



ARBORICULTURAL METHOD STATEMENT

for:

A PROPOSED GAS GOVERNOR INSTALLATION

at:

High Street, Gresford, Wrexham, LL12 8PS

February 2021

Ref: ECO/588



Ecoscope Ltd.

Unit G1, Bodnant Business Studios, Tal-Y-Cafn, Conwy

t. [03335 771 402](tel:03335771402) e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

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SUMMARY

Ecoscope Ltd. were commissioned to produce an arboricultural method statement to accompany a planning application for the construction of gas governor at High Street, Gresford, Wrexham, LL12 8PS. This report describes the impact of the proposals on the trees within the vicinity of the works and proposes relevant mitigation and working practices to minimise any impact. Two of the trees are covered by a Tree Preservation Order.

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Written by: Mr. Simon Cope MSc MCIEEM Cert. Arb

Approved by: Mr. Stuart Kato M.Sc. MCIEEM

1 INTRODUCTION

1.1 Site Overview

- 1.1.1 This arboricultural method statement was undertaken in response to a request from the Tree Officer at Wrexham County Borough Council; the report was required before determination to avoid withdrawal of the planning application. The development proposal is for the installation of a gas governor station, housing two gas governor regulator kiosk units on part of Gresford Recreation Ground, off the High Street, Gresford, Wrexham, LL12 8PS (approx. centroid grid reference SJ34825458, planning ref. P/2020/0516, **Figures 1 & 2**).



Figure 1. Map showing the location of the proposed development site (circled red).

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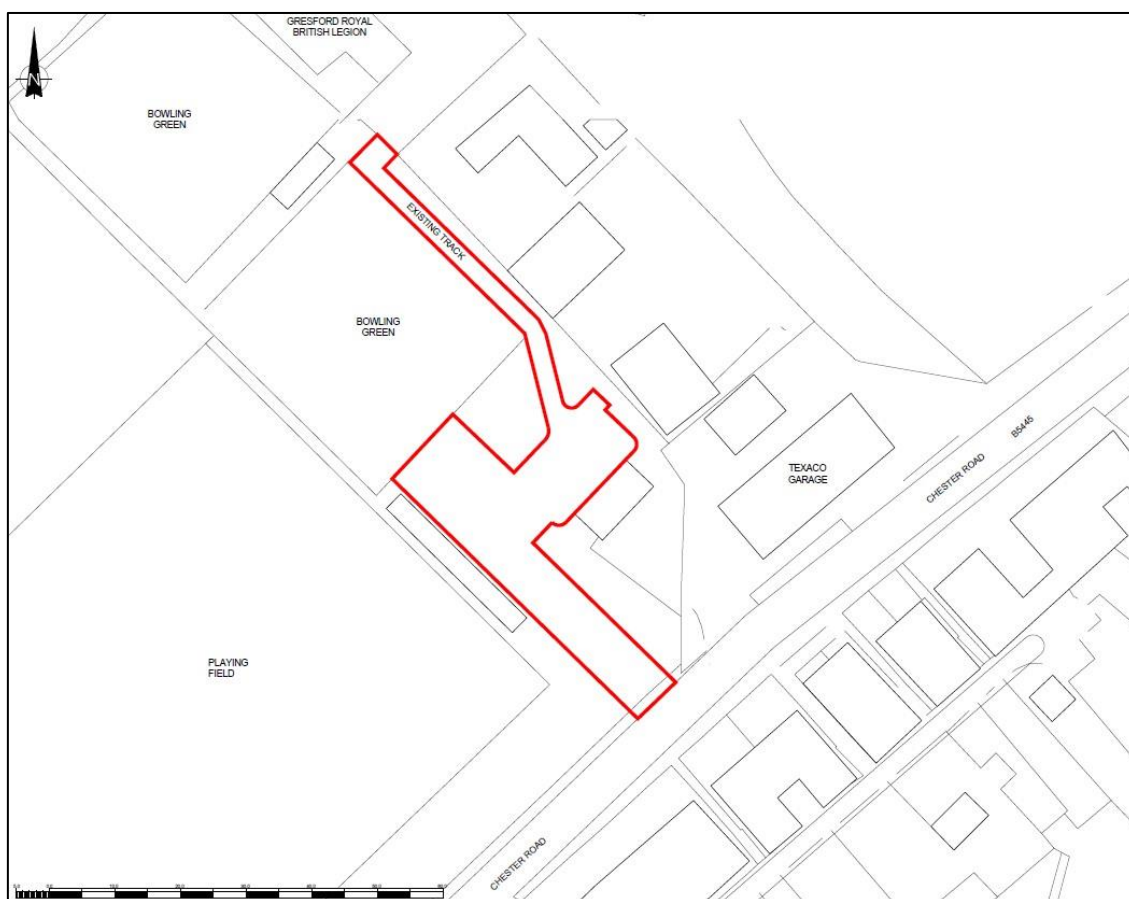


Figure 2. Map showing the boundary of the construction site.

- 1.1.2 The site was visited by Stuart Kato, and the trees measured, on the 26th of January 2021. The impact assessment and method statement are designed in accordance with guidance given in BS58237:2012.

1.2 Authors qualifications

- 1.2.1 Since gaining a Distinction in the Royal Forestry Society Certificate in Arboriculture in 2000, Simon Cope has provided arboricultural consultancy for a wide range of professional and domestic clients. Simon follows the best practice guidelines published by the Arboricultural Association in all aspects of my profession.

2 ARBORICULTURAL IMPACT ASSESSMENT

- 2.1 The site is located in the eastern corner of Gresford Recreation Ground, and the proposed development will involve the construction of a new district governor compound containing two kiosk units, with steel palisade fencing (2.4m high) around the boundary. The permanent compound area will measure approximately 15m x 6m and will be surfaced with gravel. For the purposes of construction, it will be necessary to use a temporary access and site compound (Figure 3).

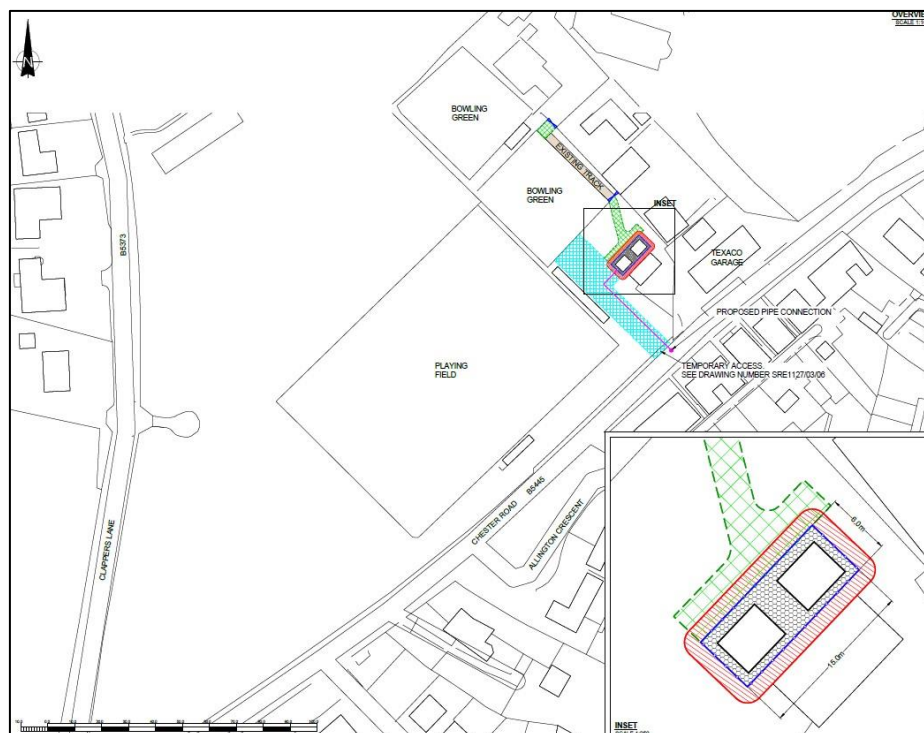


Figure 3. Map showing the approximate locations of the permanent and temporary (shaded light blue) areas of the site.

- 2.2. The only trees that will be affected by the proposed development are those alongside Chester Road, where the temporary access route will be established. These include one hedgerow and two trees (covered by a tree preservation order). The permanent access route follows an existing track and so will not impact on any of the trees close to that route.
- 2.3 The temporary access will certainly necessitate the removal of part of the hedgerow (H1, unknown species), and, without mitigation measures, is likely to have an adverse impact on the two Common Lime trees that arise from either side of the access (T2 & T3). T2 has a Diameter at Breast Height (DBH) of 764mm, and T3 has a DBH of 573mm. The RPA's are likely

to be distorted because root growth under the adjacent road would be severely restricted due to a lack of infiltrated water.

2.4 The potential negative impacts caused by the development are outlined in **Table 1**.

Table 1. Potential negative impacts of the development on the trees.

	EVENT	LIKELIHOOD	SIGNIFICANCE	DURATION OF HARM
Within construction footprint	Trees felled	Certain	Low (low quality hedgerow only)	Permanent
Development site traffic	Localised compacting and crushing of tree root networks	Highly likely	Moderate – interruption of water/nutrient supply, create access for pathogens	Immediate and residual
	Collision with machinery	Likely	Moderate - interruption of water/nutrient supply, create access for pathogens	Immediate and residual
Burial of services	Major and minor root severance	Highly likely	High – loss of structural stability, interruption of water/nutrient supply, create access for pathogens	Immediate and residual
Other issues related to access route establishment	Facilitation pruning	Likely	Low – minor branches	Immediate but temporary

3 ARBORICULTURAL METHOD STATEMENT

3.1 Mitigation rationale

3.1.1 The principle of mitigation in the broad sense involves a hierarchy of desirable outcomes designed to maintain or promote the health of the trees, as follows:

- Avoidance – can the development be designed so that there will be no negative impacts?
- Mitigation – can the development be designed to reduce the negative impacts?
- Compensation – can the unavoidable impacts be compensated for?

Avoidance

3.1.2 In arriving at a design proposal, a number of factors have been taken into account with regard to the proposed program of works:

- The development will result in tangible benefits to the local community - the sole purpose of the proposed installation is to reduce the gas pressure from transmission levels to distribution levels, which will ensure the continued supply of gas to the residents of Gresford and other surrounding business customers.
- There are no other suitable sites in Gresford for the gas governor installation - this location has been chosen after several years of investigation and planning;
- The gas pipeline has to be connected to the existing main pipeline that runs underneath Chester Road;
- Other routes for connection to the gas main from this location have been considered but would impinge on a larger number of tree RPA's along Chester Road;
- Despite repeated attempts, it has not been possible to contact the owners of the Texaco garage to the east of the site. There are underground fuel tanks alongside the shared boundary, which has ruled out the use of a crane to bring in plant;
- Temporary access across the playing fields has been ruled out by the owners of that site;
- The minimum width of the temporary access that will allow for the predicted types of site traffic during construction is 3m. This width has been significantly reduced from the previous design;
- The proposed 'pipeline' will actually consist of three pipes, and safety considerations with respect to minimum safe distances between them dictate a trench width of 2.0m and a minimum cover of 1.0m, resulting in a total depth of approximately 2.0m;
- The duration of the works will be approximately 10 weeks;

- There is a sizable amount of topsoil which has recently been stockpiled (within the last two years) to the north of T2 & T3, partly overlying the RPA's of T2 & T3. This will have already adversely affected the trees through compaction of their roots, potentially lowering the permeability of the soil around the roots.

3.2 Measures for the protection of retained trees

- 3.2.1 The pipeline trench will follow the shortest distance across the RPA's of T2 & T3 to minimise the impact of the excavation of the trench (**Figure 4**). The areas and percentages of RPA's affected are shown in **Table 2**.

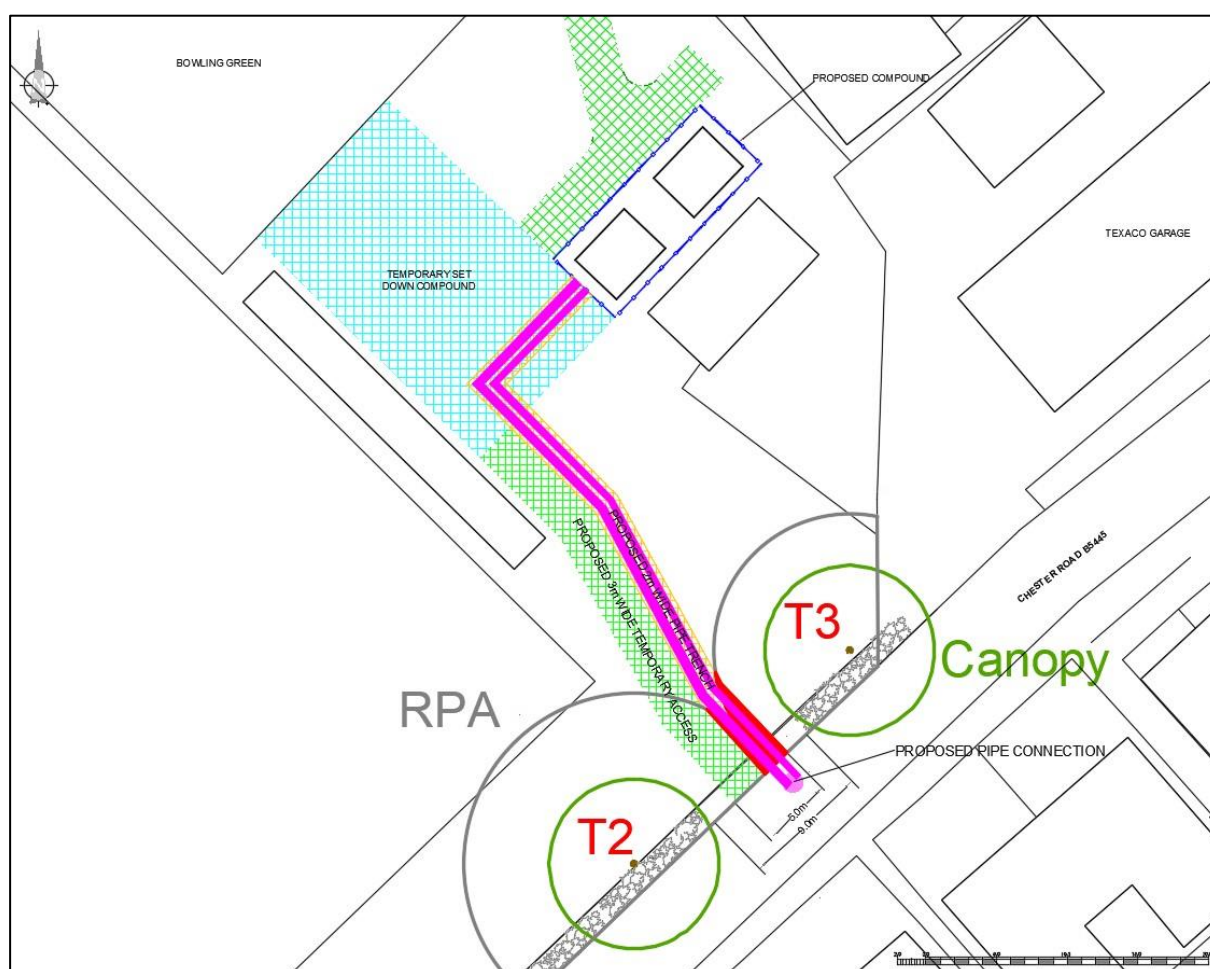


Figure 4. Map showing the layout of the temporary access track and the pipeline trench where they cross the (distorted) RPA's of the retained trees. The RPA incursions are shaded red.

Table 2. Incursions of RPA's directly affected by the pipeline trench.

	RPA (m ²)	Incursion (m ²)	Incursion (%)
T2	272	4.2	1.5
T3	150	7.9	5.3

3.2.2 Given the width required by the access route, the overlap between the RPA's of T2 & T3, and the uneven ground surface, it will not be possible to install the access track directly on the ground without damaging the trees. The access track will therefore bridge above the ground, using a proprietary modular root-bridge system supported on ground screws (indicative example shown in **Figure 5**). This will avoid any loading on the RPA's of T2 and T3.

**Figure 5.** An example of a proprietary root bridge product under construction.

3.2.3 Pilot holes for the ground screws will be drilled by hand auger, and the position will be moved if a significant root is encountered. The ground screws which support the lattice will be installed using a no-dig method by an excavator with an auger attachment. The screws are up to 2.1m in length, and can support axle loads of up to 11 tonnes. The installation of

the screws can take place from outside the Root Protection Area using the reach of the excavator to avoid compaction during installation. Further information about the system known as Root bridge can be found online at <https://greengridsystems.com/products>.

- 3.2.4 Given the relatively large diameter of the pipes to be installed from the southern end of the site, it will not be possible to use no-dig excavation techniques for this element; the pipeline trench will be excavated using a mechanical excavator, assisted with air spade and vacuum excavation. The position of the pipes has been designed to minimise the impact to the RPA. It is unlikely that many roots larger than 50mm diameter will be encountered at this distance from the stems of the trees; all exposed roots will be pruned back neatly to the edge of the trench using a sharp cutting tool such as secateurs, loppers, or a handsaw. This element will be overseen by an on-site arboriculturist.
- 3.2.5 The pipes will be laid on pipe-bedding gravel to a thickness of 1m, and then the trench will be backfilled using the previously excavated subsoil (**Figure 6**). This material will be free of contaminants and other foreign objects potentially injurious to tree roots.
- 3.2.6 Heras fencing will be placed on either side of the access track where it passes the trees to prevent collisions between machinery and the trees. This will demarcate the 9m combined width of the access track and the pipeline trench, with 2m either side to allow access for wide loads. The protected space will not be used for the storage of construction materials (see Tree Protection Plan in **Appendix I**).

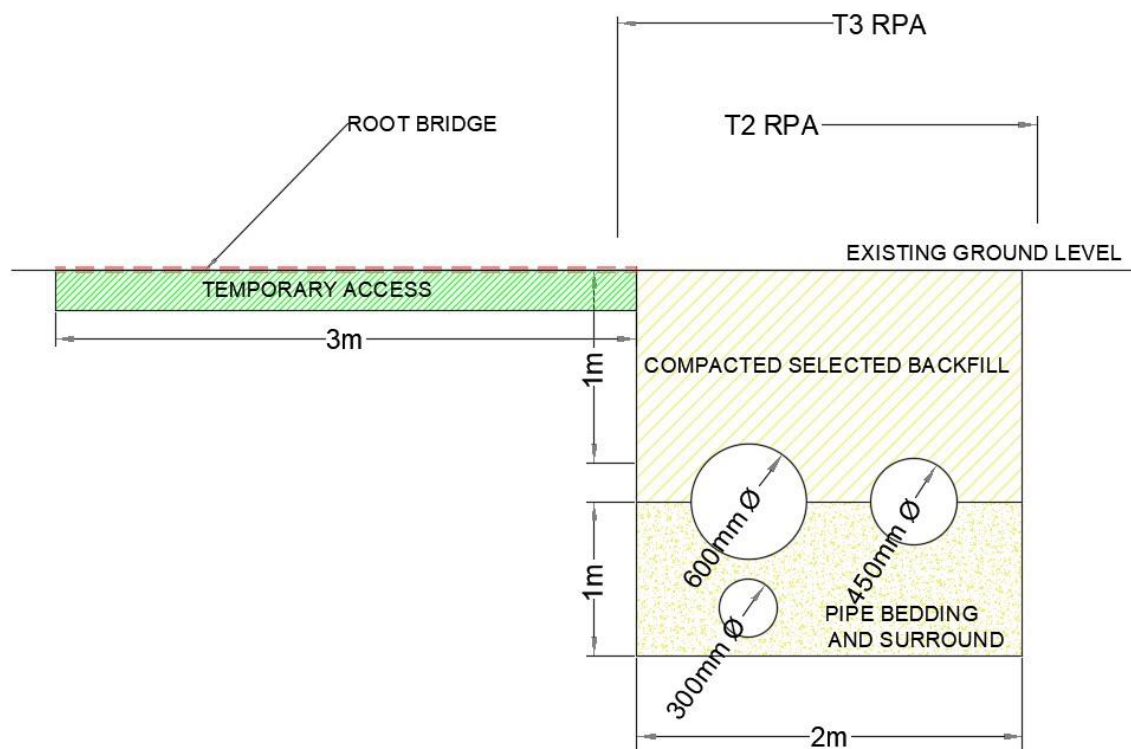


Figure 6. Cross-section showing the arrangement of pipes in the trench and the adjacent access track.

3.3 General arboricultural recommendations

- Any access facilitation pruning of low branches will be carried out in a sensitive manner so that the amenity of all trees (T2 & T3) is preserved, and they remain balanced. All tree surgery will be carried out to BS3998:2010 by suitably qualified and experienced personnel.
- All nesting birds and their nests are legally protected from harm or disturbance. This means either that all potentially damaging works to trees that may harbour nesting birds should be postponed until after the nesting season (March to August inclusive), or a suitably qualified ecologist should survey the area before works commence to confirm that no nesting birds are present.
- The pile of topsoil on the north side of the fence will be carefully removed; the excavator will be positioned outside the RPA's of the trees and reach in to lift the soil off. The original ground surface will be reinstated.

3.4 Measures for the removal of the hedgerow

- Hedgerow removal will be limited to approximately 9.0m - the minimum necessary to facilitate access - so that as much of the hedgerow is preserved intact as possible.
- The section of hedgerow scheduled for removal will be felled to ground level (coppiced), which will cause no damage to the roots of the adjacent trees. The roots will be bridged by the access track and will re-grow after the bridge is removed. In case of failure the hedgerow will be replanted like for like and maintained for three years post development to ensure establishment.

3.5 Arboricultural supervision

- 3.5.1 A suitably qualified arboriculturist will be on-site to provide advice and guidance during the removal of the existing stockpiled topsoil on the north side of the trees, the felling of the hedgerow plants, the construction of the root bridge over the RPA's, the excavation of the trench across the tree RPA's, and the erection of the Heras fencing. In the event of practicalities on site requiring deviation from this method statement, the advice of the supervising arboriculturist will be followed. Any deviation will be discussed and agreed with the Local Planning Authority tree officer before implementation.

3.6 Residual impacts

- 3.6.1 Given the adoption of the measures outlined above, all the adverse impacts described in **Table 1** will be mitigated. The proposed development should not result in any significant harm to the retained trees.

4 REFERENCES

- BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations.' British Standards Ltd.

APPENDIX I: TREE PROTECTION PLAN

