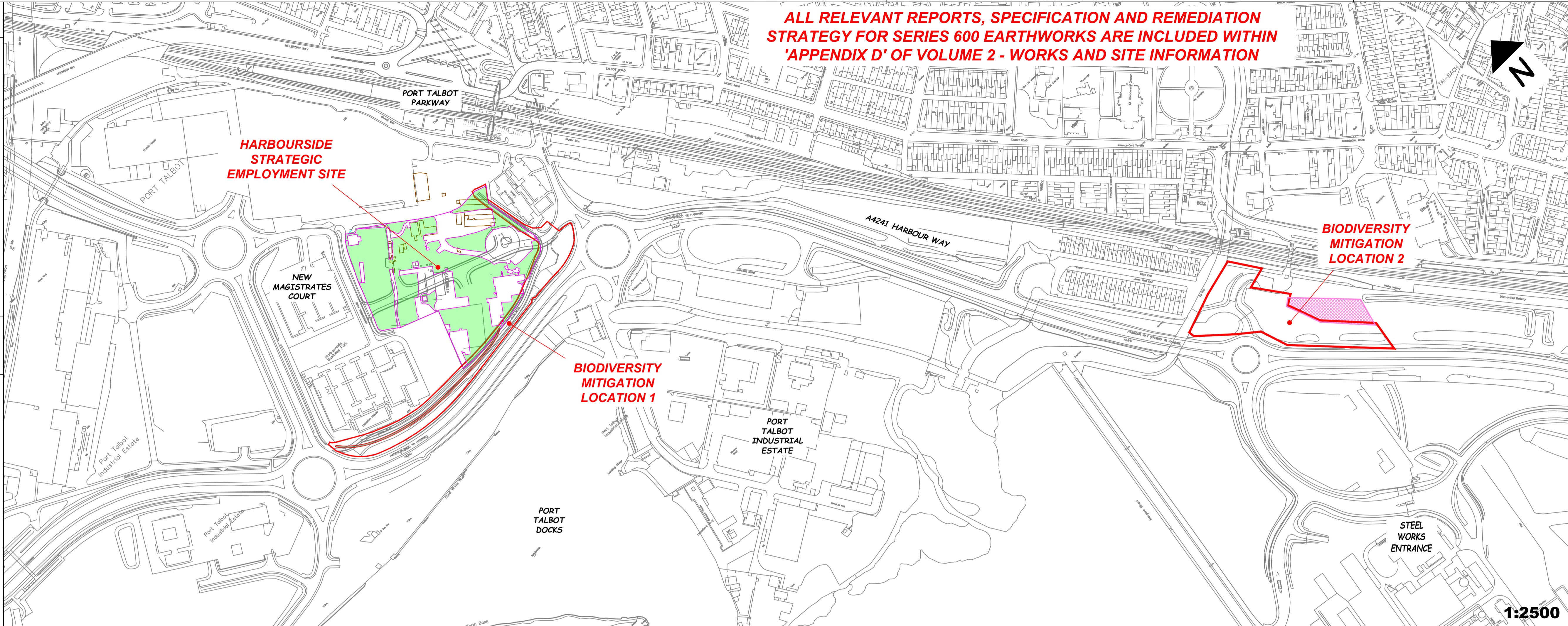
- Identified areas of BIODIVERSITY interest - approx. area = 16,200m<sup>2</sup>
- BIODIVERSITY MITIGATION approx. areas = 17,930m<sup>2</sup>
- Existing butterfly translocation area to remain unaffected
- NEW Butterfly Hibernacula to be created

**NOTE: Refer to Appendix 30/12: Special Ecological Measures for details of the requirements for the Biodiversity areas. Further information can also be found within "Appendix I - Ecological Assessment", with a report titled "Platform Preparation Ecological Assessment".**

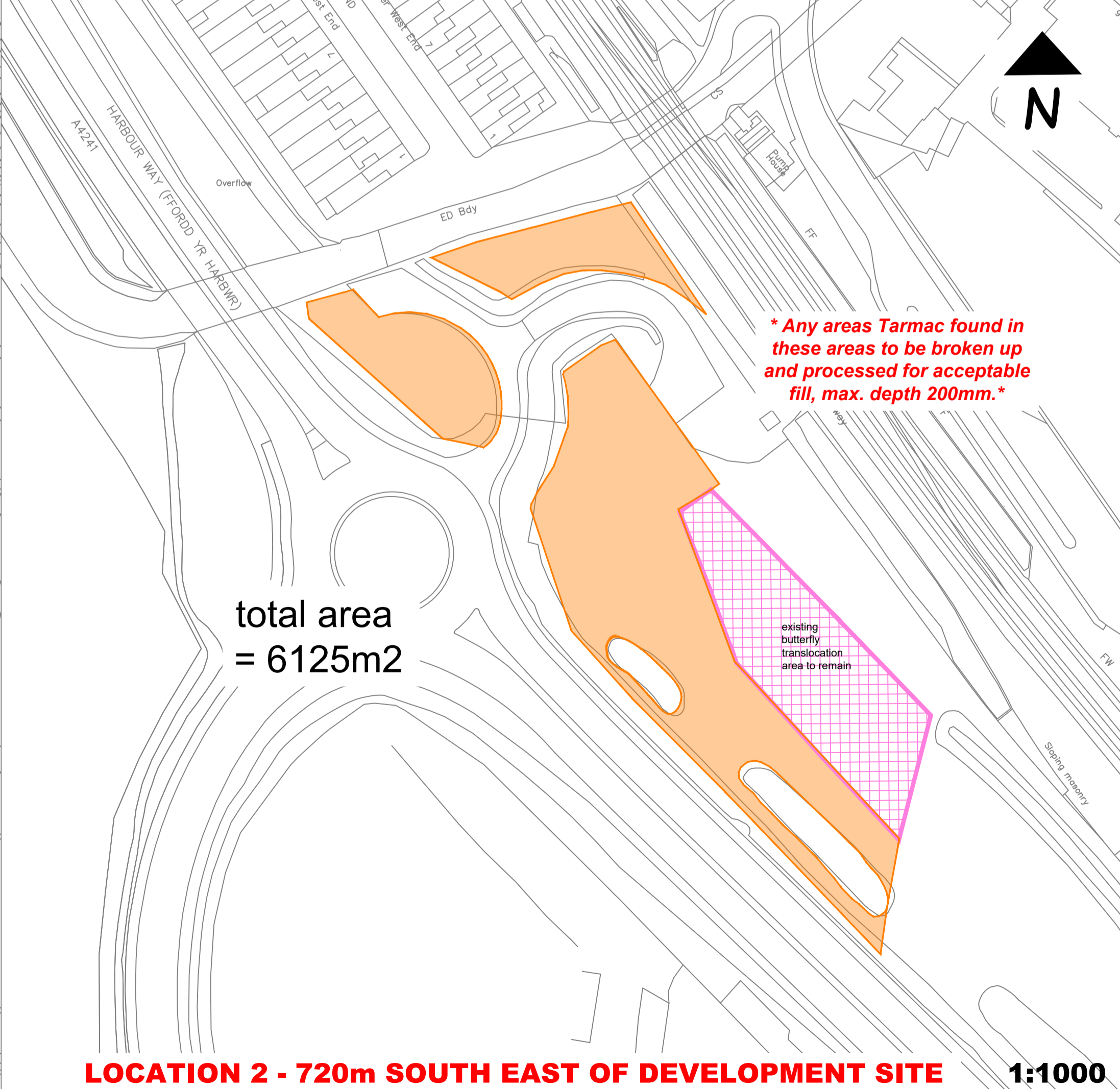
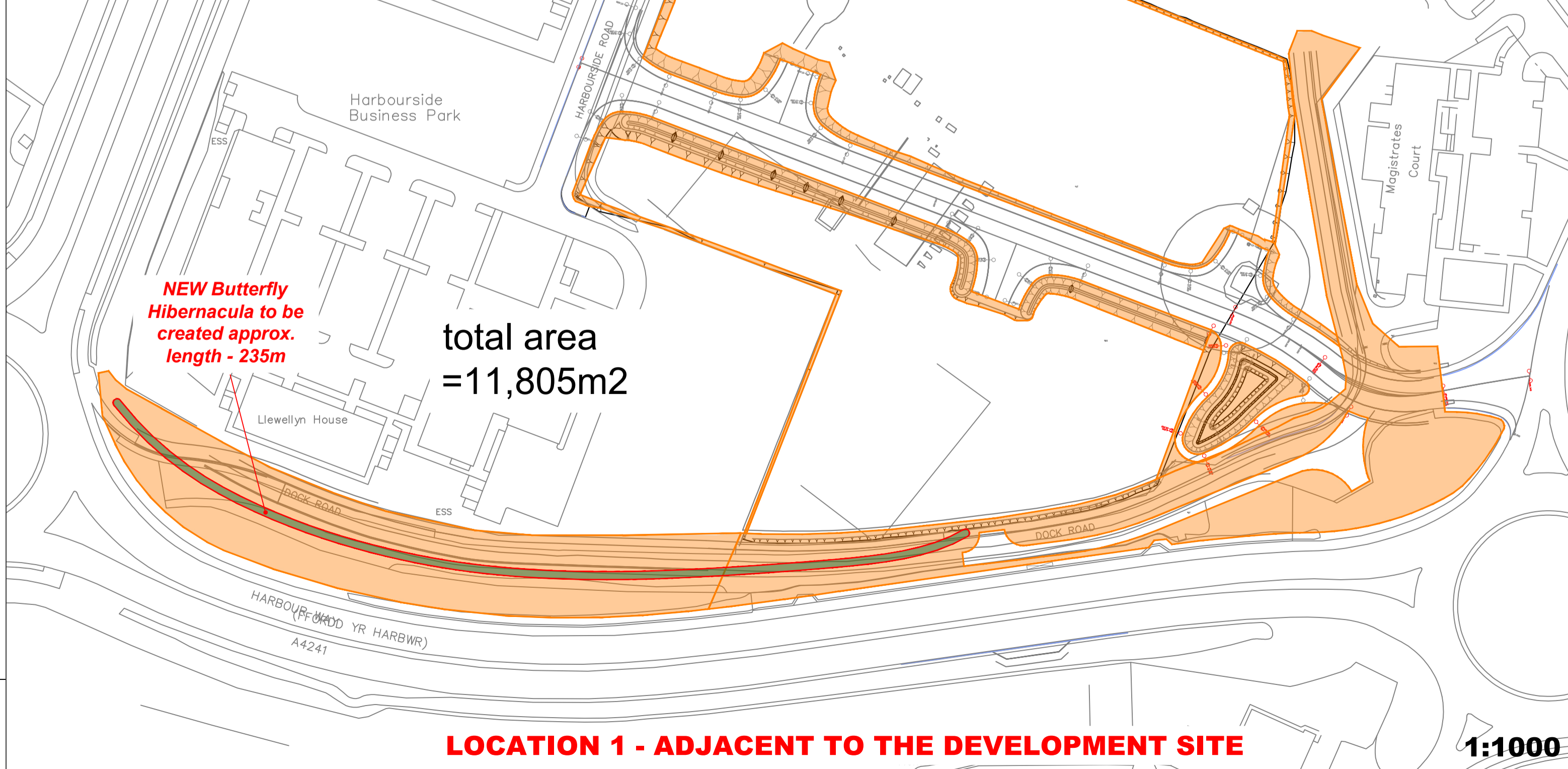
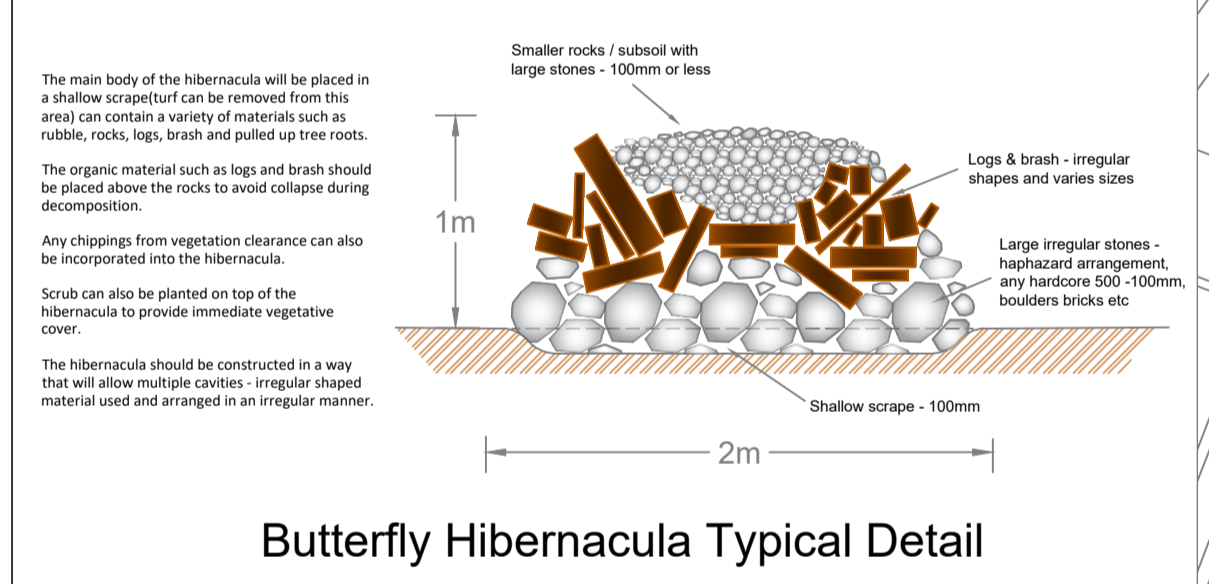
Dwg. No. C2014B / EW / 0602

C2014B HARBOURSIDE STRATEGIC EMPLOYMENT SITE BIODIVERSITY MITIGATION AREAS

Job Title



1:2500



Rev	Details	Dr	Ch	Ap	Date

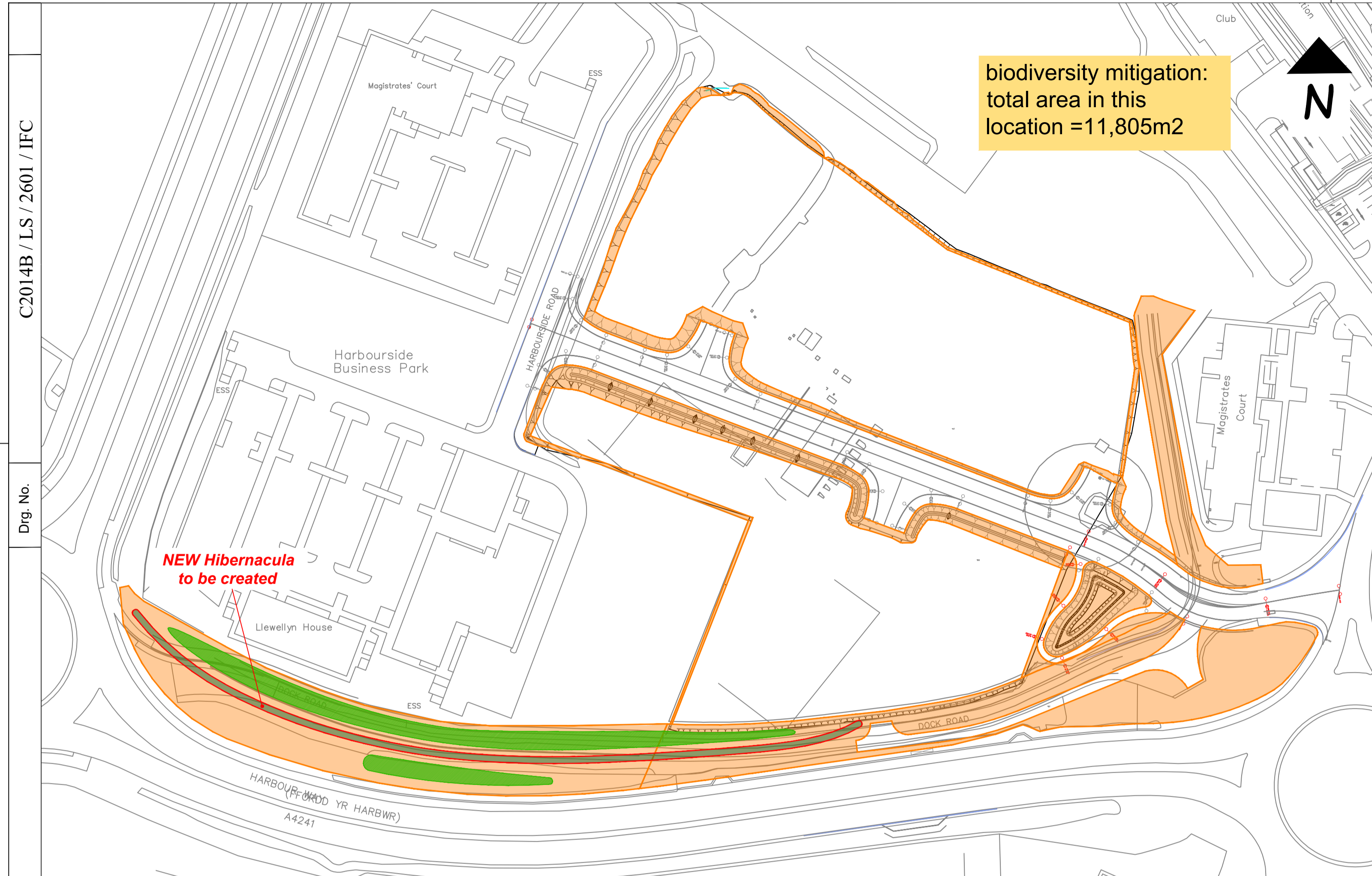
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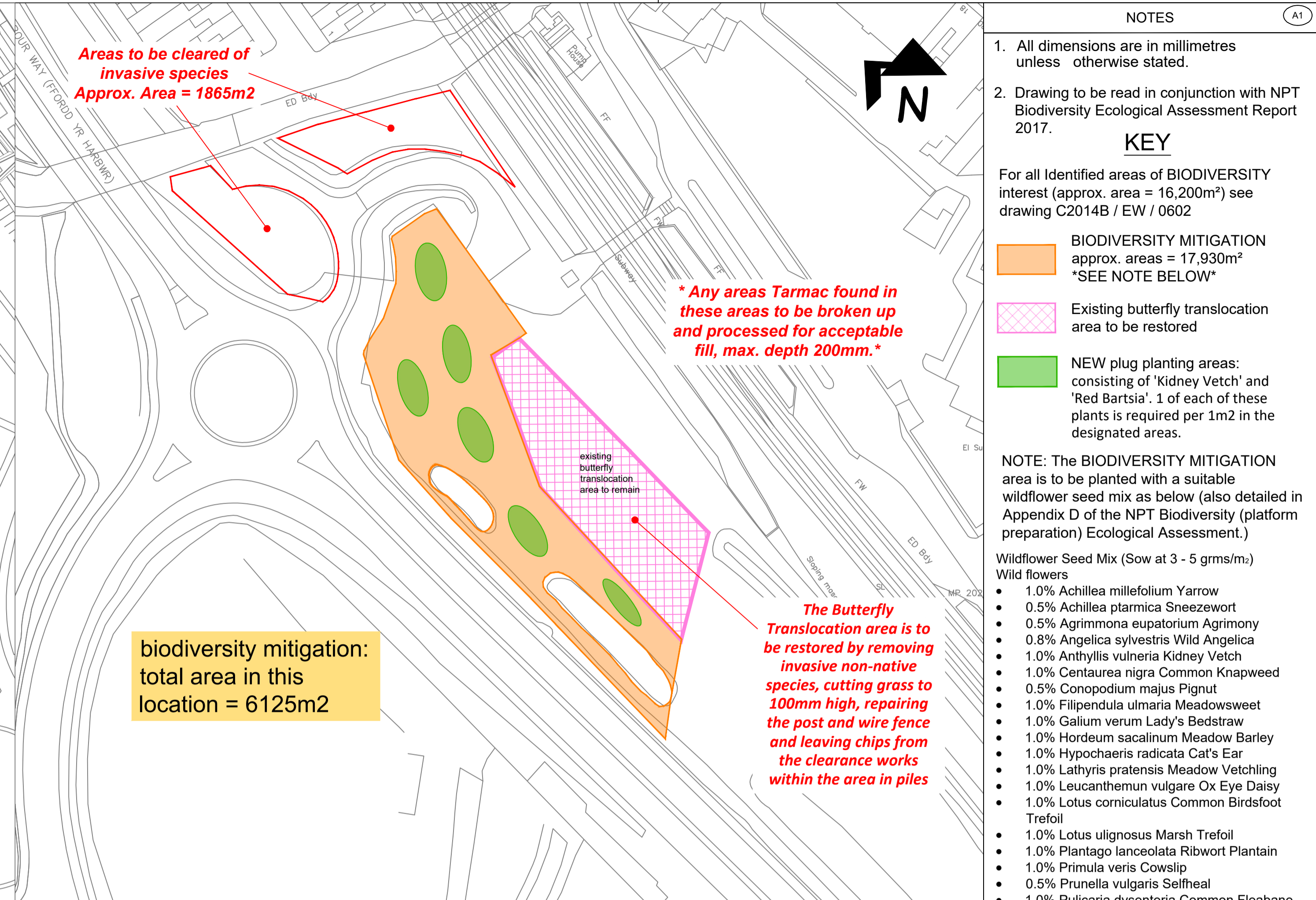
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**C2014B HARBOURSIDE STRATEGIC EMPLOYMENT SITE BIODIVERSITY MITIGATION AREAS**

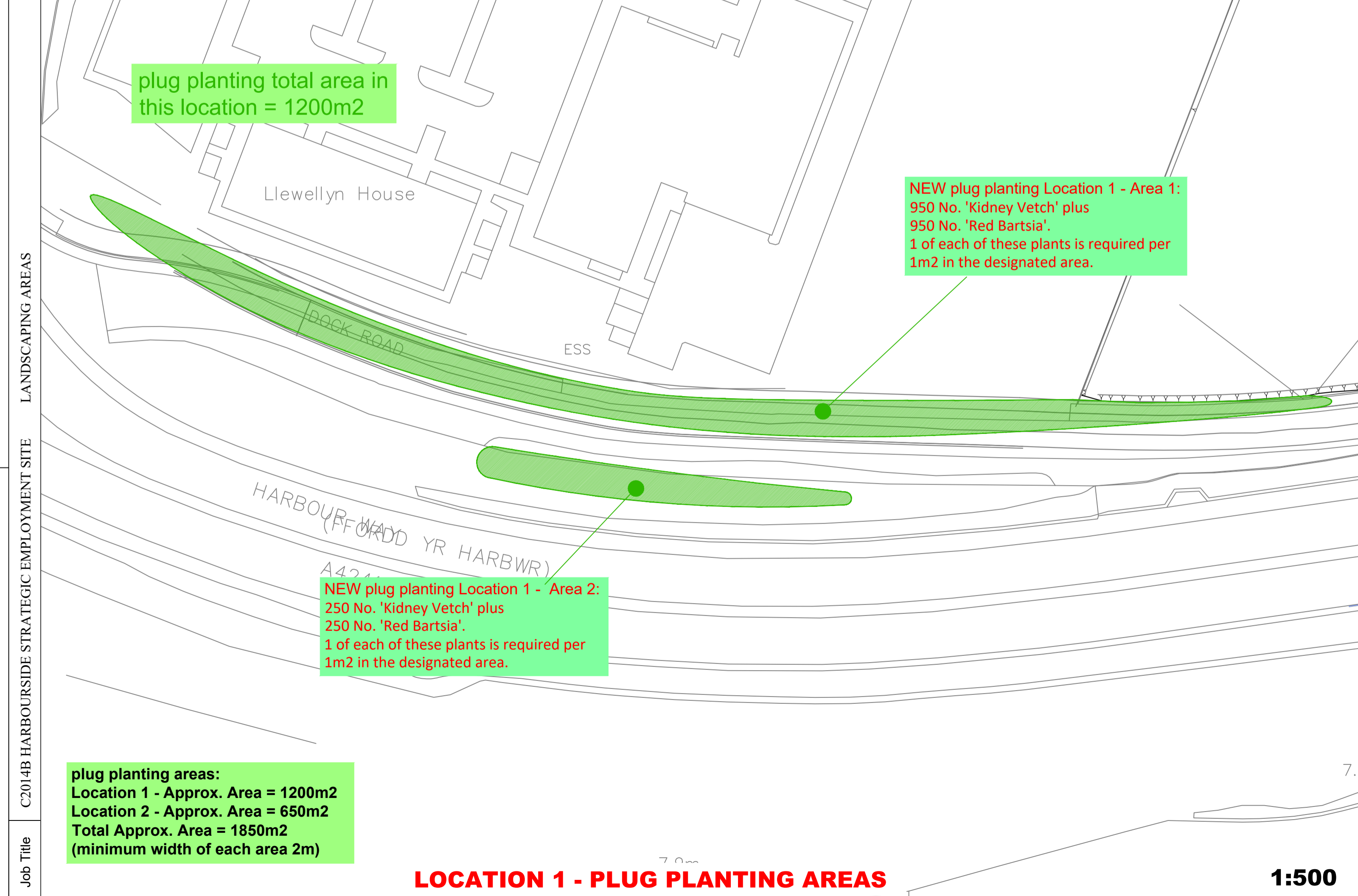
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Drawing No.	C2014B / EW / 0602				



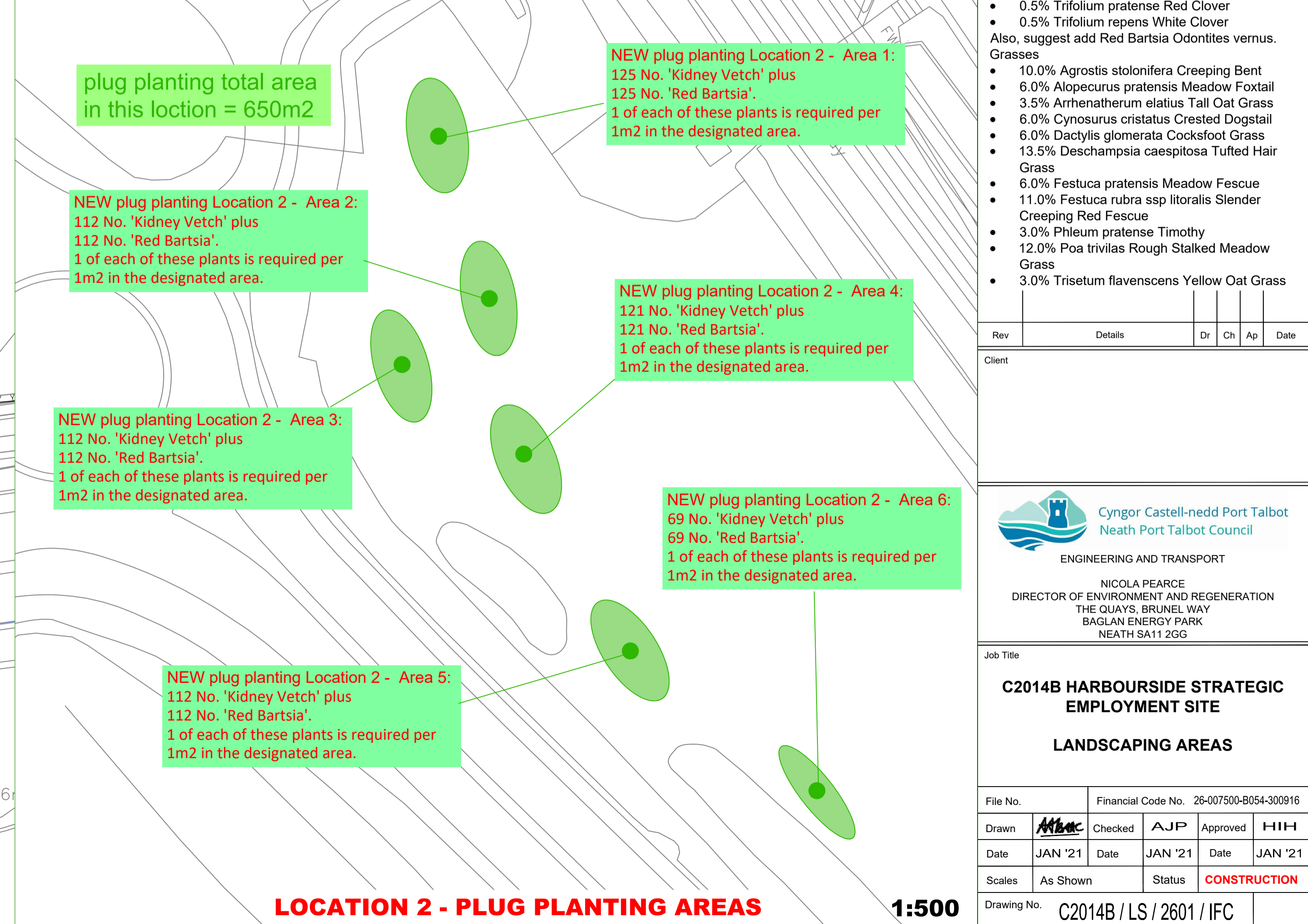
**LOCATION 1 - BIODIVERSITY MITIGATION AREA ADJACENT TO THE DEVELOPMENT SITE 1:1000**



**LOCATION 2 - BIODIVERSITY MITIGATION AREAS 1:1000**



**LOCATION 1 - PLUG PLANTING AREAS 1:500**



**LOCATION 2 - PLUG PLANTING AREAS 1:500**

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- Drawing to be read in conjunction with NPT Biodiversity Ecological Assessment Report 2017.

**KEY**

For all Identified areas of BIODIVERSITY interest (approx. area = 16,200m<sup>2</sup>) see drawing C2014B / EW / 0602

- BIODIVERSITY MITIGATION approx. areas = 17,930m<sup>2</sup> \*SEE NOTE BELOW\*
- Existing butterfly translocation area to be restored
- NEW plug planting areas: consisting of 'Kidney Vetch' and 'Red Bartsia'. 1 of each of these plants is required per 1m<sup>2</sup> in the designated areas.

**NOTE:** The BIODIVERSITY MITIGATION area is to be planted with a suitable wildflower seed mix as below (also detailed in Appendix D of the NPT Biodiversity (platform preparation) Ecological Assessment.)

- Wildflower Seed Mix (Sow at 3 - 5 grams/m<sup>2</sup>)
- Wild flowers
- 1.0% Achillea millefolium Yarrow
  - 0.5% Achillea ptarmica Sneezewort
  - 0.5% Agrimonia eupatorium Agrimony
  - 0.8% Angelica sylvestris Wild Angelica
  - 1.0% Anthyllus vulneria Kidney Vetch
  - 1.0% Centaurea nigra Common Knapweed
  - 0.5% Conopodium majus Pignut
  - 1.0% Filipendula ulmaria Meadowsweet
  - 1.0% Galium verum Lady's Bedstraw
  - 1.0% Hordeum scaberrimum Meadow Barley
  - 1.0% Hypochaeris radicata Cat's Ear
  - 1.0% Lathyrus pratensis Meadow Vetchling
  - 1.0% Leucanthemum vulgare Ox Eye Daisy
  - 1.0% Lotus corniculatus Common Birdfoot Trefoil
  - 1.0% Lotus uliginosus Marsh Trefoil
  - 1.0% Plantago lanceolata Ribwort Plantain
  - 1.0% Primula veris Cowslip
  - 0.5% Prunella vulgaris Selfheal
  - 1.0% Pulicaria dysenteria Common Fleabane
  - 1.0% Ranunculus acris Meadow Buttercup
  - 1.0% Rumex acetosa Common Sorrel
  - 0.2% Vicia cracca Tufted Vetch
  - 0.5% Trifolium pratense Red Clover
  - 0.5% Trifolium repens White Clover
- Also, suggest add Red Bartsia Odonites vernus.
- Grasses
- 10.0% Agrostis stolonifera Creeping Bent
  - 6.0% Alopecurus pratensis Meadow Foxtail
  - 3.5% Arrhenatherum elatius Tall Oat Grass
  - 6.0% Cynosurus cristatus Crested Dogtail
  - 6.0% Dactylis glomerata Cocksfoot Grass
  - 13.5% Deschampsia caespitosa Tufted Hair Grass
  - 6.0% Festuca pratensis Meadow Fescue
  - 11.0% Festuca rubra ssp litoralis Slender Creeping Red Fescue
  - 3.0% Phleum pratense Timothy
  - 12.0% Poa trivialis Rough Stalked Meadow Grass
  - 3.0% Trisetum flavescens Yellow Oat Grass

Rev	Details	Dr	Ch	Ap	Date
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Client

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NEATH SA11 2GG

Job Title

**C2014B HARBOURSIDE STRATEGIC EMPLOYMENT SITE**

**LANDSCAPING AREAS**

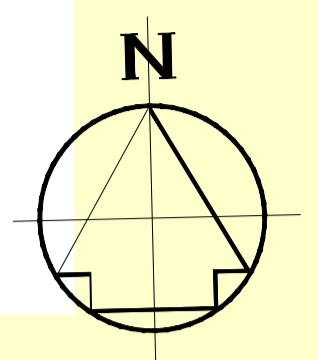
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Scales	As Shown	Status	CONSTRUCTION		
Drawing No.	C2014B / LS / 2601 / IFC				

# HARBOURSIDE STRATEGIC EMPLOYMENT SITE

PLAN 1:100

NOTES

1. All dimensions are in millimetres unless otherwise stated.



**NEW plug planting Location 1 - Wetland Area:**  
 6 No. 'Kidney Vetch' plus  
 6 No. 'Red Bartsia'.  
 1 of each of these plants is required per 1m2 in the designated area.

**NEW plug planting Location 2 - Wetland Area:**  
 15 No. 'Kidney Vetch' plus  
 15 No. 'Red Bartsia'.  
 1 of each of these plants is required per 1m2 in the designated area.

**MARGINAL PLANTS INCLUDING POCKETS WHERE REQUIRED:**

SPECIES CODE	SPECIES NAME	SPACING	No.
Cs	Callictriche stagnalis	bunch	400
Ep	Eleocharis palustris	b/r	400
Gm	Glyceria maxima	b/r	400
Ip	Iris pseudacorus	b/r	400
Je	Juncus effusus	b/r	400
Le	Lycopus europaeus	b/r	400
Ma	Mentha aquatic	b/r	400
Pb	Potamogeton bertholdii	bunch	400
Se	Sparganium erectum	b/r	400

**NEW plug planting Location 3 - Wetland Area:**  
 13 No. 'Kidney Vetch' plus  
 13 No. 'Red Bartsia'.  
 1 of each of these plants is required per 1m2 in the designated area.

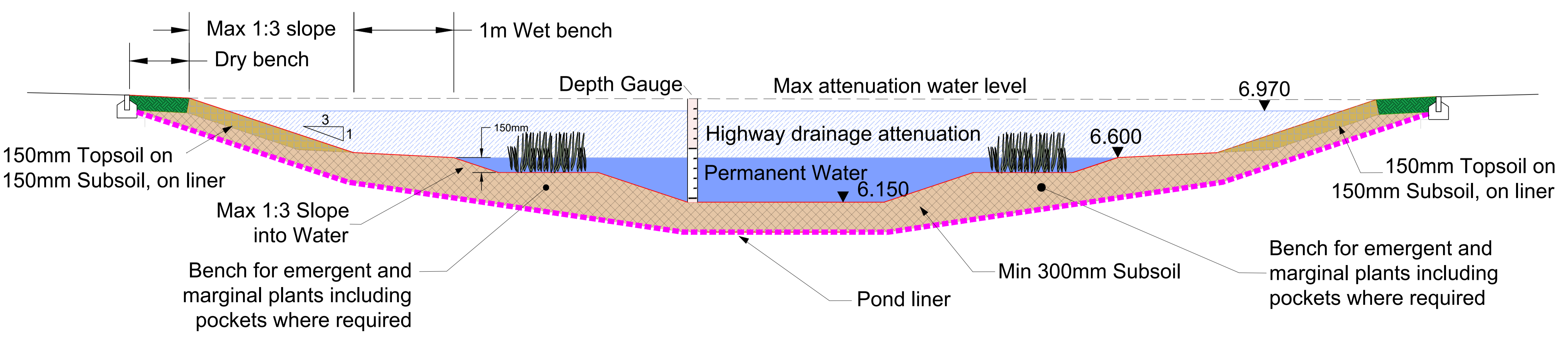
**NEW plug planting Location 4 - Wetland Area:**  
 15 No. 'Kidney Vetch' plus  
 15 No. 'Red Bartsia'.  
 1 of each of these plants is required per 1m2 in the designated area.

fan water main

LANDSCAPING - WETLAND AREA

C2014B HARBOURSIDE STRATEGIC EMPLOYMENT SITE

Job Title



## TYPICAL SECTION THROUGH WETLAND AREA

Depth Gauge base detail

Rev	Details	Dr	Ch	Ap	Date

Client

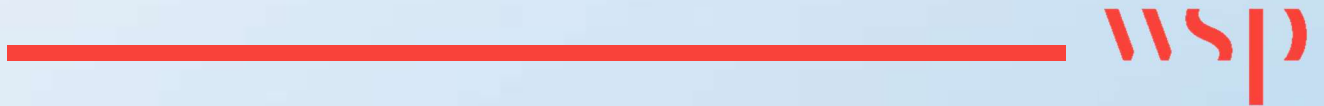
Cyngor Castell-nedd Port Talbot  
 Neath Port Talbot Council  
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Job Title  
**C2014B HARBOURSIDE STRATEGIC EMPLOYMENT SITE**  
**LANDSCAPING - WETLAND AREA**

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JAN '20	JAN '20	JAN '20	JAN '20	JAN '20	JAN '20
Scales	As Shown	Status	TENDER		
Drawing No.	C2014B / LS / 2602				

# Appendix B

## **WILDFLOWER AND WETLAND PLANTING PALETTE**



## WILDFLOWER SEED MIX

Wildflower seed mix requested by NPTCBC. To be sown at 3 - 5 grams/m<sup>2</sup>.

Wildflower species:

- · 1.0% *Achillea millefolium* Yarrow
- · 0.5% *Achillea ptarmica* Sneezewort
- · 0.5% *Agrimmona eupatorium* Agrimony
- · 0.8% *Angelica sylvestris* Wild Angelica
- · 1.0% *Anthyllis vulneria* Kidney Vetch
- · 1.0% *Centaurea nigra* Common Knapweed
- · 0.5% *Conopodium majus* Pignut
- · 1.0% *Filipendula ulmaria* Meadowsweet
- · 1.0% *Galium verum* Lady's Bedstraw
- · 1.0% *Hordeum sacalinum* Meadow Barley
- · 1.0% *Hypochaeris radicata* Cat's Ear
- · 1.0% *Lathyris pratensis* Meadow Vetchling
- · 1.0% *Leucanthemum vulgare* Ox-Eye Daisy
- · 1.0% *Lotus corniculatus* Common Birdsfoot Trefoil
- · 1.0% *Lotus uliginosus* Marsh Trefoil
- · 1.0% *Plantago lanceolata* Ribwort Plantain
- · 1.0% *Primula veris* Cowslip
- · 0.5% *Prunella vulgaris* Selfheal
- · 1.0% *Pulicaria dysenteria* Common Fleabane
- · 1.0% *Ranunculus acris* Meadow Buttercup
- · 1.0% *Rumex acetosa* Common Sorrel
- · 0.2% *Vicia cracca* Tufted Vetch
- · 0.5% *Trifolium pratense* Red Clover
- · 0.5% *Trifolium repens* White Clover
- - 1.0% *Odontites vernus* Red Bartsia

Grass species:

- · 10.0% *Agrostis stolonifera* Creeping Bent
- · 6.0% *Alopecurus pratensis* Meadow Foxtail
- · 3.5% *Arrhenatherum elatius* Tall Oat Grass
- · 6.0% *Cynosurus cristatus* Crested Dog's-tail
- · 6.0% *Dactylis glomerata* Cocksfoot Grass
- · 13.5% *Deschampsia caespitosa* Tufted Hair Grass
- · 6.0% *Festuca pratensis* Meadow Fescue
- · 11.0% *Festuca rubra* ssp *litoralis* Slender Creeping Red Fescue
- - 3.0% *Trisetum flavescens* Yellow Oat Grass
- · 3.0% *Phleum pratense* Timothy
- · 12.0% *Poa trivilas* Rough Stalked Meadow Grass

## WETLAND PLANTING

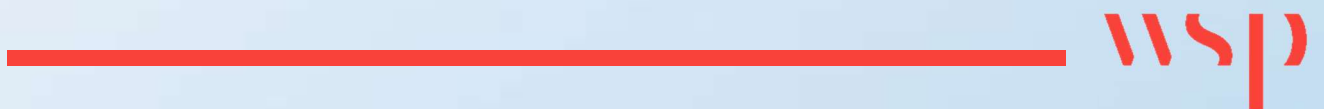
Wetland seed mix as requested by NPTCBC. Sow at 3 - 5 grams/m<sup>2</sup>.

- *Callitriche stagnalis* Common Water Starwort
  - *Eleocharis palustris* common spike-rush
  - *Glyceria maxima* Reed Sweet Grass
  - *Iris pseudacorus* Yellow Irish
  - *Juncus effusus* Soft Rush
  - *Lycopus europaeus* Gypsywort
  - *Mentha aquatic* Water Mint
  - *Potamogeton berchtoldii* Small Pondweed
  - *Sparganium erectum* Branched Bur-reed
-



# Appendix C

## **ECOLOGICAL METHODS AND MANAGEMENT AND MONITORING PROGRAMME**



**Table C-1 - Ecological Methods for Site Clearance and Construction**

Timing	Biodiversity Feature	Timing	Actions	Residual Actions
Pre-Construction	Invasive Non-Native Plant Species (INNS)	Prior to site and vegetation clearance and construction	Mapping of all stands of INNS	Engage specialist contractor to remove Japanese Knotweed and other INNS
Site and Vegetation Clearance	Breeding Birds	August – October	<p>ECoW to give TBT to all site staff</p> <p>ECoW to undertake thorough check of all vegetation suitable for nesting birds</p> <p>5m buffer implemented around active nests</p>	N/A
	Reptiles and Amphibians	<p>August – October</p> <p>No excavation during reptile hibernation period (November – March)</p>	<p>ECoW to give TBT to all Site staff</p> <p>Three stage cut of vegetation suitable to support reptiles. Area left for a period of 24 hours after each cut. Cutting should be north west to north east.</p> <p>Thorough check of hibernacula prior to dismantling</p>	N/A



Construction	Invasive Non-Native Plant Species (INNS)	At all times	Contractors and all site personnel to take reasonable steps to avoid spread of INNS or as per specific INNS management plan	N/A
Landscaping	Habitat creation and enhancement	Immediately following completion of construction	As per the Strategy and Landscape Design	Monitoring of all newly created and enhanced habitats in Table C2 below.

**Table C-2 – Management and Monitoring Programme**

Area Location and Management/Monitoring Task		Timescale After Completion of Proposed Development				
Biodiversity Location	Task	Year 1	Year 2	Year 3	Year 5	Year 10
1 and 2	Wildflower seeding of all specified areas in the Landscape Design drawings	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Re-seed in April or September if establishment of prior seeding has failed	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Re-seed in April or September if establishment of prior seeding has failed	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Final Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures
	Kidney vetch and red bartsia (common restharrow or field scabious as alternatives) seeding	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Separate seeding of these species can be sown in	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Re-seed in April or September if	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Final Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures



		autumn or winter if required		establishment of prior seeding has failed		
	Kidney vetch and red bartsia plug planting (common restharrow or field scabious as alternatives)	Site walkover to assess establishment and success of mitigation and enhancement measures	Site walkover to assess establishment and success of mitigation and enhancement measures  Implement additional plug plants in June/July if previous planting has failed	Site walkover to assess establishment and success of mitigation and enhancement measures  Implement additional plug plants in June/July if previous planting has failed	Site walkover to assess establishment and success of mitigation and enhancement measures  Management measures to be implemented based on findings of previous walkover	Site walkover to assess establishment and success of mitigation and enhancement measures  Management measures to be implemented based on findings of previous walkover
1	Wetland area creation immediately after completion of Proposed Development	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover to assess establishment and success of mitigation and enhancement measure  Management measures to be implemented based on findings of previous walkover	Site walkover to assess establishment and success of mitigation and enhancement measures  Management measures to be implemented based on findings of previous walkover

1 and 2	Grassland cut	To be undertaken following recommendations of Site walkover.	Grasslands to be cut in late July/ August and a final cut in late October	Grasslands to be cut in late July/ August and a final cut in late October	Grasslands to be cut in late July/ August and a final cut in late October	Grasslands to be cut in late July/ August and a final cut in late October
1	Butterfly bank created immediately after completion of Proposed Development	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Modification and/or new butterfly bank created based on recommendations of previous year monitoring	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures  Modification and/or new butterfly bank created based on recommendations of previous year monitoring
1 and 2	Scrub and INNS removal between and around entrance gates at Location 2 immediately after Proposed Development	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures	Site walkover in late spring/early summer to assess establishment and success of mitigation and enhancement measures



	Monitoring of INNS, weeds and scrub encroachment		Removal of unwanted scrub stands and specific treatment of INNS and weeds	Removal of unwanted scrub stands and specific treatment of INNS and weeds	Removal of unwanted scrub stands and specific treatment of INNS and weeds	Removal of unwanted scrub stands and specific treatment of INNS and weeds
1	Reptile survey	N/A	Reptile survey using artificial refugia	Reptile survey using artificial refugia	Further survey work dependant on previous survey results	Further survey work dependant on previous survey results
1 and 2	Small blue butterfly survey	Walkover to survey for presence of eggs, larvae and adults and assessment of condition and value of new habitat to understand if it functions as suitable habitat	Walkover to survey for presence of eggs, larvae and adults  Assessment of habitat condition and suitability	Walkover to survey for presence of eggs, larvae and adults  Assessment of habitat condition and suitability	Further survey work dependant on previous survey results	Further survey work dependant on previous survey results
1 and 2	Shril Carder Bee survey	Survey for nest sites and colonies (June onwards)	Survey for nest sites and colonies (June onwards)	Survey for nest sites and colonies (June onwards)	Further survey work dependant on previous survey results	Further survey work dependant on previous survey results
1 and 2	SQE/ECoW Monitoring report	Short report on findings at end of year	Short report on findings at end of year	Short report of findings at end of year	Short report of findings at end of year	Short report of findings at end of year







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