M25 junction 28 improvement scheme

TR010029

9.64 Outline Arboricultural Method Statement (AMS)

Rule 8(k)

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9.64 OUTLINE ARBORICULTURAL METHOD STATEMENT (AMS)

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1. Introduction

1.1. Terms of reference

1.1.1. This document is an Outline Arboricultural Method Statement (AMS). Its purpose is to outline the tree protection measures likely to be required during the implementation of the Scheme. It has been prepared by Highways England, in line with guidance from the British Standard BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'.

1.1.2. This Outline AMS supports the Arboricultural Impact Assessment (AIA) submitted as part of the Environmental Statement (ES), Appendix 7.7 (APP-063) for the Scheme.

1.1.3. The Principal Contractor for the Scheme, as defined under the Construction (Design and Management) Regulations 2015 (CDM 2015), will develop the Outline AMS into a final version, known as the Arboricultural Method Statement (AMS), during the detailed design and construction stages of the Scheme secured through Requirement 11 of the dDCO (TR010029/APP/3.1(3)).

1.1.4. The Outline AMS describes the tree protection measures likely to be required during the detailed design and construction stages. It sets out the following information:

- Requirements and information for pre-commencement operations and briefings
- The roles and responsibilities associated with the delivery of the protection measures, control and communication
- Mitigation measures to be recorded and implemented
- Review and monitoring mechanisms.

1.1.5. This Outline AMS should be read in conjunction with the following documents:

- AIA (APP-063)
- Updated Tree Protection Plans HE551519-ATK-ELS-XX-DR-LL-000201 to HE551519-ATK-ELS-XX-DR-LL-000211 – included in Appendix C to this document (updated from those submitted with the AIA)
- The Outline CEMP (TR010029/APP/7.2(3))
- The Register of Environmental Actions and Commitments (REAC) (TR010029/APP/7.3(3)).

1.1.6. This document has been prepared by an experienced arboriculturist with a Level 6 qualification in arboriculture and who is a professional member of the Arboricultural Association.

1.1.7. The Landscape and Ecology Management and Monitoring Plan (LEMP) secures the management of landscape and ecological mitigation post construction of the Scheme. The preparation of the LEMP is secured under Requirement 5 of the dDCO.

2. Pre-commencement actions and site briefings

2.1. Tree data

[This section will be updated by the Principal Contractor as part of the AMS secured under Requirement 11 of the dDCO.]

2.1.1. The AIA (APP-063) provides an overview of the impacts of the Scheme on the trees present within the Order limits. This includes those individual and areas of trees identified for felling or recorded as being at risk of removal to facilitate the construction of the Scheme.

2.1.2. This Outline AMS provides more detail on the anticipated tree removals and provides a total number of trees likely to be removed as part of the Scheme, including those trees which were previously recorded in the AIA (APP-063) as areas of trees (see section 5 and Appendix B of this document). It also provides approximate numbers of trees likely to be removed as part of the Scheme within the different Tree Preservation Order (TPO) extents (see section 5 and Appendix B of this document).

2.1.3. The updating of the tree removals from areas to individual tree numbers relied on the use of digital resources where existing topographical data was not available. The national tree mapping data for this area was purchased and incorporated into the Tree Protection Plans (TPPs). This data is produced by an external company[1] using high resolution national aerial photography and innovative processing techniques to provide a comprehensive database of location and crown extents for trees taller than 3m in height. The data was used to expediate the process from on site counting and plotting of trees, especially where health and safety concerns are present over accessing motorway verges and any land access restrictions.

2.2. Personnel competency and construction works supervision

2.2.1. In line with bullet point 3 of page 7 in the REAC (TR010029/APP/7.3(3)) the Principal Contractor is to appoint an Ecological Clerk of Works (ECoW) and a suitably qualified arboriculturist to support the detail design and construction stages of the Scheme.

2.2.2. The arboriculturist is to have a minimum of a level 4 qualification in arboriculture and be a professional member of the Arboricultural Association. The arboriculturist is to produce the AMS, as secured by Requirement 11 of the dDCO.

2.2.3. The supervisory role shall be performed by an arboriculturist. The frequency of these visits should align with key milestones identified in Table 2.1 below and shall be undertaken as required during the progression of the Scheme, to enable an auditable succession of monitoring events for a review of the protection measures

[1] www.bluesky-world.com

implemented for the trees.

Table 2.1: Programme of site supervision

Stage	Competent person (name and job title)	Supervision
Pre-commencement site meeting	Arboriculturist	a) Confirm location and specification of tree protective barriers; b) Confirm tree works to be undertaken; c) Confirm requirements for tree protection information to be included in induction details for the site; d) Confirm requirements for reporting any tree related incidents; e) Confirm ongoing arboricultural monitoring and contact details.
Setting out of protective barriers prior to construction works commencing	Arboriculturist	a) Review location and specification of tree protective barriers; b) Confirm any additional tree protection measure requirements; c) Submit site monitoring pro forma to the Highways England Project Manager.
Checks during operation (frequency to be determined by the Principal Contractor as part of the Landscape and Ecological Management and Monitoring Plan)	Arboriculturist	a) Review location and specification of tree protective barriers; b) Assess condition of retained trees, specifically for any construction related damage; c) Confirm any additional tree protection measure requirements; d) Submit site monitoring pro forma to the Highways England Project Manager.
Post-construction (within the first year of opening)	Arboriculturist	a) Inspect all retained trees to make sure they have not been damaged during the construction operations; b) To instruct any remedial works that may be required should a tree defect be identified as a result of the construction operations.

2.2.4. On completion of each site visit a report or site note, such as the pro forma in Appendix A of this document or similar, should be completed by the arboriculturist.

2.2.5. Where emergency matters arise regarding trees, e.g. unexpected access required within construction exclusion zones or damage to retained trees, the arboriculturist is to co-ordinate a visit to the site in person or delegate their powers to a suitably qualified person.

2.2.6. Any variations or incidents related to trees shall be reported in writing to the Highways England Project manager. Details of the variation(s) or incident(s) shall incorporate photographic evidence and site note(s) as appropriate. Suitable remedial measures, including potentially the provision of new planting where deemed appropriate.

2.3. Stakeholder engagement

2.3.1. The Principal Contractor is required to consult with the relevant stakeholders during the production of the AMS, notably local authority tree officers, to confirm trees for removal, protection measures for retained trees and ensure appropriate mitigation measures are implemented during the construction works.

2.3.2. Where trees previously identified for retention are required to be removed as part of detailed design stages, then this information shall form part of the consultation process with the relevant stakeholders. The Principal Contractor would need to ensure that such changes do not give rise to any materially new or materially different environmental effects in comparison with those reported in the ES .

2.4. Work package plans and task briefing sheets

2.4.1. The requirements for tree protection measures shall be included within Work Package Plans (WPPs) and Task Briefing Sheets (TBSs) produced by the Principal Contractor as part of the planning of construction activities. All pre-commencement briefings shall make sure all members of staff working or visiting the area of site being worked upon are aware of the individual responsibilities regarding trees and the tree protection measures required to be in place to continue construction.

2.4.2. The Principal Contractor shall make sure that any protection of trees has been implemented within the construction methodologies and seeks confirmation with the supervising arboriculturist if further clarification is required. The protection measures will need to be described in the Work Package Plans developed for each task and be part of the Toolbox Talks briefings.

2.4.3. There are key areas that require pre-commencement site briefings with the supervising arboriculturist. These currently include, but are not limited to the following areas, further areas may be added where deemed appropriate:

- Land adjacent to TPO trees reference TPO 2-02 – A1 Land on south side of Colchester road
- Land adjacent to TPO trees reference TPO 18-06 – A1 Maylands Golf Course, Colchester road
- Land adjacent to TPO trees reference TPO 5/1948 – Map 16 Alder Woo

- Land adjacent to TPO trees reference TPO 5/1948 – Map 21 Grove Wood
- Land surrounding all veteran trees
- Trees surrounding Weald Brook
- The Grove and Alder wood.

2.4.4. These pre-commencement site briefings shall be attended by the construction manager or suitable delegate. Their purpose is to raise awareness with the relevant parties of the trees within the working extents and to confirm the requirements for tree related information to be included within induction material and daily briefings to members of staff working or visiting that area of the Scheme.

2.4.5. The pre-commencement site briefings shall also check and confirm the following:

- The location of tree protective barriers
- Tree works to facilitate that phase of the Scheme
- Site specific mitigation measures
- Where/when arboricultural supervision will be required.

2.5. Contact details

[The Principal Contractor will be required to update the section below with the relevant contact details.]

2.5.1. Overseeing management of the Scheme will be directed by Highways England and details are presented in the Table 2.2 below. Highways England may delegate some site supervision roles and procure specialist consultants to supervise, monitor or check the Principal Contractors procedures for sensitive activities where required.

Table 2.2: General site contacts details

Role	PCF Stage	Contact name	Phone	Email
Highways England Project Manager	All	TBC	TBC	TBC
Principal Contractor Site Manager	All	TBC	TBC	TBC

3. Construction Exclusion Zone (CEZ) and protective barriers

3.1. CEZ definition

3.1.1. The CEZs can be defined as all the soft surfaces within the Root Protection Areas (RPAs) of retained trees outside of the works areas and the areas behind the tree protection fencing or site hoarding.

3.1.2. Site operations will not be permitted in the CEZs without consultation with the arboriculturist, including storage of plant, equipment or materials, vehicular or plant access, washing down of vehicles or machinery, handling, discharge or spillage of any substances, including cement washings, and actions likely to cause localised water-logging. No mechanical digging, scraping or excavation shall be permitted in the CEZ, nor earthworks or changes in the finished ground levels other than those agreed by the arboriculturist.

3.2. Tree protection plans (TPPs)

3.2.1. The tree protection plans (TPPs) that have been included within Appendix C of this document are an update to those submitted as part of the ES (Appendix C of the AIA (APP-063)). The TPPs include the locations of tree protection fencing likely to be required during the construction stage. These are not exhaustive at this stage and further fencing and confirmation on their positioning would need to be confirmed by the Principal Contractor as part of the AMS.

3.2.2. The protected areas once installed shall not be moved or altered without approval by the arboriculturist and, where necessary following consultation with the local planning authority.

3.3. Tree protective barriers

3.3.1. The locations of temporary protective fencing are to be finalised as part of the AMS. Where there is existing boundary fencing which is deemed adequate by the arboriculturist to protect the retained trees, no additional fencing shall be provided. Similarly, where retained trees are positioned in areas of no proposed construction activity then these shall not be identified for protective fencing. These areas shall be kept under review by the supervising engineers and if works are required, including any potential access route, then the arboriculturist is to agree the location of any additional protective fencing.

3.3.2. Where site hoarding fencing is proposed, this is permitted to form part of the tree protective barriers where deemed appropriate by the arboriculturist.

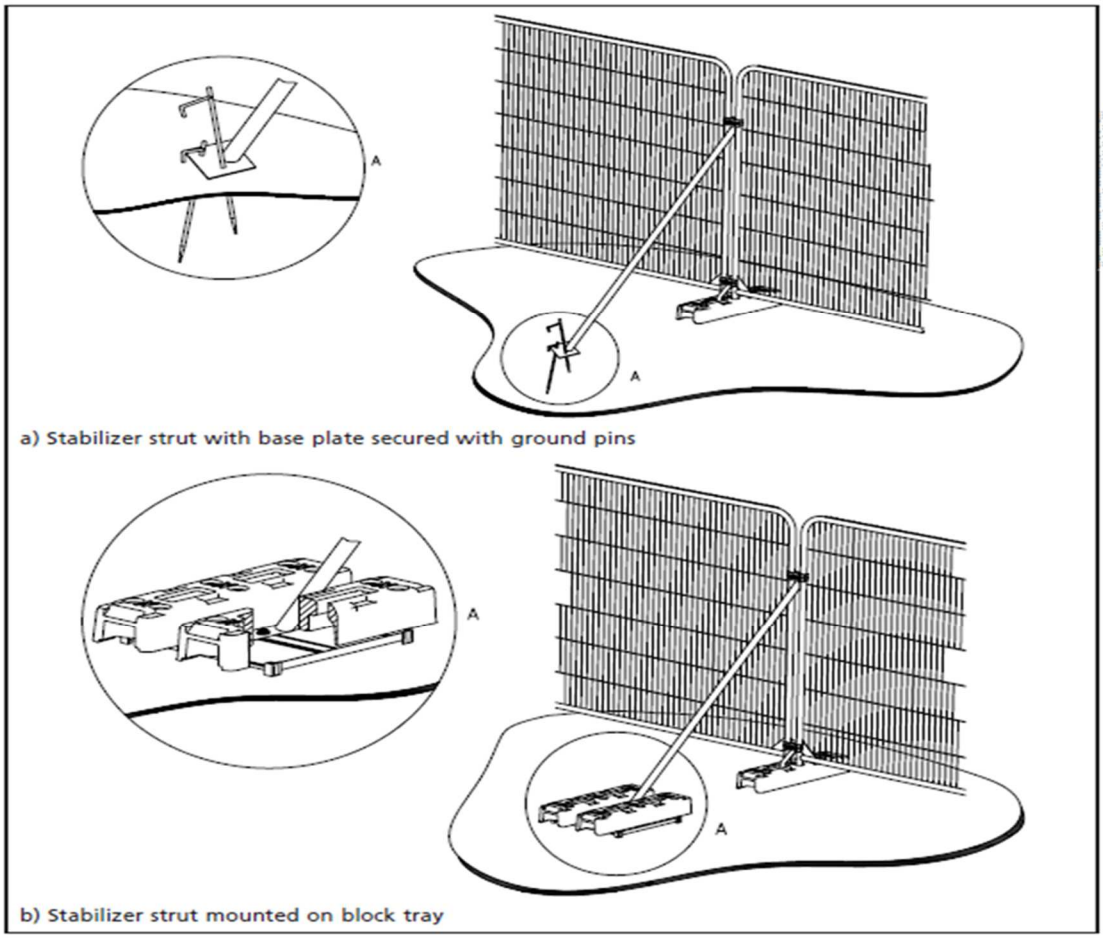
3.3.3. Where existing vegetation scheduled for removal prevents the installation of the protective fencing for adjacent retained trees, then this is permitted for removal prior to the erection of the fencing. Any plant involved in the removal of vegetation

shall be positioned outside of the RPAs of the retained trees, as confirmed with the arboriculturist.

3.3.4. The default specification for the protective barriers could comprise 2 m tall welded mesh panels on rubber or concrete feet or other similar protection measures. The panels would be joined together using a minimum of two anti-tamper couplers, installed so they can only be removed from inside the fence. The distance between the fence couplers is to be at least 1m and is to be uniform throughout the fence; the panels are to be supported by inner side stabiliser struts attached to a base plate secured on a block tray. See Figure 3.1 below.

3.3.5. For any veteran tree or areas deemed to be of high risk to adjacent trees for extensive construction activity, the use of rigid fencing shall be considered in accordance with default specification set out in BS5837:2012, with the stabiliser strut to be fixed to a post that is set in concrete. Any excavation for supporting post is to be undertaken by hand and surrounded by an impermeable geotextile as curing cement is toxic to tree roots.

Figure 3.1: Illustrative tree protection fencing



3.4. Ground protection matting

3.4.1. The locations for ground protection matting shall be illustrated on the TPPs or specified as required by the arboriculturist and recorded within the monitoring pro-forma supplied in Appendix A of this document.

3.4.2. If ground protection matting is required to protect tree roots and to minimise ground compaction within RPAs, then an example of a proprietary matting product is Ground-Guards[2]. A double layer of Ground-Guards panels with a 150mm layer of wood chips sandwiched in-between will create a suitably cushioned base to facilitate access within RPAs where absolutely necessary.

3.5. Compound areas

3.5.1. The locations of site accommodation, temporary buildings and areas used for storage of materials are to be located outside of the CEZ of retained trees as defined within the TPPs.

[2] http://www.ground-guards.co.uk/solutions/tree-root-protection/

4. Specific mitigation measures

4.1. General

4.1.1. The areas for the specific mitigation measures detailed below are to be confirmed within the AMS prior to construction and in consultation with the arboriculturist.

4.2. Hand excavations within RPAs

4.2.1. Hand excavations within the RPAs of trees shall be specified as a last resort and following a review of the works in the location to make certain there are no other design solutions to avoid the RPA of retained trees.

4.2.2. If hand excavations are specified, then they shall accord with the following:

a. The area to receive excavations is to be clearly marked out on site and agreed with the arboriculturist.

b. Hand tools are to be used, with all spoil to be positioned outside of the RPA of the tree.

c. Vacuum excavation is permitted where deemed appropriate by the arboriculturist. Small plant may also be permitted in consultation with the arboriculturist.

d. The use of an air-spade rig to loosen the sub-base material can be instructed by supervising arboriculturist if required to loosen clay based material or similar.

e. Once excavated if tree roots are located, these are to be moved if sufficiently pliable or pruned on the advice of the arboriculturist.

4.3. No-dig construction

4.3.1. Where no-dig construction is specified this is due to works having to be undertaken within the RPAs of trees, and to limit their impact on the underlying tree roots. The exact locations for this approach would need to be confirmed within the AMS and prior to construction.

4.3.2. A no-dig construction approach uses a product such as Cellweb TRP® as supplied by Geosynthetics Limited[3]. This cellular confinement system will laterally confine the sub-base material into three-dimensional interconnected honeycomb cells, reducing compaction and maintaining the soil bulk density at levels suitable for tree root growth. It also prevents direct tree root severance by building on top of existing ground levels. The product can be laid in multiple sections to account for level changes.

4.3.3. The installation method shall accord with the following:

[3] http://www.geosyn.co.uk/

a. The area to receive the no-dig approach is to be clearly marked out on site and agreed with the arboriculturist.

b. The existing turf or vegetative layer within the works area is to be treated with a glyphosate-based herbicide as per the manufacturer's guidelines or removed using a turf cutter or strimmer. This is to prevent any scraping of the turf layer and potential damage to underlying tree roots.

c. The cellweb product is then to be laid as per the manufacture's guidelines and the cells are to be filled with clean angular stone of sufficient type to maintain porosity and the surface course is to be a permeable tarmac.

4.4. Root pruning

4.4.1. As a last resort, where tree roots have to be severed, the pruning points shall be agreed with the supervising arboriculturist, and pruning undertaken using a sharp pair of secateurs or a hand saw, or if pliable, moved out of the construction profile and re-covered within topsoil.

4.4.2. On completion of the pruning operations the remaining grassed or soft surfaces surrounding the tree shall have soil amendments applied that include phosphites to maximise the trees resilience to fungal colonisation.

4.5. Veteran trees

4.5.1. The location of veteran trees is presented on Figure 2.2 of the ES (TR010029/APP/6.2(2)) and on the TPPs (Appendix C of this document). The AIA (APP-063) provides technical information on the veteran trees and the impacts.

4.5.2. Veteran trees T021A and T074 are to be removed as part of the Scheme (see the Technical Note regarding Veteran Trees in Appendix C of the Case for the Scheme (APP-095)). Compensation for the loss of those veteran trees has been agreed within Natural England (see item 2.4 of Table 3.1 of the Statement of Common Ground (REP1-011)).

4.5.3. The mitigation measures for all the retained veteran trees shall be reviewed and confirmed as part of the AMS. The likely mitigation measures for all veteran trees is covered within Table 4.1 below.

Table 4.1: Mitigation measures for veteran trees

Tree ID	Tree species	Likely mitigation
T002	Common Oak	Not applicable – no proposals within RPA. Existing hard infrastructure and fencing in situ. No mitigation identified at this time.
T004	Common Oak	Not applicable – no proposals within RPA. Existing hard infrastructure and fencing in situ. No mitigation identified at this time.

Tree ID	Tree species	Likely mitigation
T019	Common Oak	Not applicable – no proposals within RPA. Existing hard infrastructure and fencing in situ. No mitigation identified at this time.
T021A	Common Oak	Not applicable – tree to be removed.
T059	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T065	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T074	Common Ash	Not applicable – tree to be removed.
T077	Common Ash	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T095	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T097	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T109	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T112	Common Oak	Not applicable – no proposals within RPA. Existing hard infrastructure and fencing in situ. No mitigation identified at this time.
T114	Common Oak	Not applicable – tree outside of the Order limits. The tree's RPA and crown extents also fall outside of the DCO boundary.
T168	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of

Tree ID	Tree species	Likely mitigation
		protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.
T180	Common Oak	Tree protective barriers to be installed prior to construction operations. Likely location of protective barriers illustrated on TPPs and shall be confirmed as part of the AMS.

4.5.4. The use of rigid fencing shall be considered in accordance with the default specification set out in BS5837:2012, with the stabiliser strut to be fixed to a post that is set in concrete for the tree protective barriers around retained veteran tree. Any excavation for supporting post is to be undertaken by hand and surrounded by an impermeable geotextile as curing cement is toxic to tree roots.

4.6. Ancient woodlands

4.6.1. There are no ancient woodlands within the Order limits, the Scheme will have no direct impact to the ancient woodlands within 2km from the Scheme (see Figure 2.1, APP-039 for drawing showing locations).

4.6.2. No construction works will be taking place within or close to the RPAs of any trees which form part of an ancient woodland. Therefore, measures to protect ancient woodland during construction (such as pollution prevention) will be included in the CEMP. Protection of sensitive areas, such as ancient woodland, is covered in section 9 of the Outline CEMP (TR010029/APP/7.2(3)). Section 9.2 outlines that protection measures are required in relation to sensitive areas. These will be developed further for the CEMP, as secured under Requirement 4 of the dDCO.

4.7. TPO trees

4.7.1. The TPOs impacted upon by the Scheme are set out in section 3.4 of the AIA (APP-063), associated TPPs and in article 24 and Schedule 5 of the dDCO.

4.7.2. The total number of trees within the TPOs that require removal are detailed in section 5 below and shown on the TPPs in Appendix C of this document.

4.7.3. The TPPs in Appendix C include the locations of tree protection fencing likely to be required during the construction stage to protect the retained TPO trees. These will provide construction exclusion zones and ensure the preservation of sufficient rooting volume to support the continued viability of the retained tree.

4.7.4. The final locations for the protective fencing and confirmation on numbers of trees to be removed shall be included within the final AMS. All trees for removal shall be clearly marked on site with the supervising arboriculturist prior to any felling operations and update the information presented in Appendix C of this document in the AMS.

4.8. Mature woodlands

4.8.1. The woodlands Alder Wood and The Grove are mixed age woodlands which contain some mature tree stock. The use of the word ‘mature’ to describe woodlands in Chapter 9 (Landscape and visual, TR010029/APP/6.1(2)) is not intended as a formal habitat classification or category of woodland. The word mature is used as a description only to state the woodland typically contains some mature trees, i.e. is not new/young woodland.

4.8.2. The protection measures for these woodlands are described in section 4.7 above, as these are TPO woodlands.

5. Tree works

[The Principal Contactor will need to update this section to reflect the detail design and construction methodologies.]

5.1. General

5.1.1. All tree works are to be undertaken in line with current recommendations in accordance with BS3998:2010 Tree Work – Recommendations and comply with the current Arboriculture and Forestry Advisory Group (AFAG) or applicable Forestry Industry Safety Accord (FISA) advice published by the Health and Safety Executive (HSE) or FISA.

5.1.2. Tree works are to be planned to ensure protection of people, property and wildlife. Mitigation commitments in regard to protected species, including bats and nesting birds, are presented in the CEMP, as secured under Requirement 4 of the dDCO. This will incorporate the mitigation commitments included in the REAC, which includes a commitment to check for bats and bat roosting features prior to tree removal (TR010029/APP/7.3(3), commitment BD0.11 of Table 1.1).

5.1.3. The trees to be removed or worked upon for facilitation, such as pruning, shall be clearly marked by the supervising arboriculturist prior to any tree works commencing on site. These works are to be agreed with the supervising arboriculturist and ECoW where required. The method of removal shall be informed by the site and ecological constraints.

5.1.4. The tree works contractor shall provide access routes and loading bay locations for approval by the Principal Contractor. These shall take into account the retention of trees and following existing woodland access tracks or hard surfaces to try and reduce tree removals. The tree works contractor will have to submit a risk assessment and method statement for review by the Principal Contractor or Arboriculturalist prior to commencing works on site.

5.2. Tree removals Scheme wide

[The Principal Contactor will need to update this section to reflect the detail design and construction methodologies.]

5.2.1. The number of trees for removal were established from the following workflow:

5.2.2. Original tree survey data was recorded with handheld GPS and plotted in AutoCAD with positional refinement based upon aerial imagery and available topographical survey data:

- Individual trees
- Groups of trees recorded as individuals under a group reference
- Groups of trees recorded as an area
- Woodland recorded as an area.

5.2.3. The data was assessed in relation to anticipated impact of the works footprint (considering a 5 m offset from proposed alignment to allow for construction operations), to establish the clearance extent within group/woodland areas, and any recorded individual trees to mark for removal.

5.2.4. To provide further clarity for the impacts to recorded tree group areas and woodland group areas, additional individual tree data has been included to provide a figure for individual removed trees within these areas. To avoid duplication the following merging process was carried out, in order of prevalence:

- Level 1 data: Individual trees recorded during the Tree Survey.
- Level 2 data: Trees depicted on the topographical survey which fall within recorded tree group areas and woodland areas (areas were recorded during the Tree Survey). Filtered against duplication with Level 1 data.
- Level 3 data: National Tree Mapping (NTM) data which fall within recorded tree group areas and woodland areas (areas were recorded during the Tree Survey). Filtered for duplication with Level 1 and 2 data.

5.2.5. Table 5.1 covers the likely total number of trees for removal based on their BS[4] category and whether they were recorded individually or as part of a group or woodland. These are also illustrated on the TPPs in Appendix C of this document.

5.2.6. In total approximately 1016 trees are likely to be removed as part of the Scheme. Confirmation on numbers of trees for removal will be confirmed as part of the final AMS.

Table 5.1: Arboricultural impact table Scheme wide

Type	Number of trees by BS Category Reference			
	Category A	Category B	Category C	Category U
Individual tree (T)	8	22	20	4
Groups (G)	26	192	401	0
Woodland (W)	32	311	0	0

5.3. Tree removals TPOs

[The Principal Contactor will need to update this section to reflect the detail design and construction methodologies.]

5.3.1. The following TPOs have been identified within the Scheme

- TPO 18-06 – A1 ‘Maylands Golf Course, Colchester road, Romford’
- TPO 18-06 – W2 ‘Maylands Golf Course, Colchester road, Romford’

[4] British Standard BS 5837:2012 *‘Trees in Relation to Design, Demolition and Construction – Recommendations’*

- TPO 20-02 – A1 'Land on south side of Colchester road'
- TPO 5/1948 – Map 16 Alder wood
- TPO 5/1948 – Map 21 Grove wood.

5.3.2. Tree removals within TPOs follows the same work flow described section 5.2.

5.3.3. Table 5.2 covers the likely total number of trees for removal within TPO reference 18-06 – A1 Maylands Golf Course based on their BS category. These are also illustrated on the TPPs within Appendix C of this document.

5.3.4. In total approximately 13 trees are likely to be removed as part of the Scheme within the TPO extents. TPO 18-06 covers 'oak and hawthorn only' as referenced within the order citation, as such the table reflects only the oak and hawthorn specimens that would require removal for the Scheme. Confirmation on numbers of trees for removal will be confirmed as part of the final AMS.

Table 5.2: Arboricultural impact table TPO 18-06 – A1 Maylands Golf Course

Type	Number of trees by BS Category Reference			
	Category A	Category B	Category C	Category U
Individual tree	13	0	0	0

5.3.5. No trees have been identified for removal within TPO 18-6 – W2 Maylands Golf Course.

5.3.6. No trees have been identified for removal within TPO 2-02 – A1 Land on south side of Colchester Road.

5.3.7. Table 5.3 covers the likely total number of trees for removal within TPO reference 5/1948 – Map 16 Alder Wood based on their BS category. These are also illustrated on the TPPs within Appendix C of this document.

5.3.8. In total approximately 383 trees are likely to be removed as part of the Scheme within the TPO extents. Confirmation on numbers of trees for removal will be confirmed as part of the AMS.

Table 5.3: Arboricultural impact table TPO 5/1948 Map 16 Alder Wood

Type	Number of trees by BS Category Reference			
	Category A	Category B	Category C	Category U
Individual tree	4	298	81	0

5.3.9. Table 5.4 covers the likely total number of trees for removal within TPO reference 5/1948 – Map 21 Grove Wood based on their BS category. These are also illustrated on the TPPs within Appendix C of this document.

5.3.10. In total approximately 94 trees are likely to be removed as part of the Scheme within the TPO extents. Confirmation on numbers of trees for removal will be confirmed as part of the AMS.

Table 5.4: Arboricultural impact table TPO 5/1948 Map 21 Grove Wood

Type	Number of trees by BS Category Reference			
	Category A	Category B	Category C	Category U
Individual tree	35	36	23	0

6. Scheme replanting proposal

[The Principal Contractor will need to provide the detail design environmental drawing and it is secured by Requirement 5 of the dDCO. The Principal Contractor will be required to ensure this section is updated in line with the environmental design presented in the Landscape and Ecological Management and Monitoring Plan.]

6.1. Preliminary environmental design information

6.1.1. The location and extent of planting proposals are shown on the Preliminary Environmental Design for the Scheme (see Figure 2.2 of the ES Chapter 1-4 Figures (TR010029/APP/6.2)) and once the detail design is completed the replanting proposal will need to be reflected in the LEMP secured under Requirement 5 of the dDCO.

6.1.2. The current total of area of new woodland planting (based on the Preliminary Environmental Design) equates to approximately 4.7 hectares. Therefore using a 2m x 2m spacing as referenced in the Forestry Commissions Technical Paper no.27, page 9 – Woodland Creation then the total number of replacement plants equates to 11,750, of which approximately 70% are trees and 30% are shrubs. Planting mixes and densities are to be confirmed as part of detailed design.

6.2. Veteran trees - compensation and veteranisation

6.2.1. The compensation shall include the planting of eight trees for each veteran tree lost (total of 16 no. trees) with space around them to develop into an open crown. These trees shall be planted within the Order limits at a location confirmed within the AMS, secured under Requirement 11 of the dDCO. The tree species for replanting are 8 no. common oak and 8 no. hornbeam.

6.2.2. Two retained broad leaf trees that are not veteran specimens are to be ‘veteranised’ to promote dead wood habitat. These trees are to be within the Order limits and selected by the appointed arboriculturist in consultation with the London Borough of Havering ecologist as part of the AMS. Examples of veteranisation include ring-barking of main stem and/or major limbs to promote heartwood and sapwood decay, coronet cuts and/or deliberate snapping or shattering of limbs to enable ingress of water and subsequently fungal attack. Confirmation on how the arisings from the veteran trees T021A and T074 are to be used shall be within the AMS.

Appendices

Appendix A. Tree monitoring pro-forma

A.1. Tree monitoring pro-forma

Job number:			
Document ref:			
Revision:			
Purpose description:			
Originated:			
Checked:			
Authorised:			
Date:			
Notice:			

Purpose of Monitoring Visit

▫

Date of Visit

Observations

▫

Recommended Actions

▫

Relevant Photographs

Number	Photograph	Description

Appendix B. Tree survey schedule

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T001	Common Oak	10	990	6.0	8.0	6.0	7.0	3-NE	2.5	M	Good	Crown break at 2m into 4no. Stems. Unions appear sound. Crown historically reduced. Occluded and unoccluded wounds present. Moderate diameter dead wood in middle crown. Frayed wounds in places. Block paving in root zone to east and south.	No works presently required	40+	A3	11.9	RET	#N/A
T002	Common Oak	16	1110	9.0	8.0	8.0	9.0	5-W	3	V	Good	VETERAN TREE: Grass surface around base. Existing concrete access road 2.5m west. No direct damage recorded from surface root activity, potential root barrier to growth. Base of tree approximately 1m higher than level of road. Crown break at 2m into 4no. Stems. Cavity in main stem beneath multi-stem unions. Revealing heartwood decay. Occasional moderate diameter dead wood in middle crown.	No works presently required	40+	A3	13.3	RET	#N/A
T003	Common Oak	4.5	630	1.0	1.0	1.0	1.5	4-W	4	OM	Dead	Standing dead tree. Dessicated exposed deadwood and areas of cubicle rot on internal decayed heartwood. Hollowing main stem. Elongated cavity. No live crown present. Veteran habitat features. Tree not of advanced age.	No works presently required	40+	B3	7.6	RET	#N/A
T004	Oak	13	1000	5.0	4.0	4.0	4.0	2	2.5	V	Good	VETERAN TREE; existing tag 0402; on grassy knoll, with edge of *in situ* concrete road 500mm from base; stem extensively hollow, historic vertical slit cavity from ground level to crown break, north side, similar vertical decay trenches ascending two of three principal limbs above crown break; these three limbs all topped; 5% dieback at top of crown; historic branch tears, stubs, deadwood branches to 100mm diameter; impact damage from vehicles at 4m on western flank	No works required at present	40+	A3	12.0	RET	#N/A
T005	Common Oak	14	1100	5.0	5.0	5.0	4.0	2-S	2.5	OM	Poor	Loss of vitality. Dieback and dead wood throughout crown. Roots severed to west. Main stem leans to south east. Historic lean. Epicormic growths on main stem.	Pollard at 5m.	40+	B3	13.2	RET	#N/A
T006	Apple	4.5	430	3.0	3.0	5.0	3.0	1.5-SW	1.5	M	Good	Decay cavities in main stem. Crown historically reduced, decay at old pruning wounds. Good regrowth in crown. Main stem leans to south. Existing concrete access road 1.5m west, no direct damage recorded from surface root activity, potential root barrier to growth.	No works presently required	10+	C2	5.2	RET	#N/A
T007	Common Ash	16	450;200	6.0	6.0	4.0	3.5	3-S	5	EM	Fair	Existing concrete access road 400mm east. No direct damage recorded from surface root activity. Potential root barrier to growth. Crown previously reduced to east for access. Elongated wound on main stem to east, wood decay fungi Inonotus hispidus present. Further attachment points visible in crown. Occasional small to moderate diameter dead wood in lower and upper crown.	Remove deadwood overhanging access road	10+	C2		RET	#N/A
T008	Oak	19	640	6.0	8.0	10.0	6.0	4.5-S	4	M	Good	At side of in situ concrete road, crown lifted on west (road) side; low southern limb cut back and some encroachment into root zone for recent installation of security gate 3m from stem; rounded open crown has occasional branch tears; frequent deadwood branches to 150mm diameter in shaded lower crown area	Remove deadwood if adjacent to proposed works	40+	B2	7.7	RET	#N/A
T009	Silver Birch	10	350	5.0	3.0	5.0	4.0	2.5-NW	2	SM	Fair	Manhole in root zone to west, 300mm from base. Fibrous roots visible after recent excavation to reveal cover. Crown lifted, unoccluded wounds present and stubs of dead wood.	No works presently required	10+	C2	4.2	REM	1
G010	Cherry, apple, crack willow, Norway maple, blackthorn, ash, elder, Hawthorn	12	300	4.0	4.0	4.0	4.0	N/A	0	Y-EM	Fair to good	Planted and self sown stock. Growing on steep sloped bank, down to brook. Dead willow close to waters edge. Habitat value. Relatively young trees.	No works presently required	20+	B2	3.6	REM	16
T011	White Willow	18	590 at 1000	10.0	10.0	10.0	6.0	1.5	2	EM-M	Good	On steep bank 5m above stream; planted specimen - stake remains in place; rapid growth compared with surrounding trees planted at same time; crown growth suppressed to west by neighbouring trees; branches arching, some crossing; small diameter deadwood in shaded crown interior	Remove deadwood if works proposed within crown extents	20+	B2	7.1	REM	1
G012	A Group	to 15	to 300	5.0	5.0	5.0	5.0	1.5	1	EM	Good	Mixed vegetation on bank above stream, mostly planted as screen for property to north; group extending into garden of property; principal species whitebeam, Norway maple, alder near stream including some multi-stemmed; planting stakes still in place; understorey of blackthorn in dense clusters; some hawthorn, goat willow; vitality generally good; 1no larger willow recorded separately	No works required at present	20+	B2	3.6	PRG	4
G013A-F	Norway maple, whitebeam	8	330	4.0	4.0	4.0	4.0	N/A	1	Y-SM	Good	Planted group. Tree stakes still present, now redundant. Mutually suppressed crowns.	Remove tree stakes	10+	C2	4.0	PRG	2
T014	Cherry Plum	5	250	4.0	3.0	2.0	1.0	1.5-E	1	SM	Fair	Main stem leans to east. Crown resting on chainlink fence. Manhole in root zone to south.	No works presently required	10+	C2	3.0	RET	#N/A
G015A-D	Common Beech	14	350	5.0	5.0	5.0	5.0	2.5-E	2	SM	Fair	Group of planted trees. Concrete raft foundation in root zones to north and east. East tree late into leaf and moderate diameter dead wood in lower crown. Mutually suppressed crowns.	Remove dead wood if within falling distance of works area.	20+	B2	4.2	RET	#N/A

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
G016A	Norway maple, crack willow. Rowan, ash, cherry, silver birch, hazel.	12	350	4.0	4.0	4.0	4.0	N/A	0	SM	Fair to good	Planted and self sown stock. Pockets of scrub. Bases not accessible. Habitat value. Relatively young age on trees.	No works presently required	20+	B2	4.2	PRG	28
G016	A Group	to 16	to 400	5.0	5.0	5.0	5.0	1.5	1	EM	Good	Attractive mixed screen planting on triangular bank between A12 carriageway and slip road; species include lime, ash, sycamore, hawthorn, blackthorn; 7-9m spacing typical between larger trees; frequent co-dominant forks among limes; bramble encroachment; screening and softening value	No works required at present	20+	B2	4.8	PRG	31
G017	A Group	to 16	to 400	5.0	5.0	5.0	5.0	1.5	1	EM	Good	Attractive mixed screen planting on triangular bank between A12 carriageway and slip road; species include lime, ash, sycamore, horse chestnut, elder, hawthorn, blackthorn; 7-9m spacing typical between larger trees; frequent co-dominant forks among limes; bramble encroachment; screening and softening value	No works required at present	20+	B2	4.8	RET	#N/A
G018	Norway maple, lime, crack willow, silver birch, hazel, hawthorn	12	300	4.0	4.0	4.0	4.0	N/A	0	SM	Good	Informal group of planted and self sown stock. Bases not accessible. Single and multistem forms visible. Mutually suppressed crowns. Habitat value. Relatively young age on trees.	No works presently required	20+	B2	3.6	RET	#N/A
T019 (627)	Common Oak	18	1290	12.0	8.0	12.0	9.0	3-N	3	V	Fair	Large stem circumference. Historical pollard, multi stem form from 3-4m. Evidence of more recent crown reduction in upper crown. Abrupt angles on some branches. Cavities in some old branch wounds. Small to moderate diameter dead wood throughout crown, appears a combination of natural crown retrenchment and storm damage. Open crown habit.	No works presently required	40+	A3	15.0	RET	#N/A
T020	Oak	18	1100	8.0	8.0	8.0	8.0	2	1.5	M	Good	Former pollard beside dry field ditch, concrete headwall of culvert 1.5m to south; swellings on bole and pronounced buttress flare; regulation quantities of historic branch tears, pockets of decay where branches lost	No works required at present	40+	A3	13.2	RET	#N/A
T021A	Oak	25	1460	15.0	10.0	14.0	12.0	2-S	0	V	Good	VETERAN TREE; existing tag 0415; vast, high quality specimen in field close to woodland boundary ditch; stem and crown angled towards open space to south, with crown bending low to ground, one large limb resting on ground; frequent large historic branch tears, deadwood branches to 300mm diameter; woodpecker holes; small entrances to hollow basal cavities; widespread mammal burrowing in southern root zone. Hollwing main stem. Heartwood decay.	No works required at present	40+	A1/3	15.0	REM	1
T021B	Common Oak	24	1000	8.0	14.0	13.0	6.0	0-SE	1	M	Good	Growing on edge of woodland. Slight lean on main stem to south east due to competition for light with woodland trees. Shallow dry ditch at base to north. Lowest south east branch in contact with ground, historic wound on upperside of branch, with exposed dessicated wood visible. Hung up moderate diameter dead wood in crown and also lying at base. Decay cavities in some.old branch wounds.	No works presently required.	40+	A3	12.0	REM	1
G022	Hawthorn, blackthorn, oak, elder, ash.	12	250	4.0	4.0	4.0	4.0	N/A	0	SM	Fair to good	Informal intermittent groups of trees and scrub vegetation. Large amounts of self sown blackthorn scrub. Brook growing on east extents. Habitat value. Mammal grazing visible on lower stems. Good buffer zone for adjacent woodland.	No works presently required	20+	C2	3.0	REM	15
T023	Ash	14	430	5.5	4.0	4.0	5.5	2.5-N	3	EM	Fair	Growing on bank of brook. Late into leaf. Occasional small diameter dead wood in lower and middle crown.	No works presently required	20+	B2	5.2	REM	1
T024	Ash	19	400	4.0	6.0	11.0	9.0	2	2	EM-M	Good	On stream bank, stem extending horizontally over water, then turning 90° upwards; upper crown leaning to south, lower branches cut back on north side below telecommunications cables passing east to west; large surface roots extending along bank in both directions; large hanging branch resting on ground to north-east	Remove hanging branch if adjacent to proposed works	20+	B2	4.8	REM	1
G025	Common Alder	16	300 + 280 + 280	4.5	4.5	4.5	4.5	3	2	M	Good	Pair of three-stemmed trees 4m apart, c.2-3m from stream; stem removed from western tree; compression fork at base of northern pair of stems on eastern tree; form and situation characteristic of species	No works required at present	20+	B2	6.0	REM	2
T026 (418)	Common Oak	18	840	5.0	10.0	10.0	5.0	3-S	5	M	Fair	Growing on south edge of woodland, 4m from dry boundary ditch. Extensive storm damage recorded. Hanging 200mm diameter dead branch to north, dessicated wood visible and elongated cracks and fissures. Good habitat value, ecological assessment required. Hazard beam to south. Horizontal split in lowest branch, no resting in adjacent blackthorn. Further occasional moderate diameter dead wood in middle crown.	No works presently required	40+	A3	10.1	REM	1
T027	Oak	18	890	7.0	5.0	12.0	8.0	2-S	2	M	Good	Woodland edge tree, crown growth predominantly to south and west, suppressed to east by companion oak; regulation quantities of branch tears, sub-200mm diameter deadwood; hanging branch at centre of crown	Remove hanging branch and deadwood only if works proposed within crown	40+	A2	10.7	REM	1

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T028	Oak	18	570 + 390	4.0	6.0	10.0	8.0	3-S	1.5	M	Fair	Tagged nunber 0138; forking at 600mm, dominant stem vertical, secondary stem leaning to west; light dieback at crown extents; frequent deadwood to 150mm diameter and hanging branches	Remove deadwood and hanging branches if adjacent to proposed works	20+	B2	8.0	REM	1
T029	Oak	21	620	8.0	8.0	10.0	9.0	4	4	M	Good	Tagged number 0149; locally dominant specimen, occasional branch tears, stubs, sub-100mm diameter deadwood; large crown slightly sparse; shear crack in branch to south-west at 9m	No works required at present	20+	B2	7.4	REM	1
T030	Oak	17	650	7.0	7.0	7.0	7.0	4-W	1.5	M	Good	Beside woodland path; upright form, light dieback at crown extents; deadwood branches to 200mm diameter in shaded lower crown area; cutting back from overhead electricity cables on south-west side	Remove larger deadwood if adjacent to proposed works	20+	B2	7.8	RET	#N/A
W031	Poplar, oak, hornbeam, ash, hawthorn, pine, fir, hemlock, silver birch	18	500	7.0	7.0	7.0	7.0	N/A	0	Y-M	Fair to good	Mixed woodland. Broadleaf and coniferous trees. Scots pine abundant, frequent Douglas fir. Occasional young oak, ash, hornbeam. hawthorn and blackthorn frequent on south boundary as part of former hedgerow. Blue bell ground flora. Limited shrub vegetation further into wood. Relatively uniform vertical structure. Topography slopes downtown south. Rare standing dead wood. Dead wood on ground.	No works presently required	40+	B2	6.0	PRG	33
W032	A Woodland	20	1000	8.0	8.0	8.0	8.0	N/A	0	Y-M	Fair to good	Broadleaf dominated woodland. Oak abundant, young to mature trees. Frequent ash. Occasional poplar, birch. Rare rowan, hawthorn. Blue bell ground flora. Occasional scrub pockets. Varied topography and vertical structure. Woodland edge habitat mainly along south boundary. Crowns topped on trees beneath utility cables. Occasional standing and fallen dead stems.	No works presently required	40+	A2	12.0	PRG	32
G033	Hawthorn	13	550 at 300	4.0	4.0	4.0	4.0	1.5	1	M	Good	3no trees growing close to stream or adjacent small dry ditch; characteristic tangled multi-stemmed form above low crown break; small broken deadwood stems on eastern tree	No works required at present	10+	C2	6.6	REM	3
T034	Common Oak	5	260	3.0	3.0	3.0	3.0	1.8-E	1.5	Y	Fair	Growing on bank of brook. Crown topped for utility cable clearance.	No works presently required	10+	C2	3.1	REM	1
T035	Common Alder	10	200;200;200	3.5	3.5	2.0	3.0	3-N	3	SM	Fair	Growing on brook bank. Base not accessible. Multiple stems from ground level, suggesting past coppice. Decay at coppice stool. Past stem failure.	Consider re-coppice.	10+	C2	6.6	REM	1
T036	Common Alder	14	300 + 280 + 280 + 170 + 150	5.0	5.0	5.0	5.0	2	2	M-OM	Good	Approximately 5no stems rising from bole overhanging stream; aerial roots descending into stream; large decay cavity at historic branch failure point at 1m, east side	No works required at present	20+	B2	5.5	REM	1
G037	blackthorn, hawthorn, elder	4.5	150	3.0	3.0	3.0	3.0	N/A	0	SM-M	Fair	Intermittent lapsed woodland boundary hedgerow. Gaps in places, mainly where mature trees have out competed with understory vegetation. Multiple stems on shrubs. Pockets of bramble and scrub vegetation. woodland edge habitat. Dry shallow ditch along boundary. Crowns browsed in places by livestock.	No works presently required	20+	C2	1.8	REM	1
T038	Common Alder	16	460	4.0	4.0	4.0	4.0	3	3	EM-M	Fair to poor	At top of stream bank, upright form; large fruiting body of *Ganoderma* fungus at base, stream side; barbed wire historically embedded in stem; woodpecker interest; 5no younger stems closely adjacent, possibly rising from same bole	No works required at present	10+	C2	5.5	REM	1
T032B (140)	Oak	16	600	6.5	6.5	6.5	6.5	6.5	2	M	Good	Locally dominant specimen.	No works required at present	20+	B2	7.2	REM	1
G039A-E	Common Hazel, Hawthorn	6	400	5.0	5.0	5.0	5.0	N/A	0	M	Good	Group of multistem hazel and hawthorn intermittently growing on bank of brook. The multistem forms being indicative of past felling to ground level and regeneration. No recent management visible, numerous stems that are touching and rubbing in places. Mutually suppressed crowns. Some collapsed stems, and small to moderate diameter dead wood. Some decay cavities.	No works presently required	20+	B2	4.8	REM	5
G040A-E	Alder	8	230;200;150;150	4.5	4.5	4.5	4.5	N/A	1	EM	Fair	Group of multistem trees growing intermittently along bank of brook. Tue multistem form being indicative of past felling to ground level and subsequent regeneration. Mutually suppressed crowns. Drawn stems in places, some collapsed or rubbing on adjacent stems. Occasional small black exudates on stems, potential phytophora spp. Infection. No significant decline in vitality at this time.	No works presently required	20+	C2	4.5	PRG	1
T041	Ash	19	300 + 300 + 190 + 160	6.5	6.5	5.5	8.0	3-E	2	M	Good	Multi-stemmed, at top of stream bank; upright form, minimal deadwood; stem of companion ash on opposite bank fallen and wedged between stems	No works required at present	20+	B2	6.0	RET	#N/A
G042	Field Maple	5	400	5.0	10.0	2.0	1.0	0-E	0	M	Good	Group of collapsed trees. East crowns in contact with ground. Root zones undermined to west. Trees on 45degree angle, crowns starting to correct, curving to vertical growth. Some branches browsed by livestock, leaving small and moderate diameter dead wood in crowns.	No works presently required	10+	C2	4.8	RET	#N/A
G043A-E	Field Maple	6	250	3.5	3.5	3.5	2.0	N/A	0	SM	Good	Intermittent trees growing on bank of brook. Approximately 10no. Single and multistem. Root zones becoming undermined to west through water erosion of soils. Not significant at present. Mutually suppressed crowns.	No works presently required	10+	C2	3.0	PRG	2

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T044	Crack Willow	23	700 + 600 + 500 + 470 + 360	12.0	10.0	7.0	11.0	2	1	OM	Fair	Tagged number 0442; on west bank of stream; five large stems rising from vast bole, leaning in all directions; stem over river to east torn out and part-fallen on east bank; top of stem to west also torn out, suspended at failure point; frequent large historic branch tears, extensive woodpecker activity; frequent dieback at crown extents; large deadwood on ground, deadwood on tree mostly small diameter; ivy encroachment into upper crown	If adjacent to proposed works, consider reduction of main stem; remove deadwood, and bring hanging branches to ground level	20+	B3	14.0	RET	#N/A
T045	Field Maple	16	640	10.0	3.0	5.0	10.0	1-S	1	M	Good	Tagged number 0439; on promontory overhanging meandering brook, leaning to west; very dense ivy coverage restricts visual assessment; large network of exposed surface roots - possibly connected to smaller companion tree 3m to north-east; visible crown vitality good	No works required at present	20+	B2	7.7	RET	#N/A
G046A-F	Common Alder	16	450 + 400	5.0	5.0	5.0	5.0	2	1	M	Good	Intermittent specimens, mostly multi-stemmed, growing by east bank of stream, stems of variable size, basal growth; frequent small diameter branch tears; some deadwood, mostly small diameter; tree T046-F is older specimen with large bole containing many cavities offering high habitat potential	No works required at present	20+	B2	7.0	PRG	1
T046	Sycamore	16	400	4.0	7.5	6.0	4.0	2-E	1.5	EM	Good	Growing on east bank of brook. Co-dominant stems from 3m, slight inclusion at union. Crown suppression to north.	No works presently required	20+	B2	4.8	RET	#N/A
T047	White Willow	16	800;800	17.0	16.0	4.0	4.0	0-E	0	OM	Fair	Potentially two trees. Now collapsed over brook and resting on ground. Historic collapse. Remaining branches now growing vertical, leading to further collapses. Ivy clad stems in places. Moderate and large diameter dead wood in lower crowns, likely to be a result of livestock browsing.	Consider reductions of crown if within falling distance of works.	10+	C3		RET	#N/A
T048	Ash	18	600	6.0	8.0	6.0	8.0	3	3	M	Fair	Upright stem, open crown has frequent sub-120mm diameter deadwood	Remove deadwood if closely adjacent to proposed works	10+	C2	7.2	REM	1
G049A-C	White Willow	8	550	4.0	11.0	4.0	2.0	0-E	0	OM	Fair	Collapsed trees, crowns re-establishing and curving vertically towards sunlight. Extensive cavities at failure points, revealing internal decay. Moderate diameter dead wood in lower crowns through previous livestock browsing. Root plates being undermined to west by brook.	Consider reductions of crowns if within falling distance of works	10+	C3	6.6	RET	#N/A
T050	Ash	21	520 + 360	10.0	8.0	9.0	6.0	2-E	2	M	Good	On face of stream bank; smaller third stem has slot impact wound 0-1800mm, strong occlusive growth; decay at branch junction to south at 3m descending from wound above - possible future failure point, but location sheltered and target area very low risk	No works required at present	20+	B2	7.0	RET	#N/A
T051	Common Oak	17	1000	8.0	9.0	5.0	8.0	3-E	3	M	Fair	Growing on east bank of brook. Main stem trifurcates at approximately 3m, unions appear sound. Stems curved. No live growth visible on west stem, large diameter dead wood present, and exposed dessicated wood. further Moderate to large diameter dead wood in lower and middle crowns of remaining stems. Cracks and fissures in decayed wood. Veteran habitat features throughout	No works presently required	40+	B3	12.0	RET	#N/A
T052	Field Maple	20	660	7.0	7.0	7.0	7.0	2	1	M-OM	Good	Highly characterful specimen on north-west-facing bank of meandering stream, bending upwards from close to water, leaning slightly to north-west; top of high crown disturbed by heavily leaning very large willow to north-west; frequent dieback/deadwood throughout crown; hanging branch	Remove deadwood and hanging branch if closely adjacent to proposed works	20+	B2	7.9	REM	1
T053	Crack Willow	17	1000	5.0	7.0	6.0	6.0	3.5-S	2	OM	Fair	Extensive basal decay visible through cavity to north. Hollowing main stem. Vertical split in main stem extending from cavity to 1.5m above. Extensive storm damage recorded throughout crown, some broken branches now hanging in upper crown. Large diameter around base from past failures. Large diameter wounds in crown. Dieback and deadwood in upper crown extents.	If retained, tree to be reduced to monolith at approximately 4m.	10+	C3	12.0	REM	1
T054	White Willow	18	800	9.0	8.0	10.0	7.0	4	0	M	Fair	Co-dominant stem historically failed, north side, now layered and growing separately; larger lower branches torn out and suspended at failure point, arching to ground	Consider reduction of crown if adjacent to proposed works	10+	C2	9.6	RET	#N/A
T055 (421)	Crack Willow	17	550	12.0	4.0	2.0	4.5	0-S	0	EM	Fair	Growing on bank of brook. South stem collapsed over brook, leaving large cavity in main stem. Further branch failures evident with large diameter wounds visible. Curved and kinked main stem, crown dominant to north.	Crown reduction to approximately 4m in height if within falling distance of works	10+	C3	6.6	RET	#N/A
T056	Ash	18	650	7.0	8.0	7.0	10.0	4	3	M	Good	Tagged number 0401; overhanging stream; historic tear-out of main stem at 8m - existing crown in large part re-growth around resulting decay cavity; remains of large fallen tree on opposite bank propped against lower tree	No works required at present	10+	C2	7.8	RET	#N/A
G057	Hornbeam	to 17	to 490 at 300	5.0	5.0	5.0	5.0	1	1	M	Good	Pair of trees 2.5m apart, growing beside dry ditch; height of southern tree restricted by large oak to south; aerial roots; pockets of decay at branch failure points and low impact wounds; natural bracing - occlusion of branches	No works required at present	20+	B2	5.9	RET	#N/A

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
G058	A Group	5	280	3.0	3.0	3.0	3.0	0	0	M-OM	Good	Linear group growing along dry field ditch, remnants of former hedge; species include hawthorn, elder, field maple, cherry plum; occasional ivy encroachment; intermittent large trees; gaps, but coherent canopy cover; signs of former laying; blackthorn becomes dominant at south end, where line turns 90° to east; green infrastructure value	No works required at present	20+	B2	3.4	RET	#N/A
T059	Common Oak	19	1100	9.0	9.0	11.0	13.0	3-S	2.5	V	Fair	Veteran tree. Growing within dry shallow ditch. Crown lost vitality to east, dieback and dead wood present in upper and middle crown extents. Potential natural retrenchment given age, or ground compaction in root zone to east. Historic basal wounds, exposed dessicated wood present, and sections of lose bark. Occasional small black exudates on main stem, potential bacterial infection. Not significant at present.	Improve root zone conditions to east.	40+	A3	13.2	RET	#N/A
T060	Common Oak	20	1160	13.0	10.0	14.0	14.0	4-NW	3	M	Good	Growing within dry shallow ditch. Occasional large diameter dead wood in lower crown, cracks and fissures visible in dead wood. Crown break at 4m into multistems, potential old pollard. Large full crown. No evidence of stem hollowing.	No works presently required	40+	A3	13.9	RET	#N/A
T061	Oak	16	500	8.0	5.5	1.0	11.0	2-W	1	M	Good	Shaped by life beneath crown of larger neighbour to south; crown growth and lean to north-west; frequent sub-100mm diameter deadwood branches in shaded crown area; widespread epicormic growth	No works required at present	20+	B2	6.0	RET	#N/A
T062	Common Oak	14	1100	5.0	4.0	4.0	6.0	3-N	0	OM	Dead	Formerly 3no. Stems from 2.5m, south and west stems failed. No live growth visible. Extensive large diameter dead wood present. Dessicated dead wood visible, and sections of rot. Tree creeper nesting in underside of bark layer on main stem to west. Large diameter dead wood around base. Cracks and tears. Sections of lose bark	Depending on proximity of works, remaining stem may require reduction	40+	B3	13.2	RET	#N/A
T063	Oak	6	500 + 400	7.0	3.0	6.0	7.0	0	0	M	Fair	Growing on bank of dry ditch; apparently once part-windthrown, retaining some viable rooting area; historic branch tears; small-scale crown has light dieback and some deadwood	No works required at present	20+	B2	7.0	RET	#N/A
T064 (415)	Common Oak	14	1000	6.0	6.0	6.0	6.0	4-W	2	M	Fair	Rubble covering majority of root zone and up to 2m on main stem. Large diameter dead wood present in upper crown. Loss in vitality likely to be from root zone compaction. Crown largely epicormic in growth habit.	Consider moving rubble and debris from root zone	20+	B3	12.0	RET	#N/A
T065	Oak	20	1120	9.0	8.0	9.0	15.0	3	0.5	M	Good	VETERAN TREE; tagged number 0424; boundary tree, eastern half of RPA buried beneath landfill; massive limb tear-out cavity at crown break, large stem entirely hollow; crown predominantly to west, extending down to ground; deadwood branches in shaded lower crown area, some large, but overall vitality good	Remove larger deadwood only if works proposed within drip line of crown	40+	A3	13.4	RET	#N/A
G066	A Group	6	260	3.0	3.0	3.0	3.0	0	0	M	Fair	Linear group, remnants of boundary hedge; eastern half of RPA buried beneath landfill - several specimens lost due to burial, leaving lengthy gaps in row; principal species blackthorn and hawthorn, 2no field maple specimens at north end	No works required at present	10+	C2	3.1	RET	#N/A
G067A-B	Common Ash	18	560	5.0	5.0	5.0	5.0	4-S	4	EM	Fair	Trees growing within intermittent boundary hedgerow. Rubble piled in root zones to east. Small to moderate diameter dead wood in middle crowns.	Remove ruble from root zones.	20+	B2	6.7	RET	#N/A
T068	Common Oak	18	1100	9.0	9.0	9.0	9.0	4-NW	2	OM	Dead	Not current live growth visible. Potential epicormic growths yet to form leaf cover. Old pollard, multistems from 3.5m. Rubble in root zone to east, saturated ground in root zone to west. Both contributed to decline in vitality wood decay fungi Ganoderma spp. Visible on north west buttress roots.	Potential reduction of dead wood to reduce risk of harm to adjacent people.	40+	B3	13.2	RET	#N/A
T069	Common Oak	15	900	5.0	3.0	7.0	7.0	2-SW	2	M	Fair	Growing on field boundary. Rubble piled around base to east and up main stem. Old pollard, multistem from 3m. Old branch tears. Small to moderate diameter dead wood in crown. Likely to be attributed to root zone compaction.	Remove rubble from root zone	20+	B3	10.8	RET	#N/A
T070	Common Ash	12	260	5.0	5.0	5.0	5.0	4-S	2.5	SM	Good	Growing on bank of wet ditch. Co-dominant stems from 3m. Union appears sound. Balanced crown	No works presently required	20+	B2	3.1	RET	#N/A
T071	Common Oak	16	600	2.5	2.0	6.5	8.0	2-W	3	EM	Fair	Growing on bank of wet ditch. Compacted ground to south for existing access point to adjoining field. Pronounced west scaffold branch. Small to moderate diameter dead wood in lower and middle crown. Likely to be attributed to competition for light with surrounding trees.	No works presently required	20+	B2	7.2	RET	#N/A
T072	Common Oak	17	530	4.0	2.0	7.5	11.0	3-W	3	EM	Good	Growing on west extents of woodland, on bank of dry, shallow ditch. Co-dominant stems from 3m, union appears sound. Crown dominant to west. Occasional moderate diameter dead wood in middle crown.	No works presently required	40+	A2	6.4	RET	#N/A
T073	Common Oak	18	800	5.0	2.0	10.0	13.0	2.5-NW	2.5	M	Good	Growing on west extents of woodland, on bank of dry ditch. Main stem growing on lean to west, correcting at approximately 5m. Occasional small to moderate diameter dead wood in lower crown. Likely to be attributed to competition for light with surrounding trees.	No works presently required	40+	A2	9.6	REM	1

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T074 (436)	Common Ash	17	900	1.0	3.5	8.0	6.0	2-W	2	V	Fair	Growing on west extents of woodland. Dry, shallow ditch to west. Co-dominant stems from 3.5m. Large cavity beneath union in main stem. Likely to be extensive internal decay and hollowing of main stem. Pronounced basal swelling, indicative of reaction wood to an internal defect. Further cavities at old branch wounds and storm damage in crown. Elongated cavities visible in middle crown, and exposed decayed w9d	Live growth largely epicormic in habit. Ecological assessment required. Management required to crown if wind dynamics changed through loss of surrounding trees.	20+	B3	10.8	REM	1
T075	Common Oak	19	930	6.0	4.0	8.0	8.0	3-NW	2	M	Good	Growing on west extents of woodland, steep dry ditch to west. Crown break at 3m. Unoccluded pruning wounds visible in lower crown. Ringed bulges on main stem. Storm damage recorded to north, large frayed wound remains. Moderate diameter dead wood in middle crown to east.	No works presently required	40+	A2	11.2	REM	1
T076	Common Oak	24	920	7.0	2.0	10.0	10.0	2.5-S	2	M	Good	Growing on west extents of woodland. Shallow, dry ditch to west. Occluded wounds on main stem. Pronounced buttress roots to north west and west. Hung up large diameter dead wood in middle crown to east. Prominent tree given scale.	No works presently required	40+	A2	11.0	REM	1
T077	Ash	15	950	5.0	3.5	7.0	11.0	4	4	V	Fair	VETERAN TREE At west edge of wood beside boundary ditch; main stem historically torn out at 6m; numerous historic branch tears, majority fully or mostly occluded, but with frequent pockets of established decay; crown growth a handful of limbs on south half of tree, live growth mostly vertical shoots sprung from adventitious buds; sizeable deadwood to 150mm diameter at branch ends; deadwood on ground at base	Remove deadwood if adjacent to proposed works	20+	B2/3	11.4	RET	#N/A
T078	Common Oak	16	420	2.0	2.0	5.0	5.0	N/A	6	SM	Poor	Extensive dieback and dead wood throughout crown. Live crown mainly epicormic in habit. Extensive black exudates on main stem, indicative of bacterial infection.	Fell if within falling distance of proposals. Carryout necessary precautions to prevent spread of any bacterial infection.	<10	U	5.0	REM	1
T079	Turkey Oak	16	360	4.0	4.0	4.0	4.0	N/A	4	SM	Dead	No live crown present. Extensive black exudates on main stem indicating bacterial infection.	Fell on the grounds of safety. Carryout necessary sanitation on completion of works to avoid spread of bacteria	<10	U	4.3	REM	1
T080	Ash	8	650	0.0	1.0	8.0	3.0	5-S	4	M	Poor	Stem torn out at 5m height, leaving monolith extensively decayed along its full length - vertical decay seam on east side; live growth all to south; extensive mammal burrowing throughout root zone; remains of stem above tear on ground to south	No works required at present	10+	C2	7.8	RET	#N/A
T081	Oak	18	990	7.0	7.0	10.0	7.0	3	1.5	M	Good	Full-crowned specimen at south edge of wood, with crown growth primarily to south; large historic branch tear wounds on stem fully or largely occluded; frequent branch tears in crown, deadwood branches and stubs; some bleed marks on stem; buttress roots spreading outward in bell shape suggesting basal decay	Remove larger deadwood if works proposed close to tree	40+	A2/3	11.9	RET	#N/A
W082A	A Woodland	20	450	6.0	6.0	6.0	6.0	N/A	4	SM	Fair	Mixed broadleaf woodland. Mature trees growing along west boundary, on historic drainage channel. Varied age within the with some regeneration visible. Chainsaw activity visible, utility line clearance and processing of dead stems. Frequent hornbeam and field maple. Ash and Hawthorn abundant. Browsing damage on some stems from deer activity, possible squirrel browsing damage further up crowns. Some stems felled. No obvious signs of ashdieback. 6-8stems per 10m2.	No works presently required	40+	B2	5.4	PRG	34
W082B	A Woodland	20	500	6.0	6.0	6.0	6.0	N/A	0	Y-M	Fair to good	Mixed broadleaf woodland. Mature trees growing along west boundary, on historic drainage channel. Varied age within the with some regeneration visible. Chainsaw activity visible, utility line clearance and processing of dead stems. Frequent hornbeam and field maple. Ash and Hawthorn abundant. Occasional sycamore at northern end. Varied vertical structure.	No works presently required	40+	B2	6.0	RET	#N/A
G083A-B	Common Oak	20	550	5.5	5.5	5.5	5.5	10-S	8	EM	Good	Growing within woodland. Pronounced basal flare. Good stem taper. No apparent significant structural defects recorded.	No works presently required	40+	B2	6.6	REM	2
G084	Oak	17	to 610	6.0	6.0	6.0	6.0	2	1.5	M	Fair to good	Mature oak trees growing on or adjacent to woodland boundary; trees to south of brook/ditch have landfill to 2m height up to base of stem, filling south half of RPA, but mostly good vitality - ditch appears to provide sufficient water supply; mutual crown suppression common - trees leaning in search of light and space; variable rates of dieback; occasional branch tears, deadwood branches and stubs to 150mm diameter in shaded interior	Remove larger deadwood if works proposed close to trees	20+	B2	7.3	REM	16

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
G085	A Group	12	300	6.0	6.0	6.0	6.0	0	1	M	Fair	Linear planting on either side of line of overhead high voltage electricity cables; typically one or two rows of hawthorn, with one or two rows of field maple behind; hawthorn low, good vitality, typically leaning and crowns extending into open space beneath power lines; maple often more upright, vitality more varied, frequently multi-stemmed, with stem wounds up to 1500mm height perhaps associated with deer browsing; some topping and cutting back of branches beneath lines; where group merges into woodland, several low vitality specimens, especially of ash on east side, including occasional dead or dying; relaxed spacing affords occasional encroachment by high forest trees	Remove dead or dying trees and deadwood if adjacent to proposed works	10+	C2	3.6	PRG	38
T086	Common Oak	18	600;300	4.0	7.0	7.0	3.0	2-S	2	M	Good	Growing on south extents of woodland. Wet ditch to north. Co-dominant stems from 1.2m, union appears sound. 2no. black exudates on south stem. Potential early onset of bacterial infection. Earthworks to east, compaction of root zone. Lower branches damaged and covered at tips.	Crown lift damaged branches.	20+	B2	3.6	REM	1
T087	Common Oak	20	900	9.0	9.0	9.0	6.0	3-S	3	M	Fair	Growing on south extents of woodland. Wet ditch to north. Ground level raised to south by up to 4m. Compaction in root zone. Damaged lower branches to south from earthworks. Occasional moderate diameter dead wood in lower and middle crown. Pronounced buttress roots. Crown break at 4m, into co-dominant stems. Union appears sound.	Crown lift or reduce damaged stems.	20+	A2	10.8	REM	1
W088	A Woodland	18	500	6.0	6.0	6.0	6.0	N/A	0	SM-M	Fair	Mixed broadleaf woodland average of 6stems per 10m2. Woodland edge to west. Wet ditch to south with intermittent oak. Fallen and standing dead wood. Relatively uniform vertical structure. Deer activity. Ash abundant throughout, ranging from semi to early mature. Planted specimens. Limited successional growth. Oak and hawthorn occasional. Alder and sycamore rare.	Fell any dead trees within falling distance of road	20+	B2	6.0	PRG	178
W089	A Woodland	18	500	6.0	6.0	6.0	6.0	N/A	0	Y-M	Fair to good	Mixed broadleaf woodland. Average of 8no. Trees per 10m2. Denser woodland, compared with others in area. Planted and self established. Standing and fallen dead wood. Evidence of chainsaw activity. Ash and hawthorn abundant, young to mature trees. Frequent field maple. Occasional oak and elder. Rare sycamore. Varied vertical structure. Deer	Fell any dead trees within falling distance of road.	20+	B2	6.0	PRG	66
G090	A Group	to 15	to 250	4.0	4.0	4.0	4.0	1	1	SM	Good	Screen planting on bank rising from motorway edge, bank widening towards north; predominantly native species including ash, field maple, oak, hawthorn, cherry, sycamore, with hornbeam most prominent; trees planted at 2-3m spacing, no apparent thinning or other post-planting management; occasional compression forks on most susceptible species; small diameter deadwood, most commonly found on ash, and in more shaded parts of canopy interior	Remove larger deadwood if adjacent to proposed works	10+	C2	3.0	REM	13
T091	Ash	19	520 + 480	5.0	12.0	8.0	9.0	7-NE	8	M	Fair	V-shaped tree at centre of wood, forking at 600mm; open crown has frequent 150mm diameter deadwood and infrequent dieback at crown extents; small hanging branches; frequent L-shaped branches indicative of re-growth following branch tears	Remove larger deadwood and hanging branches if adjacent to proposed works	10+	C2	8.5	REM	1
T092	Ash	16	600	4.5	4.5	4.5	4.5	4-S	4	M	Fair	Growing on east extents of woodland. Crown previously topped at approximately 4m. Good regrowth visible. Decayed stubs of dead wood at pruning points. Co-dominant stems from 2m. Union appears sound.	No works presently required	10+	C2	7.2	REM	1
T093	Turkey Oak	24	900	9.0	9.0	9.0	6.0	8-S	8	M	Good	Pronounced basal flare. Co-dominant stems from 10m, slight inclusion at union. Broad open crown.	No works presently required	40+	A2	10.8	RET	#N/A
G094	Hornbeam	15	600 + 500	7.0	9.0	7.0	8.0	2-N	1.5	M	Good	Several hornbeam growing along north boundary along ditch line; Prominent specimen to northeast, forking near ground level, bare lower stems have characteristic twisted form of species, pockets of decay at branch tear points, low limb to south removed by saw; crown dense, some small diameter deadwood	No works required at present	40+	A2	9.5	PRG	1
T095	Common Oak	18	1010	8.0	8.0	8.0	8.0	3-N	1.8	V	Good	Veteran tree. Brook in root zone to east. Concrete bridge to south. Pronounced buttress roots. Elongated wound on north west side of main stem, exposed and desiccated dead wood. Moderate diameter dead wood in middle crown. Frayed old branch sounds. Cracks and fissures in pieces of dead wood.	No works presently required	40+	A3	12.1	RET	#N/A
G096	A Group	to 15	to 370	5.0	5.0	5.0	5.0	0.5	1	EM-M	Good	Trees growing on both banks of stream between motorway and concrete field bridge; predominantly hawthorn, with occasional early mature standard specimens of oak (2no), ash (1no, directly to south of bridge) and a cluster of field maple; infrequent elder; collective vitality good; occasional small diameter deadwood	No works required at present	20+	B2	4.4	PRG	3

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T097	Common Oak	22	1430	12.0	7.0	17.0	7.0	0-SE	1	V	Good	Veteran tree. Brook 3m to west. Crown break at 2-3m, into 3no. Stems. Unions appear sound. South west scaffold branch historically failed, now resting on the ground and partially attached to main stem. Large wound remaining. Exposed desiccated dead wood visible. Crossing and natural propping of branches in crown. Elongated cavity at old branch failure to south at 6m, and further storm damage recorded in crown.	Exclusion zone around tree.	40+	A3	15.0	RET	#N/A
G098	A Group	to 19	to 550	7.0	7.0	7.0	7.0	1.5	1.5	M	Good	2no ash and 1no sycamore on east bank of stream, overhanging water; mutual crown suppression, especially of shorter sycamore to north; occasional deadwood, mostly light; ivy encroachment into lower crown of central tree	Remove larger deadwood if adjacent to proposed works	20+	B2	6.6	RET	#N/A
G099A-K	Sycamore, Ash, Oak.	10	220	3.5	3.5	3.5	3.5	N/A	2	SM	Good	Planted group of trees. Some co-dominant unions, slight inclusion visible at unions. Mutually suppressed crowns. Some bark wounds on main stems	No works presently required	20+	C2	2.6	REM	11
T100	Field Maple	16	550	3.5	6.0	6.0	4.5	6-E	4	M	Good	Growing on east bank of brook. Curved main stem. Evidence of past pruning and storm damage recorded in crown.	No works presently required	20+	B2	6.6	RET	#N/A
T101	Field Maple	3.5	350	2.5	4.0	3.0	1.0	N/A	0	EM	Fair	Tree collapsed to east. Root plate heave. New growth now establishing.	No works presently required	<10	U	4.2	REM	1
T102	Hawthorn	4	200;200;200;200;200	4.0	3.0	3.0	4.0	1-NW	0	OM	Fair	Multi stem stem. Suggesting past coppice. Dieback and dead wood in crown. Likely to be competition for sunlight with adjacent tree. Partially collapsed north west stem.	No works presently required	10+	C2	5.4	RET	#N/A
G103	Alder, Ash, Field Maple, Hazel, Hawthorn.	16	550	6.0	6.0	6.0	6.0	N/A	0	EM-M	Fair to good	Informal group growing on banks of brook. Multi stems on hazel and alder. Suggesting historic felling and regeneration. Old branch wounds on alder, and dieback in upper crown.	Remove dead wood in alder within falling distance of works.	20+	B2	6.6	RET	#N/A
T104	Ash	20	1000	7.0	10.0	7.0	10.0	3-N	3	OM	Fair	Growing on north bank of brook. Crown break at 2.5m into 3no. Stems, unions appear sound. Extensive storm damage recorded in crown, large diameter frayed wounds remaining and hung up pieces of deadwood. Exposed desiccated decayed wood. Cavities at old wounds and wood decay fungi attachment points, specifically inonnotus hispidus.	Exclusion zone, or if works within falling distance of tree then remove dead wood.	20+	B3	12.0	RET	#N/A
G105A	Goat Willow	14	to 480	6.0	6.0	6.0	6.0	1.5	1.5	EM-M	Good / poor	Pair of trees of similar form on opposite sides of brook: rounded crown above 1.5m high stem; crown of western tree 80% dead	Coppice western tree if adjacent to proposed works	10+	C2	5.8	RET	#N/A
G105	A Group	6	150	4.0	4.0	4.0	4.0	0	0	EM-M	Good	Dense thicket of blackthorn with occasional hawthorn occupying triangular area inside curve of stream; varied stem size and spacing between stems; leaning stems; occasional part-fallen branches and deadwood	Remove deadwood and part-fallen branches as required	10+	C2	1.8	RET	#N/A
T106	Alder	18	470 + 400	9.0	5.0	10.0	8.0	1.5	1.5	M	Good	2no principal stems rising from large bole overhanging stream; pockets of decay on stem where lower branches lost; re-growth at branch tear-out to east; occasional sub-120mm diameter deadwood branches and stubs; basal growth	No works required at present	20+	B2	7.4	RET	#N/A
T107	Hawthorn	11	300 + 280 + 280 + 250 + 250	7.0	7.0	8.0	7.0	0.5	0.5	M	Good	Prime, spreading example of species, growing at north end of dry field boundary ditch; multiple stems, 'natural bracing' among rubbing and crossing stems and branches; lower crown browsed by deer	No works required at present	20+	B1/2	7.3	RET	#N/A
G108A	Common Oak	17	830	5.0	5.0	5.0		3-SE	3	M	Fair	Part of a intermittent group of oak trees. Crown retrenchment visible. Moderate diameter dead wood in middle and upper crown. Basal decay viable.	Exclusion zone	40+	B3	10.0	RET	#N/A
G108B	Common Oak	17	600	7.0	7.0	4.0	7.0	2.5-NE	2	M	Good	Crown lifted for high seat. Crown suppressed to south.	No works presently required	40+	A2	7.2	RET	#N/A
G108C	Common Oak	17	780	8.0	4.0	8.0	8.0	3-SW	2	M	Good	Growing on west extents of woodland. Crown suppressed to east. Occasional moderate diameter dead wood in lower and middle crown.	No works presently required	40+	A2	9.4	RET	#N/A
G108D	Common Oak	22	900	8.0	4.0	8.0	8.0	5-W	2	M	Good	Growing on west extents of woodland. Co-dominant stems from approximately 4m, union appears sound. Storm damage recorded in lower crown to west.	No works presently required	40+	A2	10.8	RET	#N/A
G108E	Common Oak	17	700	8.0	6.0	8.0	8.0	2.5-W	1.5	M	Good	Growing on west extents of woodland. Co-dominant stems from approximately 4m, union appears sound. Occasional moderate diameter dead wood in lower crown.	No works presently required	40+	A2	8.4	RET	#N/A
G108F	Common Oak	22	900	6.0	5.0	6.0	9.0	3-NW	1.5	M	Good	Growing on west extents of woodland. Pronounced buttress roots. Extensive storm damage recorded in crown, frayed wounds remaining. Cavities visible in some old branch wounds.	No works presently required	40+	A2	10.8	RET	#N/A
G108G	Common Oak	14	650	4.0	3.0	5.0	7.5	3-S	2	M	Good	Growing on west extents of woodland. Crown suppressed to north. Occasional moderate diameter in lower crown.	No works presently required	40+	A2	7.8	RET	#N/A
T109	Oak	24	1290	6.5	9.0	8.5	10.5	4	4	V	Good	VETERAN TREE Outstanding specimen on bank of dry field boundary ditch, base on east side 1m higher than on west side; good vitality at crown extents suggesting retrenchment not imminent; lower crown growth to north suppressed by inferior companion; occasional deadwood branches to 250mm diameter; re-growth at branch end tears	No works required at present	40+	A1/2/3	15.0	RET	#N/A

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T110	Ash	24	1000	13.0	10.0	12.0	6.0	4-E	6	M	Fair to good	Extensive basal swelling, reaction wood to internal decay including that from wood decay fungi Ganoderma spp. Brackets visible to north, east and south. Sound wood when struck with a mallet surrounding brackets. Main stem growing on lean to east. Co-dominant stems from approximately 4m, union appears sound. Stems correcting lean and growing vertical. Cavities in south stem. Wood decay fungi attachment points visible, inonotus hispidus brackets fallen at base. Pieces of moderate diameter dead wood in lower crown. Large open crown structure. Extensive buttress roots, with mammal activity visible.	No works currently required	20+	A3	12.0	RET	#N/A
T111	Common Oak	20	1030	7.0	7.0	7.0	7.0	4-N	5	M	Good	Growing on west extents of woodland. Crown break at 4m. Extensive storm damage recorded at break with 4no. Large diameter frayed wounds remaining. Exposed dessicated dead wood, cracks visible in stubs. Large diameter dead branches in lower crown to north and south, and large diameter fallen branch at base.	No works presently required	40+	A3	12.4	RET	#N/A
T112	Oak		1060	8.0	5.0	11.0	9.0	3-N	2	V	Good	VETERAN TREE Locally dominant specimen on east bank of dry wood boundary ditch; crown growth suppressed on east side, perhaps by neighbours now vanished; several large historic branch tears in central crown, with established large areas of decay and decayed stubs; good occlusion where 600mm diameter limb lost at 2m, south side and where other lower branches lost; frequent sub-150mm diameter deadwood branches; good vitality at crown extents	Remove larger deadwood if adjacent to proposed works	40+	A2/3	12.7	RET	#N/A
T113	Ash	17	800	3.0	5.0	6.0	2.0	4-N	4	M	Fair	Co-dominant stems from approximately 4m, west stem failed 1m above main union. Large diameter frayed wound remaining, daldinia concentrica on opposing side of wound and down main stem. Exposed decayed woody tissue visible. Further storm damage recorded in crown of east stem. Frayed wounds and decay cavities visible.	Exclusion zone, or potential further investigation into structural condition.	10+	B3	9.6	RET	#N/A
T114	Oak	22	1380	6.0	5.5	8.5	9.5	5-W	1.5	V	Good	VETERAN TREE On east bank of dry wood boundary ditch, formerly pollarded specimen entirely hollow from opening at crown break to ground level; extent of spread of decay up three limbs not known; in upper crown, regulation quantities of branch tears, deadwood; 5m long trench decay slit in northern limb	No works required at present	40+	A2/3	15.0	RET	#N/A
T115	Common Oak	20	1100	5.0	7.0	7.0	7.5	4-W	2	OM	Good	Storm damage recorded in lower crown, large diameter wounds remaining. Cavity visible in north west wound. Further storm damage recorded in middle crown, frayed wounds and decay cavities.	No works presently required	40+	A3	13.2	RET	#N/A
T116	Crack Willow	22	950 at 500	12.0	9.0	9.0	9.0	1	1	M-OM	Fair	Possible former pollard, 4no stems collapsed at crown break; branch tears in straggling crown, frequent sub-150mm diameter deadwood	Recommended to pollard at lower-mid-crown height if adjacent to proposed works	20+	B2	11.4	RET	#N/A
T117	Ash	16	400	6.0	6.0	6.0	6.0	2-S	4	EM	Good	Growing on south bank of brook. Blackthorn growing through crown. Crown lifted to east over access road. Occasional stubs of dead wood at pruning points.	No works presently required	20+	B2	4.8	REM	1
G118	Blackthorn, hawthorn, apple, ash, alder, oak, willow, cherry	16	350	4.0	4.0	4.0	4.0	N/A	0	Y-M	Fair to good	Long informal group of planted and self down trees and shrubs. Large pockets of dense blackthorn scrub. Intermittent standard trees. Crowns lifted over pavement to south. Screening function. Gaps in places, where bramble established.	No works presently required	20+	C2	4.2	REM	18
G119A-F	Ash	to 16	to 450	5.0	5.0	5.0	5.0	2	2	EM	Good	Standard ash trees growing on bank between slip road and stream; group includes one alder (G119-D) and one multi-stemmed tree (G119-B); branches on roadside trees cut back from pavement; small diameter deadwood, mostly in shaded lower crown area; light mutual crown suppression	Remove larger deadwood if adjacent to proposed works	20+	B2	5.4	REM	6
G120	Crack Willow	to 15	to 350	5.0	5.0	5.0	5.0	0	0.5	EM	Fair	Approximately 6no trees growing near top of bank between slip road and stream; mostly multi-stemmed, several stems leaning towards road recently removed; crowns also cut back from pavement; frequent sub-100mm diameter deadwood	Remove larger deadwood if adjacent to proposed works	10+	C2	4.2	REM	6
G121A-C	Apple, hawthorn, field maple	4.5	250	3.0	3.0	3.0	3.0	N/A	1	SM	Fair	Line of trees. Crowns previously lifted. Pavement to south, direct damage recorded from surface root activity with mounded surface. Stubs of deadwood at pruned branches.	No works presently required	10+	C2	3.0	REM	3
T122	Alder	14	350;350;350;200	3.5	4.0	3.5	4.0	2-N	1	M	Fair	Growing on south bank of brook. Multi stem form from ground level, suggesting past felling to ground level and regeneration. Stems reduced for utility cable clearance. Regrowth at pruning points. Mutually suppressed crowns.	No works presently required	10+	C2	7.0	REM	1
G123	A group	5	150	2.0	2.0	2.0	2.0	N/A	0	SM	Fair	Mixed informal group including self sown trees and shrubs.	No works presently required	10+	C2	1.8	PRG	218

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
G124 & G125	Crack Willow	14	600	6.0	3.0	1.0	5.0	2-N	1	M	Fair	Trees growing on south bank of brook. Extensive storm damage recorded. West tree has stem hungup in adjacent trees. Hazard beams in crown, old failure points and pruned stems have regrowth. Exposed heartwood rot on east tree on main stem. Crown previously reduced over brook. Regrowth present.	Reduce west stem back to 4m on west tree.	10+	C2	7.2	PRG	4
T126	Alder	4	450	5.0	1.0	0.0	2.0	1-NE	1	OM	Poor	Growing directly on brook bank. Main stem failed at approximately 1m, heartwood rot remains. Live growth limited to epicormic stems.	No works presently required	10+	C2	5.4	REM	1
T127	Common Alder	18	520	4.5	7.0	3.0	2.5	4-E	2	M	Good	Growing directly on brook bank. Suckering growths establishing. Crown suppression by adjacent trees.	No works presently required	20+	B2	6.2	REM	1
T128	Common Ash	17	450	6.0	3.0	6.0	6.0	3-W	2	EM	Good	Growing directly on brook bank. Slight drawn stem. Area of sunken bark on main stem at 6m, old branch wound, potential fungal attachment point.	No works presently required	20+	B2	5.4	REM	1
T129	White Willow	18	1150	5.0	8.0	10.0	8.0	4	4	M-OM	Fair	No access to base, potential stem hollowing, storm damage in crown, lean to south; upper crown tangling with field maple to south; torn branch hangs near ground on south side, part-suspended at tear	Remove hanging branch	10+	C2	13.8	REM	1
G130	Oak, Ash, Hornbeam, Hawthorn	20	550;550	8.5	8.5	8.5	8.5	N/A	1	M	Fair to good	Intermittent line of trees growing on old field boundary. Ash, oak, hornbeam. Mixed line of trees. Oak dominant. Collapsed branches and stems in places. Intermittent hawthorn. Mutually suppressed crowns. Ivy encroachment on some stems.Part of old field boundary.	No works presently required	40+	A2	12.0	PRG	12
G130A	Ash	18	560;700	11.0	6.0	4.0	13.0	5-W	2	M	Good	Co-dominant stems from 500mm. Union appears sound. Suppressed stems, growing on leans. Collapsed north west scaffold branch, resting on floor. Unoccluded wounds in crown from past failures. Occasional small to moderate diameter dead wood in lower crown.	No works presently required	20+	B3	10.8	REM	1
G130B	Common Oak	19	1000	7.0	11.0	8.0	11.0	4-W	3	M	Good	Growing along historic dry drainage ditch. No obvious stem hollowing. Crown suppression to north, collapsed branches to east. Small dessicated dead wood on lower crown. Prominent oak within group.	No work's presently required	40+	A2	12.0	REM	1
G131	Hazel, Field Maple, Alder.	6	400	5.0	5.0	5.0	5.0	N/A	1	M	Fair	Intermittent trees. Mutually suppressed crowns. Collapsed stems over brook. Multi stem forms on hazel.	No works presently required	10+	C2	4.8	PRG	15
T132	Field Maple	18	500;300	7.0	7.0	7.0	7.0	3	3	M	Fair	No access to base; twin-stemmed, overhanging stream on steep bank; dense ivy covering stem and in crown	Sever and remove ivy to enable fuller assessment	20+	B2	7.0	REM	1
T133	Alder	15	350;200	3.5	3.5	3.5	3.5	1-E	1	EM	Fair	Growing on south bank of brook. Co-dominant stems from 200mm, union appears sound. Mutually suppressed crowns. North stem dieback in upper canopy. Ganoderma spp. Wood decay fungal brackets visible on north side of main stem.	Reduce north stem by approximately 5m.	10+	C2	4.8	RET	#N/A
T134	Common Oak	t	750	0.5	0.5	0.5	0.5			OM	Dead	Branch canopy heights n/a; standing dead tree, monolithed stem only remaining; section of stem fallen to south-east; extensive heartwood decay	No works presently required	<10	C2	9.0	RET	#N/A
T135	Field Maple	14	490	5.0	6.0	7.0	6.0	2-E	1.5	M	Good	Upright form, growth to north formerly restricted by T134, now gone		20+	B2	5.9	REM	1
T136	Common Hornbeam	14	350	4.5	4.5	4.5	4.5	3-W	0	SM	Good	Growing on bank of brook. Crown suppression by adjacent trees. Lean on main stem to east.	No works presently required	20+	B2	4.2	RET	#N/A
T137	Not used																#N/A	#N/A
T138	Common Ash	20	700	6.0	6.0	6.0	6.0	12-S	10	M	Good	Growing on south bank of brook. Potential old pollard, multi stem form at 12m. Further evidence of crown works or regrowth following storm damage in crown. Tear out wound in upper crown to north. Area of sunken bark and discolouration on main stem at 4m. Potential old fungal attachment point. Extensive exposed structural roots on brook bank. Elongated wound on west side of main stem from base to 12m, column of decay.	No works presently required	10+	B2	8.4	RET	#N/A
T139	Alder	17	400	7.0	7.0	7.0	5.0	2-SE	2	EM-M	Good	On stream bank, numerous aerial roots descending into stream on south side; upper stem bends away from large neighbouring ash to west; historic pockets of decay at branch failure points	No works presently required	10+	C2	4.8	RET	#N/A
G140	White Willow	20	450;450;350;350;300	10.0	10.0	10.0	10.0	1	1	M	Good	Sprawling group of stems on east bank of stream, some leaning at >45degree angles, or collapsed; crown vitality good, with frequent deadwood small diameter only	No works presently required	10+	C2	10.3	RET	#N/A
G141	Common Alder	12	550	5.0	5.0	5.0	5.0	1-E	1	EM	Fair	Growing directly on brook bank. Multi stem forms. Evidence of past storm damage, frayed wound on west stem of south tree at old failure point. Mutually suppressed crowns	No works presently required	10+	C2	6.6	RET	#N/A
T142	Alder	15	300;300;250;250;200	8.0	8.0	7.0	8.0	2-NE	1.5	M	Good	to fair No access to base; on bank above stream, multi-stemmed re-growth following historic cutting to ground level; probable basal decay; small decay pockets at branch failure points; light dieback at crown extents	No works presently required	10+	C	7.3	REM	1
T143	Field Maple	8	200;200;200;200	3.0	3.0	3.0	3.0	3-SW	2	M	Good	Old coppice stool growing on south bank of brook. Evidence of decay at stool, including old branch failure points. Large open crown.	No works presently required	10+	C2	4.8	REM	1

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G144	A Group	14	140	2.0	5.0	5.0	2.0	2	2	SM-EM	Good	Stems of hornbeam clustered at 1-2m spacings along stream; de facto woodland edge plants with phototropic form - leaning towards space to south-east; frequent occlusive growth and rubbing and crossing stems resulting in natural bracing; infrequent birch, occasional standard oak trees recorded separately (G144-A to C)	No works presently required	20+	B	1.7	RET	#N/A
T145	Common Oak	18	850	9.0	8.0	8.0	3.0	3-E	2	M	Good	Historic drainage channel in root zone to north and east, leading to river. Steep bank to north. Main stem on slight lean to east, crown suppression to west. Occasional small to moderate diameter dead wood in lower and middle crown, likely to be a result of internal canopy shading.	No works presently required	40+	A	10.2	RET	#N/A
T146	Common Oak	18	560	4.0	6.0	5.0	2.0	10-E	10	EM	Fair	Mutually suppressed crown. Small to moderate diameter dead wood in lower crown. Likely to be a result of sunlight competition. Ground falls to east.	No works presently required	40+	B2	6.7	RET	#N/A
T147	Field Maple	18	430	4.0	8.0	5.0	4.0	1-E	1	M	Fair	Mutually suppressed crown. Ground falls away to east. Occasional small to moderate diameter dead wood in lower crown.	No works presently required	20+	B2	5.2	RET	#N/A
T148	Common Oak	18	700	3.0	7.0	4.0	4.0	14-E	12	M	Fair	Ground level falls away to north. Small to moderate diameter dead wood in lower and middle crown (<120mm), likely to be a result of sunlight competition. Large diameter wound at historic branch failure at 10m. Exposed desiccated wood visible. Elongated cavity on south side of main stem revealing white rot and slight heartwood rot, not extensive at present. Potential woodpecker and larger bird habitat holes.	No works presently required	40+	B2	8.4	RET	#N/A
T149	Common Hornbeam	16	430	5.0	5.0	5.0	5.0	3-S	3	EM	Good	Mutually suppressed crown. Cavities on main stem at old branch wounds. Occasional small diameter dead wood in lower and middle crown.	No works presently required	20+	B2	5.2	RET	#N/A
T150	Common Hornbeam	18	550	5.0	8.0	2.0	6.0	5-E	4	M	Fair	Curved main stem. Frayed wounds at old branch failures, dessicated white rot visible and soft rot in wound at 2m to east. Occasional small to moderate diameter dead wood in lower and middle crown, likely to be a result of sunlight competition.	No works presently required	20+	B2	6.6	RET	#N/A
T151	Common Hornbeam	22	530	5.5	5.5	5.5	5.5	4-E	5	M	Good	Growing on bank of former brook or historic drainage channel. Relatively balanced crown. 5no. black exudates recorded at base of tree to north. Basal stem to south east.	No works presently required	40+	B2	6.4	RET	#N/A
T152	Crack Willow	17	480	5.0	9.0	8.0	9.0	5-E	5	M	Poor	Apparently growing on bank of former stream now re-routed; stem curving upwards from base and straightening vertically; crown area 60% dead, with 150mm diameter deadwood; live foliage in scattered clumps	Pollard if adjacent to proposed works	<10	C2	5.8	RET	#N/A
G153	Alder	17	200;180	4.5	4.5	4.5	4.5	2	2	EM	Good	Predominantly alder, growing on north-west bank of stream, with poplar plantation on north-west side; frequently multi-stemmed, tending to lean towards space and light to south-east; 3-5m spacing between stems typical; characteristic EXOTHERMIC form of species; mutual crown suppression; aerial roots in stream; occasional hornbeam stems and infrequent poplar	No works presently required	20+	B2	3.2	RET	#N/A
G154	Hornbeam, Birch	17	300	5.0	5.0	5.0	5.0	1.5	1	EM	Good	Self-set hornbeam with occasional birch growing on south-east bank of stream; hornbeam stems clustered at 1-2m spacing with mutual crown suppression; birches taller, with upright stems; occasional basal decay where co-dominant stems lost; 1no dead birch monolith, 1no alder; screening/amenity value - beside the A12	No works presently required	20+	B2	3.6	RET	#N/A
T155	Birch	18	270	5.0	5.0	5.0	5.0	3	3	EM	Good	Locally dominant specimen at top of bank; surface roots descending bank towards stream	No works presently required	20+	B2	3.2	RET	#N/A
T156	Oak	10	390	9.0	10.0	5.0	3.0	2-E	1	EM-M	Good	Standing precariously on sheer bank of stream, streamside roots exposed by erosion; old crown lifting dating from construction of concrete roadside revetment to east - full occlusion of wounds; crown growth suppressed on south-west side	No works presently required	20+	B2	4.7	RET	#N/A
T157	Hornbeam	18	840	11.0	10.0	9.0	3.0	1.5	1.5	OM	Fair to good	Diameter measured at 1000mm; veteran habitat features. once pollarded, hollow-stemmed specimen on bank of former stream (re-routed); brown rot heartwood decay, roots on stream side exposed by erosion; crown growth suppressed by neighbour on north-west side; otherwise extensive and displaying good vitality; established ivy into mid-crown	No works presently required	20+	A2	10.1	RET	#N/A
T158	Common Hornbeam	14	200;250	2.0	6.0	8.0	3.0	0-E	3	SM	Fair	Formerly three stems from ground level, east stem historically failed, laid on ground and extensively decayed. Mutually suppressed crowns on remaining stems.	No works presently required	10+	C2	3.8	RET	#N/A
G159A-F	Common Hornbeam, Sycamore	18	480	6.0	6.0	6.0	6.0	6-E	6	EM	Fair to good	Intermittent trees on west side of old brook or drainage channel. Mutually suppressed crowns, leans on stems towards available sunlight. Basal cavity on north tree, revealing heart wood decay. Small to moderate diameter dead wood in lower and middle crowns.	no works presently required	20+	B2	5.8	RET	#N/A
G160A-C	Common Oak	20	650	6.0	6.0	6.0	6.0	N/A	6	EM to M	Good	Intermittent trees along bank of former brook or drainage channel. Occasional small to moderate diameter dead wood in lower and middle crowns.	No works presently required	40+	B2	7.8	RET	#N/A
T161	Sycamore	12	450	3.0	3.0	3.0	3.0	N/A	0	SM	Poor	Live growth limited to basal stem. Extensive dessicated white rot and areas of lose bark.	No works presently required	<10	U	5.4	RET	#N/A

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G162	Hybrid Black Poplar	28	600	7.0	7.0	7.0	7.0	6	6	EM-M	Fair to poor	plantation of approximately 45no trees in half-moon shaped space between former and current routes of stream; planting stakes still in place; collectively, physiological and structural condition poor; stems regrowing and reasserting apical dominance where leader failed; established decay cavities where limbs lost; edge trees leaning outwards in search of light and space; individual trees in group fallen, part-fallen and caught in neighbour, or dead . frequent large diameter deadwood and occasional dieback; 1no sycamore interloper.	Long-term management strategy required for group; bring part-fallen tree safely down to ground; remove deadwood if adjacent to proposed works C/U	<10	C2	7.2	RET	#N/A
T163	Common Oak	16	550;600	5.0	7.0	6.0	6.0	2.5-E	2	M	Good	Twin stemmed from ground level. Small to moderate diameter dead wood in lower and middle crown. Mutually suppressed stems.	No works presently required	40+	B2	9.8	RET	#N/A
G164	Common Alder, Field Maple	12	350	5.0	5.0	5.0	5.0	N/A	0	SM to EM.	Fair	Intermittent trees growing along former brook or drainage channel. Single and multi stem forms, suggesting past coppice. Collapsed stems in places.	No works presently required	10+	C2	4.2	RET	#N/A
T165	Common Oak	18	990	7.0	7.0	7.0	8.0	3	3	M-OM	Good	At woodland edge, basal swelling around large cavity opening to east; decay rising from roots meeting decay descending from historic branch failure points at 2m - gap in eastern crown resulting from lost limb here	No works presently required	40+	A2	11.9	RET	#N/A
T166	Common Oak	18	1000	8.0	7.0	8.0	8.0	2.5-N	2	M	Good	Growing on old earth bank. Crown break at 3m into multi stems. Unions appear sound. Large diameter (<250mm) present in crown. Cracks and fissures in dead wood. Dessicated white rot visible. Historic wounds on branches, revealing further white rot	No works presently required	40+	A2	12.0	RET	#N/A
T167	Not used												No works presently required				#N/A	#N/A
T168	Common Oak	16	1250	9.0	9.0	9.0	9.0	4-SW	2	V	Good	Veteran. Extensive storm damage recorded, loss of main leader. Exposed heart wood decay. Water pocket in main stem. Hollowing. Remaining crown relatively in tact. Dead wood piled at base. Dessicated white rot in crown. Occasional dead branch.	No works presently required	40+	A3	15.0	RET	#N/A
G169	Alder, oak, hawthorn	18	600	6.5	6.5	6.5	6.5	N/A	0	Y-M	Good	Linear group of trees and shrubs on brook banks. More mature trees largely multi-stem alders, indicative of last felling to ground level and regeneration. Pockets of bramble scrub. Screen function. Occasional semi-mature Oak. Sheet piling for slip road works on opposing bank.	No works presently required	40+	B2	7.2	RET	#N/A
T170	Common Oak	20	1100	8.0	8.0	11.0	8.0	3-SW	2	M	Good	Crown in tact. No obvious hollowing. Limited dead wood resource. Potential old pollard. Multi stem from 3m. Unions appear sound. Dense ivy encroachment on main stem. Dry ditch to north.	No works presently required.	40+	A1	13.2	RET	#N/A
T171	Common Oak	16	1000	8.0	8.0	8.0	6.0	3-E	3	M	Good	Occasional small diameter dead wood in lower crown. Dessicated white rot. Old branch wound to north, revealing desiccated white rot. Basal wound showing column of internal decay. Limited heart rot visible.	No works presently required	40+	A1	12.0	RET	#N/A
T172	Common Oak	18	1100	9.0	7.0	9.0	9.0	7-S	5	M	Fair	Old ditch line in root zone to north. Old fungal fruiting bodies on main stem. Ganoderma spp. Internal decay, but not extensive. No pronounced hollowing visible. Old branch tears in crown. Dessicated white rot visible.	No works presently required	40+	B2	13.2	RET	#N/A
T173	Common Oak	18	1000	9.0	10.0	11.0	6.0	4-S	3	M	Fair	Dry deep ditch to north. No obvious hollowing. Old branch wounds. Exposed dessicated white rot visible. Crown in tact.	No works presently required	40+	A2	12.0	RET	#N/A
T174	Common Oak	18	900	8.0	6.0	6.0	4.0	8-E	3	M	Fair	Crown loss of vitality. Thinning and small diameter dead wood in middle and upper crown. Woodpecker holes in old branch wounds in upper stem.	No works presently required	40+	B23	10.8	RET	#N/A
T175	Common Oak	18	1100	8.0	9.0	9.0	9.0	6-E	6	M	Good	Main stem no obvious hollowing. Large volume of dessicated white rot. Scaffold branch to north west collapsed. Remaining crown relatively in tact. Growing within existing dry ditch.	No works presently required	40+	A2	13.2	RET	#N/A
G176	A group	16	350	6.0	6.0	6.0	6.0	N/A	0	SM to EM.	Good	Oak dominated. Sporadic hornbean, hawthorn and ash. Mutually suppressed crowns. Steep bank to brook. Drawn stems. Unbalanced crowns. Screen function. Multi-stem crack willow. 7no. 300mm diameter stems. Collapsed in places.growing on east bank. Multi-stem alder. North end of group.	No works presently required	20+	B2	4.2	RET	#N/A
T177	Turkey Oak	15	600	6.0	6.0	6.0	6.0	2-E	2	M	Good	Root zone restricted by retaining structure for culvert. Balanced crown.	No works presently required	20+	B2	7.2	RET	#N/A
W178	Oak, Hornbeam, Hazel, Ash	To 18	To 600	8.0	8.0	8.0	8.0	N/A	0	Y-M	Fair to good	Broadleaf dominated woodland. Oak abundant, young to mature trees. Occasional ash. Frequent Hazel. Limited ground flora at time of assessment. Occasional scrub pockets. Varied topography and vertical structure. Woodland edge habitat mainly along the brook	No works presently required	40+	A2	7.5	RET	#N/A
G179	Hawthorn, Hazel,	To 12	To 300	4.0	4.0	4.0	4.0	N/A	0	Y-M	fair	Areas of dense scrub and individual trees. Single and multi-stem forms recorded. Informal groups.	No works presently required	10+	C2	3.5	REM	6
T180	Common Oak	18	1250	9.0	7.0	9.0	7.5	4-N	2	V	Fair	Tag 0441. Veteran tree. Large stem circumference for species. Extensive basal wounds to east and west, revealing onset of hollowing and heartwood decay. Large area of dessicated white rot on surface of dysfunctional wood. Extensive large diameter (>200mm) storm damage recorded in crown. Frayed wounds. Large diameter dead wood in crown and around base.	Remedial works maybe required if works within falling distance of tree.	40+	A3	15.0	RET	#N/A

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T181	Common Ash	17	650	8.0	6.0	6.0	8.0	6-N	5	OM	Fair to poor	Formerly multi stem from base. Three no. Stems collapsed. Failed at base. Potential root plate undermining by brook, or due to included bark junctions. Some growth on stems. Limited to epicormic. Dieback in crown of standing stem, historic tear out wounds in crown. White rot visible. Innontus hispidus attached to stems.	Top at 6m remaining stem and retain as dead wood habitat.	10+	C3	7.8	RET	#N/A
G182	Alder, hawthorn, field maple	16	600	8.0	8.0	8.0	8.0	N/A	0	SM to M	Fair to good	Growing along brook bank. Single and multi stem forms. Collapsed stems in places.	No works presently required	20+	B2	7.2	RET	#N/A
G183	Ash, Oak	17	600	7.0	7.0	7.0	7.0	N/A	1	EM to M	Fair to good	Habitat features throughout. Old storm damage with unoccluded wounds and pockets of decay. Three no. Stems on east tree. Small to moderate diameter dead wood in middle crowns. Hazard beams where branches and stems have vertical and horizontal cracks from end loading and dysfunctional wood. Elongated cavities visible, revealing decayed wood.	Remedial works maybe required if works within falling distance of trees.	20+	B3	7.2	RET	#N/A
G183A	Ash	16	600	3.0	4.0	10.0	4.0	N/A	3	EM	Fair	Elongated vertial crack in main stem. Revealling internal decay, high risk of total collapse.	Agree remedial works with ecologists given potential habitat value.	<10	U	7.2	RET	#N/A
T184	White Willow	12	1300	6.0	3.0	2.0	3.0	O-W	1	OM	Fair	Growing on west bank of brook. Collapsed west stem. Large wound remaining. Extensive decayed wood revealed. Extensive ivy cover on east stem.	Protect	10+	C3	15.0	RET	#N/A
G185	Alder, White Willow, Crack willow, ash, Hawthorn, hazel, blackthorn	18	650	6.0	6.0	6.0	6.0	N/A		EM to M	Fair	Mixed group along west bank of brook. Ivy encroachment on some stems. Collapsed stems and branches in places. Regenerated branches in places. Multistem hazel. Pockets of blackthorn.	No works presently required	20+	B3	7.8	PRG	7
T186	Ash	17	400;400;400;400;400	7.0	7.0	8.0	8.0	2-SW	1	M	Good	Multistem from ground level. Growing on west bank of brook. Mutually suppressed crowns. Fused stems to west. Sap run on south stem. Small to moderate diameter dead wood in lower crown. Fallen in places. Grazing damage.	No works presently required	20+	B2	9.6	RET	#N/A
T187	White Willow	14	1010	4.0	1.0	3.0	3.0	N/A		OM	Dead	Tag 0443. No obvious love growth present. Formerly pollarded at 3m. Potential hollowing of main stem. Large diameter dead wood remaining in crown.	Retain as dead wood habitat	10+	C3	12.1	REM	1
T188	White Willow	12	1200	2.0	4.0	8.0	6.0	0-S	0	OM	Fair	Hollow main stem. Collapsed branches. Historically pollarded. Extensive decayed wood visible. Large diameter	No works presently required	10+	C3	14.4	RET	#N/A
T189	Common Ash	14	300;300;300;300	7.0	7.0	7.0	7.0	3-S	2	EM	Fair	Crown recently lifted for high seat access. 4no. Stems 1m, slight included bark at junctions. Tight union on north and central stems.	No works presently required	20+	B2	7.2	RET	#N/A
T190	Ash	15	560	6.0	6.0	6.0	6.0	3-NW	3	EM	Good	Growing on top of concrete retaining structure. Survey ceased given health and safety incident.	No works presently required	20+	B2	6.7	RET	#N/A
G191	Willow, ash, hazel, hawthorn	14	500	6.0	6.0	6.0	6.0	N/A	0	SM to M	Fair to good	Lining banks of brook. Single and multi stems recorded. Bases not accessible. Existing concrete access to east of group. Low crown heights over access road.	No works presently required	20+	B2	6.0	RET	#N/A
G192	Alder, field maple, willow, ash	16	400	6.0	6.0	6.0	6.0	N/A	0	SM to EM	Good	Group of trees lining banks of brook. Bases not accessible. Land access not permitted. Internal screen function.	No works presently required	20+	B2	4.8	RET	#N/A
G193	Leyland cypress, blackthorn, hawthorn, oak, crack willow, sycamore	10	150	2.5	2.5	2.5	2.5	N/A	0	Y to SM	Fair	Dense blackthorn scrub established along A12 pavement. Leyland planted along boundary fence. Fair to poor vitality. Crowns thinning throughout.	No works presently required	10+	C2	1.8	RET	#N/A
T194	Wild Cherry	4	350	2.0	2.0	2.0	2.0	N/A	1	SM	Dead	Standing dead tree. No live crown present.	Fell to ground level	<10	U	4.2	REM	1
T195	Ash	14	400	6.0	6.0	6.0	6.0	4-E	1	SM	Good	Balanced crown. Occasional small diameter dead wood in lower crown.	No works presently required	20+	B2	4.8	RET	#N/A
T196	Ash	14	450	7.0	7.0	7.0	7.0	1.6-W	2	SM	Good	Balanced crown. Mounding in root zone to north. Occasional small diameter dead wood in lower crown. Sloped embankment to pavement to south. French drain to north and south of base.	No works presently required	20+	B2	5.4	REM	1
T197	Norway Maple	12	360	6.0	6.0	6.0	6.0	2-N	2	SM	Good	Growing on sloped embankment. Surface roots visible to south abs west. Balanced crown.	No works presently required	20+	B2	4.3	REM	1
T198	Pear	5	250	1.0	5.0	4.0	1.0	2-E	1	SM	Fair	Growing on sloped embankment. Block of concrete in root zone to north. Crown suppressed to west.	No works presently required	10+	C2	3.0	REM	1
T199	Norway Maple	12	390	6.0	6.0	6.0	6.0	2-NE	1.5	SM	Good	Balanced crown. Growing on sloped embankment. Main stem historically struck. Elongated wound on south west side of main stem.	No works presently required	10+	C2	4.7	REM	1
G200	Norway Maple	3.5	85	1.5	1.5	1.5	1.5	N/A	1	Y	Good	Relatively new tree planting. Balanced crowns.	No works presently required	10+	C2	1.0	REM	5

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
T201	Common Oak	12	450;500	7.0	7.0	7.0	7.0	2-S	1.5	EM	Fair	Co-dominant stems from 1m, union appears sound. Stems fused by branch attachment at 2m. Occasional small diameter dead wood in lower crown. Area of standing water to north.	No works presently required	40+	B2	8.1	REM	1
T202	Common Oak	12	300;300	6.0	6.0	6.0	6.0	1.6-SE	1.5	SM	Good	Growing at the top of sloped embankment. Co-dominant stems from approximately 500mm. Fused stems at point of branch attachment. Occasional small diameter dead wood in lower crown.	No works presently required	20+	B2	5.1	REM	1
T203	Ash	16	200;200;200;200;200	6.0	6.0	6.0	6.0	4-SE	1.8	EM	Good	Multi stem from ground level. Manhole in root zone to south. Restricting root zone. Mutually suppressed crowns. Leans on some stems.	No works presently required	10+	C2	5.4	REM	1
T204	Elm	10	200;200;200;200	5.5	5.5	5.5	5.5	2-SE	1.5	EM	Fair to poor	Crown thinning. Multi stem form. Mutually suppressed crowns.	No works presently required	<10	C2	4.8	REM	1
T205	Ash	12	280	5.5	5.5	5.5	5.5	2-S	1.5	SM	Fair	Crown suppressed by adjacent trees and shrubs. Small diameter dead wood in lower crown. Base not accessible.	No works presently required	10+	C2	3.4	REM	1
G206	Hawthorn, crab apple, field maple	5	180;180;180	4.0	4.0	4.0	4.0	N/A	1.5	EM	Fair	Multi stem forms. Growing on grassed verge. Mutually suppressed crowns.Potential direct damage recorded from tree root activity to adjacenet pavement.	No works presently required	10+	C2	3.7	REM	4
G207	Hawthorn, Hazel, blackthorn	To 12	To 300	4.0	4.0	4.0	4.0	N/A	0	Y-M	fair	Areas of dense scrub and individual trees. Single and multi-stem forms recorded. Informal groups.	No works presently required	10+	C2	3.5	PRG	31
T208	Common Oak	16	700	9.0	9.0	9.0	9.0	1.5-N	2	M	Good	Balanced crown. Crown break at approximately 3m into mukti-stems.	No works presently required	40+	B2	8.4	REM	1
T209	Common Oak	12	440	7.0	7.0	7.0	7.0	1.6-N	1.8	SM	Good	Balanced crown.	No works presently required	20+	B2	5.3	REM	1
T210	Common Oak	8	380	5.0	5.0	5.0	5.0	1.5-N	1.5	SM	Good	Balanced crown	No works presently required	20+	B1	4.6	RET	#N/A
G211	Field maple, blackthorn	8	300	3.0	3.0	3.0	3.0	N/A	0	SM	Fair	Scrub pockets. Intermittent boundary vegetation. Occasional young ash, oak. Live and dead elm.	No works presently required	10+	C2	3.6	RET	#N/A
G212	Lime, maple, silver birch, whitebeam, white willow	17	750	10.0	10.0	10.0	10.0	N/A	2	SM to M	Good	Intermittent line of planted trees. Crowns lifted. Unoccluded pruning wounds.	No works presently required	20+	B2	9.0	RET	#N/A
G213	Oak, field maple ash, Hawthorn, blackthorn	16	350	6.0	6.0	6.0	6.0	N/A	0	SM	Good	Informal linear belt of trees and shrubs. Screen function areas of scrub. Mutually suppressed crowns.	No works presently required	20+	B2	4.2	PRG	1
T214	Common Oak	10	550;430	7.0	7.0	7.0	7.0	N-2	1.8	M	Good	Co-dominant stems at approximately 600mm. Union appears sound. Drainage ditch to east. Occasional dessicated white rot present on moderate diameter dead wood in lower crown.	No works presently required	20+	B2	8.4	REM	1
G215	Field maple, blackthorn, oak, hawthorn, hornbeam	6	250	3.5	3.5	3.5	3.5	N/A	1	SM	Good	Informal linear group. Screen function.	No works presently required	20+	C2	3.0	RET	#N/A
G216	Lombardy and Grey Poplar	18	450	8.0	8.0	8.0	8.0	N/A	2	EM	Good	Intermittent line of trees.	No works presently required	20+	B2	5.4	RET	#N/A
G217	Comon Oak, field maple, ash, hawthorn, blackthorn	18	750	8.0	8.0	8.0	8.0	N/A	1	SM TO m	Good	Informal linear group. Screen function. Oak dominates.	No works presently required	40+	A2	9.0	PRG	12
W218	A Woodland	18	700	10.0	10.0	10.0	10.0	N/A	0	SM to M	Good	To M. Mixed broadleaf. Abundant oak standards. Frequent lime, occasional sycamore and horse chestnut. Woodland edge to south. Lapsed. Drawn straggly forms. Mature oak on boundary. Sycamore and young oak on east boundary	No works presently required	40+	A2	8.4	RET	#N/A
G219	Hawthorn	4	250	2.5	2.5	2.5	2.5	N/A	0	M	Fair	Lapsed hedgerow. Collapsed stems in places.	No works presently required	20+	C3	3.0	RET	#N/A
G220	A group	18	700	10.0	10.0	10.0	10.0	N/A	0	SM-OM	Good	Brookside vegetation. Intermittent trees and shrubs. Hawthorn, alder, ash, willow.	No works presently required	40+	B2	8.4	RET	#N/A
G221	Mixed group	18	600	6.0	6.0	6.0	6.0	N/A	0	SM-M	Good	Intermittent trees and larger groups. No access to bases. Measurements estimated.	No works presently required	20+	B2	7.2	RET	#N/A
G222	Mixed group	18	600	6.0	6.0	6.0	6.0	N/A	0	SM-M	Good	Part of TPO.	No works presently required	20+	B2	7.2	RET	#N/A
G223	Mixed group	18	600	6.0	6.0	6.0	6.0	N/A	0	SM-M	Good	Part of motorway verge vegetation.	No works presently required	20+	B2	7.2	PRG	#N/A
G224	Mixed group	12	500	6.0	6.0	6.0	6.0	N/A	0	Y-EM	Good	Linear group of intermittent trees	No works presently required	20+	B2	5.5	REM	20

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
GC-T1	Field Maple	6	250;250;350	4.5	4.5	4.5	4.5	2-SW	0.5	M	Good	Three stems from base. Basal cavity to west dessicated white rot present. Fused stems at 2m on central and south stem.	No works presently required	20+	B3	5.6	RET	#N/A
GC-G2	Hawthorn, Field Maple	4	200;200	2.5	2.5	2.5	2.5	N/A		M	Fair	Lapsed hedgerow. Approximately 12no. Trees. Multi stem and some collapsed. Dense bramble scrub established.	No works presently required	10+	C2	3.4	PRG	1
GC-T3	Field Maple	5.5	250	3.5	3.5	3.5	3.5	3-S	3	EM	Fair	Base not accessible. Measurements estimated. Co-dominant stems from approximately 2m. Union appears sound.	No works presently required	10+	C2	3.0	REM	1
GC-G3A	Sycamore	6	210	3.0	3.0	3.0	3.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	2.5	REM	1
GC-G3B	Sycamore	8	210	3.0	3.0	3.0	3.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	2.5	REM	1
GC-G3C	Sycamore	8	250	3.5	3.5	3.5	3.5	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	3.0	REM	1
GC-G3C	Sycamore	6	210	3.0	3.0	3.0	3.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	2.5	REM	1
GC-G3D	Sycamore	6	210	3.0	3.0	3.0	3.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	2.5	REM	1
GC-G3E	Sycamore	8	320	4.0	4.0	4.0	4.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	3.8	RET	#N/A
GC-G3F	Sycamore	8	430	5.0	5.0	5.0	5.0	N/A	2	SM	Good	Part of group of standard trees. Crowns lifted, unoccluded wounds present.	No works presently required	20+	B2	5.2	RET	#N/A
GC-G4A	Goat willow	5	220;220	4.0	4.0	4.0	4.0	N/A	0.5	EM	Fair to good	Part of lapsed hedgerow. Goat Willow. Co-dominant stems from ground level. Shallow drainage ditch to south.	No works presently required	10+	C2	3.7	REM	1
GC-G4B	Field Maple	6	260;280	4.0	4.0	4.0	4.0	N/A	0.5	EM	Fair to good	Twin stemmed from ground level. Mutually suppressed stems. Basal cavity on east stem.	No works presently required	10+	C2	4.6	RET	#N/A
GC-G4C	Hawthorn	4	240;130	2.0	2.0	4.0	2.0	N/A	0.5	M	Fair to good	Twin stemmed from ground level. Growing on bank face of drainage ditch. Lean to south. Moderate diameter dead wood in middle crown.	No works presently required	10+	C2	3.3	RET	#N/A
GC-G4D	Field Maple	6	370;220	5.0	3.0	4.0	3.0	1-N	0.5	EM	Fair to good	Three stems from close to ground level. North stem growing on lean. Mutually suppressed crowns.	No works presently required	10+	C2	5.2	RET	#N/A
GC-T5	Silver Birch	4.5	200	3.0	3.0	3.0	3.0	N/A	1	Y	Good	Balanced crown.	No works presently required	10+	C2	2.4	RET	#N/A
GC-G6A	Alder	3.5	120	2.0	2.0	2.0	2.0	N/A	1.8	Y	Fair	Part of intermittent planted trees. Crown lifted. Decay cavities.	No works presently required	10+	C2	1.4	REM	1
GC-G6B	Alder	3.5	120	2.0	2.0	2.0	2.0	N/A	1.8	Y	Fair	Part of intermittent planted trees. Crown lifted. Decay cavities.	No works presently required	10+	C2	1.4	REM	1
GC-G6C	Alder	3.5	120	2.0	2.0	2.0	2.0	N/A	1.8	Y	Fair	Part of intermittent planted trees. Crown lifted. Decay cavities.	No works presently required	10+	C2	1.4	REM	1
GC-G6D	Alder	3.5	120	2.0	2.0	2.0	2.0	N/A	1.8	Y	Fair	Part of intermittent planted trees. Crown lifted. Decay cavities.	No works presently required	10+	C2	1.4	RET	#N/A
GC-G6E	Alder	3.5	120	2.0	2.0	2.0	2.0	N/A	1.8	Y	Fair	Part of intermittent planted trees. Crown lifted. Decay cavities.	No works presently required	10+	C2	1.4	RET	#N/A
GC-T7	Grey Poplar	18	660	5.0	10.0	8.0	6.0	4-SE	1.8	M	Good	Crown previously lifted. Growing on slight lean. No root plate heave visible.	No works presently required	20+	B2	7.9	RET	#N/A
GC-G8A	Grey Poplar	16	500	6.0	6.0	6.0	6.0	N/A	3	EM	Good	Crown previously lifted. Growing on slight lean to east	No works presently required	20+	B2	6.0	RET	#N/A
GC-G8B	Lombardy Poplar	17	420	3.5	3.5	3.5	3.5	N/A	1	EM	Good	Upright growth habit.	No works presently required	20+	B2	5.0	RET	#N/A
GC-G8C	Hybrid Black Poplar	16	560	7.0	7.0	7.0	7.0	N/A	1	EM	Good	Part of informal group	No works presently required	20+	B2	6.7	RET	#N/A
GC-G8D	Hybrid Black Poplar	14	270	4.0	4.0	4.0	4.0	N/A	1	EM	Good	Part of informal group	No works presently required	20+	B2	3.2	RET	#N/A
GC-G8E	Hybrid Black Poplar	16	430	6.0	6.0	6.0	6.0	N/A	1	EM	Good	Occasional moderate diameter dead wood in middle crown	No works presently required	20+	B2	5.2	RET	#N/A
GC-G8F	Hybrid Black Poplar	16	450	6.0	6.0	6.0	6.0	N/A	1	EM	Good	Occasional moderate diameter dead wood in middle crown. Abrupt angle on north west scaffold branch. Overextended.	No works presently required	20+	B2	5.4	RET	#N/A
GC-G8G	Hybrid Black Poplar	18	600	7.5	7.5	7.5	7.5	N/A	1	M	Good	Broad open crown.	No works presently required	20+	B2	7.2	RET	#N/A
GC-G8H	Grey Poplar	18	600	8.0	8.0	8.0	8.0	N/A	1	M	Good	As before grey pop	No works presently required	20+	B2	7.2	RET	#N/A
GC-G8I	Grey Poplar	18	600	8.5	8.5	8.5	8.5	N/A	1	M	Good	Part of informal group	No works presently required	20+	B2	7.2	RET	#N/A
GC-G8J	Lombardy Poplar	16	450	6.0	6.0	6.0	6.0	N/A	1	EM	Good	Part of informal group	No works presently required	20+	B2	5.4	RET	#N/A
GC-G8K	Lombardy Poplar	16	430	6.0	6.0	6.0	6.0	N/A	1	EM	Good	Part of informal group	No works presently required	20+	B2	5.2	RET	#N/A

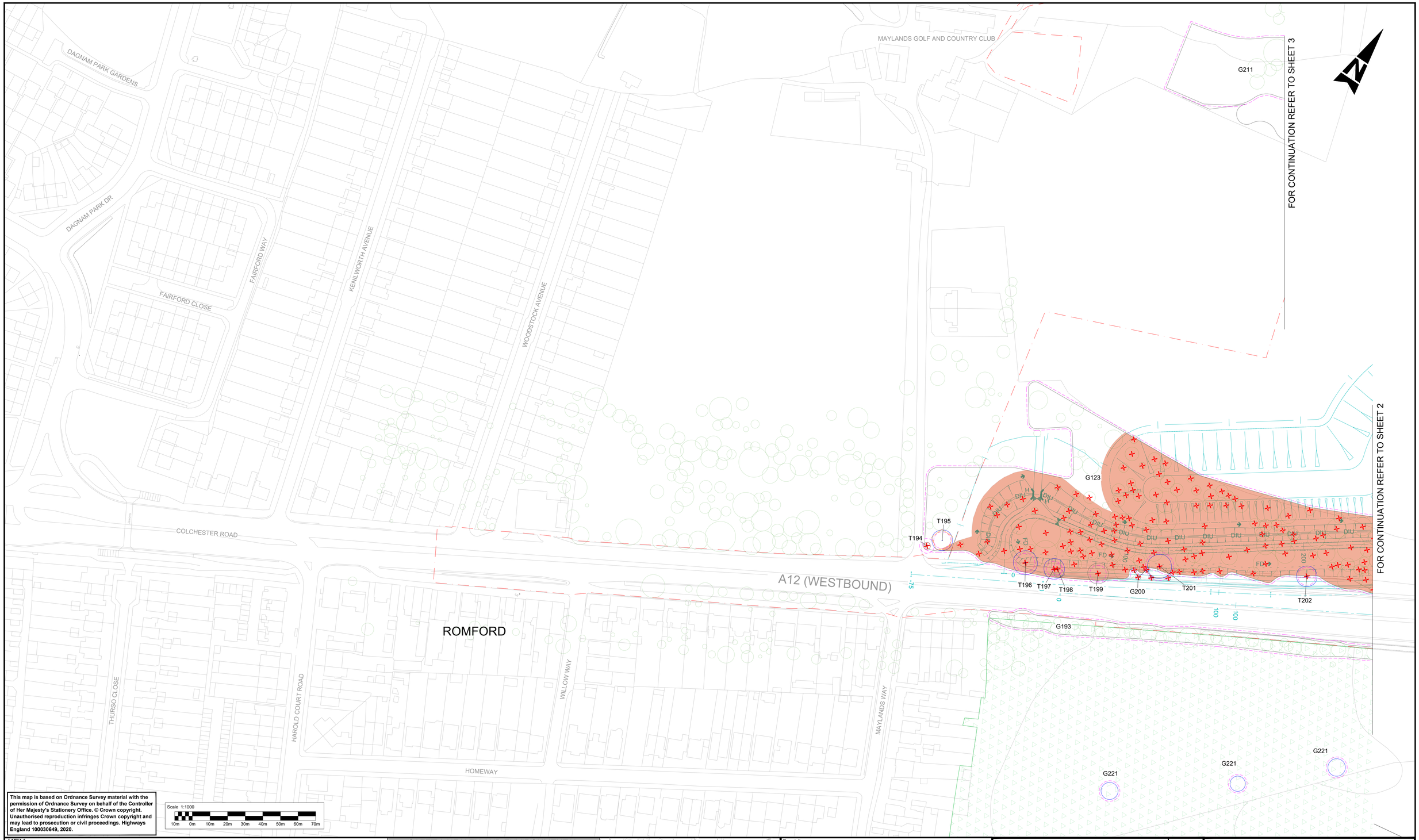
Appendix B: Tree Survey Schedule

Tree ID	Species	Height (m)	Stem Diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	First significant branch height (m)	Canopy height (m)	Life Stage	Vitality	General observations	Preliminary mangement recommendations	Estimated Remaining Contribution (Years)	Category Grading	RPA Radius (m)	Impact: Remove / Part Remove / Retain (REM, PRG, RET)	Trees Removed Count
GC-T9	Lime	8	500	5.0	5.0	5.0	5.0	N/A	1.8	EM	Good	Balanced crown. Crown lifted. Unoccluded wounds present. Water pocket at old branch wound on main stem at 1m to south.	No works presently required	20+	B2	6.0	RET	#N/A
GC-T10	Common Oak	10	620	6.0	6.0	6.0	6.0	N/A	1.5	EM	Good	Potential historic root heave. Lean to east. Ground displaced to west. Fused branches. Occasional moderate diameter dead wood in middle crown.	No works presently required	20+	B2	7.4	RET	#N/A
GC-T11	Lime	7	360	4.5	4.5	4.5	4.5	N/A	2	SM	Good	Balanced crown. Previously lifted. Unoccluded wounds present.	No works presently required	20+	B2	4.3	RET	#N/A
GC-T12	Common Oak	16	960	7.0	7.0	7.0	7.0	2-S	2	M	Fair	Co-dominant stems from approximately 4m. Union appears sound. Large diameter dead wood in lower crown. Dessicated white rot present. Occasional sap bleeds.	No works presently required	40+	A3	11.5	RET	#N/A
GC-G13A	Common Oak	17	620	6.0	6.0	6.0	6.0	2.5-SE	3	M	Good	Woodpecker hole in main stem at approximately 4m. Occasional moderate diameter dead wood in middle crown. Dessicated white rot present.	No works presently required	40+	A2	7.4	RET	#N/A
GC-G13B	Common Oak		600	2.0	7.0	2.0	7.0	N/A	4	M	Good	Growing along boundary. Clusters of epicormic growths on main stem. Multi stems from approximately 4m. Dense epicormic growths obscure unions. Occasional large diameter dead wood in middle crown.	No works presently required	40+	A2	7.2	RET	#N/A
GC-G13C	Common Oak	17	860	8.0	8.0	8.0	8.0	3-SE	3	M	Good	Balanced crown. Occasional large diameter dead wood in middle crown. Dessicated white rot present.	No works presently required	40+	A2	10.3	RET	#N/A
GC-G13D	Common Oak	12	550	6.0	6.0	6.0	6.0	2-NW	2	EM	Good	Crown dominant to west. Slight lean to west. Growing on edge of group.	No works presently required	20+	B2	6.6	REM	1
GC-T14	Common Oak	16	800	6.0	6.0	6.0	6.0	3-SE	3	M	Fair	Slight crown thinning. Dieback and dead wood in upper crown. Potential natural retrenchment.	Improve rooting environment	40+	A2	9.6	RET	#N/A
GC-G15	Oak, Hawthorn, Blackthorn	8	200	3.0	3.0	3.0	3.0	N/A	0	Y to EM	Fair	Informal.group. approx. 12no. Young.oak. single and mutly stem. Hawthorn and blackthorn. Field maple. Approx. 20. Lapsed hedgerow.	No works presently required	10+	C2	2.4	PRG	#N/A
GC-G16	Grey Poplar, Hybrid black poplar	18	450	6.0	6.0	6.0	6.0	N/A	3	SM to EM	Good	Planted standard trees. Hybrid black poplars, grey poplars, one.lime. mutually crown suppression. Occasional moderate diameter dead wood in lower crowns.	No works presently required	20+	B2	5.4	PRG	44

Appendix C. Tree protection plans

DO NOT SCALE

Millimetres 0 10 100



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Scale 1:1000

10m 0m 10m 20m 30m 40m 50m 60m 70m

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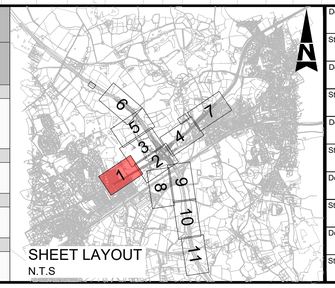
Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
NONE IDENTITIES IN THIS STAGE

Decommissioning / Demolition
NONE IDENTITIES IN THIS STAGE



SHEET LAYOUT
N.T.S

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION
Status: A4

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Client: Working on behalf of highways england

Project Title: M25 junction 28 improvement scheme

Drawing Title: Tree Protection Plan Sheet 1 of 11

Drawing Number
Project: HE551519 - ATK - ELS - XX - DR - LL - 000201
Location | Type | Role | Number

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 1 of 11 | Rev: 3

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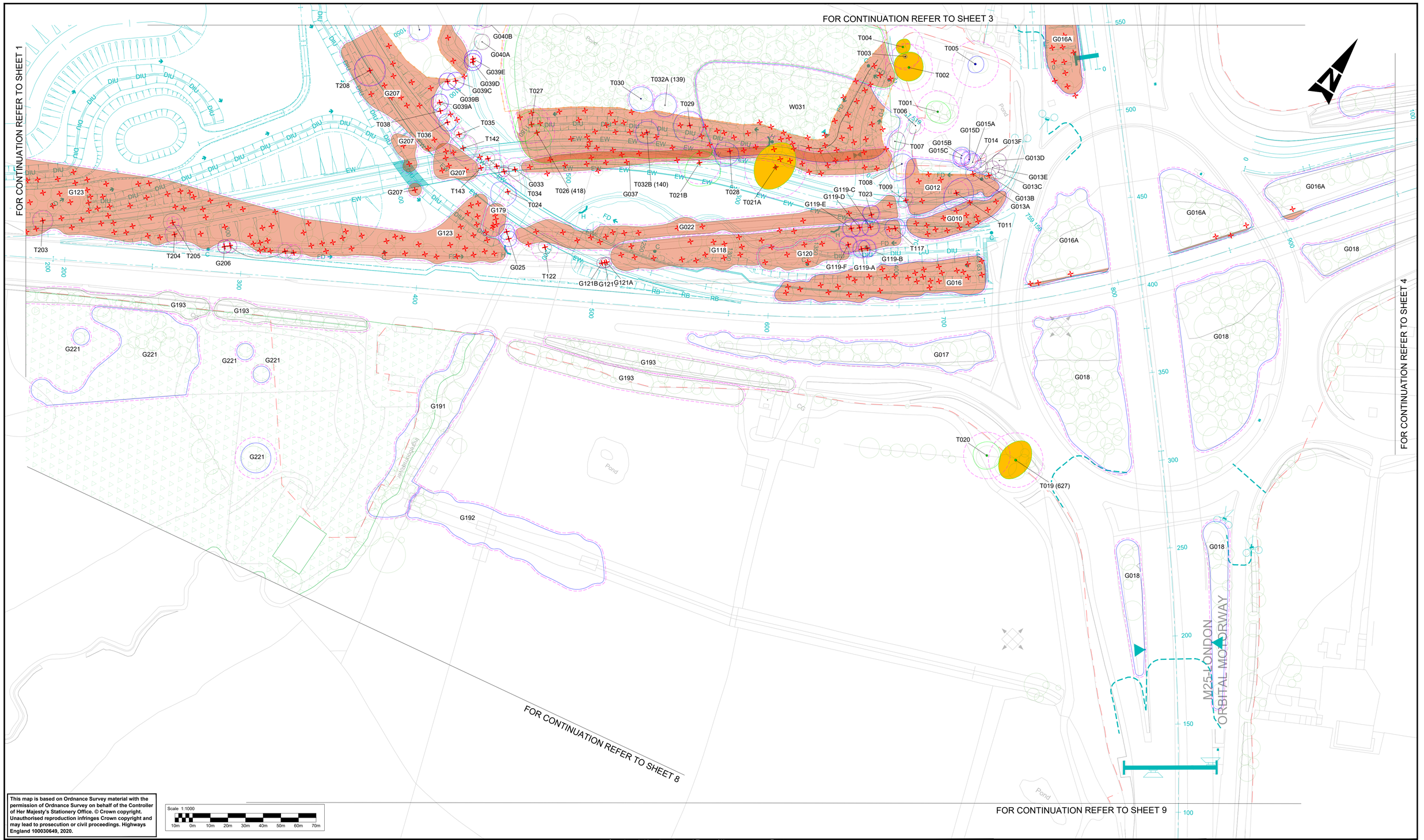

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Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
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Decommissioning / Demolition
NONE IDENTITIES IN THIS STAGE

SHEET LAYOUT
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Project Title: M25 junction 28 improvement scheme

Drawing Title: Tree Protection Plan Sheet 2 of 11

Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000202

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 2 of 11 | Rev: 3

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FOR CONTINUATION REFER TO SHEET 1

FOR CONTINUATION REFER TO SHEET 2

M25-LONDON ORBITAL MOTORWAY

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Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
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Decommissioning / Demolition
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SHEET LAYOUT
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Client: Working on behalf of highways england

Project Title: M25 junction 28 improvement scheme

Drawing Title: Tree Protection Plan Sheet 3 of 11

Drawing Number: Project HE551519 - Originator ATK - Volume ELS - XX - DR - Location LL - Type - Role - Number 000203

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 3 of 11 | Rev: 3

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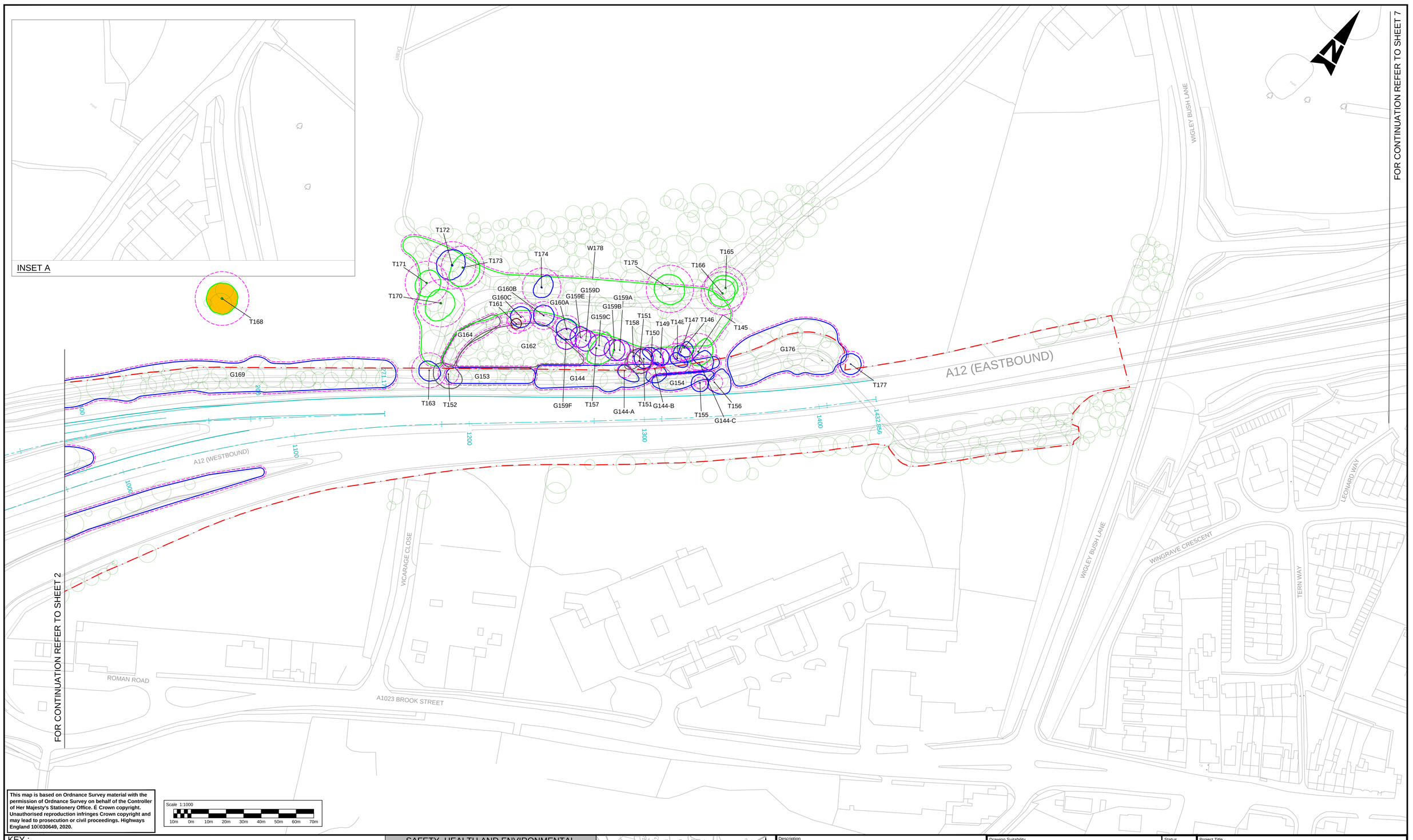

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Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
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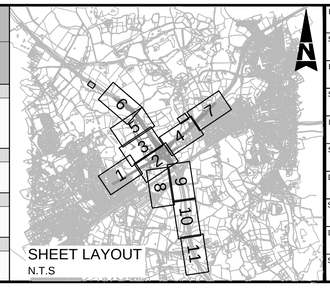
Decommissioning / Demolition
NONE IDENTITIES IN THIS STAGE



SHEET LAYOUT
N.T.S

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION
Status: A4

Project Title: M25 junction 28 improvement scheme

Drawing Title: Tree Protection Plan Sheet 4 of 11

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Project | Originator | Volume
HE551519 - ATK - ELS -
Location | Type | Role | Number
XX - DR - LL - 000204

Original Size:	Scale:	Project Ref. No:	Sheet:	Rev:
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Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
NONE IDENTITIES IN THIS STAGE

Decommissioning / Demolition
NONE IDENTITIES IN THIS STAGE

SHEET LAYOUT
N.T.S
1 2 3 4 5 6 7 8 9 10 11

Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
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Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
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Description						
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Drawing Suitability: DCO EXAMINATION
Status: A4

Project Title: M25 junction 28 improvement scheme

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Drawing Title: Tree Protection Plan Sheet 5 of 11

Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000205

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 5 of 11 | Rev: 3

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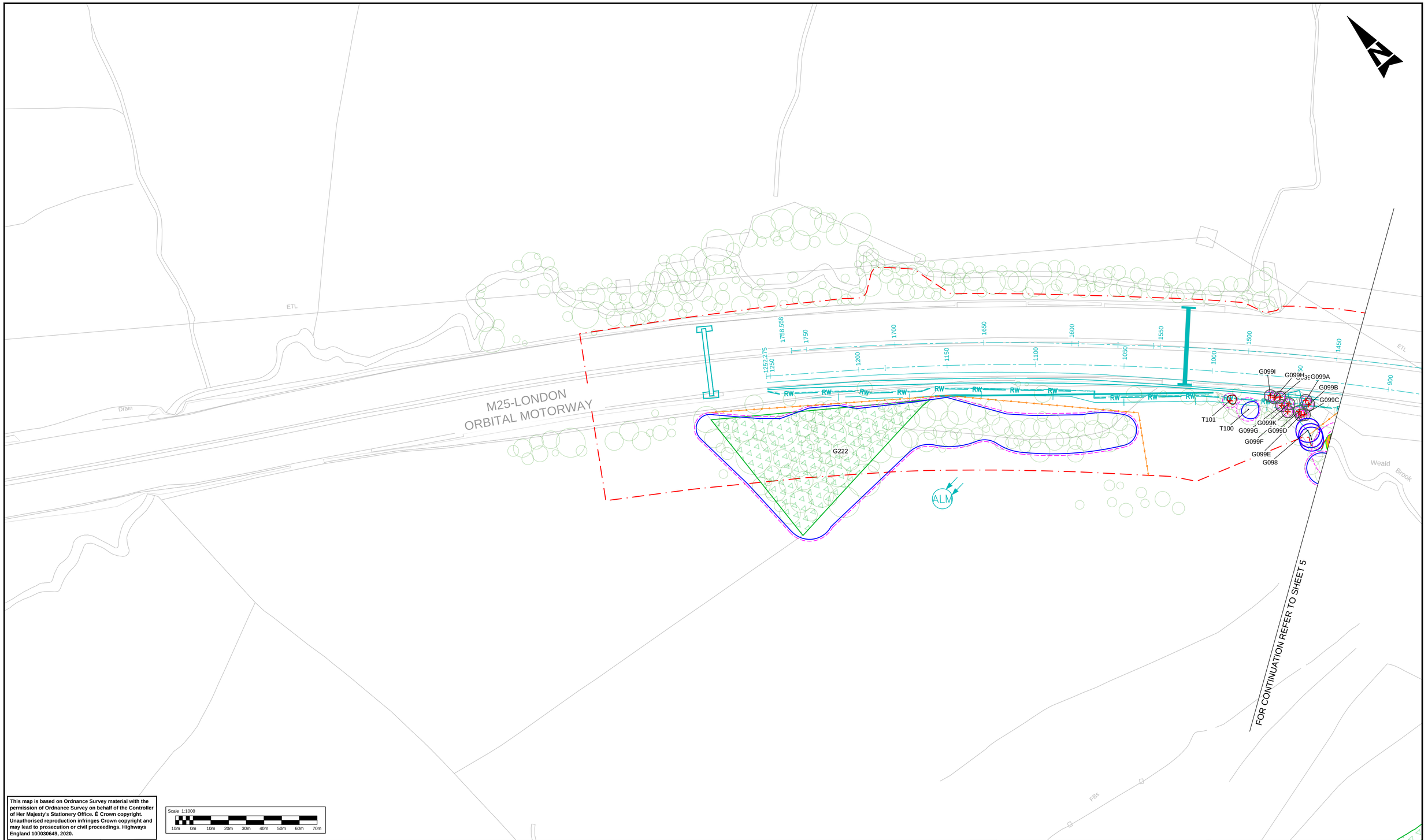

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Maintenance / Cleaning

CONVOLUTED WINTER MAINTENANCE ROUTE

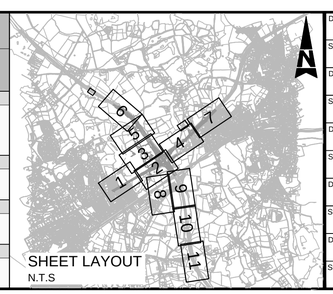
Use

NONE IDENTITIES IN THIS STAGE

Decommissioning / Demolition

NONE IDENTITIES IN THIS STAGE

SHEET LAYOUT
N.T.S



Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION

Status: A4

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 6 OF 11

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Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000206

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 6 of 11 | Rev: 2

DO NOT SCALE

Millimetres 0 10 100

FOR CONTINUATION REFER TO SHEET 4

WEALD PARK WAY

A12(EASTBOUND)

SELWOOD ROAD

LINKWAY ROAD

LANGLEY Dr

BELVEDERE ROAD

TALBROOK

SPITAL LANE

BROOK ROAD

WANSFORD CLOSE

HILLSIDE WALK

S WEALD ROAD

RIVER ROAD

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Maintenance / Cleaning
CONVOLUTED WINTER MAINTENANCE ROUTE

Use
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Decommissioning / Demolition
NONE IDENTITIES IN THIS STAGE

SHEET LAYOUT
N.T.S

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION
Status: A4

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 7 OF 11

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Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000207

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 7 of 11 | Rev: 2

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FOR CONTINUATION REFER TO SHEET 9

FOR CONTINUATION REFER TO SHEET 2

NAG'S HEAD LANE

EXISTING RAILWAY LINE

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Client: Working on behalf of highways england

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 8 OF 11

Drawing Number
Project | Originator | Volume | Location | Type | Role | Number
HE551519 - ATK - ELS - XX - DR - LL - 000208

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 8 of 11 | Rev: 2

This Drawing is saved on ProjectWise. Plotted: 14/06/2021 13:24:34 By: SHAR4699

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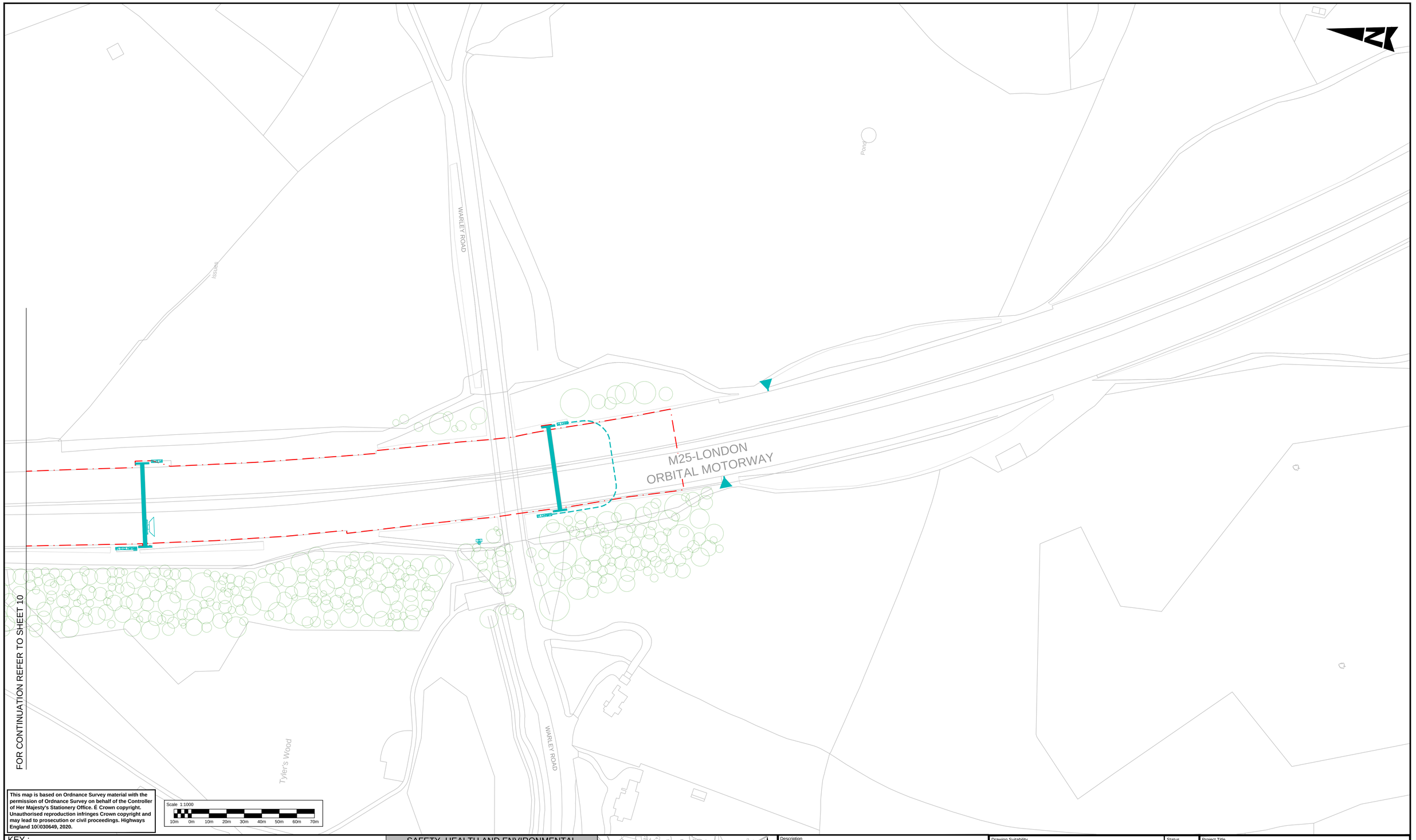

FOR CONTINUATION REFER TO SHEET 10

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Scale 1:1000

10m 0m 10m 20m 30m 40m 50m 60m 70m

KEY :

- CATEGORY A TREE / GROUP / WOODLAND
- CATEGORY TREE / GROUP / WOODLAND
- CATEGORY C TREE / GROUP / WOODLAND
- CATEGORY U TREE / GROUP / WOODLAND
- VETERAN TREE
- ROOT PROTECTION AREA
- T000 / G000 / W000 REFERENCE NUMBER: INDIVIDUAL TREE / TREE GROUP / WOODLAND
- TREE PRESERVATION ORDER (TPO) AREA / INDIVIDUAL
- TREE TO BE REMOVED AS PART OF WORKS
- EXTENT OF TREE GROUP TO BE REMOVED AS PART OF WORKS
- PROPOSED SCHEME
- DCO BOUNDARY
- TREE PROTECTION FENCING
- NATIONAL TREE MAPPING

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction

CI: WORKS IN CLOSE PROXIMITY OF BPA LINE
CII: WORKS IN CLOSE PROXIMITY OF O/H CABLES
CIII: WORKS IN CLOSE PROXIMITY OF NHP MAIN
CIV: WORKS IN CLOSE PROXIMITY OF LHP MAIN

Maintenance / Cleaning

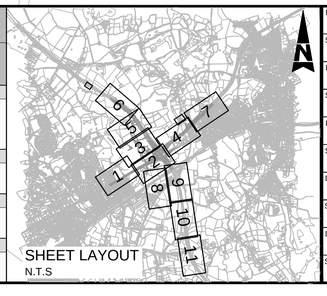
CONVOLUTED WINTER MAINTENANCE ROUTE

Use

NONE IDENTITIES IN THIS STAGE

Decommissioning / Demolition

NONE IDENTITIES IN THIS STAGE



SHEET LAYOUT
N.T.S

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION
Status: A4

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Client: Working on behalf of highways england

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 11 OF 11

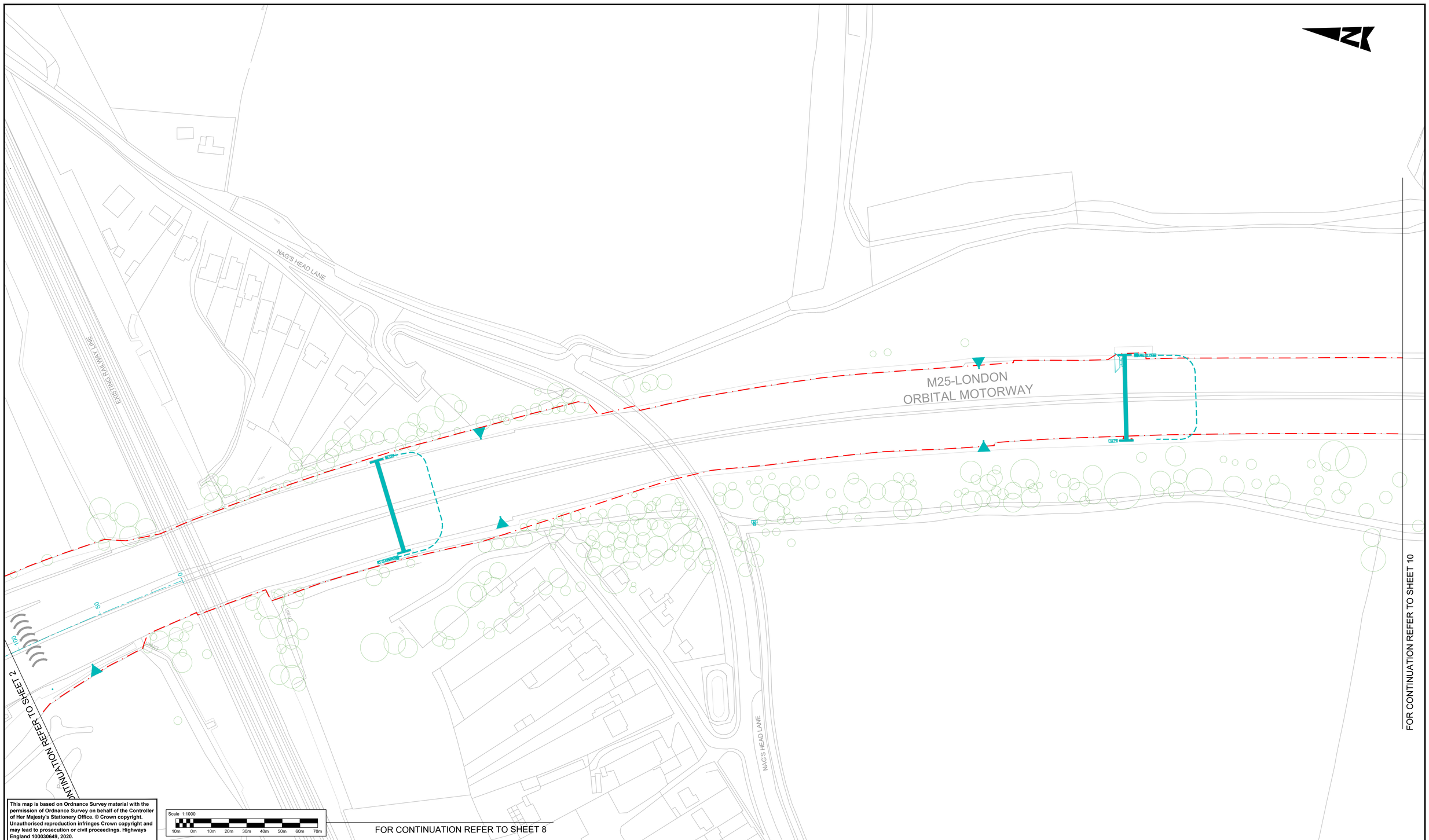
Drawing Number
Project | Originator | Volume
HE551519 - ATK - ELS - XX
Location | Type | Role | Number
- DR - LL - 000211

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 11 of 11 | Rev: 2

This Drawing is saved on ProjectWise. Plotted: 14/06/2021 13:24:31 By: SHAR4699

DO NOT SCALE

Millimetres 0 10 100



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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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Maintenance / Cleaning

CONVOLUTED WINTER MAINTENANCE ROUTE

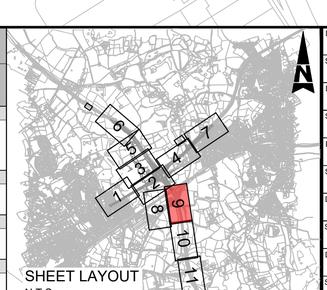
Use

NONE IDENTITIES IN THIS STAGE

Decommissioning / Demolition

NONE IDENTITIES IN THIS STAGE

SHEET LAYOUT
N.T.S



Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION
Status: A4

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 9 OF 11

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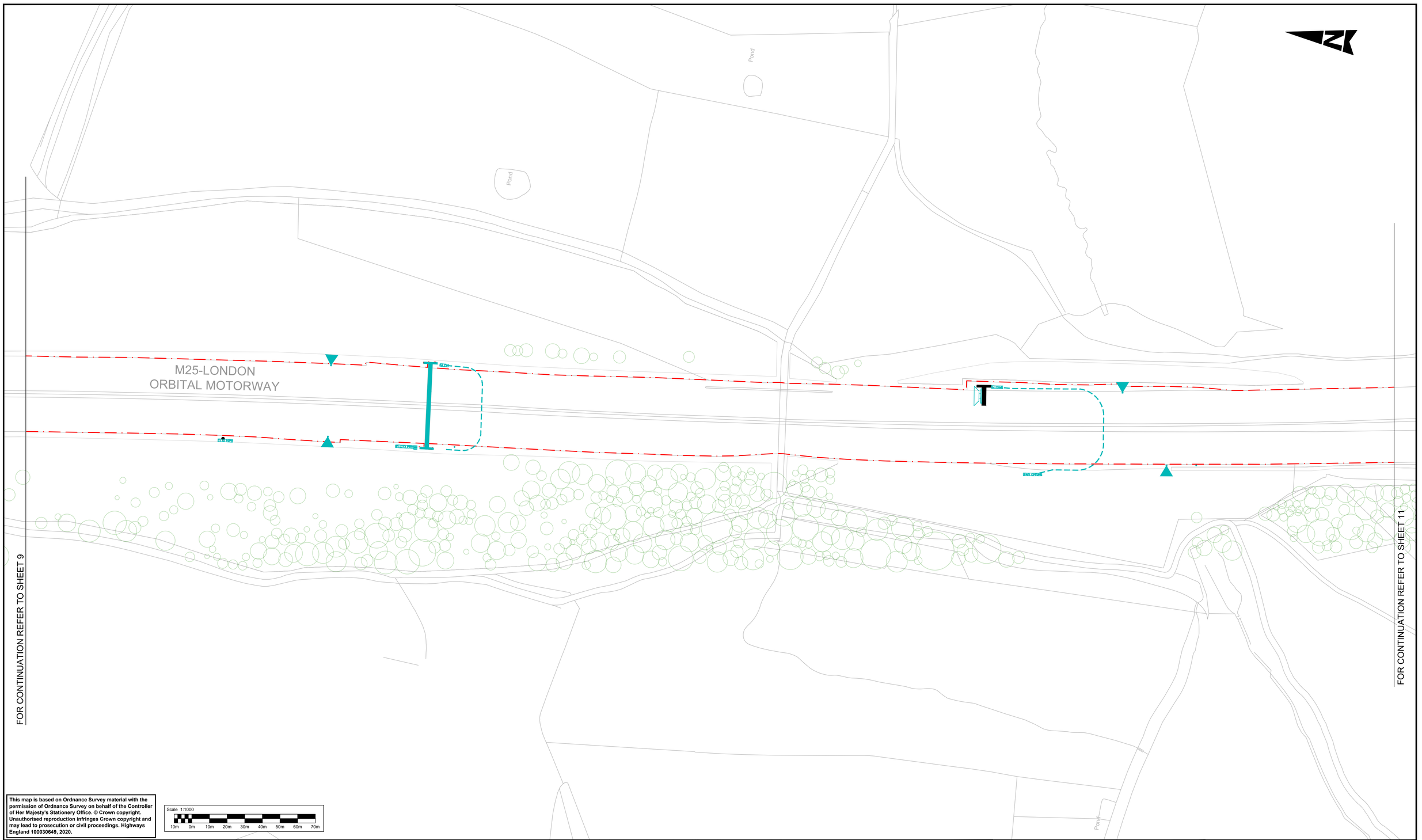
Client: Working on behalf of highways england

Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000209

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 9 of 11 | Rev: 2

Millimetres 0 10 100

DO NOT SCALE



FOR CONTINUATION REFER TO SHEET 9

FOR CONTINUATION REFER TO SHEET 11

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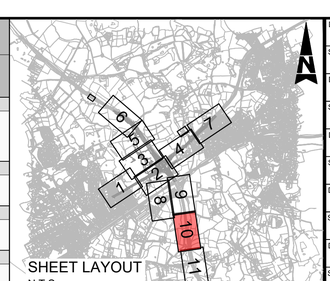

SHEET LAYOUT
N.T.S

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Drawing Suitability: DCO EXAMINATION

Status: A4

Project Title: M25 junction 28 improvement scheme

Drawing Title: TREE PROTECTION PLAN SHEET 10 OF 11

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Drawing Number: Project HE551519 - Originator ATK - Volume ELS - Location XX - Type DR - Role LL - Number 000210

Original Size: A1 | Scale: 1:1000 | Project Ref. No: 5158157 | Sheet: 10 of 11 | Rev: 2

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