

**Green Infrastructure  
&  
Biodiversity Benefit Assessment  
&  
Planting Scheme**

Land at  
Queensway Meadows Industrial Estate  
Meadows Road  
Newport

**Ref:**  
GIS/MRN/06/26

**Date:**  
3<sup>rd</sup> June 2026

**Commissioned by:**  
CV Planning

**Prepared by**  
S. Shields

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#### **Planting Plan**

| Date                      | Revision |                     |
|---------------------------|----------|---------------------|
| 3 <sup>rd</sup> June 2026 |          | Issued for Planning |
|                           |          |                     |
|                           |          |                     |

## **Instruction & Introduction**

- 1.1 Shields Arboricultural Consultancy received instructions from CV Planning on behalf of Oak Tyres to undertake a green infrastructure and biodiversity assessment at the above location.
- 1.2 Planning permission is being sought to undertake external works to an existing industrial building including the removal of a small number of trees. An Arboricultural Impact Assessment ref: AIA/MRN/01/26 has been prepared for the site and should be read in conjunction with this report.

## **Scope & Limitations**

- 2.1 A Green Infrastructure Statement is required for all development proposals in accordance with Planning Policy Wales 12 and the biodiversity duty under Section 6 of the Environment (Wales) Act 2016. The purpose of the statement is to demonstrate how the proposed development will maintain and enhance green infrastructure assets and deliver a net benefit for biodiversity. This survey was undertaken on 10<sup>th</sup> January 2026 by S. Shields, Principal Arboricultural Consultant of Shields Arboricultural Consultancy.

### *Desk-based Study*

- 2.2 A data search from the local environmental records centre was not commissioned for this assessment due to the limited scale of the work at the site, the relatively low diversity and extent of habitats affected, and the low likelihood that historic biological records would materially influence either the baseline assessment or the mitigation measures proposed. Where relevant, any notable historic species records identified through publicly available sources or site observations are referenced within the relevant species accounts in the Results section.

### *Baseline Habitat Assessment*

- 2.3 The habitat survey was undertaken in accordance with the UK Habitat Classification (UKHab) methodology (Version 1.1, updated January 2021), which provides a standardised framework for classifying and mapping habitat types within the United Kingdom. Botanical nomenclature follows Rose (Revised Edition, 2006) for native, naturalised, and commonly occurring vascular plant species. Introduced ornamental species and cultivated garden varieties have not necessarily been identified to species or cultivar level where this was not considered material to the assessment.

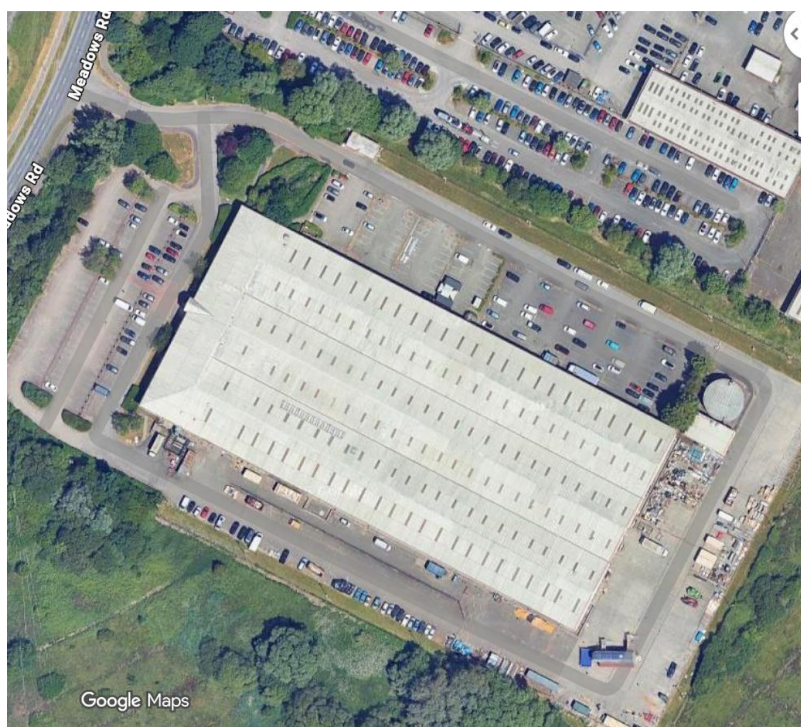
## **Statutory Controls & Obligations**

- 3.1 Forestry Act; the felling of trees is controlled by the Forestry Act, which requires that a felling licence is obtained prior to cutting down any trees. The Forestry Act does not apply to the felling of trees growing within an orchard, private garden, churchyard or public open space. Natural Resources Wales has the responsibility for enforcing the Forestry Act.

- 3.2 Tree Preservation Orders & Conservation Areas; Local Authorities have specific powers under the Town & Country Planning Act 1990 as amended, to protect trees through the use of Tree Preservation Orders. Where trees are protected under such orders it is a criminal offence (subject to any exemptions for which provision may be made by the act or order) to undertake, cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except with the consent of the local planning authority. Similar controls apply to all trees growing within a designated Conservation Area.
- 3.3 Bats, wild birds and other protected species; The Wildlife & Countryside Act & the Conservation (Natural Habitats & C.) Regulations make it an offence to disturb or destroy bats and bat roosts and wild birds and their nests. Other species of plant and animal are also protected. These creatures often inhabit trees and sufficient care must be taken to ensure they are not affected during forestry and arboricultural works.

### **Site Description**

- 4.1 The site is a large industrial building and car parking area located off Meadows Road in the Queensway Meadows Industrial Estate to the southeast of the town of Newport. Access to the site is via an internal site road from Meadows Road. The site has boundaries with the industrial area to the north and west and with open countryside to the south and east.
- 4.2 The site extends to 3.9 hectares, is predominantly level and at an elevation of 6m AOD. The site is moderately exposed and coastal.



Imagery ©2026 Airbus, Bluesky, Infoterra Ltd & COWI A/S, Maxar Technologies, Map data ©2026 20 m

- 4.3 The site is mainly set to hard standing with small groups of trees within landscape beds in the parking area. There are groups of trees around the boundary including linear groups of mature mixed broadleaves adjacent to Meadows Road and along the north boundary with the neighbouring site.
- 4.4 Where present, within landscape beds, the soils appeared to be free draining cultivated brown earth. Geological maps indicate tidal flat deposits of coarse grain clays over a mudstone bedrock. The existing hard standing is a significant impediment to root development.

## Baseline Assessment

### Designated Sites

- 5.1 The Gwent Levels – Nash and Goldcliff Sites of Special Scientific Interest (SSSIs) are situated approximately 125 m to the east of the site. No protected species were identified on the site.
- 5.2 UK Habitats Classification was used to record habitat types within and immediately adjacent to the proposed development area. These habitats are listed below and shown in figure 1.

- Built linear features (buildings)
- Developed land; sealed surface
- Scattered rural/urban trees



Figure 1

### 5.3 Site Photos – view of the existing trees adjacent to development area.



Figure 2

View of T1, G2, G3.



Figure 3

View of G2



Figure 4

*View of development area across car park to the north of existing building*



Figure 5

*View across car park to the west of existing building*



Figure 6

*View across car park to the south of existing building towards south and east boundary*

## ***Biodiversity Baseline Summary***

- 5.6 The red line development area totals 39310m<sup>2</sup> ha. Individual area sizes per habitat were measured during the 2025 survey when habitat borders were defined and mapped. A summary of the habitats present on site, current habitat condition scores and their total area size (per habitat) in m<sup>2</sup> can be seen in the table below. Full details in Green Infrastructure Statement (appendix A)

| Habitat Type                    | Condition   | Area M <sup>2</sup>       |
|---------------------------------|-------------|---------------------------|
| Built Linear Feature - Building | N/A         | 13130                     |
| Developed Land – Sealed Surface | N/A         | 23700                     |
| Vegetated Areas                 | Fair        | 2480                      |
| Individual Trees                | Fair - Poor | 10no. (across wider site) |
| Hedgerow                        | Fair        |                           |

## **Green Infrastructure & Biodiversity Benefit Evaluation**

### ***Summary of Proposed Development***

- 6.1 The proposed development seeks to undertake external works to the existing building including the installation of a new access door. The work will involve the removal of 5 trees.

### ***Habitats Impacts and Mitigation***

- 6.2 The proposed works are confined to an established industrial site and involve only the removal of limited Category C planting. It has been confirmed that the proposals will not result in any amendments to the existing surface water or foul drainage; however, all construction and landscape operations should be undertaken so that no silt, hydrocarbons, cementitious material, contaminated runoff or other pollutants can enter any drainage feature with potential connectivity to the wider Gwent Levels reed and ditch system.

### ***Habitat Creation***

- 6.3 The site lies within close proximity to the Gwent Levels: Nash and Goldcliff SSSI and the landscape scheme has therefore been designed to avoid any direct or indirect adverse effects upon the designated site. Particular regard has been given to pollution prevention, surface water management, lighting control, plant biosecurity and the avoidance of invasive or ecologically inappropriate species.
- 6.4 To provide a biodiversity enhancement it is proposed to provide one sparrow terrace nesting box [RSPB Sparrow terrace nest box - Bird houses & nest boxes](#) on the north elevation of the existing gate house building and plant ten Callery Pear - *Pyrus calleryana* 'Chanticleer' light standard trees and 180m of native species hedgerow.

## Planting Scheme

### **Site Assessment & Constraints**

#### *General*

- 7.1 The site is a large industrial building and car parking area located off Meadows Road in the Queensway Meadows Industrial Estate to the southeast of the town of Newport. Access to the site is via an internal site road from Meadows Road. The site has boundaries with the industrial area to the north and west and with open countryside to the south and east.
- 7.2 The site extends to 3.9 hectares, is predominantly level and at an elevation of 6m AOD. The site has a warm, moderately exposed and slightly dry climate, but with local shelter from adjacent structures. The soils are 'very moist' moisture status and carbonate nutrient status. The presence of a carbonate soil will potentially cause chlorosis in many tree species. Soils within soft landscape areas appear to have been imported or modified and are free draining.

#### *Ground assessment*

- 7.3 The site is set to hard standing with soft landscape beds.
- 7.4 Soil was assessed manually and classed as a loam.
- 7.5 Soil pH of 6.5
- 7.6 No drainage, percolation test was undertaken, but soils appear to be reasonably free draining, but water retentive.

#### *Climatic conditions*

- 7.7 Site is moderately exposed and well-lit receiving full or part sunlight for the majority of the day during the growing season.

#### *Site features and existing vegetation*

- 7.8 There are a variety of trees present in the area including Willow, Sycamore, Cherry, Birch, Ash, Leyland Cypress and Oak.
- 7.9 There is adequate space available for crown development of medium to large sized trees at the selected planting locations.
- 7.10 No evidence of underground services in the planting location, however care should be taken when excavating the planting pits.

### **Species / Planting Stock Selection**

- 8.1 Selected species must be capable of becoming attractive, long-lived specimens that can tolerate the prevailing site conditions. It is proposed to plant eight Callery Pear - *Pyrus calleryana* 'Chanticleer' light standard trees and 90m of native species hedgerow comprising Hawthorn (75%) Hazel (20%) and Holly (5%). The trees and hedgerow plants must be selected and planted in accordance with the following specifications. It is preferable that the planting stock is inspected and selected in the nursery prior to delivery on site.

## 8.2 Planting Stock Specification

| Species             | Shape                 | Stem Girth @1m | Height      | Container Volume | Production Method |
|---------------------|-----------------------|----------------|-------------|------------------|-------------------|
| <b>Callery Pear</b> | <i>Light Standard</i> | 6cm – 8cm      | 2.0m – 2.5m | 25 lts.          | Container grown   |
| <b>Hawthorn</b>     | <i>Whip</i>           |                | 40cm/60cm   |                  | Bare Root         |
| <b>Holly</b>        | <i>Whip</i>           |                | 40cm/60cm   | 2lts.            | Pot Grown         |
| <b>Hazel</b>        | <i>Whip</i>           |                | 40cm/60cm   |                  | Bare Root         |

8.3 The tree and planting material must be supplied and packed in accordance with the recommendations of BS 8545: 2014. The trees must be delivered in good condition and be free from damage, if transported in open lorries, trees must be protected by opaque sheeting. Root systems must be moist and protected during transport and. The tree should be inspected and approved prior to accepting delivery. If planting is not undertaken immediately after delivery, the tree should be placed in a sheltered location and the container covered with sand to prevent drying or freezing. The tree will be inspected on delivery in accordance with the standards set out in table 1 BS 8545: 2014. Trees that do not meet the standard will be rejected and returned to the nursery.

8.4 The trees are to be pit planted in the location identified on the tree planting plan MRN/TPS/06/26 and staked or secured using the Arborguy® ([www.greenblue.com](http://www.greenblue.com)) anchoring system and the planting site kept weed free and the tree watered until established. Hedging is to be planted in a double off-set row at 50cm x 50cm centres.

## **Planting, Protection & Maintenance**

9.1 To ensure that the landscape planting is to the highest standard, it is recommended that a quality planting materials and products are used. This report specifies the use of the GreenBlue Urban Arborsystem® [www.greenblue.com](http://www.greenblue.com) as the preferred planting product and Barcham Trees [www.barcham.co.uk](http://www.barcham.co.uk) as the preferred supplier for the planting stock.

### *Site Preparation*

9.2 The proposed planting site are situated in areas currently set to soft landscaping. All tree planting areas are to be protected from compaction and contamination during the felling and construction operations in accordance with the Arboricultural Method Statement provided in the AIA report AIA/MRN/01/26.

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### Soil Addition and Improvement

- 9.3 The proposed tree and hedgerow planting will be undertaken within the soft landscape strip along the northeast edge of the site and should be supported by appropriate soil improvement measures to maximise establishment, growth and long-term resilience. Existing soils should be decompacted where necessary by sub-soiling or cultivation to alleviate any compaction associated with the site's industrial use and adjacent hardstanding. Prior to planting, the soil should be ameliorated through the incorporation of peat free organic matter and biochar such as Carbon Gold Biochar [Biochar for Tree Planting Arboriculture | Landscapers | Carbon Gold](#) or an equivalent biochar-based soil conditioner. Biochar provides a stable carbon source that improves soil structure, enhances moisture retention, increases nutrient-holding capacity and promotes beneficial soil microbial activity. Its use is particularly beneficial on disturbed or low-fertility soils where rooting conditions may be constrained. Trees should be planted within suitably sized planting pits in accordance with BS 8545:2014 '*Trees: from nursery to independence in the landscape*', with the excavated soil mixed with biochar and organic compost before backfilling. Hedgerow planting trenches should be similarly ameliorated to create a continuous zone of improved rooting medium. The combined use of soil decompaction, organic matter and biochar will improve root development, increase drought resilience, enhance long-term tree vitality and contribute to carbon sequestration within the landscape scheme.

### Tree Pits

- 9.4 All trees are to be pit planted in the locations identified on the attached Tree Planting Plan ref: MRN/TPS/06/26. Tree planting pits are to be prepared as follows, in accordance with the drawings (GBU2002) shown in figure one below. As services are not required beneath the pits then the design can be amended to remove the root barrier and the root irrigation system is not required in this location. Once the soil has consolidated, the tree pits are to be excavated to the size of 1.5m diameter and to the depth of the root container of the planting stock. The bottom and edges of the pit are to be lightly broken up to using a fork, to improve root penetration. Tree pits are to be back filled with excavated soil, which must be stored loose tipped adjacent to the tree pit. Care must be taken to ensure that topsoil and sub-soil are stored in separate piles. The base plate of the guying system is to be installed in the base of the pit in accordance with manufactures recommendations. Alternatively, the trees can be secured using a double low stake method utilising fabric tree ties.

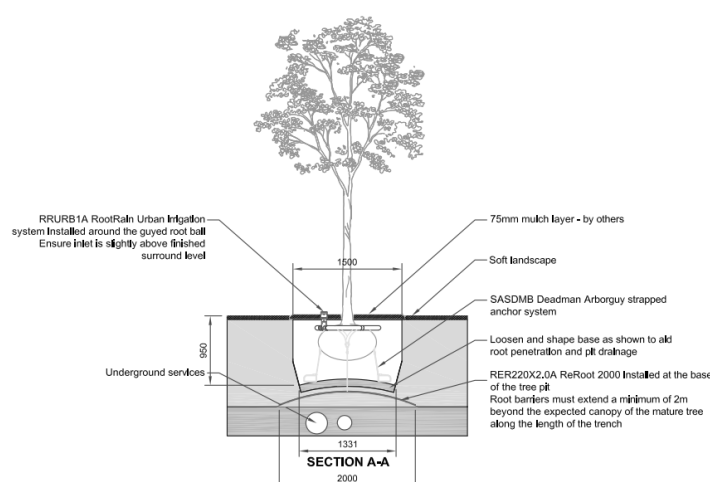


Figure1 Soft Landscape Tree Pit © GreenBlue Urban

### Planting - Trees

- 9.5 Trees should not be planted when the ground is frozen or waterlogged. It is recommended that trees are planted during the winter period. Prior to planting, remove any damaged or rubbing branches in accordance with BS 3998: 2010 good practice guidelines. Remove any tags or labels and stem wrapping. The tree **must** be planted at its original root collar soil depth. The soil mark on the stem is an indication of this, and it should be maintained on the finished level, allowing for settling of the soil after planting. If required, the pit should be partially backfilled to 'bed up' the tree to the desired height. The compost / growing medium in container grown trees must be moist before planting and before containers are removed. The growing medium in the soil cells should be thoroughly watered prior to planting.
- 9.6 Once the container is removed and immediately before planting, any broken or damaged roots must be cut back to sound growth and to an appropriate point; heavily coiled or spiralling roots should be eased from the rootball or pruned back. Once the tree is satisfactorily positioned the pit should be backfilled using the excavated soils mixed with soil improver as specified above, **it is important to ensure that topsoil is not used below the depth of the original topsoil layer and that the original root collar depth is maintained.** The backfill should be added in layers of around 150mm and lightly firmed to ensure close contact with the roots. Trees should have 20 lts of water applied after planting. Once planted and firmed the tree must be secured using the Arborguy® system as specified in the drawing or the double low stake method.
- 9.7 A woven, water permeable polypropylene mulch mat (600mm x 600mm) is to be placed around the base of the tree and secured using pegs or pins and then an over laid with 20mm of sterilised bark chippings. Chippings should be pulled back from the base of the stem of the tree.

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### *Planting - Hedge*

- 9.8 Hedging is to be planted in a double off-set row at 50cm x 50cm centres. Whips are to be trench planted and pots to be pit planted. The trench is to be cut to accommodate the spread and depth of the root system. Care must be taken to ensure that the trench is not too deep as it is essential that the plants are planted at the original root collar depth. Tree roots must be protected from elements until planted, this usually requires that they are kept in their delivery bag. Pit planting requires a small pit excavated to accommodate the root ball and should be planted in accordance with directions given in section 9.5. Whips are to be protected using spiral guards secured by canes and holly plants are to be protected using fine mesh shrub guards and secured using canes or small stakes.
- 9.9 A woven, water permeable polypropylene mulch mat or weed control fabric is to be placed around the base of the plants and secured using pegs or pins.
- 9.10 Remove all debris leaving site clean and tidy.

### *On-going maintenance*

- 9.11 All newly planted trees should be inspected in the first few weeks after planting and after periods of frost or strong winds. The trees should be re-firmed where heave or movement has occurred, and the guying system adjusted as necessary.
- 9.12 The mulch mats around each tree are to be inspected and maintained in good condition and the area they cover maintained free from weeds, grasses or other vegetation for a period of 3 years after planting.
- 9.13 The trees are to be watered during dry spells. Trees are to be inspected following periods of more than 10 days without significant rain fall. This inspection should assess the moisture content of the soil and, if required sufficient quantities of water are to be applied to ensure soils reach field capacity. This should be repeated every second day until the dry spell ends.
- 9.14 Trees are to be formatively pruned to remove crossing, dead and rubbing branches and to single any multiple leaders. This is a one-off operation and should be performed in the third year after planting.
- 9.15 Trees which fail to establish or become weakened, damaged or die must be replaced in the following planting season.
- 9.16 Trees should be inspected annually for the first 5 years following planting. This should be undertaken in mid-summer and any problems rectified as required.

### *On-going maintenance – hedge*

- 9.17 All newly planted hedging should be inspected in the first few weeks after planting and after periods of frost or strong winds. The plants should be re-firmed where heave or movement has occurred, and the guying system adjusted as necessary.

- 9.18 The mulch mats or weed control fabric around the plants are to be inspected and maintained in good condition and the area they cover maintained free from weeds, grasses or other vegetation for a period of 3 years after planting.
- 9.19 At year 3 hawthorn and holly plants are to be cut back by 50% and hazel coppiced to approx. 10cm above ground level. Any weed growth is to be removed from the hedge.

### **Site Operations – General Precautions**

#### **10.1 *Hydrological protection***

- No discharge of contaminated surface water, silt, cement washings, oils, fuels or chemicals to any ditch, reën, drain or watercourse connected to the Gwent Levels.
- Surface water drainage should use trapped gullies, silt control, oil interceptors and pollution prevention measures.
- Any changes to drainage must demonstrate no adverse change to water quality, water quantity, flow regime or groundwater conditions affecting the SSSI.

#### **10.2 *Construction pollution control***

- Refuelling, storage of fuels, oils, chemicals, cement and bituminous materials should be within bunded areas on existing hardstanding and away from drains.
- Spill kits should be available at all times and staff briefed on emergency response.
- No stockpiling of loose material where runoff could enter drainage systems.

#### **10.3 *Ecological sensitivity of the Gwent Levels***

- The SSSI is designated for its reën and ditch network, aquatic and marginal plants, and important invertebrate assemblages. NRW identifies the Gwent Levels drainage system as the largest in Wales and of high ecological importance.
- The proposed works are small-scale and within an existing industrial curtilage, but that indirect effects through drainage/pollution pathways must be avoided.
- Long-term site maintenance should avoid pesticides/herbicides where runoff pathways to drainage features exist.

#### **10.4 *Planting design***

- Use robust, climate-resilient and largely native or wildlife-beneficial species suited to exposed, low-lying coastal conditions.
- Avoid invasive, spreading or ecologically inappropriate species near the SSSI/reëns.

- Replacement planting should improve structural diversity over the existing Leyland cypress/limited ornamental planting, with native hedgerow, flowering/fruiting shrubs and selected small or medium canopy trees.

#### 10.5 *Biosecurity*

- Imported plants and soils should be sourced from reputable suppliers and checked for pests, diseases and invasive weeds.
- Avoid importing contaminated topsoil or plant material that could introduce pathogens or invasive species to the Gwent Levels landscape.
- All tree works will be undertaken in accordance with current UK plant biosecurity guidance issued by the UK Government and the Forestry Commission. Prior to arriving on site, all equipment, tools, vehicles and footwear will be cleaned and, where necessary, disinfected to remove soil, organic debris and potential pathogens. During operations, reasonable precautions will be taken to prevent the spread of pests and diseases, including avoiding the movement of contaminated material between sites and ensuring that any arisings are handled and disposed of appropriately.

#### 10.6 *Lighting*

- External lighting should be directional, low-spill and avoid unnecessary illumination of boundary vegetation, ditches, dark corridors or land facing the SSSI.
- Use warm colour temperature lighting, cowls/baffles and motion/timer controls where possible.

**S.J.A. Shields**

**Uni Cert For. & F.P. (Bangor)**

**P. Dip. Arb. (RFS), MSc. Arb. & Urban For. (UCLan)**

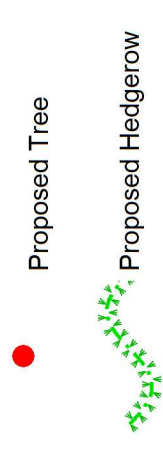
**M.Arbor.A, MICFor.**

**Chartered Forester**

**3<sup>rd</sup> June 2026**

## Tree Planting Plan

Queensway Meadows Industrial Estate  
Meadows Road  
Newport



Drawing No: MRN/TPS/06/26

Drawn By: S. Shields

Scale: 1:500 @ A2

Date: 3rd June 2026

Revision:

Do not scale from this drawing all dimensions to be checked on site

Drawing is colour coded and a monochrome copy should not be relied upon

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