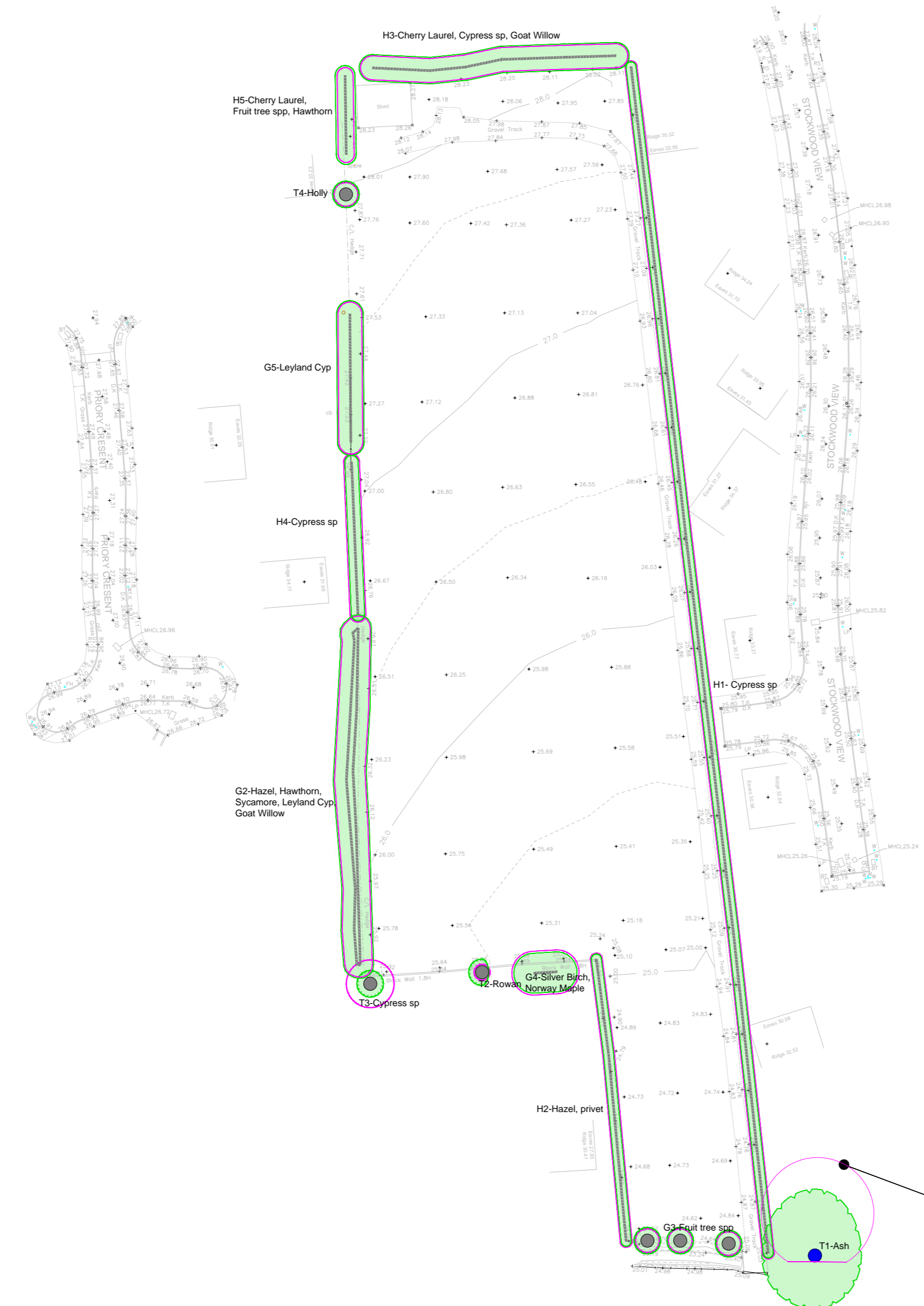


## 10.0 Appendix 2 - Tree Constraints Plan

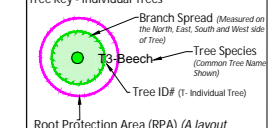
### An introduction to the Tree Constraints Plan (TCP)

Trees that have been identified to be retained should be treated as constraints to the design of future development. A Tree Constraints Plan has been drawn and can be found over leaf.

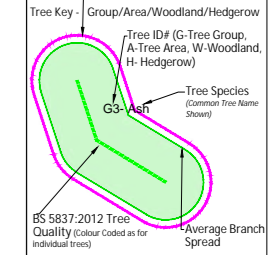
- **Tree Quality** - The TCP highlights the above and below ground constraint each tree poses to the design of future development schemes. Further to this the BS5837 tree quality category (A - High, B - Moderate, C - Low and U- Unsuitable for retention) are coloured coded as solid circles at the centre of the trees position.
- **Root Protection Area** – As shown as cyan circle on the TCP sets out root protection area (RPA). Within this area no construction work, alteration in ground levels or site traffic (machinery or persons) should occur. This prevents damage to tree roots and soil compaction. (Where possible an Arboriculturist can design suitable tree protection methods to facilitate construction work/site traffic within these areas).
- **Tree Canopy** - The green circle/oval on the TCP sets out the above ground constraints of tree canopy spread. Within this area no construction work or site traffic (machinery or persons) should occur if the tree is to be retained. This prevents damage to the tree branches and trunk. (Where possible an Arboriculturist can design suitable tree protection methods to facilitate construction work/site traffic within these areas).
- **Tree Shading** – Shade from the retained trees should be considered in the development design. The shade cast, depending on the trees height and width, will be from a North West to East pattern through the main part of the day.
- **Tree Future growth** - Within future development design, consideration should also be given to the ultimate height and extent of the canopy spread of all trees within the site identified to be retained.



- KEY BS5837:2012 Tree Quality (Colour Code)**
- Category A (High) ("Highly desirable for retention")
  - Category B (Moderate) ("Desirable for retention")
  - Category C (Low) ("Optional for retention")
  - Category U (Poor) ("Unsuitable for retention")



**Root Protection Area (RPA)** (A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's stability, and where the protection of the roots and soil structure is treated as a priority.)



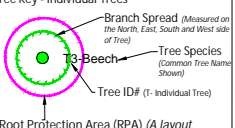
**Shade Pattern** - shade pattern not shown on plan (any missing shade starting with 'S' through to 'Z' is shown in the field)

- Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedgerows (Colour Code)**
- A** - Those of high quality with an estimated remaining life expectancy of at least 40 years. ("Highly desirable for retention")
  - B** - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. ("Desirable for retention")
  - C** - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. ("Optional for retention")
  - U** - Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. ("Unsuitable for retention unless provides high conservation value")

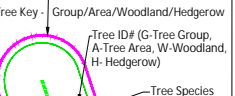
**Please Note:** Barriers and Ground Protection must be designed by an arboriculturist, installed before materials or machinery is brought onto site and before any demolition, development or stripping of soil commences. Once erected, barriers and ground protection should be regarded as sacrosanct, and should not be removed or altered without prior recommendation by an Arboriculturist and approval of the Local Planning Authority (LPA).

Root Protection Area altered in shape and position to reflect southern drainage ditch

- Category A (High) - (Highly desirable for retention)
- Category B (Moderate) - (Desirable for retention)
- Category C (Low) - (Optional for retention)
- Category U (Poor) - (Unsuitable for retention)



Root Protection Area (RPA) (A layout design foot indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority)



Tree Key - Group/Area/Woodland/Hedge/row  
Tree ID (G-Tree Group, A-Tree Area, W-Woodland, H-Hedge/row)  
Tree Species (Common Tree Name)



BS5837:2012 Tree Quality (colour code in use) - Average Branch Spread

Shade Pattern - shade pattern not shown on plan (only moving mass starting with root through to canopy shade to the east)

Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedge/rows (Colour Code):  
 A - Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Highly desirable for retention\*)  
 B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)  
 C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)  
 U - Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. (\*Unsuitable for retention unless provides high conservation value\*)

Please Note: Barriers and Ground Protection must be designed by an arboriculturist, installed before materials or machinery is brought onto site and before any demolition, development or stripping of soil commences. Once erected, barriers and ground protection should be regarded as sacrosanct, and should not be removed or altered without prior recommendation by an Arboriculturist and approval of the Local Planning Authority (LPA).



Root Protection Area altered in shape and position to reflect southern drainage ditch

## 10.0 Appendix 3 - Tree Survey Data Key

- **Tree ID #** - Identifies the location of individual trees (T-ID Number), Groups of trees (G-ID Number), Area of trees (A-ID Number), Hedgerow (H-ID Number), Woodland (W-ID Number), Row of trees (R-ID Number) and tree Stumps (S-ID Number) on the accompanying plan. *(Please note: A group of trees here refers to two or more standing trees that form a visual whole, whereas an area of trees refers to dispersed individual trees standing within the site)*
- **Tree Species** - Scientific names and common tree name in brackets are generally shown.
- **Age**
  - o (Y) Young – Less than 1/3 of life completed
  - o (SM) Middle Aged - 1/3 - 2/3 of life completed
  - o (EM) Early Mature – Just entering Maturity
  - o (M) Mature – more than 2/3 of life completed
  - o (OM) Over Mature - more than 3/3 of life completed and declining
  - o (V) Veteran - (v) Veteran – Veteran trees have no precise definition but are trees considered to be of biological aesthetic or ecological value because of their age
- **Stems** – Number of tree stems used to calculate the RPR/RPA
- **Stem Diam** (mm) - Diameter of tree stem measured in millimetres for single stem trees or average stem diameter calculated for multi-stemmed trees as detailed in section 4.6 & Annex C of the British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations. The height above ground level where the stem measurement was taken will be shown if not measured at 1.5 metres above ground level. *(Please note: that the stem diameter of certain trees will have to be estimated due to difficulties in taking measurements or for trees with a large number of stems)*
- **Cat** – Tree Quality Category - British Standard 5837:2012 A, B, C, U + 1, 2, 3

Based on BS5837:2012 categories A, B, C, U provides the basis of prioritising trees for retention:

- o A – Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Most desirable for retention\*)
- o B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)
- o C – Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)
- o U – Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. (\*Unsuitable for retention unless provides high conservation value\*)

Retention Criteria Subcategories: Used for identifying subcategories

E.g. A2 = A high quality tree with a high landscape qualities (further details can be found in British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations UK; British Standards Intuition)

- o 1 – Mainly Arboricultural qualities
- o 2 – Mainly landscape qualities
- o 3 – Mainly cultural values, including conservation
  
- **Height + (Lower Branch Height)** - Tree height in metres and in brackets height in metres of the crown (tree branches) clearance at its lowest point above adjacent ground levels.
  
- **Nrth, Est, Sth, Wst** - Crown Spread (Metres) -Tree branch spread in metres measured in four directions (North, East, South, West) from the trunk.
  
- **Phys Cond** - Physiological Condition Indicating the health of the tree -
  - o (G) Good
  - o (F) Fair
  - o (P) Poor
  - o (D) Dead
  
- **Struc Cond** – Structural Condition indicting the structural integrity of the tree -
  - o (G) Good – No, or remediable physical defects or decay
  - o (F) Fair - Physical non-remediable defects or decay present, not presenting imminent danger but should be monitored
  - o (P) Poor - physical non-remediable defects or decay present, tree liable to imminent collapse or loss of major limbs.
  - o (D) Dead
  
- **Est. Remain Contrib - (<10, 10+, 20+, 40+)**

The trees estimated remaining contribution in years, recorded as:

  - o <10 – less than 10 years
  - o 10+ – at least 10 years
  - o 20+ – at least 20 years
  - o 40+ – at least 40 years
  
- **Comments** – Additional Comments if required
  
- **Preliminary Management Recommendations** – Work Recommendations, including further investigation of suspected defects that require more detailed assessment and pose potential for wildlife habitat.

- **Work Priority** - Work Priority -This gives a work priority rating of preliminary management for each tree.
  - o H - High – Urgent work to be carried out as soon as practicable due to safety reasons (Within 14 days).
  - o H/M – High - Medium – Work to be carried out within 6 months/or before construction phase begins
  - o M - Medium – Work to be carried out in 12 months
  - o L - Low – After consideration/Re-inspect in 18-24 months
  - o Blank – No work required.
  
- **RPR** – Root protection radius / **RPA** - Root Protection Area - Is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority. RPR is a circular area measured as a radius in metres from the centre of the tree or RPA is an area in metres squared. Where required this area may be changed in shape but not reduced in area whilst providing adequate protection of the tree’s rooting system.

## **10.0 Appendix 4 – Tree Protection Plan**

### Tree Protective Fencing

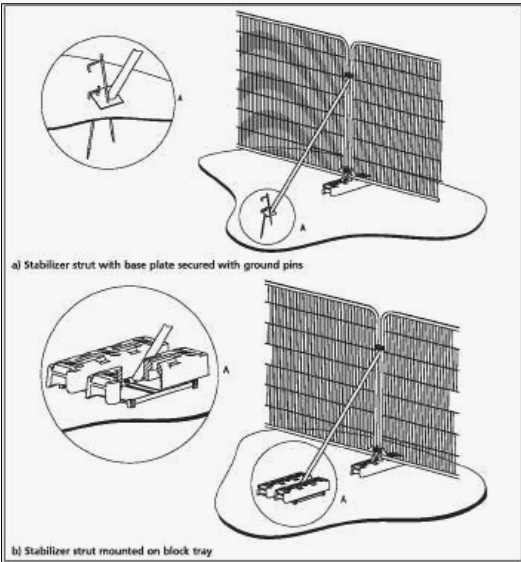
- Trees for removal to be identified from the drawing and marked by an arboriculturist.
- No vehicles to enter the grass verge or root protection zone during tree removal or fencing installation/removal.
- Fencing to be installed prior to any construction works (including demolition, materials delivery, works compound installation).
- The location of the tree protective fencing is indicative only and must not be directly measured from this plan. Its true location must be surveyed accurately on site and where applicable be measured from the tree centre by the stated dimension value.
- Fencing to remain in place until all construction works have ceased.

#### BS5837: 2012 Recommendations (extract)

6.2.2.3 Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturist and, where relevant, agreed with the local planning authority.

#### Fencing Specification

For example: 2metre tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins. Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray.



#### Why Is Fencing Erected Around Trees?

- The major cause of damage to trees on construction sites is due to soil compaction.
- Roots use the spaces between soil particles to obtain Oxygen, Water and Nutrients.
- Heavy plant and machinery compresses (compacts) the soil, squashing out the air spaces and preventing root function.
- A compacted soil structure will stay compacted.
- Consequently the tree suffers and will show signs of branch die-back.
- Symptoms such as die-back may take several years to appear.
- Soil compaction over roots can be prevented by maintaining a fenced exclusion zone over the tree roots.
- The exclusion zone is calculated using British Standard 5837.
- Protective Fencing is installed around the calculated area.
- Protective Fencing is a condition of planning approval, if it is removed or repositioned the construction firm is in breach of a condition and may be subjected to legal action.



Root Protection Area altered in shape and position to reflect southern drainage ditch

#### Key : Tree Protection Methods

- Temporary Tree Protective Fencing (Not to be altered without prior approval from the Local Planning Authority)
- Construction Exclusion Zone (No access, storage of any building material or equipment at any time for the entire construction period)
- Small section of hedgerow to be removed to facilitate construction work

**Please Note:**  
**Arboricultural Method Statement:**  
 MUST be followed in sequence, include site supervision by an Arboriculturist where specified and adhered to at all times. Noncompliance with this method statement may result in planning enforcement action or prosecution.

**Tree Protection Plan**  
 Site - Langstone  
 Project Ref - 719.4  
 Scale 1:600 @ A2  
 www.ArbTS.co.uk

**KEY BS5837:2012 Tree Quality (Colour Code)**

- Category A (High) (Highly desirable for retention)
- Category B (Moderate) (Desirable for retention)
- Category C (Low) (Optional for retention)
- Category U (Poor) (Unsuitable for retention)

**Tree Key - Individual Trees**

- Branch Spread (Measured on the North Side, East and West side of tree)
- Tree Species (Common Tree Name)
- Tree ID# (Individual Tree)

**Tree Key - Group/Area/Woodland/Hedgerow**

- Tree ID# (Tree Group, Woodland, Hedgerow)
- Tree Species (Common Tree Name)

**BS5837:2012 Tree Quality (colour code in the field)**

- Average Branch Spread

**Shade Pattern - shade pattern not shown on plan (any shading mask starting with 'sh' through to 'shw' shade to the East)**

**Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedgerows (Colour Code):**

- A - Those of high quality with an estimated remaining life expectancy of at least 40 years. (Highly desirable for retention)
- B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (Desirable for retention)
- C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (Optional for retention)
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**Please Note:**  
 Barriers and Ground Protection must be designed by an arboriculturist, installed before materials or machinery is brought onto site and before any demolition, development or stripping of soil commences. Once erected, barriers and ground protection should be regarded as sacrosanct, and should not be removed or altered without prior recommendation by an Arboriculturist and approval of the Local Planning Authority (LPA).

## 10.0 Appendix 5 – Tree Photographs

Tree ID#T1



Tree ID#H1



Tree ID#G3



Tree ID#H2



Tree ID#G4



Western boundary



## Plans

**Plan EDP 1:** Extended Phase 1 Habitat Plan  
(edp8992\_d001 26 November 2024 VMS/ESe)

**Plan EDP 2:** Non-statutory Designated Sites  
(edp8992\_d003 26 November 2024 VMS/ESe)

**Plan EDP 3:** Statutory Designated Sites  
(edp8992\_d002 26 November 2024 VMS/ESe)



- Site Boundary
- <x x x x x  
x x x x x Scattered Scrub
- A Arable
- Standing Water
- Building
- Intact Species-poor Hedgerow
- Running Water
- Wet Ditch
- Scattered Trees (Broadleaved)

client  
**United Welsh Housing Association**

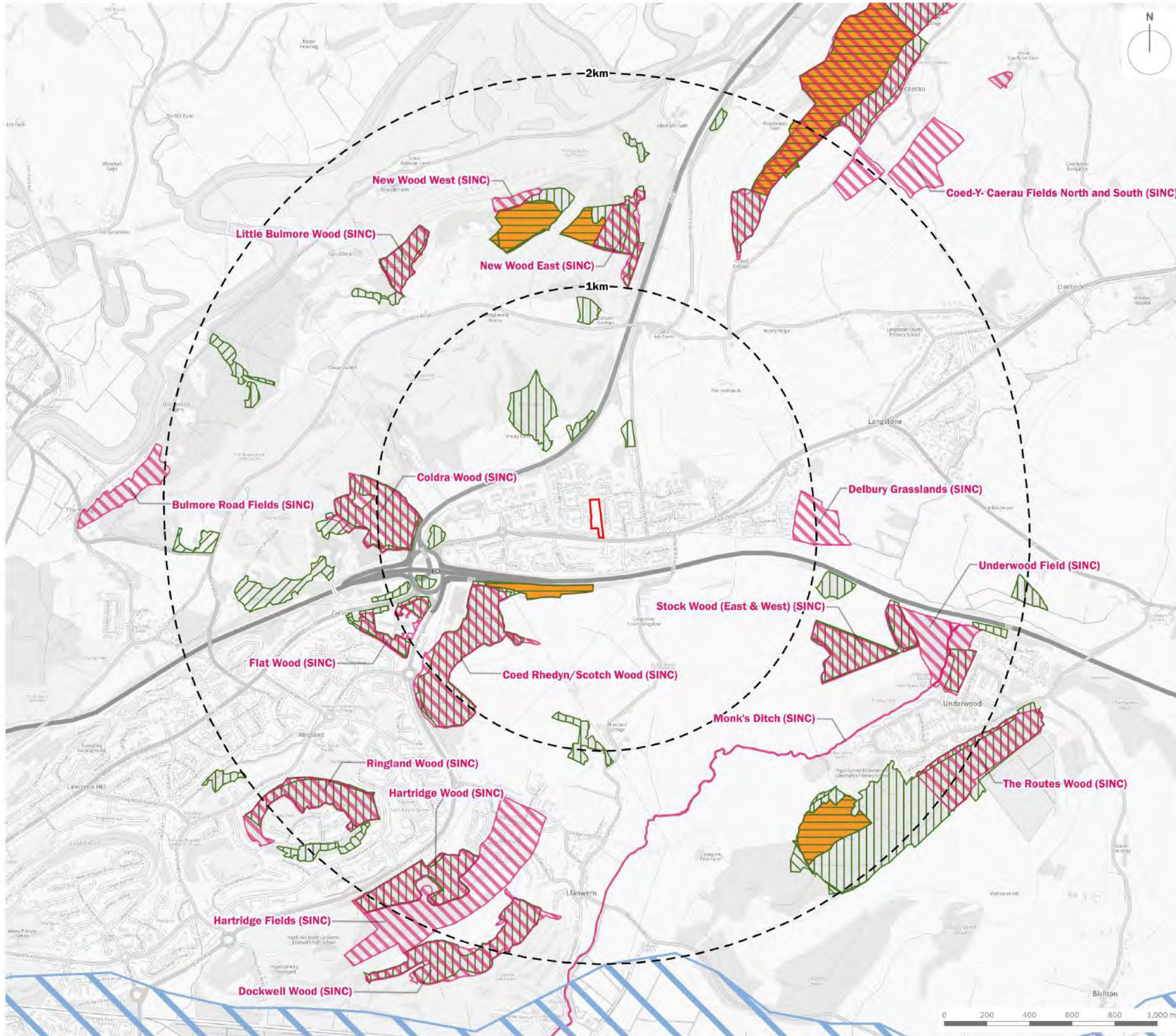
project title  
**Langstone, Newport**




drawing title  
**Extended Phase 1 Habitat Plan**

date **26 NOVEMBER 2024** drawn by **VMS**  
drawing number **edp8992\_d001** checked **ESe**  
scale **1:1,000 @ A3** QA **GYo**

**edp** the environmental dimension partnership

Registered office: 01285 740427 · www.edp-uk.co.uk · info@edp-uk.co.uk



-  Site Boundary
-  Range Rings (at 1km intervals)
-  Priority Area (Lowland Wetland)
-  Priority Area (Woodland - PAWS)
-  Ancient Semi Natural Woodland
-  Plantation on Ancient Woodland Site
-  Restored Ancient Woodland Site
-  Ancient Woodland Site of Unknown Category
-  Wildlife Site/SINC (Adopted)

client  
**United Welsh Housing Association**

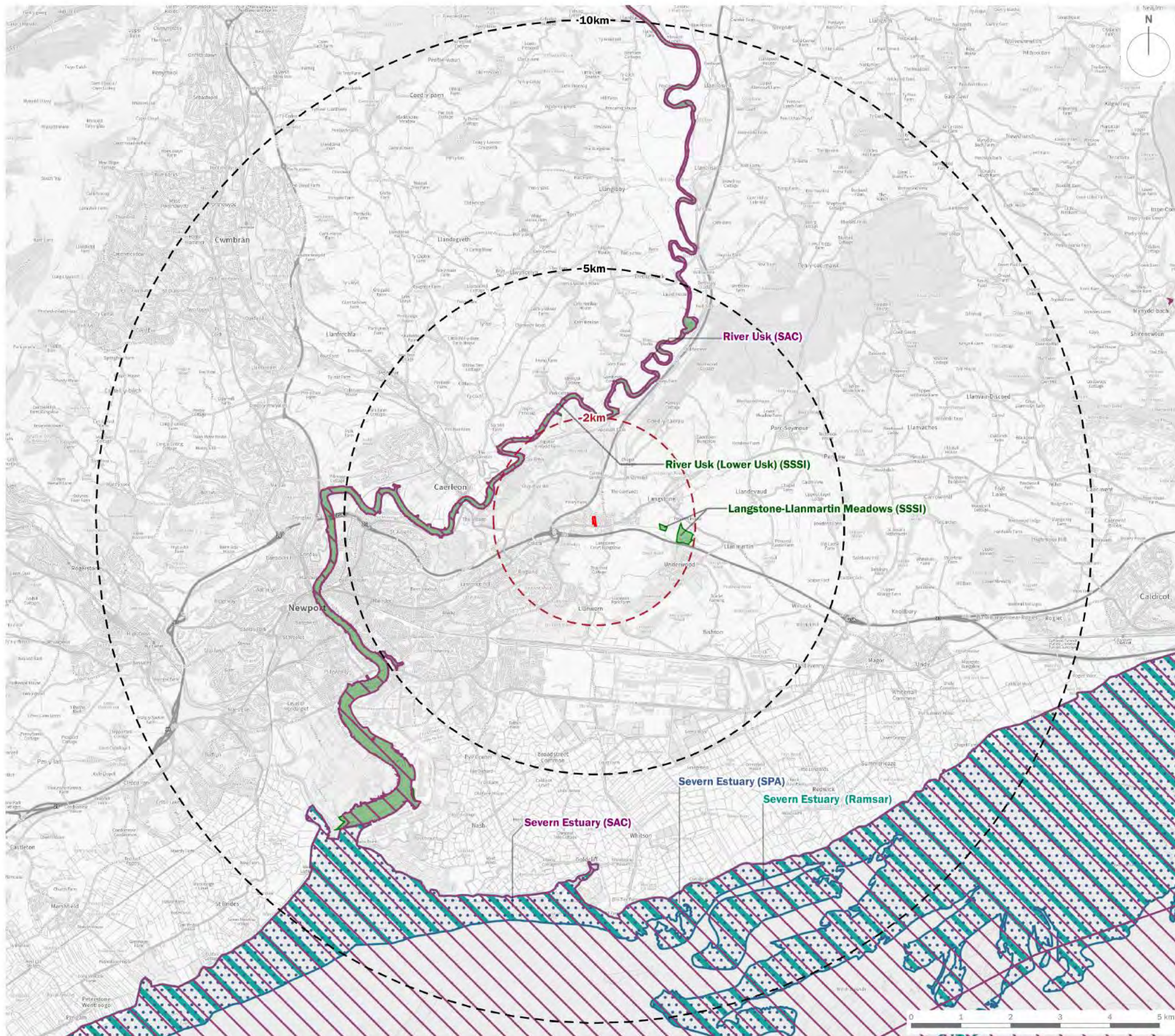
project title  
**Langstone, Newport**

**Non-statutory Designated Sites**

date	<b>26 NOVEMBER 2024</b>	drawn by	<b>VMS</b>
drawing number	<b>edp8992_d003</b>	checked	<b>ESe</b>
scale	<b>1:17,500 @ A3</b>	QA	<b>GYo</b>



Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



- Site Boundary
- Range Rings (at 5km intervals)
- 2km Detailed Study Area
- Internationally Important Statutory Designated Sites (within 10km of the Site)**
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Wetland of International Importance (Ramsar)
- Nationally Important Statutory Designated Sites (within 2km of the Site)**
- Site of Special Scientific Interest (SSSI)

client  
**United Welsh Housing Association**

project title  
**Langstone, Newport**

drawing title  
**Statutory Designated Sites**

date **26 NOVEMBER 2024** drawn by **VMS**  
drawing number **edp8992\_d002** checked **ESe**  
scale **1:75,000 @ A3** QA **GYo**

