



Wrexham Technology Park Access Road Wrexham

Bats: Method Statement Detailing Measures to Maintain Favourable Conservation Status

TEP Report Ref 4912.002

Version 1.0

January 2015

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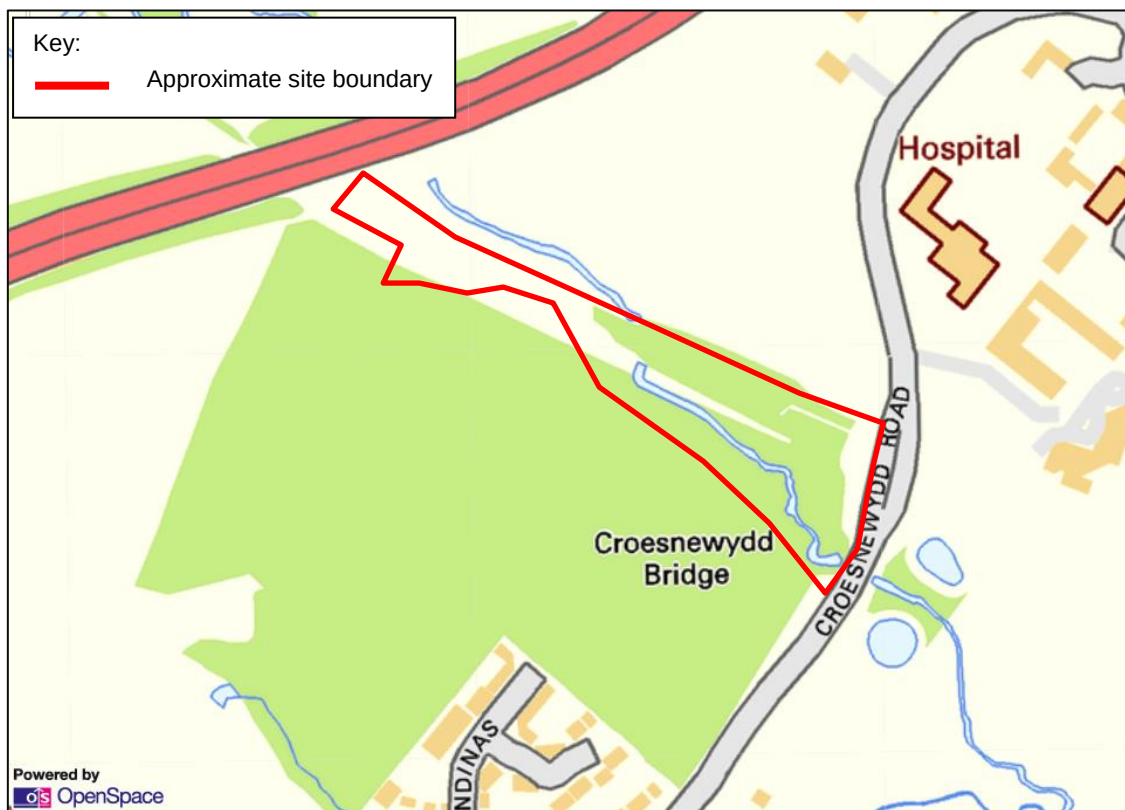
1.0 INTRODUCTION

- 1.1 TEP was commissioned in December 2014 by Ramboll UK to produce a mitigation strategy to ensure that bats are not disturbed during the removal of trees and vegetation in proximity to two trees confirmed to have bat roost potential. The tree and vegetation removal is required to facilitate proposals for the access road to the Wrexham Technology Park.

Site Context

- 1.2 The site is located to the east of Croesnewydd Road on the eastern extents of Wrexham Town Centre in North Wales (central grid reference SJ 318 505). The boundaries of the site extend westwards from Croesnewydd Road stopping at the A483; belts of screen planting and woodland define the site to the north and south. The site's location is illustrated at Figure 1.

Figure 1: Site location plan



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- 1.3 The site comprises a stretch of dismantled railway and limestone aggregate, large areas of screen planting, shelterbelt and woodland with smaller areas of open, rough grassland. The River Gwenfro runs from west to east, intersecting the site midway via a culvert that runs underneath the old railway. An overgrown public footpath also runs underneath the railway further to the west via an underpass.

- 1.4 Land use around the immediate vicinity of the site includes roads, residential and industrial areas to the east and mixed use, arable and grazed pasture to the north, south and west.

Previous Survey

- 1.5 Bat activity surveys carried out across the the Wrexham Technology Park site by TEP in the summer of 2014 (TEP Ref: 4571.005) confirmed that the site is utilised by a number of bat species for foraging and commuting. Species recorded, in order of abundance, included:
- Common pipistrelle (*Pipistrellus pipistrellus*);
 - Soprano pipistrelle (*Pipistrellus pygmaeus*);
 - Noctule (*Nyctalus noctula*);
 - Leisler's bat (*Nyctalus leisleri*);
 - Serotine (*Eptesicus*); and
 - Species of *Myotis* bats
- 1.6 During the bat activity surveys, it was noted that there were a number of trees present on site with the potential to support roosting bats. It was recommended in the report that prior to works commencing a ground based assessment of these trees was undertaken by an experienced bat ecologist to identify any trees with features suitable to support roosting bats.
- 1.7 TEP was previously commissioned in September 2014 by Ramboll UK to undertake a ground based daytime assessment of trees on site for their potential to support roosting bats.
- 1.8 The ground based assessment of trees within the footprint of the new access road works was completed on 23rd September by experienced bat ecologist Natasha Seaward MCIEEM. This survey identified two groups and six individual trees with potential to support roosting bats. These all contained heavy ivy growth which could have obscured features suitable to support bats such as cracks and crevices. These trees were all initially classified as Category 2; in line with the Bat Conservation Trust (BCT) Bat Surveys Good Practice Guidelines (Hundt, 2012), these are "trees with no obvious potential, although of a size or age that elevated surveys may result in cracks or crevices being found, or the trees may support some features which may have limited potential to support bats".
- 1.9 Aerial surveys of these Category 2 trees as were subsequently carried out on Wednesday 24th September 2014. The inspection was carried out by a two man aerial climbing team supervised by Natasha Seward. An endoscope was used to aid the aerial inspections. No bats or evidence of bats was identified during the aerial inspections.
- 1.10 Following the aerial survey, the majority of the Category 2 trees were downgraded to Category 3; these are defined in the guidelines as "trees with no potential to support roosting bats". However two trees, identified as T1 and T2 in the arboricultural survey (Appendix A) were upgraded to Category 1 ("trees with definite bat potential...with

potential for use by single bats"). The potential of these two trees is limited to the thick ivy growth on the trees which forms a lattice behind which bats could roost.

- 1.11 Trees T1 and T2 are located within an area of dense woodland and are directly adjacent to each other, forming a contiguous feature. . In order to facilitate the construction of the proposed access road, the woodland, scrub and scattered trees surrounding T1 and T2 require removal.

Development Proposals

- 1.12 The proposed development includes the construction of a new access road and roundabout linking Croesnewydd Road to a proposed development site towards the south west. An attenuation pond is also proposed to the south-east of the roundabout.
- 1.13 Detail of the proposals and the locations of T1 and T2 relevant to the works are shown on Drawing D4598.002F (Appendix A; drawing extracted from the Arboricultural Impact Assessment TEP Ref 4508.001). Figure 2 below shows the approximate development boundary.

Figure 2: Site Proposals



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- 1.14 Drawing G4912.001 illustrates the areas of woodland to be removed, the locations of T1 and T2 and the location of woodland to be retained.

2.0 OBJECTIVES

- 2.1 T1 and T2 are both classified as Category 1 trees and both require removal to facilitate construction of the new access road.
- 2.2 Nighttime activity surveys and ground based surveys and aerial inspections of trees have been completed across the wider footprint of the proposed Technology Park. No bat roosts were identified during the course of these surveys; however, T1 and T2 were reclassified as Category 1 trees, having definite although limited potential to support roosting bats. T1 and T2 require removal to facilitate construction of the access road.
- 2.3 While no bat roost has to date been confirmed at the site, bat roosting behaviour is dynamic, with bats moving between roost sites between and even within a season. This is particularly the case with tree roosts.
- 2.4 This method statement details those measures to be implemented to ensure that:
- no bats are roosting in T1 or T2 at the time their removal;
 - in the event that T1 or T2 is identified to support a roost in the time leading up to their removal, a licence to permit the felling of the trees will be obtained and appropriate roost replacement measures will be implemented prior the felling of the trees;
 - connectivity between T1 and T2 and retained woodland will be maintained until such time that T1 and T2 have been felled; and
 - the final development will not have significant detriment to bats in respect of their use of the site for foraging and commuting.
- 2.5 The measures set out in this method statement will therefore ensure the favourable conservation status of those bats utilising the site.

3.0 LEGISLATIVE CONTEXT

- 3.1 The Conservation of Habitats and Species Regulations 2010 (Habitats Regulations) state, at Regulation 41:

41. (1) A person who—

(a) deliberately captures, injures or kills any wild animal of a European protected species,

(b) deliberately disturbs wild animals of any such species,

(c) deliberately takes or destroys the eggs of such an animal, or

(d) damages or destroys a breeding site or resting place of such an animal,

is guilty of an offence.

- 3.2 Regulation 41(2) confirms that disturbance of animals includes, in particular, any disturbance that is likely to (a) impair their ability to survive, to breed or reproduce, or rear or nurture young, to hibernate or migrate or (b) to affect significantly the local distribution or abundance of the species.
- 3.3 Derogation from the above legislation can be obtained, under appropriate circumstances, through licensing by the Welsh Assembly Government. Three tests must be satisfied before the licensing authority can issue a licence under Section 53(2)(e) to permit otherwise prohibited acts:
- Section 53(2)(e) states that licences may be granted by the licensing authority “to preserve public health or public safety or other imperative reasons of overriding public interest including those of the social or economic nature and beneficial consequences of primary importance for the environment”
 - Section 53(9)(a) states that a licence may not be granted unless the licensing authority is satisfied “*that there is no satisfactory alternative*”.
 - Under Section 53(9)(b) a licence cannot be issued unless the licensing authority is satisfied that the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.
- 3.4 The measures detailed in this method statement will ensure that no works are implemented on site in any way that would constitute an offence under the Habitats Regulations at Regulation 41. In the event a bat roost is identified in either T1 or T2 at any stage of works, the measures set out in this method statement will ensure that the favourable conservation status of the species in question is maintained.

4.0 PRE-COMMENCEMENT SURVEYS

- 4.1 There are no intended capture or exclusion works to be implemented as part of this method statement.
- 4.2 An initial inspection will be undertaken, prior to the commencement of any tree felling work, to re-assess the condition and categorisation of all trees to be felled in case there has been any deterioration since the initial ground based and aerial surveys in September 2014.
- 4.3 Prior to the removal of trees T1 and T2, three roost surveys, comprising dusk emergence and/or dawn re-entry surveys, will be completed so as to ensure the trees are not occupied by bats at the onset of works.
- 4.4 These surveys will be completed on suitable nights during the period May 2015 to September 2015. Suitable nights are those with temperatures above 7°C with no appreciable wind or rain that could affect bat behaviour. The surveys will be completed by sufficient number of surveyors (minimum of two) that ensure complete coverage of

any potential roost feature on T1 and T2. At least two of the three surveys will comprise dawn re-entry surveys.

In the Event a Bat Roost is Confirmed Present

- 4.5 If bats are confirmed to be roosting in either tree, a license will be required from Natural Resource Wales to permit felling of both the trees; the licence will include both trees due to their close growth and concern that felling of one would result in significant damage or disturbance to the other.
- 4.6 The requirement to obtain a licence will have timing implications for the project whilst the licence application is produced, submitted and determined. Depending on the timescales from the date of the last survey to the scheduled felling of T1 and T2, a reinspection of the two trees may be appropriate.

In the Event a Bat Roost is Confirmed Absent

- 4.7 If, following the last survey, the trees are not found to have any evidence of roosting bats they will be felled within 24 hours in line with advice provided by the ecologist undertaking the bat surveys.

Enabling Works

- 4.8 Prior to the roost surveys being undertaken at T1 and T2, vegetation clearance works to surrounding woodland and trees will be undertaken.

5.0 MITIGATION AND COMPENSATION

- 5.1 Before commencing any work on site, builders and contractors will be inducted by a licensed bat ecologist to make them aware of the possible presence of bats, their legal protection and of working practices to avoid harming bats. A copy of this Method Statement document will remain available on site at all times, together with details of who to contact should bats be found.
- 5.2 Works must be undertaken during day light hours only.
- 5.3 Tree felling works for all trees excepting T1 and T2 may commence prior to the completion of the roost surveys. These works will be commenced in January/February 2015 so as to avoid the bird nesting season. While clearance works may extend beyond this period into the bird nesting season, the scale and nature of clearance works is such that nest establishment within the works period is unlikely. This timing will also reduce disturbance effects to foraging and commuting bats by avoiding the bat activity season.
- 5.4 However, throughout these works a 10m standoff from trees T1 and T2 must be maintained at all times, until such time that T1 and T2 have been felled. Heras fencing or similar should be used to mark this boundary and appropriate signage should be put in place to ensure no entry into the area. If for any reason works are required within this

area a suitably qualified bat consultant must first be contacted and an approach to the works agreed if possible.

- 5.5 Additionally, until such time that trees T1 and T2 have been felled,, habitat linkage to the wider area must be maintained to allow foraging and commuting. The area of vegetation which must be retained in order to maintain this habitat linkage is illustrated at Appendix B.
- 5.6 During tree felling of trees with bat roost potential, T1 and T2, contractors will be instructed from ground level by the licenced bat consultant.
- 5.7 In the absence of any additional licence requirement for the felling of T1 or T2, the following standard measures will be applied to the felling of all trees with bat roost potential:
- Smaller branches without cavities will be felled and may be removed from site or chipped on site with no further constraints.
 - Larger branches or those with visible cavities will be felled employing a 'soft-felling' technique, whereby the branch is gently lowered to be ground and cushioned on impact.
 - Lowered branches will be inspected on the ground using an endoscope and left on site overnight to enable any bats within the branch to escape.
- 5.8 In the unlikely event that bats are encountered at any time during clearance works, works will cease in that area, or as otherwise advised by the bat ecologist. Where possible, the bat will be left *in situ* and works will be implemented around the bat. Where this is not possible, appropriate action as advised by the bat ecologist will be implemented.
- 5.9 No contractor shall be permitted to handle bats.

Roost Habitat

- 5.10 The loss of T1 and T2 will result in a reduction of available tree roost habitat, even if no current evidence of roosting is confirmed during the roost surveys. The loss of this potential roost habitat will be offset by the installation of bat boxes.
- 5.11 Six bat boxes will be installed onto two suitable retained trees. Each of the selected trees will have 3 bat boxes installed:
- 5.12 The boxes will be installed a minimum of 3m above the ground and will be oriented to the north, southwest and southeast (or as close to these orientations as tree characteristics will permit). The boxes will be installed under the supervision of the bat ecologist and will be fixed to the trees in accordance with directions from an arborist.

Reporting

- 5.13 Following the survey and tree felling work, findings will be reported to Wrexham Borough Council. In the event that a licence is required to permit the felling of T1 and

T2, a licence report will be submitted to Natural Resources Wales and Welsh Government on completion of the licensable works.

6.0 POST-DEVELOPMENT MEASURES

Landscape scheme

- 6.1 Mitigation planting has been proposed as part of the Arboricultural Implications Assessment (see drawing D4598.003). This should include a mix of native species which have been locally sourced. This mitigation planting should help to mitigate for the loss of woodland on site. The vegetation will also ensure that a commuting route is maintained along the edge of the new road and will provide foraging opportunities for any bats present on site.

Lighting scheme

- 6.2 Leaving the access road unlit is preferable so as to (a) limit fragmentation of foraging and commuting habitats for most bat species or (b) avoid attracting some bat species to the roadside thus introducing a collision risk or affecting the local distribution of bats.
- 6.3 If lighting of the road is unavoidable, to minimise the impacts from artificial lighting on bats post-construction, the following steps will be taken:
- Lighting will only be installed in those areas required for health and safety;
 - Upward lighting will be avoided;
 - Light will be directed only to where it is needed to avoid light spillage into surrounding areas;
 - The brightness of lamps will be as low as legally possible considering health and safety requirements;
 - Where possible low pressure sodium lamps will be used instead of high pressure sodium or mercury lamps;
 - If the use of mercury lamps cannot be avoided then they will be fitted with UV filters;
 - The height of lighting columns will be the absolute minimum required in that location, with light directed at the lowest height level possible to reduce the ecological impact of the light.
 - The times during which lighting will be used in proximity to retained or newly planted linear features and the new SUDS basin will be limited to provide some dark periods;
 - Where practical, light will be restricted to selected areas by fitting hoods which

direct the light below the horizontal plane, at an angle of less than 70 degrees;
and

- A corridor(s) of permanent darkness will be maintained across the site to ensure that foraging and commuting habitats do not become fragmented or isolated. This can be achieved through (a) ensuring no lighting and no light spill occurs between the A483 and the roundabout of the new access road – additional screen planting may be considered to achieve this dark corridor; or (b) ensuring a dark break across the access road in which no lighting occurs or in which lighting is switched off during the hours of dusk and dawn – the break would be best sited across the stretch of road between T3 and W1 (Appendix A) and should be allowed to create a dark corridor width of 5m.

7.0 FAVOURABLE CONSERVATION STATUS

7.1 The conservation status of a species is defined in the Habitats Directive as favourable when:

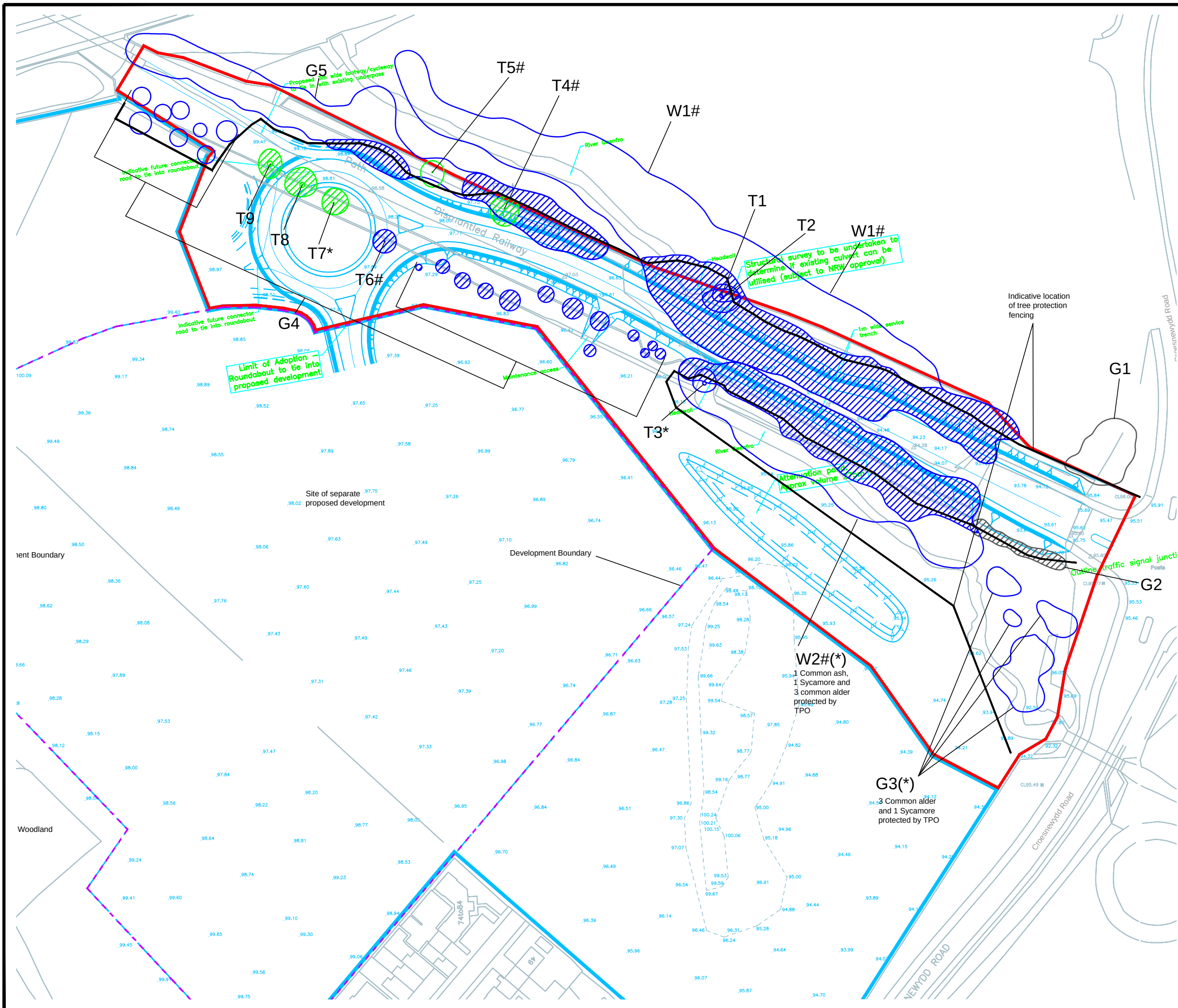
- (a) population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats; and
- (b) the natural range of the species is neither being reduced nor is likely to be reduced in the foreseeable future; and there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

7.2 There will be no detriment to the favourable conservation status of bat species at the site as a result of the proposals. Measures detailed in this method will ensure:

- Roosting bats will not be disturbed by works
- There will be no net loss of potential tree roost habitat
- There will be no foraging or commuting habitat fragmentation.
- No bats will be injured or killed.

Appendix A: Tree removal and protection plan (TEP Ref: 4598.002F)

Please note categories within this drawing refer to value of trees only and not bat roost potential.



KEY
[This drawing must be reproduced in colour]

- T1 Individual trees
- G1 Groups of trees
- W1 Woodland
- Survey Boundary
- # Approximate location (Feature not shown on topo)
- * Statutory Protection (TPO, Conservation Area, Important Hedgerow etc.)
- Tree Protection Fencing (c. 730m) (Indicative location)

Trees to be retained
(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Trees with existing or potential conservation value)

Trees to be removed
(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Data Sheets (Appendix 1).



F	Updated road layout Separated planting to D4598.003	RMG	JGS	27.10.14
E	Removed mitigation planting	RMG	TDP	21.10.14
D	Updated mitigation planting location	RMG	JGS	16.10.14
C	Updated mitigation planting location	RMG	JGS	15.10.14
B	Updated layout and tree removal	RMG	JGS	09.10.14
A	Updated tree removal and fencing (ground works for new culvert)	RMG	JGS	08.10.14
Rev	Description	Drawn	Approved	Date



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Project

Western Gateway, Wrexham Technology
Park - Access Road
Arboricultural Impact Assessment

Title

Drawing 2
Tree Removal and Protection Plan
[PROPOSED]

Drwg No
D4598.002F

Scale
1:1250 @ A3

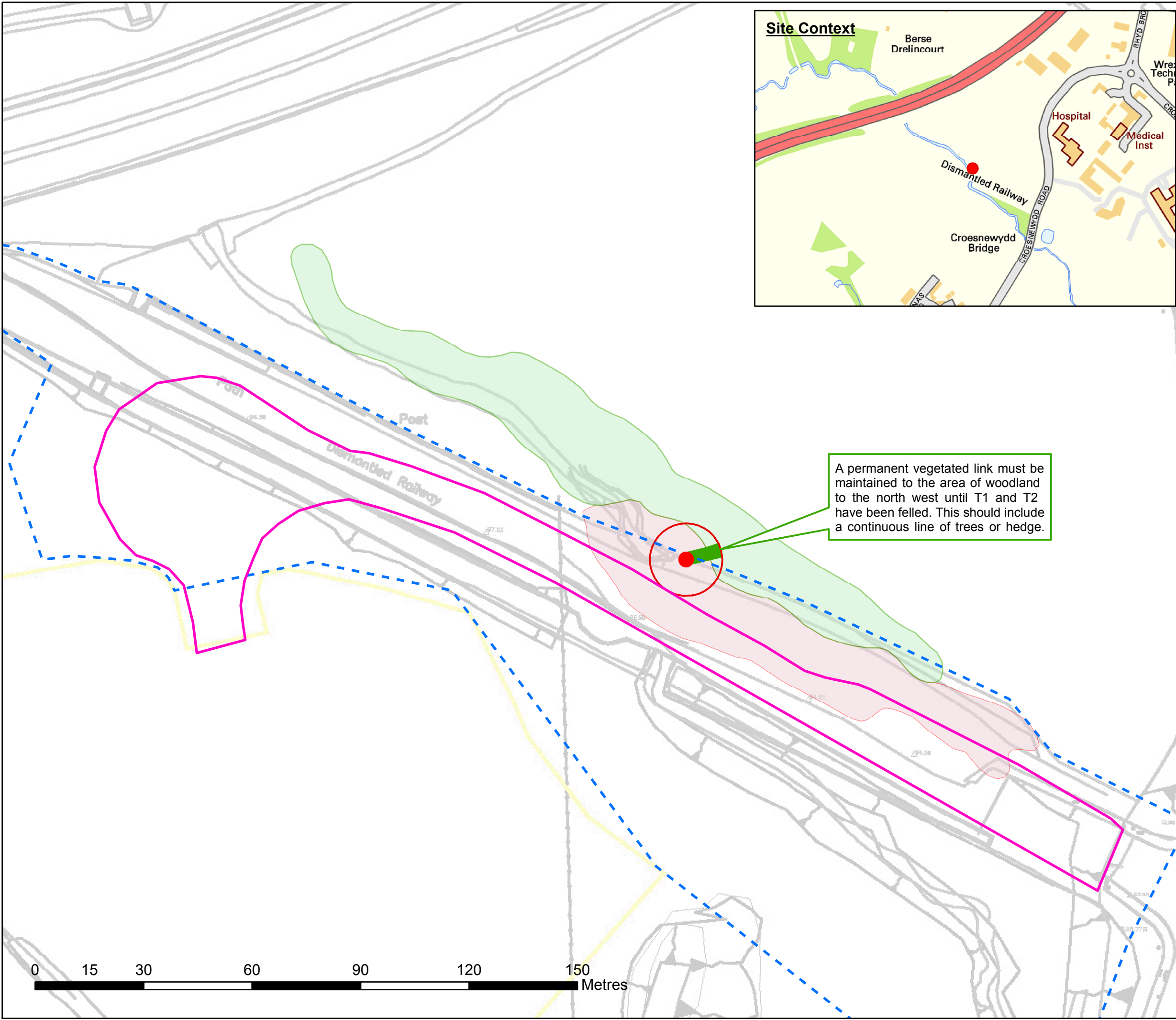
Date
09/07/14

Drawn
RMG

Checked
KJT

Approved
JGS

Appendix B: Reasonable avoidance measures drawing (TEP Ref: G4912.001)



- Key**
- T1 and T2
 - New Road Boundary
 - Site Boundary
 - 10m Exclusion Zone
 - Maintained Habitat Linkage
 - Retained Woodland
 - Woodland to be felled

A permanent vegetated link must be maintained to the area of woodland to the north west until T1 and T2 have been felled. This should include a continuous line of trees or hedge.

Base plan provided by client.
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Rev	Description	Dwn	Appvd Date
		Genesis Centre Birchwood Science Park Warrington WA3 7BH Tel 01925 844004 Fax 01925 844002 email tep@tep.uk.com	
Project:			
Wrexham Technology Park Access Road			
Title:			
Bat Reasonable Avoidance Measures			
Map No.		G4912.001	
Scale:		Date:	
1:1,000 @ A3		07/01/2015	
Drawn:	Checked:	Approved:	
IH	JC	RR	

