

Queens Road – Landscape Scheme v2

Land adjacent to Queens Road, Merthyr Tydfil

Landscape Scheme for planting and maintenance

Prepared for Gorsedd Development
by
Mackley Davies Associates Ltd

September 2021 v2

1.0 LANDSCAPE DESIGN RATIONALE:

The site consists of the former Ysgol Gymraeg Santes Tudful, which is now demolished and is dominated by the flat plateau of the former school.

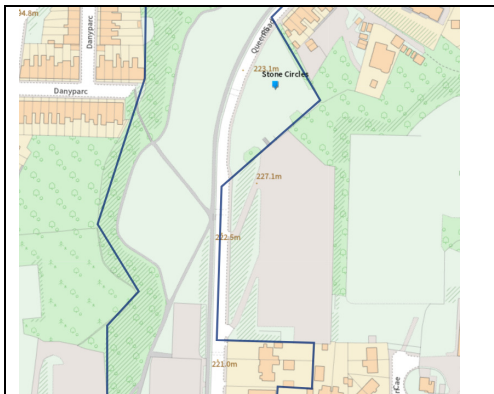
The western boundary with Queens Road is enclosed from the road by a low stone wall topped with railings which will be conserved. The two access roads leading up a steep embankment to the terraced area will be conserved with revised levels retained by new walls of between 1m and 1.5m height. The grassed embankment is planted with mature cherry, whitebeam and rowan with areas of young self-seeded cherry and goat willow, some of which will be retained – refer to the Tree Report by Mackley Davies.

The boundary to the east is defined by a low stone built retaining wall topped by a narrow stand of early mature trees consisting of ash, sycamore and goat willow which lie outside the site and provide a high, dense screen.

The southern boundary leads onto residential property with a line of mature spruce, larch and Lawson cypress conifers planted near the south west corner which will be retained along with a Category B oak.

The north boundary consists of a high retaining wall with an area of public open space including the Gorsedd Circle at the base, adjacent site trees include mature limes which overhang the site.

The site borders Thomastown Conservation Area, refer boundary from the Local Development Plan below:



Views into the site from Thomastown Park and Recreation Ground are screened in the summer by mature trees within the park along Queens Road, with trees along the west boundary and the site levels providing further screening.



Queens Road frontage

Queens Road – Landscape Scheme v2



View towards the site from Thomastown Park and Recreation Ground



East boundary showing tree screen outside the site and the stone retaining wall



South boundary showing group of conifers to be retained

The landscape aims are to:

1. Successfully retain trees identified for retention in the Tree Survey.
2. Use tree and hedge planting to soften views of buildings, fencing, parking and roads with planting suitable for a residential setting.
3. Improve ecological diversity through the use of native mixed hedges, trees, and ground cover.
4. Reinforce vegetation cover along Queens Road and Gorsedd Circle open space providing a suitable planted site frontage onto the highway and Conservation Area.
5. Minimal planting to the east boundary where views in are already screened by existing tree cover and keep views open onto the stone wall which will be retained.
6. New planting to the south boundary onto residential property.
7. Undertake maintenance for 5 years, replacing defects the following planting season, to ensure the planting plan is delivered

2.0 OUTLINE SPECIFICATION FOR SOFT LANDSCAPE WORKS

Refer to Landscape Plan reference: 21/839/01.

1.0 Work to be carried out in accordance with the following standards:

- British Standards:
 - BS 3882:2015 Specification for topsoil
 - BS 8601:2013 Specification for subsoil and requirements for use
 - BS 5837:2012 Trees in relation to design, demolition and construction
 - BS 8545:2014 Trees from nursery to independence in the landscape
 - BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces)
- National Plant Specification
- National Landscape Specification (NBS) latest revision

2.0 Protection of site trees and hedges:

Before work commences, ensure protection of any hedges and trees to be retained in accordance with BS 5837:2012 Trees in relation to design, demolition and construction in line with Mackley Davies Tree Protection Plan.

3.0 Site clearance:

Remove any rubbish, concrete, metal, glass, decayed vegetation, contaminated substrate and stones with largest dimension exceeding 100mm. Contamination includes steel, concrete, rubble, fuel, lubricants or other substances injurious to plant growth.

4.0 Soil conditions:

Do not work in waterlogged conditions, when the ground is frozen or covered by snow, or when there are pools of water on the ground surface, or following sustained heavy rainfall eg >10mm in 24 hours.

Cultivate and plant into moist friable soil.

Provide adequate additional root protection and prevent planting pit sides and bases and backfill materials from freezing.

5.0 Climatic conditions:

Carry out the work while soil and weather conditions are suitable for the relevant operations. Do not plant during periods of frost or strong winds. Bare root planting to be restricted to the 'lifting' season, generally November to March.

6.0 Machines and tools:

Use only machinery and tools suitable for the site conditions and the work to be carried out.

7.0 Excavation:

Ensure the location of all services is known before any excavation operations.

Excavation is NOT to be carried out within the root protection areas of hedges and trees to be retained.

8.0 Soils:

Soils should be investigated to determine how they can be re-used to minimize the quantities disposed of as waste.

Where a Soil Resource Plan is not available for the site, a topsoil/subsoil analysis report will be obtained from an agreed soil science consultancy. The results to include an interpretive commentary on the suitability of the topsoil/subsoil for the proposed landscape design and end users in addition to any measures required at planting or during the three year plant establishment period to aid growth.

The following hierarchy to be followed to reduce soil handling:

1. If soils are suitable and in the right location, protect during the construction period in-situ by adequate fencing
2. Otherwise, move to the receptor site
3. Otherwise, strip, store, and re-use for backfill once the receptor site is ready
4. If not suitable for re-use, replace with imported soil

All in accordance with:

- BS 15176: 2019 Guidance on the characterization of excavated soil and other materials intended for reuse
- BS 3882:2015 Specification for topsoil
- BS 8601:2013 Specification for subsoil and requirements for use
- Defra Code of Practice for the Sustainable Use of Soils on Construction Sites

Subsoil:

Use of subsoil under soft landscape areas to be site won and stripped, stored, and placed to BS8601:2013. Project Manager is to ensure subsoils under soft landscape areas are loose tipped and not firmed, consolidated, or compacted when laying. Tip and grade to approximate levels in one operation with minimum trafficking by plant. Batter/feather in local levels to achieve smooth rounded profiles and ensure falls are positive to reduce the risk of water ponding.

Topsoil should be keyed into the subsoil interface. Over-compacted subsoil should be loosened using ripping equipment before topsoiling, when soil is dry. For small areas, a small tracked excavator with a tine attachment or hand cultivation should be used. Remove surface stones larger than 75mm in preparation for cultivation, for light and non-cohesive subsoils: loosen thoroughly to a depth of 300 mm.

Topsoil:

At Queens Road, it is likely that some imported topsoil will be required. The Main Contractor shall advise the Landscape Contractor of the supply source.

If site won topsoil is to be used, strip, store, and place to BS3882:2015 with storage in low mounds <2m for humus rich topsoil to minimise compaction risk and placed in layers of 0.2m maximum. Ideally supply and place topsoil without the need for storage. If storage is required, store in low mounds <2m for humus rich topsoil to minimise compaction risk, placed in layers of 0.2m maximum. If storing for more than six months, sow with a deep rooting grass/legume mix to stabilize and maintain soil aeration and to restrict self-seeding weeds eg. Emorsgate grass/clover mix EG22c, cut growth 2-3 time pers year.

No spreading after sustained heavy rainfall over 10mm in 24 hours.

Ensure topsoil is loose tipped in layers of 0.2m maximum, and not firmed, consolidated, or compacted when laying by tipping and grading to approximate levels in one operation with minimum trafficking by plant in line with Landscape National Building Specification.

Place sufficient depth to allow for topsoil settlement.

Batter/feather in local levels to achieve smooth rounded profiles and ensure falls are positive to reduce the risk of water ponding.

Backfill to the following depths for subsoil (to BS8601:2013) and topsoil (to BS3882:2015):

	Subsoil depth mm	Topsoil depth mm
trees	600	300
ground cover, shrubs/hedging plants	300	300
grass	150	150

9.0 Tree Planting:

Refer to Tree Pit Section on Landscape Plan 21/839/01.

Backfill mix (including green compost, fertilizer, mycorrhizal supplement) for bare root stock, to accord with recommendations of any site Soil Resource Plan. Backfill mix should not be required for rootballed and container trees at planting.

Plant trees as indicated on the Planting Plan. Contractor is to locate underground services before excavation. Install a root barrier where trees will lie within 3m of an existing or proposed underground service route or highway kerb eg. Greenleaf Reroot or equivalent to full depth of topsoil to top of finished soil level with sides vertical.

10.0 Cultivation prior to planting:

If areas are weed infested, remove by hand or mechanical means or treat re-growth (during the growing season) with an approved herbicide such as Glyphosate as advised by the CA.

No cultivation to take place within hedge and tree root protection areas.

No cultivation after sustained heavy rainfall over 10mm in 24 hours.

Cultivate topsoil by hand or machine to achieve a suitable loose, friable tilth, remove rubbish/stones/roots etc over 50mm for planting areas in line with BS 3882:2015 table A.1, and rake to even out levels.

11.0 Plant Supply:

Nursery Stock to BS 3936 Part 1 'Nursery stock specification for trees and shrubs' and BS 8545:2014 Trees from nursery to independence in the landscape.

Name, forms, dimensions and other criteria as scheduled and defined in the National Plant Specification. If specified plants are unobtainable or known to be likely to be unobtainable at the time of ordering, obtain approval before making any substitution.

Plants should be:

- Materially undamaged, sturdy, healthy, vigorous, of good shape and without elongated shoots.
- Grown in suitable environment and hardened off.
- Free from pests diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants to be bottom worked unless otherwise specified or approved.
- Ideally from nurseries at a similar exposed and elevated site and UK grown.

- Produced in peat-free compost.

In addition, trees should have:

- Clearly defined and straight leader.
- Balanced branching framework with lateral branches subordinate to the leader.
- Clearly defined stem taper and proportionate, balanced height/stem girth ratio appropriate to the species.
- No crossing or co-dominant branches.
- Evenly spaced lateral roots with minimum four major laterals.
- Evenly spaced, well developed fibrous roots.
- An intact root-ball with the root-flare clearly visible.

12.0 Plant Handling:

Handling of plants to HTA National Plant Specification and the Committee for Plant Handling and Establishment Part 3 'Recommendations for Plant Handling from Delivery to Successful Establishment' and BS 8545:2014 Trees from nursery to independence in the landscape.

All plants delivered on racks. Boxed/pallet stacked plants are not acceptable.

Protect plants / trees from frost and from drying out.

Handle plants / trees with care. Protect from mechanical damage and do not subject to shock eg. by dropping from a vehicle.

All plant material is to be carefully lifted, adequately and carefully packed and protected for delivery to site.

Plants should not be lifted and stored on the delivery vehicle overnight. Ideally plants should be lifted, delivered to the site and planted on the same day.

On delivery to site, bare-root or root-balled plants, should be stacked together, away from the effects of the drying winds, their roots being covered with sand or fine soil and watered to prevent drying out.

Plants may require to be heeled-in, using prepared trenches, covered with soil (fine material) and watered thoroughly. Stored plants should be checked regularly to ensure their root systems are fully covered and that the soil (fine material) is kept moist.

If planting becomes delayed into April or later, then bare root plant material is to be stored in cold stores until required on site.

13.0 Planting:

Set out plants evenly to density and quantities shown, arranged to avoid straight lines and geometric patterns.

Plant to the nursery soil depth, face up to present best side, and firm in.

For bare root stock, dip in a proprietary alginate prior to planting such as Alginure/Broadleaf P4 anti-desiccant gel before planting.

For rootballed, containerizing and container grown trees:

Dig a hole that is widest at the top with gently sloping, scarified sides to comfortably accommodate the width, but of no greater depth than the roots or root-ball. For root-balled trees the hole may be slightly shallower than the rootball (approximately 2.5-5cm), in anticipation of soil settlement. For container grown trees the hole may need to be 4-6cm shallower. Do not mix the excavated soil.

Water the root system prior to planting.

Diameter of pit to be minimum 75mm greater than the root system. Plant at correct depth with root flare visible at ground level, allowing for topsoil settlement. Backfill in 150-200mm layers, firm to eliminate voids. Final backfill layer is not consolidated. Remove wire baskets, hessian and twine used in the rootballing process where this is feasible without disturbing the root ball. Immediately water to field capacity, add mulch but not at root flare to a 1.2m radius or 3m radius for large trees where possible. No fertilizer to be added in the first season.

14.0 Immediate aftercare:

Immediately after planting cut back any damaged, dead or diseased branches and remove any weak, thin or malformed growth.

For tree species any immediate aftercare is to accord with BS3998:2010 and BS 8545:2014.

If tree leaders are damaged or have been removed, the stock should be replaced.

Water as necessary to ensure the establishment and continued thriving of all planting. Ensure the full depth of topsoil is thoroughly wetted. Use a fine rose where appropriate to avoid damaging or loosening plants.

For trees planted into tree pits, wet the root system before planting and saturate the tree pit after planting to field capacity. Allow for watering every week to every fortnight according to weather conditions, from April to October. Where tree irrigation is provided, water through the cap and also use overhead watering for roots above the irrigation system – allow 20L for all trees.

Add mulch after watering in.

15.0 Tree guards/shrub shelters:

If required protect bare root hedge lines with temporary fencing until planting is established.

Trees planted into grass to be provided with mower guards.

If grazing by rabbits may be an issue, provide a shrub guard for bare root stock and add 50mm depth bark mulch to suppress weeds eg Tubex Shrub Shelter 60cm.

16.0 Tree staking:

For standard trees: three untreated wooden stakes driven well into the ground vertically, equally spaced around the root system, with biodegradable fabric ties and pad, set low on the stem (max 1/3rd tree height).

17.0 Mulch specification:

Supplier to be agreed. Generally an amenity grade is required. Spread evenly to a depth of 50mm, increasing to 75mm around trees. Ensure no plant foliage is covered by mulch, lift all ground cover foliage above.

18.0 Mown grass areas:

Carry out the work while soil and weather conditions are suitable. Ideally carry out seeding during April-May or September. Cultivate and rake removing stones over 20mm and perennial weeds and to create smooth profile with existing levels ensuring areas are 25mm settled depth higher than adjacent hard surfaces to allow for easy grass cutting and 150mm below DPC of adjoining buildings.

Spread seed evenly at the specified rate(s) applied in two equal sowings in transverse directions. Lightly harrow or rake, roll and cross-roll after seeding using a lightweight roller. Stone and earth clod removal to 10mm size.

Pre-seeding fertilizer applied to manufacturers recommendations EXCEPT FOR any meadow grass areas.

Seed mix to be Emorsgate EG22 Strong Lawn Grass Mixture or equivalent sown at 25g per sqm for close mown grass [mixture of fescue grasses with dwarf ryegrass].

Keys areas may require turfing depending on programme in which case a similar grass mix is to be provided. If turfing, add grass fertilizer to suppliers instructions eg. Rolawn GroRight Lawn Establishment Fertiliser and rake or till into top 25mm of topsoil. Two days before turf is to arrive, water soil to 75mm depth. Roll out turf immediately in spring/summer and within 24 hours for autumn/winter delivery.

3.0 PLANTING SCHEDULE

Refer to Planting Plan 21/839/01 for layout and detail of tree pits and hedge planting.

	Species	Height (mm)	Description	Spacing	Total (no.)
Trees	Easy lift bag, planted into tree pits as shown on plan including irrigation points, ensure base is dug over to avoid water ponding. Good branching rather than height is key. Mulch to 75mm depth.				
Te	Tilia euchlora	2.1m clear stem	16-18cmg Easy lift bag	As per plan	7
Qr	Quercus robur	2.1m clear stem	16-18cmg Easy lift bag	As per plan	3
Pa	Prunus avium	2.1m clear stem	16-18cmg Easy lift bag	As per plan	5
Be	Betula ermanii (birch)	2.1m clear stem	16-18cmg Easy lift bag	As per plan	2
Be	Betula ermanii (birch)	2.1m clear stem	10-12cmg Easy lift bag	As per plan	7
Ac	Acer campestre (field maple)	2.1m clear stem	16-18cmg Easy lift bag	As per plan	2
Ac	Acer campestre (field maple)	2.1m clear stem	10-12cmg Easy lift bag	As per plan	2
Sauc	Sorbus aucuparia (rowan)	2.1m clear stem	10-12cmg Easy lift bag	As per plan	10
Sa	Sorbus aria (whitebeam)	2.1m clear stem	10-12cmg Easy lift bag	As per plan	7
ME	Malus Evereste	2.1m clear stem	10-12cmg Easy lift bag	As per plan	4
Cm	Crataegus monogyna (hawthorn)	2.1m clear stem	10-12cmg Easy lift bag	As per plan	3

Groundcover [E = evergreen]					
	Hedera helix Hibernica E	Groundcover	1L	4/sqm	1236
	Hedera helix Hibernica Variegata E	Groundcover	2L	5/sqm	100
	Osmunda regalis [royal fern]	15sqm planted in informal block of 3 sqm.	2L	4/sqm	60
	Harts Tongue fern	20sqm planted in informal block of 3 sqm.	2L	4/sqm	80
	Blechnum spicant [hard fern]	20sqm planted in informal block of 3 sqm.	2L	4/sqm	80
	Bulbs planted into ivy groundcover as shown in 2 areas: 12sqm dwarf daffodils 35/ sqm 15sqm snowdrop 80/sqm 10sqm native bluebell 20/sqm	Plant in informal drifts of 5sqm. Centres/depths as per suppliers recommendation.			37sqm

Ornamental evergreen hedges to front gardens					
Plant a staggered row at 3 plants/lin m . Mulch hedge width to 50mm depth. Maintain to 1.2-1.5m height.					
PIV	Prunus lusitanica Variegata		5L	3/linm	555
PIR	Photinia x fraseri Red Robin		5L	3/linm	420

Hornbeam Hedges – 105 linear meters					
Plant a double staggered row [450mm between rows, 400mm along rows] at 5 plants/lin m , bare root transplants 1+2, 900-1200mm. Mulch hedge width to 50mm depth. Maintain to 1.5-1.8m height.					
Carpinus betulus [hornbeam]					525

Native Mixed Hedges – 300 linear meters					
Plant a double staggered row [450mm between rows, 400mm along rows] at 5 plants/lin m , bare root transplants 1+2, 900-1200mm. Mulch hedge width to 50mm depth. Maintain to 1.5-1.8m height.					
Hawthorn [Crataegus monogyna] 70%					1500
Holly [Ilex aquifolium] 15%					225
Hazel [Corylus avellana] 15%					225

Native Mixed Hedge Mix 2– 50 linear meters					
Plant a double staggered row [450mm between rows, 400mm along rows] at 5 plants/lin m , bare root transplants 1+2, 900-1200mm. Mulch hedge width to 50mm depth. Allow to grow on or cut in February every 3 years [face side and top on rotation] to provide source of nuts and berries.					
Hawthorn [Crataegus monogyna]					250

4.0 MAINTENANCE TASKS

For newly planted areas:

Undertake maintenance at regular intervals during the growing season April to September.

During the 5 year establishment phase carry out maintenance of the planted areas as follows:

- Maintain a weed free area around each tree/shrub, minimum diameter 1.2m by use of hand weeding (herbicide such as glyphosate could be used but there is a risk of plant damage from herbicide drift)
- The timing and method of weed control is to be kept under review.
- If herbicides are to be used, they are to be in accordance with COSHH regulations and manufacturers instructions.
- Watering trees: for the first growing year allow for watering every week to every fortnight according to weather conditions, from April to October. Water through the irrigation cap AND also use overhead watering for roots above the irrigation system – allow 20L for all trees. Watering in year 2 is also likely to be required.
- For other plants, water as necessary to prevent plants wilting.
- Undertake formative pruning to maintain good dense plant structure.
- Re-firm soil around any loose plants without compacting.
- Maintenance operations shall be carried out only during suitable weather conditions.
 - Top up bark mulch to maintain depth of 50mm for shrubs and hedges, 75mm for trees.
 - South boundary native mixed hedge to be maintained to provide a food and shelter resource, ideally leave overwinter berries and cut in February on a three year rotation for face and top.

- Other hedges to be pruned at appropriate times to remove dead or dying and diseased wood and suckers to promote healthy growth and natural shape. Prune to achieve heights as shown on the Landscape Plan.
- Allow groundcover to spread but cut back from hard surfaces.
- Prune trees to favour a single central leading shoot, unless specified otherwise. Prune in accordance with good horticultural practice.
- Tree stakes should be removed at year 2 or year 3.
- Every month check condition of stakes, ties, irrigation. Replace broken or missing items. Adjust if necessary to allow for growth and prevent rubbing of bark. Cut back any damaged bark.

5.0 MONITORING AND DEFECT REPLACEMENTS

Undertake an annual walkover to enable monitoring of tree and hedge establishment success.

Plants that fail to thrive during the **5 year establishment phase** will be replaced in the next suitable planting season [November to March inclusive].

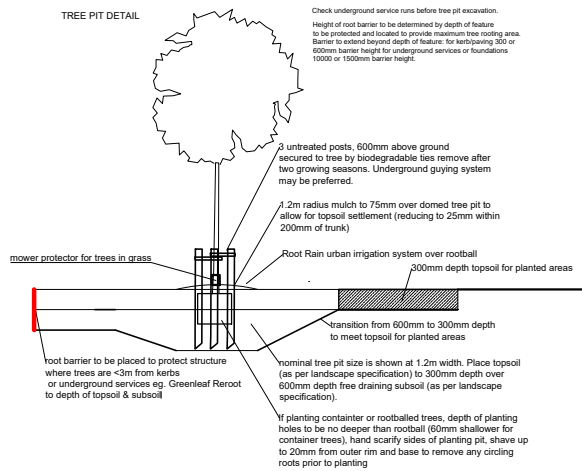
Replacements will match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater.



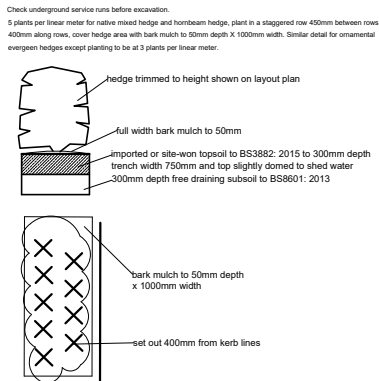
Notes

- tree planting at 16-18cmg
- tree planting at 10-12cmg
- proposed evergreen hedge
- proposed hornbeam hedge
- proposed native mixed hedge
- proposed groundcover
- existing levels [topographic survey data]
- proposed levels [architects layout plan]
- trees and hedges to be removed [refer Tree Survey by Mackley Davies]
- trees and hedges to be retained [refer Tree Survey by Mackley Davies]
- tree protection fence line [refer Tree Survey by Mackley Davies]

TREE PIT DETAIL



HEDGE PLANTING DETAIL



	Species	Height (mm)	Description	Specing	Total (no.)
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Ornamental evergreen hedges to front gardens

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PIV	Prunus lusitanica Variegata	SL	3/linm	555
PIR	Photinia x fraseri Red Robin	SL	3/linm	400

Rev A 21.9.21 garden hedge planting amended to run across top of existing steps.

Layout and levels based on Site Plan 001 by Stuckey George.

Refer to Mackley Davies Landscape Scheme [for plant schedule, outline specification and maintenance/management].
Refer to Mackley Davies Tree Survey & Arboricultural Impact Assessment.

All dimensions must be checked on site and not scaled from this drawing.

This drawing is for the purposes of PLANNING. Based on Ordnance Survey data as supplied. OS Licence 100043966

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SITE
Queens Road, Merthyr Tydfil

CLIENT
Gorsedd Development

DRAWING TITLE

Landscape Layout

SCALE 1:250 @ A1 Job No. 21/839/01
DATE September 2021 REVISION No. A