



By Email: [REDACTED]

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24th May 2018

Dear [REDACTED]

Information request

Reference number: FOI2018/00518

Thank you for your email of 30th April 2018. You requested the following information:

'I would like to make a freedom of information request relating to Network Rail's tree felling programme. Please can you share any relevant documentation on the felling programme. I would also specifically like to know:

What third parties are involved in the programme, whether for felling the trees or processing them?

Are the trees being sold on for profit, for example for biofuel? If so, to whom, and for how much?

Is there a written plan for the next stage of tree felling?

What documentation is there to prove the programme is respectful of wildlife and is indeed necessary?'

I have processed your request under the terms of the Environmental Information Regulations (EIR). Information is exempt under section 39 of the Freedom of Information Act 2000 if it meets the definition of environmental information found in Regulation 2 of the EIR. In this case we think the information in question is covered by Regulation 2(a) of the EIR.

At Network Rail, we take very seriously our responsibility to keep the railway and the natural environment around it safe.

In recent media reports, there has been a lot of inaccurate coverage of how Network Rail manages trees and other vegetation that grows alongside the railway. To be

clear, we do not have a national tree felling programme and we certainly do not have any plans to cut down all of the trees on our estate.

We believe we can enhance biodiversity whilst still running the railway safely. But it's much more complex than has recently been portrayed. By proactively managing vegetation we think we can find a win-win solution – protecting the environment and meeting our need, reinforced by the regulator, to remove trees and vegetation as necessary to maintain a safe and reliable railway. I have attached a copy of a briefing note which may be helpful.

Further information about our approach and policies is available on our website at these links, including copies of documents:

<https://www.networkrail.co.uk/managing-railways-habitats/>

<https://www.networkrail.co.uk/feeds/working-with-nature-by-the-railway/>

<https://www.networkrail.co.uk/communities/environment/sharing-railway-wildlife/trees-and-the-railway/>

I can confirm that we hold some of the information you requested.

What third parties are involved in the programme, whether for felling the trees or processing them?

Across our Routes we use various contractors to assist with our vegetation management programmes:

- Alun Griffiths
- BM McHugh
- Cleshar
- Coombes Forestry
- Dyer & Butler
- Environmental Forestry
- Ground Control
- Homegrown Timber
- Martins
- QTS
- Railscape
- Scottish Woodlands
- Stobart Rail
- TRAC

- Vital HR

We also work alongside the Forestry Commission with the aim to aligning our vegetation work with their tree harvesting operations where possible.

Are the trees being sold on for profit, for example for biofuel? If so, to whom, and for how much?

We do not sell any of the timber and it is not used as biofuel due to the logistics of removing the material from site.

Is there a written plan for the next stage of tree felling?

We do not have a written plan for '*the next stage of tree felling*'. We have published some information on our high level strategy for vegetation management in our CP6 documentation. ([CP6 Strategic Business Plan](#)). Further information on our approach to vegetation management can also be found at the following link:

<https://www.networkrail.co.uk/communities/environment/vegetation-management/>

What documentation is there to prove the programme is respectful of wildlife and is indeed necessary?

We work to standard contract specifications which contain a clause on environment and ecology. We also comply with legal requirements and industry standards. The attached 'vegetation management' document provides some further explanation of our approach to wildlife and when vegetation management is necessary.

Please also find attached our Lineside Vegetation Management Manual. You will note that I have removed the first page of the report. This page has the names and signatures of those who have approved the document. These individuals are relatively junior and would not expect their personal information to be disclosed in this way. As a result we think disclosure of the document in its entirety would not be fair and lawful, and would, in consequence, be in breach of the data protection principles¹. Regulation 13(1) of the EIR permits public authorities to withhold information in circumstances where providing it would be inconsistent with the data protection principles.

If you have any enquiries about this response, please contact me in the first instance at FOI@networkrail.co.uk or on 01908 782405. Details of your appeal rights are below.

¹ As referenced in the General Data Protection Regulations (GDPR).

Please remember to quote the reference number at the top of this letter in all future communications.

Yours sincerely

Danielle Stratton
Information Officer

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Appeal Rights

If you are unhappy with the way your request has been handled and wish to make a complaint or request a review of our decision, please write to the FOI Compliance and Appeals Manager at Network Rail, Freedom of Information, The Quadrant, Elder Gate, Milton Keynes, MK9 1EN, or by email at foi@networkrail.co.uk. Your request must be submitted within 40 working days of receipt of this letter.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire SK9 5AF

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User information

This Network Rail document contains colour-coding according to the following Red–Amber–Green classification.

Red requirements – no variations permitted

- Red requirements are to be complied with and achieved at all times.
- Red requirements are presented in a red box.
- Red requirements are monitored for compliance.
- Non-compliances will be investigated and corrective actions enforced.

Amber requirements – variations permitted subject to approved risk analysis and mitigation

- Amber requirements are to be complied with unless an approved variation is in place.
- Amber requirements are presented with an amber sidebar.
- Amber requirements are monitored for compliance.
- Variations can only be approved through the national variations process.
- Non-approved variations will be investigated and corrective actions enforced.

Green guidance – to be used unless alternative solutions are followed

- Guidance should be followed unless an alternative solution produces a better result.
- Guidance is presented with a dotted green sidebar.
- Guidance is not monitored for compliance.
- Alternative solutions should be documented to demonstrate effective control.

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Compliance

This Network Rail standard/control document is mandatory and shall be complied with by Network Rail Infrastructure Limited and its contractors if applicable from 01 April 2019.

Where it is considered not reasonably practicable¹ to comply with the requirements in this standard/control document, permission to comply with a specified alternative should be sought in accordance with the Network Rail standards and controls process, or with the Railway Group Standards Code if applicable.

If this standard/control document contains requirements that are designed to demonstrate compliance with legislation they shall be complied with irrespective of a project's Governance for Railway Investment Projects (GRIP) stage. In all other circumstances, projects that have formally completed GRIP Stage 3 (Option Selection) may continue to comply with any relevant Network Rail standards/control documents that were current when GRIP Stage 3 was completed.

NOTE 1: *Legislation includes Technical Specifications for Interoperability (TSIs).*

NOTE 2: *The relationship of this standard/control document with legislation and/or external standards is described in the purpose of this standard.*

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¹ This can include gross proportionate project costs with the agreement of the Network Rail Assurance Panel (NRAP).

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Issue record

Issue	Date	Comments
1	March 2018	New document. Replaces NR/L2/TRK/5201 and NR/SP/TRK/05200.

Reference documentation

NR/L2/OCS/095	High risk sites for wrong side track circuit failures in leaf fall areas and for low rail adhesion
NR/L2/OPS/021	Weather – managing the operational risks
NR/GN/ENV/004	Waste management manual
NR/L2/CTM/014	Competence & Training in Overhead Line Engineering
NR/L3/MTC/MG0176	Ellipse work management handbook
NR/L3/MTC/PL0175	Maintenance planning handbook
NR/L3/MTC/PL0215	Communicating with the public
NR/L3/MTC/EN0099	Protected sites and species management
NR/L2/SIG/10157	Signal sighting
NR/L2/SIG/19608	Level crossing infrastructure inspection & maintenance
NR/L3/TRK/4041	Maintaining track assets at level crossings
NR/GN/TRK/7001	Track Work Information Index
NR/L3/TRK/003/TEF3064	Hazard report for track assets
NR/L3/TRK/003/TEF3076	Leaf fall risk assessment
NR/L3/TRK/003/TEF3077	Tree hazard: risk evaluation and treatment system (threats and threats-nr)
NR/L3/TRK003/TEF3079	Lineside vegetation inspection
NR/L3/TRK/003/TEF3211	Fallen tree incident form
NR/L3/TRK/003/TEF3244A	Third party tree notification letter (3PTL)
NR/L3/TRK/003/TEF3244B	Third party tree notification letter (3PTLII)
NR/L3/TRK/003/TEF3245	Tree risk evaluation & control by non-arboriculturist railway personnel (THREATS-NRP)
NR/L3/TRK/003/TEF3269	Supervisory inspection of lineside vegetation
NR/L3/TRK/003/TEF3270	Cab ride of lineside vegetation

External References

BS3998	Recommendations for Tree Work
BS5837	Trees in relation to design, demolition and construction. Recommendations.

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1 Purpose

Lineside vegetation management is a process that uses risk assessment to contribute to the safe running of the railway infrastructure.

Risk from lineside vegetation is controlled by inspection, management and maintenance. These activities protect the Network Rail workforce and third parties against harm. Lineside vegetation includes areas on the operational railway, closed lines, non-operational or third party land

Management of lineside vegetation is a control from the threats identified on bow tie 'railway or third party vegetation affecting safety' and controls or mitigates the following risks:

- a) trees within falling distance of the track or third party land;
- b) vegetation affecting:
 - 1. overhead line equipment;
 - 2. signal sighting;
 - 3. level crossing sighting;
 - 4. position of safety/refuge;
 - 5. railway vehicles by damage to rolling stock;
 - 6. railway access;
 - 7. inspection of assets;
 - 8. renewal of other assets; and
 - 9. enhancement projects;
- c) leaf fall affecting the railway;
- d) injurious and invasive weeds; and
- e) damage to railway infrastructure or third parties.

Cyclical maintenance helps to deliver the most effective management regime once a compliant profile has been achieved.

Responsible management of vegetation and respecting our neighbours improves the lineside, environment and stakeholder relations.

2 Scope

This manual contains:

- a) key principles for the management of risk;
- b) asset knowledge; and
- c) the impact of vegetation on other assets.

The document applies to inspecting, managing and maintaining lineside vegetation and all who are involved in those activities.

Out of scope for this process are:

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- a) management of vegetation necessary only for the stability and security of earthworks and structures;
- b) management and inspection of vegetation in advance or in response to adverse/severe weather events which is included within NR/L2/OPS/021 'Weather – managing the operational risks'; and
- d) environmental and community requirements for vegetation management.

3 Key principle for the management of risk

The key principle that underpins this standard is that risk from lineside vegetation has to be understood so that appropriate controls can be selected and applied. Risk may be related to safety, performance, cost or reputation.

Risks from lineside vegetation are identified, assessed and action is taken to control them. This is a continuous process, using the results of inspections and the full range of lineside vegetation information available.

4 Asset Knowledge

Ellipse contains the vegetation asset register and is used when creating the inspection and management plans. It stores the following asset information:

- a) compliance with the requirements of this standard;
- b) output from inspections;
- c) work arising reports for lineside vegetation; and
- d) any work carried out on lineside vegetation.

Accurate and current asset information is required to produce credible inspection and management plans.

5 Summary of modules

5.1 Overview

Table 1 provides an overview of modules in this manual. Modules 01 and 02 have been published with issue 1 of this standard. Modules 03 to 06 will be published subsequently.

Module	Title	Issue	Publication date
NR/L2/OTK/5201/01	Lineside vegetation inspection and risk assessment	1	March 2018
NR/L2/OTK/5201/02	Lineside vegetation management requirements	1	March 2018

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NR/L2/OTK/5201/03	Ecological and community requirements	1	TBC
NR/L2/OTK/5201/04	Lineside vegetation management codes of practice	1	TBC
NR/L2/OTK/5201/05	Third party hazardous tree notification	1	TBC
NR/L2/OTK/5201/06	Information on legal requirements	1	TBC

Table 1 – Module summary

5.2 Lineside vegetation inspection and risk assessment – Module 01

This module prescribes requirements for inspection frequencies, minimum actions and maximum timescales.

This module prescribes the production and implementation of an inspection plan that covers all lineside vegetation.

The purposes of cyclical inspection are to:

- a) assess where vegetation requires action or will require action before the next planned inspection;
- b) assess the risk from trees that are within falling distance of the railway or a third party location;
- c) assess the risk to the railway from Autumn leaf fall;
- d) identify and assess the risk from injurious non-native plants; and
- e) assess lineside vegetation that might be vulnerable during extreme weather events.

Investigations following incidents inform on the cause of failure and whether the asset poses a wider risk.

This module details:

- a) types of inspection – vegetation, tree, leaf fall, cab ride, supervisory, post incident, and reactive;
- b) vegetation inspections procedure;
- c) corrective actions arising from inspection;
- d) management requirements once the inspection has been completed;
- e) updating records; and
- f) hazardous tree remediation process.

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5.3 Lineside vegetation management requirements – Module 02

5.3.1 Principles of management

Lineside vegetation is kept clear to a specified distance from the running line to allow for the safe operation of the railway. Planned maintenance avoids the need for the immediate response and reactive work.

Lineside vegetation is managed to allow other assets to be inspected and maintained. Management also allows certain assets, for example drainage, to function safely.

Output from inspections, asset information, analysis and local knowledge is used to carry out management work to meet safety, performance and cost targets.

Legislative and environmental restrictions are followed when managing lineside vegetation.

Vegetation management should encourage the establishment of desirable lineside conditions that add value not only to the lineside but also to the surrounding environment in terms of:

- a) connecting environments;
- b) promoting and providing biodiversity;
- c) protecting areas of ecological and historical importance; and
- d) improving the resilience of the vegetation.

Actions to manage vegetation will depend on the zone it grows within.

Zones for the management of vegetation are immediate action, action and alert as described in 5.3.2 – 5.3.4.

5.3.2 Immediate action

The Immediate Action Zone describes the area where vegetation is acted upon due to:

- a) contact with trains;
- b) affecting sighting of signalling;
- c) affecting sighting for users of level crossings;
- d) disrupting or damaging overhead line equipment;
- e) obstructing places of safety and safe walking routes; and
- f) trees that pose a risk to safety.

5.3.3 Action

The Action Zone profile describes the area where vegetation requires assessment and management for:

- a) tree failure affecting safety;
- b) leaf fall during Autumn; and
- c) encroachment towards the Immediate Action Zone.

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5.3.4 Alert

The Alert Zone profile describes the area which requires maintenance to provide safe operating conditions for the railway and mitigates the risk posed by:

- a) trees growing to a height and diameter that pose a derailment risk;
- b) the density of leaf fall; and
- c) vegetation growing towards an area that requires an actionable response.

Continual cyclic vegetation tasks are required to restrict vegetation growth and to limit any negative impact it might have.

This module details:

- a) the vegetation management procedure;
- b) analysis of information;
- c) requirements of intervention;
- d) treatments – chemical, mechanical and motor/manual;
- e) managing vegetation on rock faces and other earthworks;
- f) disposing of cut material and managing tree stumps;
- g) managing invasive non-native species;
- h) updating records and asset information; and
- i) environmental treatments – grazing, planting and re-seeding.

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6 Definitions

Term	Definition
Arisings	Material resulting from management and maintenance operations which requires control or removal.
Ballasted area	Between the outside edges of the ballast shoulders, including the four foot, six foot and ten foot.
Banded / banding	With respect to logs using, for example, steel fencing wire and staples to secure small dimension timbers to reduce the risk of logs moving to unwanted locations
Cambium	A layer that exists between the bark and the wood that assists in the growth of the tree.
Cess	The ground from the outer edge of the ballasted area to 3 metres from the running rail.
Cess Strip	The ground area 3 to 5 metres from the running rail.
Closed line	A line that is legally closed but where land is still in ownership of Network Rail.
Conservation Areas	Designated areas within settlements where consent from the Local Planning Authority is required for a greater range of development activities than is the case elsewhere. NOTE: Local Authority websites can be consulted for the locations of conservation areas and the restrictions that apply.
Coppice regrowth	The production of new growth from a cut tree stump.
Corrective action	An intervention designed to fully restore the asset to the desired operating condition. NOTE: Undertaken to complete an asset repair or return the asset to a safe condition often as a follow up to immediate action undertaken during rapid response.
Cutting slope angle	Steepness of the slope measured from the horizontal.

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Term	Definition
Disused / moth-balled line	A line that is not in use but is still legally available to train and freight operating companies.
Flail	Using a flail mower, a type of powered agricultural equipment, which is used to deal with heavier grass/scrub.
Forest Industry Safety Accord	Forest Industry accredited good practice for raising the standard of health, safety and welfare in the work place.
Hazardous tree	A tree, which may have significant defects, that poses a risk to either the railway or a third party.
High risk leaf fall species	Sycamore (<i>Acer pseudoplatanus</i>), ash (<i>Fraxinus excelsior</i>), sweet chestnut (<i>Castanea sativa</i>), horse chestnut (<i>Aesculus hippocastanum</i> , lime (<i>Tilia</i> species.), poplar (<i>Populus</i>) species – except aspen (<i>P. tremula</i>).
Immediate Response	An initial intervention undertaken to remove the cause of an undesirable condition.
Invasive Non Native Species	Relevant plants listed in The Weeds Act 1959, The Wildlife and Countryside Act 1981 (as amended), Wildlife & Natural Environment (Scotland) Act 2011 for Scotland and Invasive Alien Species Regulations 2014. NOTE: This includes other railway 'problem plants' not specifically listed in legislation, including horsetail and buddleia.
Lineside	The area between the ballasted area and the boundary measure.
Lineside assets	Infrastructure assets on the lineside that require vegetation management. NOTE: These include but are not limited to the following: cess paths, walking routes, troughing/cable routes, access steps, access roadways, location cabinets/rooms, lineside buildings, equipment housing, signalling gantries, and overhead line equipment stanchions.
Lineside operational signs	Those that provide instruction or information to train drivers, train crew or those working on the railway.

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Term	Definition
Maintenance	Activities that keeps vegetation in a compliant state.
Management	Extensive work on vegetation to achieve a compliant profile.
Manual operations	The use of hand held tools for the management of vegetation and boundaries.
Mechanical operations	The use of plant and machinery for the management of vegetation.
Network Operations	This term refers to Route Operations Control for older locations, and Rail Operating Centre for newer
Operational Control measures	Actions separate to the removal of vegetation that lower the risk. NOTE: <i>these may include speed restrictions or placing a watchman.</i>
Rapid response	Where teams or individuals are required to react immediately when they discover the matter or it is reported to them. NOTE: <i>This will be in response to safety of the line incidents managed through Network Operations.</i>
Reactive inspection	Inspection generated from reports by Network Operations or third parties.
Rock cutting	Steep sided excavation through rock, chalk or interbedded rock and soil.
Selective felling	Individual trees within a group of other trees that are identified and removed.
Species Control Agreement	An agreement made between an environmental authority and an owner of premises that sets out operations that are required to be taken against an invasive non-native species or formerly resident native species. NOTE: <i>An owner could be the freeholder, leaseholder or a person who exercises powers of management or control over the land.</i>

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Term	Definition
Stump diameter	<p>A measurement recording of the longest straight line across and passing through the centre of a tree stump.</p>  <p>NOTE: For a coppice stool this includes the full extent of the stool.</p>
Vegetation Inspection	Activity to visually assess the condition of vegetation.
Vegetation management plan	The activities required to achieve and maintain the desired vegetation profile over a given length of time.
Windrowing	Linear piles of branch and stem material, often used when access issues prevent use of a chipper; may be specified as part of environmental conditions creating biodiversity habitat.
Wind-throw	Uprooting or breakage of trees caused by strong winds, resulting in fallen trees with the root plate attached or broken parts of trees on the ground.
Woody vegetation	<p>Trees and shrubs.</p> <p>NOTE: This includes Other weeds that can be harmful such as brambles or weeds of a size and density that could cause obstruction where they are found up to 3 metres from the running rail and 1 metre around lineside assets.</p>

Table 2 – Terms and definitions

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7 Abbreviations

For the purpose of this standard the abbreviations in Table 3 shall apply.

Abbreviation	Description
AFAG	Arboriculture and Forestry Advisory Group. NOTE: AFAG is an advisory group of the Health and Safety Executives (HSE's) Agriculture Industry Advisory Committee (AIAC).
ALCRM	All Level Crossing Risk Assessment Model
AWR	Authorised Walking Route
BASIS	British Agrochemical Standards Inspection Scheme. NOTE: An independent organisation (BASIS Registration Ltd) set up to advise the UK Government and to specify and assess standards in the pesticide industry relating to storage, transport and competency.
DBH	Diameter of a tree trunk measured at breast height.  NOTE: Measured at 1.3 metres above ground level – when trees on slopes are measured, this shall be done from the 'up-slope' side of the tree
ENV	Environment and Sustainability
FISA	Forest Industry Safety Accord
FMS	Fault Management System, utilised by operations control
HSE	Health and Safety Executive
IC	Incident Controller
INNS	Invasive Non Native Species
LiDAR	Light Detection and Ranging
IMPC	Infrastructure Maintenance Protection Coordinator
MST	Maintenance Scheduled Task
NR	Network Rail
OLE	Overhead Line Equipment

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Abbreviation	Description
ORCC	Operations Risk Control Coordinator
OTK	Off-Track
PSR	Permanent Speed Restriction
RAM	Route Asset Manager
SM[OT]	Section Manager [Off Track]
SSSI	Site of Specific Scientific Interest
TEF	Track Engineering Form
THREATS	Tree Hazard: Risk Evaluation And Treatment System
TME	Track Maintenance Engineer
WAIF	Work Arising Information Form
WO	Work Order

Table 3 – Abbreviations

Standard and control document briefing note



Ref: NR/L2/OTK/5201		Issue: 01	
Title: Lineside vegetation management manual			
Publication date: 03 March 2018		Compliance Date: 01 April 2019	
Standard/Control Document Owner: <i>Head of Lineside</i>			
Non-compliance rep (Approver of TRACKER applications): Neil Strong (Head of Lineside)			
Technical lead/contact for briefings: <i>Graham Owen Senior Track & Lineside Engineer</i>			Tel: 07515621583
<p>Purpose:</p> <p>Lineside vegetation management is a process that uses risk assessment to contribute to the safe running of the railway infrastructure.</p> <p>Risk from lineside vegetation is controlled by inspection, management and maintenance. These activities protect the Network Rail workforce and third parties against harm. Lineside vegetation includes areas on the operational railway, closed lines, non-operational or third party land</p> <p>Management of lineside vegetation is a control from the threats identified on bow tie 'railway or third party vegetation affecting safety' and controls or mitigates the following risks:</p> <ul style="list-style-type: none"> a) trees within falling distance of the track or third party land; b) vegetation affecting: <ul style="list-style-type: none"> 1. overhead line equipment; 2. signal sighting; 3. level crossing sighting; 4. position of safety/refuge; 5. railway vehicles by damage to rolling stock; 6. railway access; 7. inspection of assets; 8. renewal of other assets; and 9. enhancement projects; c) leaf fall affecting the railway; d) injurious and invasive weeds; and e) damage to railway infrastructure or third parties. <p>Cyclical maintenance helps to deliver the most effective management regime once a compliant profile has been achieved.</p> <p>Responsible management of vegetation and respecting our neighbours improves the lineside, environment and stakeholder relations.</p>		<p>Scope:</p> <p>This manual contains:</p> <ul style="list-style-type: none"> a) key principles for the management of risk; b) asset knowledge; and c) the impact of vegetation on other assets. <p>The document applies to inspecting, managing and maintaining lineside vegetation and all who are involved in those activities.</p> <p>Out of scope for this process are:</p> <ul style="list-style-type: none"> d) management of vegetation necessary only for the stability and security of earthworks and structures; e) management and inspection of vegetation in advance or in response to adverse/severe weather events which is included within NR/L2/OPS/021 'Weather – managing the operational risks'; and f) environmental and community requirements for vegetation management. 	

What's new/ what's changed:

This is a new standard control document.

This document replaces NR/L2/TRK/5201 ISSUE 4.

The Lineside vegetation management manual introduces the following supporting modules:

- a) NR/L2/OTK/5201/01 Lineside Vegetation and Risk Assessment; and
- b) NR/L2/OTK/5201/02 Lineside Vegetation Management Requirements.

NOTE: *It is the duty of those briefed or notified, to read through this document and familiarise themselves with its content.*

<u>Document</u>	<u>Summary of Content</u>
Lineside vegetation management manual	This document contains: <ul style="list-style-type: none">a) The principles of lineside management;b) Principles on asset knowledge; andc) An overview of supporting modules and their content.
Lineside vegetation inspection & risk assessment	This document contains: <ul style="list-style-type: none">a) inspection of vegetation on Network Rail operational infrastructure;b) targeted survey of trees to ascertain likelihood of failure;c) considering the impact of vegetation on other assets;d) visual assessment of third party vegetation that has the potential to affect rail safety or performance; ande) inspection of vegetation on Network Rail disused lines, closed lines, and other non-operational land.
Lineside Vegetation Management requirements	This document contains: <ul style="list-style-type: none">a) the requirements for the management of lineside vegetation;b) the extents of the intervention zones, including actions required, form the core of this module; andc) management of vegetation on other assets.

Reasons for change:

The Lineside vegetation management manual provides new profiles that are designed to encourage clearance that will avoid a reactive approach and to manage trees that are large enough to pose a derailment risk. It introduces the requirement to intervene within a specified timeframe where vegetation poses a safety risk.

Affected documents:

Reference

NR/L2/OTK/5201 ISSUE 1
NR/L2/OTK/5201/01 ISSUE 1
NR/L2/OTK/5201/02 ISSUE 1
NR/L2/TRK/5201 ISSUE 4
NR/L1/TRK/05200 ISSUE 2

Impact

New
New
New
Withdrawn
Withdrawn

Briefing requirements:

Technical briefings are given to those who have specific responsibilities within this standard/control document.

Awareness briefings are given to those who might be affected by the content but have no specific responsibilities within the standard/control document.
 Details of the briefing arrangements are included in the associated briefing programme.

Briefing (A-Awareness/ T-Technical)	Post	Function	Responsible for cascade briefing? Y/N
T	DRAM	Route Asset Management	
T	Route Asset Manager M (responsible for Offtrack)	Route Asset Management	Y
T	Senior Asset Engineer (Lineside)	Route Asset Management	Y
T	Asset Engineer (Lineside)	Route Asset Management	N
A	IMDM	Maintenance	N
A	IME	Maintenance	N
A	Track Maintenance Engineer (TME)	Maintenance	N
T	Section Manager (Offtrack)	Maintenance	Y
T	Project Manager Offtrack (Wales Route)	Maintenance	Y
A	Infrastructure Maintenance Protection Coordinator	Maintenance	N
A	Works Delivery Manager	Works Delivery	Y

NOTE: Contractors are responsible for arranging and undertaking their own Technical and Awareness Briefings in accordance with their own processes and procedures.

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NR/L2/OTK/5201

Module 01

Lineside vegetation inspection and risk assessment

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- Guidance should be followed unless an alternative solution produces a better result.
- Guidance is presented with a dotted green sidebar.
- Guidance is not monitored for compliance.
- Alternative solutions should be documented to demonstrate effective control.

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1 Scope

In scope are:

- a) inspection of vegetation on Network Rail operational infrastructure;
- b) targeted survey of trees to ascertain likelihood of failure;
- c) considering the impact of vegetation on other assets;
- d) visual assessment of third party vegetation that has the potential to affect rail safety or performance; and
- e) inspection of vegetation on Network Rail disused lines, closed lines, and other non-operational land.

Out of scope are:

- a) inspections of third party owned structures to protect or investigate allegations of suspected structural damage due to vegetation growth, the process for which is controlled by Network Rail Legal Services;
- b) Geotechnical inspections of earthworks specifically relating to the stability that might be offered by vegetation; and
- c) environmental and community assessments of proposed lineside vegetation work.

2 Vegetation inspection plan

2.1 Planning protocol

An inspection plan shall be in place for all lineside vegetation.

The inspection plan shall also include visual assessment of third party vegetation where it poses a risk to the railway.

Inspection plans shall be set and progressed from last scheduled dates and not the last performed dates.

Undertake all inspections at the minimum frequencies shown in Table 1.

If the planning interval is exceeded, complete the inspection before the 'maximum interval between inspections' timescale shown in Table 1 has been exceeded.

Vegetation inspections, with the exception of post-incident inspections, shall be planned to take place between 1st April and 31st October.

NOTE 1: *The timing of the inspection is important as when vegetation is in leaf defects will be more easily identified.*

Vegetation inspections shall be planned in Ellipse.

NOTE 2: *Consult NR/L3/MTC/MG0176 for instructions on how to create Maintenance Scheduled Task (MST) or Work Orders (WO).*

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Type and TEF	Extent	Method	Minimum Frequency	Maximum Interval between inspections
Vegetation on-foot inspection NR/L3/TRK/003/TEF3079	All Operational ELRs Disused and closed lines, and other non-operational land	On foot	36 months	44 months
Cab ride of lineside vegetation NR/L3/TRK/003/TEF3270	All operational ELRs	Cab or video	12 months	16 months
Tree inspection NR/L3/TRK/003/TEF3077	All Operational ELRs Disused and closed lines, and other non-operational land Where a (current) approved remote survey has been carried out the extent can be limited to trees identified as posing a risk	On foot	60 months	68 months
Leaf fall inspection NR/L3/TRK/003/TEF3076	All Operational ELRs	On foot	60 months	68 months

Table 1 – Inspection frequency

2.2 Review of inspection plans

Review the plan and associated frequencies of inspection annually.

Update any revisions to the inspection plan in ellipse.

NOTE 1: Locations where high risk trees have yet to be mitigated or where vegetation cannot be routinely managed outside of the immediate action zone may indicate that an increase in inspection frequency is required.

NOTE 2: Where growth rates alter, inspection frequencies should be reviewed.

3 Carry out vegetation on foot inspection

3.1 Inspection protocol

Where unsafe situations are found during the inspection, call Control and request protection for the railway or third party. The protection shall remain in place until the unsafe condition has been removed.

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The inspection shall assess risk posed by vegetation within the immediate action, action and alert zones, as shown in Figure 1.

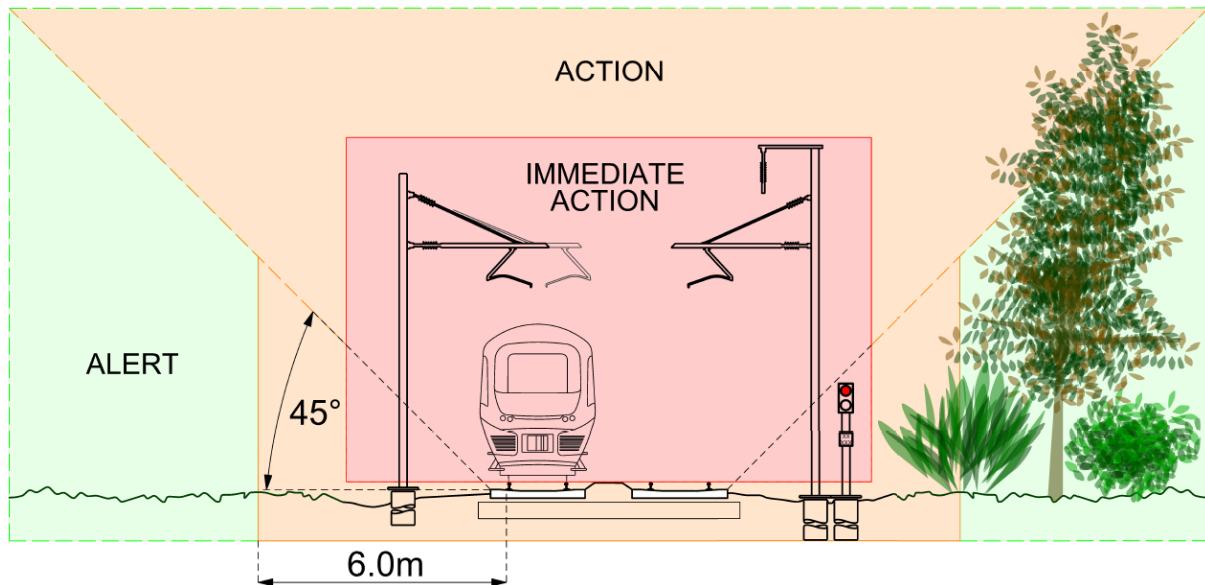


Figure 1 – Intervention zones

Output of the vegetation inspection shall be recorded against every eighth of a mile for each side using NR/L3/TRK/003/TEF3079.

The 'MyWork App' shall be used for carrying out inspections.

NOTE 1: The 'MyWork App' is available from the app catalogue on tablet or smartphone devices.

The vegetation inspection shall be carried out in daylight and on foot.

Locations where lineside vegetation cannot be inspected on foot shall be recorded.

The inspection shall look for vegetation growing out of structures and within the immediate action zone described in 3.2.

Stations, depots and sidings shall be inspected.

NOTE 2: Alternative methods to on foot inspection require prior approval by the RAM responsible for lineside.

Digital photos should be taken to support the inspection and where work is required.

This should include where it is necessary to establish the location of follow on activities.

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3.2 Immediate action

3.2.1 Inspection details

The inspection shall assess where vegetation is within the immediate action zone.

This zone describes immediate risks posed by the presence of vegetation that is:

- a) within close proximity of overhead line equipment (OLE) and within its encroachment zones;
- b) encroaching toward or affecting sighting of signals, level crossings or operational signs;
- c) obstructing refuges and positions of safety;
- d) blocking authorised walking routes and cress paths, or presenting a risk for anyone using them; and
- e) close to the running line and in danger of coming into contact with rail vehicles.

This zone does not have dimensions.

3.2.2 Assigning corrective action to vegetation within the immediate action zone

The Inspector shall assign the appropriate response for vegetation in the immediate action zone in accordance with Table 2.

Risk	Immediate response timescale	Corrective action timescale
Obscured sighting of; Signals Level crossings Lineside operational signs	Rapid response	Not applicable
Encroaching of sighting of; Signals Level crossings Lineside operational signs Required visibility for track side worker	No temporary action required	3 months

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OLE encroachment within 300mm <i>NOTE: Live line clearance may be considered but only carried out by those competent in the use of live line tools to remove foreign objects from the overhead line equipment. OLE staff may be engaged to carry this out. In all other circumstances isolations of the OLE will be required.</i>	Rapid response	6 months
OLE encroachment between 300mm and 3.5m <i>NOTE: Live line clearance may be considered but only carried out by those competent in the use of live line tools to remove foreign objects from the overhead line equipment. OLE staff may be engaged to carry this out. In all other circumstances isolations of the OLE will be required.</i>	1 month	6 months
Vegetation coming into contact with trains	Rapid response	6 months
Weeds obscuring track components within the ballasted area on routes where Plain Line Pattern Recognition is in use.	1 month	12 months

Table 2 – Action timeframes

3.3 Vegetation in the action or alert zones

3.3.1 Inspection details

The inspection shall assess the risk posed by vegetation to the railway and third parties.

The vegetation on-foot inspections shall include checks for:

- a) the presence of trees that pose a risk to the railway or third parties;
- b) the presence of INNS growing or encroaching on Network Rail infrastructure;
- d) vegetation restricting inspections of other infrastructure or assets; and
- e) cut or chipped material that is affecting safe performance or function of an asset.

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3.3.2 Evaluation of trees during vegetation on-foot inspection

While undertaking the vegetation on-foot inspection, look for trees that are within falling distance of the running line or third parties. Any trees identified as being potentially hazardous, with the capability to cause derailment or harm, shall be assessed and recorded.

NOTE 1: *Trees or branches of 150mm or greater diameter are known to be capable of causing derailments.*

Trees identified as being potentially hazardous shall be assessed and recorded using NR/L3/TRK/003/TEF3245. If the result requires a further arboricultural inspection carry out the inspection using NR/L3/TRK/003/TEF3077 and in accordance with clause 4.

NOTE 2: *Competence requirements for those completing NR/L3/TRK/003/TEF3077 are included on the form.*

NOTE 3: *Appendix A provides an overview of the process to be followed along with the options to be considered.*

3.3.3 Assigning corrective action for vegetation not within the immediate action zone

Woody material between 1.25m and 3.0m from the running rail but not affecting sighting or OLE shall be planned for removal within twelve months.

Assess the risk and assign a priority to all other lineside vegetation that will require action before the next planned inspection due to proximity to the running line.

NOTE 1: *It should be contained so that it does not pose a safety risk.*

A WAIF shall be used to record any work identified during inspections, with priority and action.

NOTE 2: *When assessing these conditions consider how growth rate and weather conditions such as wind, rain, snow and ice loading may bring vegetation closer to or within the immediate action area.*

3.3.4 Work arising associated with INNS

Where INNS species are found during inspection identify work where risk arises from their location.

Record and assign a priority within its current growth season for giant hogweed that is growing in locations accessible to those on Network Rail land or the public.

4 Tree inspection.

All trees greater than 150mm diameter at breast height that appear hazardous to the railway or third party shall be inspected.

All Network Rail trees greater than 750mm DBH should be inspected.

Record tree Inspections on NR/L3/TRK/003/TEF3077.

The location of trees can be identified by other inspection reports, ad hoc reports, or remote means (typically LIDAR).

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Where a unique identification number is required and does not exist from a previous inspection:

- a) attach a tag to the tree and record the unique identification number on NR/L3/TRK/003/TEF3077; or
- b) record the unique identification number and that access was not possible on NR/L3/TRK/003/TEF3077.

A photo of the tag may be taken and attached to the inspection record.

Undertake the risk assessment on NR/L3/TRK/003/TEF3077 and:

- a) determine the response including any additional risk controls or precautions; and
- b) provide detail of the work required.

For third party trees follow the Third Party Hazardous Tree Notification process in accordance with NR/L3/TRK/003/TEF3244A/B.

5 Leaf fall inspection

Leaf fall inspections shall be carried out to assess the severity of leaf fall expected during the Autumn period on operational lines for each eighth of a mile section.

NR/L3/TRK/003/TEF3076 shall be used to record the results of the inspection for every eighth of a mile section on both up and down sides of the track.

All potential leaf fall shall be taken into account during the inspection.

If the leaf fall risk score is 3, 4 or 5 complete a WAIF stating the work required to reduce the risk score. Table 3 shall be used to assign corrective action timescales for leaf fall sites.

Leaf Fall Category	Description	Corrective Action
5	High risk throughout the leaf fall period	Twelve months
4	High risk during peak leaf fall period and wet conditions	Mitigate by the beginning of the second growing season
3	Moderate risk during peak leaf fall period and wet conditions	Mitigate by beginning of third growing season
2	Low Risk	No mitigation required.
1	Negligible risk	

Table 3 – Leaf fall action

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On completion of the work re-score the site using NR/L3/TRK/003/TEF3076 and update the details in Ellipse.

Consult with the seasonal preparedness teams within the route Infrastructure Support Services for advice on actions to be taken. The Environment and Social team should also be consulted because of the scale of work.

6 Cab ride inspection

Use NR/L3/TRK/003/TEF3270 when undertaking cab ride inspections to record, where identified:

- a) vegetation obstructing sighting of signals and level crossings;
- b) vegetation encroachment on OLE;
- c) location of hazardous trees;
- d) vegetation within the ballasted area;
- e) vegetation leading to blocking or obstructing walkways, cress paths, refuges or places or safety;
- f) INNS; and
- g) vegetation within proximity of contacting rail vehicles.

Cab riding is not required in the year that the vegetation on-foot inspection is carried out.

Video may be used as an alternative to cab ride inspections.

The video shall have been recorded in daylight.

NOTE 1: *The video recording should be recent so the image is representative of the state of the asset at the time of inspection.*

Cab rides or digital records from video inspections may be also used for:

- a) inspections following reports from control or community relations;
- b) inspections following weather events; and
- c) assessing the priority of work required.

NOTE 2: *It is advisable to prepare in advance for cab surveying to allow for recording of location information whilst travelling.*

7 Supervisory inspection

Undertake an on foot supervisory inspection and assess effectiveness of vegetation management.

NOTE 1: *This should include the SM[OT] or delegated representative accompanying the inspector to a sample of differing locations annually to locations of repeat incident, where work is required or where work is complete.*

A plan shall be produced and managed so that repeat visits to the same locations are avoided. The plan shall be reviewed annually.

NOTE 2: *The inspection should be at least the extent of the vegetation eighth of a mile asset or limited to the extent of the work undertaken or the extent of work required.*

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Particular elements to be considered during the inspection are:

- a) the inspection can be carried out safely with adequate access;
- b) the condition of the asset and risks found are recorded correctly;
- c) works undertaken on site are effective and left safe; and
- d) the work bank is accurate and with the correct priorities.

Record the results of the supervisory inspection on NR/L3/TRK/003/TEF3269.

8 Post-incident inspection

An inspection shall take place where an incident of tree or branch failure occurs and NR/L3/TRK/003/TEF3211 shall be completed.

The inspection shall take place within seven working days of the incident occurring.

NOTE 1: To assist with undertaking a post incident inspection the person first responding should be contacted to assist with the investigation.

Complete NR/L3/TRK/003/TEF3064 for incidents that are reportable on this form.

NOTE 2: Fallen trees that are a diameter of 150mm at rail require completion of this form.

9 Ad-hoc and reactive inspection

Use NR/L3/TRK/003/TEF3079 where asset records do not exist after which time the inspection shall be planned on a cyclical basis.

Use NR/L3/TRK/003/TEF3245 where a risk to the railway or a third party from trees is reported. If the result requires a further arboricultural inspection carry out the inspection in accordance with clause 4.

10 Update records

The vegetation asset condition records within Ellipse shall be updated following inspection or any activity that results in a change to the asset within 28 days of the inspection.

Enter all work arising from inspection in Ellipse.

NOTE: the Ellipse Handbook describes the requirements for closing inspection work orders and recording work arising in Ellipse.

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Appendix A - Hazardous tree remediation

A.1 Hazardous tree risk assessment

Any potentially hazardous tree identified during inspection or survey shall follow the risk assessment process as shown below.

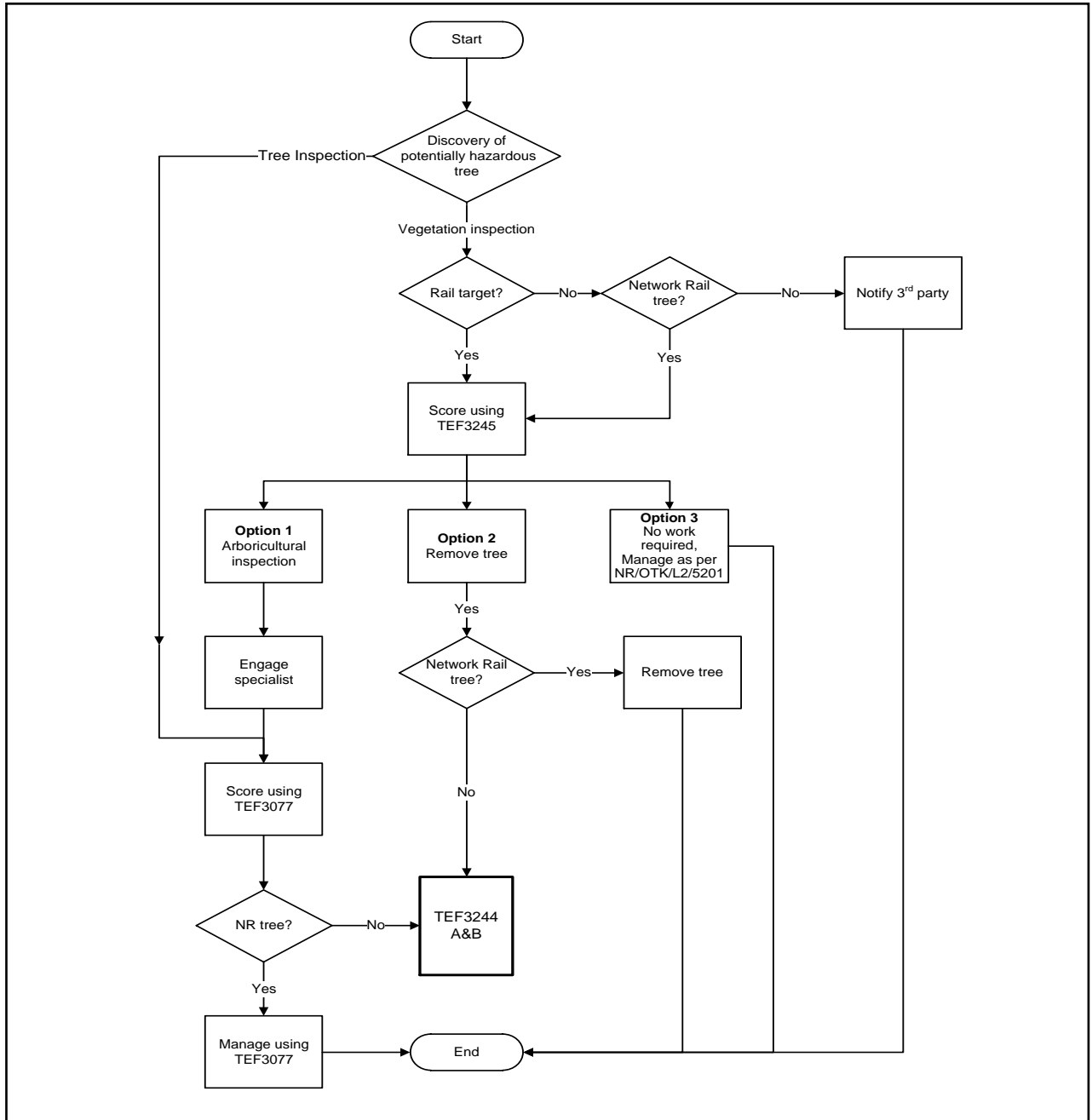


Figure A-1 – Hazardous tree risk assessment

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NR/L2/OTK/5201

Module 02

Lineside vegetation management requirements

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1 Scope

In scope for this module are the requirements for the management of lineside vegetation.

The extents of the intervention zones, including actions required, form the core of this module.

The module considers the impact of management of vegetation on other assets

Not included within this module are:

- a) management of vegetation to protect against damage to structures;
- b) management of vegetation to directly assure or improve earthworks integrity and stability; and
- c) environmental and community requirements for vegetation management.

2 Principles of vegetation management

2.1 General principles

Plants including weeds and woody vegetation are able, each year, to produce new shoots. They incrementally increase stem, branch and root growth and expand in size and structural form. They are able to spread and re-colonise areas where previously they have been restricted or removed.

Interventions will disrupt the growth process but not fully eradicate it. Cyclical vegetation management tasks are required to restrict vegetation growth and to limit any negative impact it may have.

Vegetation management should encourage the establishment of desirable lineside conditions that add value not only to the lineside but also to the surrounding environment through:

- a) connecting environments;
- b) promoting and providing biodiversity;
- d) protecting areas of ecological and historical importance; and
- e) improving the resilience of the vegetation.

To effectively manage vegetation the following needs to be known:

- a) the habitat type so that any design requirements align to this;
- b) species that require specific controls due to legislation;
- c) species that require specific management plans due to their vulnerability to pest and disease;
- d) species that require specific management plans due to the potential risks to the railway during Autumn leaf fall; and
- e) locations of trees and vegetation that have specific preservation requirements due to ecological or historic importance.

Where management operations are proposed the impact of such work is assessed and information is gathered regarding:

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- a) environmental restrictions that prohibit or limit the extent of work;
NOTE 1: Consult with environmental specialists to establish these locations
- b) negative impacts on the public as a result of the vegetation removal;
- c) value provided by trees and vegetation as a visual amenity to the surrounding environment; and
- d) effects on biodiversity.

Consideration is given to the impact on other assets where management or maintenance activities are carried out.

NOTE 2: An example of this is clearance of lineside vegetation on earthworks.

Consult other asset groups regarding how management of lineside vegetation will help with optimal performance for their respective areas.

NOTE 3: An example of this is to establish a cyclical vegetation maintenance regime to assure the performance of drainage assets.

2.2 Safe working

Work on vegetation is undertaken so that it does not compromise the safety of railway operations or affect those who work or live next to the railway.

A safety assessment is required to protect those carrying out the activities and the environment. There is guidance available produced by organisations outside of Network Rail which inform on the safest working methods.

NOTE 1: Work Activity Risk Assessments (WARA) will inform on risk presented by carrying out these tasks.

NOTE 2: Guidance on work site checklists is available from FISA and AFAG.

A specific competence is required for cutting vegetation within close proximity to overhead line equipment when it is live.

NOTE 3: Competence for working close to OLE is defined in NR/L2/CTM/014.

2.3 Analysis of vegetation information

Information received from inspection and reactive reports shall be analysed and the work required shall be determined.

Review rectification timeframes assigned by the Inspector to allow for the work to be scheduled in Ellipse.

NOTE 1: NR/L3/MTC/PL0175 contains guidance for maintenance planning.

A site visit may be arranged to establish the work required.

NOTE 2: Legal requirements will influence vegetation management.

The intervention shall be managed in accordance with Figure 1 and Table 1.

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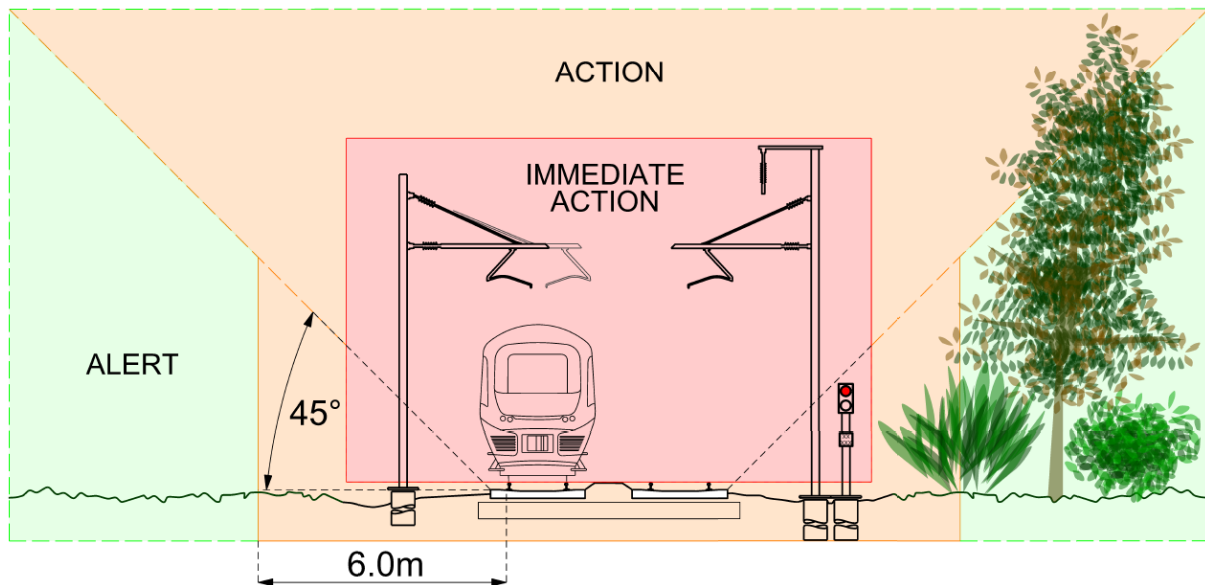


Figure 1 – Principles and requirements of the intervention zone

Intervention Zone	Requirement
Immediate Action	a) Remove vegetation to, at least, the action zone
Action	<ul style="list-style-type: none"> a) Intervene where inspection identifies that action is required b) Prevent growth towards the immediate action zone c) Manage potentially hazardous trees d) Prevent trees growing large enough that they would pose a derailment risk e) treat vegetation on a cyclic basis to minimise growth. f) Prevent the establishment of trees within 6metres where they do not already exist.
Alert	<ul style="list-style-type: none"> a) Manage vegetation to protect against specific safety or performance issues to NR or third parties b) Control INNS requiring intervention

Table 1 – Required activity within each zone

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2.4 Before commencing any vegetation work

Prior to undertaking any vegetation management activities check:

- b) the proposed method of treatment can be carried out at that location;
- b) the proposed work does not create new risks including material left on site;
- c) any site restrictions or hazards that might impact on the work;
- d) proposed treatments are not prohibited or restricted;
- e) proposed treatment and timing of work will not have a negative impact upon biodiversity; and
- f) that the proposed work does not impact on the function of drainage assets or the stability and security of structures, earthworks and rock faces.

An environmental and social appraisal shall be carried out for all scheduled vegetation clearance work. Requirements from the assessment shall be adhered to.

NOTE 1: *The hazard directory and environmental specialists can provide information on environmentally sensitive areas.*

NOTE 2: *NR/L3/MTC/EN0099 describes the process to be followed for the assessment.*

Before any work commences, consider the impact of the removal of vegetation on internal stakeholders and third parties.

Third parties shall be notified where they are affected by the removal of vegetation.

NOTE 3: *Permissions may need to be obtained from outside parties or adjacent landowners before work can commence.*

NOTE 4: *NR/L3/MTC/PL0215 describes the process to be followed for notification.*

Where an immediate response is required to remove vegetation, assess specific safety risks which might arise during the work.

2.5 Managing vegetation within the immediate action zone.

Table 2 below shall be complied with where vegetation is within the immediate action zone. The timescales for removal shall be according to Table 2 of NR/L2/OTK/5201/01.

Condition	Action
Vegetation in contact with trains	Manage vegetation back to the action zone (as a minimum)
Vegetation obstructing places of safety or refuges	Manage vegetation so that places of safety and refuges are unobstructed
Sighting requirements – level crossings	Return to minimum sighting requirements detailed in the ALCRM risk assessments completed by Level Crossing Managers
Sighting requirements – signals	Return to minimum sighting requirements as detailed by route Signal Sighting Engineers.

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Sighting requirements – lineside operational signs	Manage vegetation back to the action zone (as a minimum)
Overhead Line Equipment (OLE)	Clear vegetation back to 3.5metres (as a minimum)
Tree at imminent risk of failure (included identified threat category 7 on NR/L3/TRK/003/TEF3077 and NR/L3/TRK/003/TEF 3245)	Follow actions as detailed by the THREATS process contained within NR/L3/TRK/003/TEF3077 and NR/L3/TRK/003/TEF 3245

Table 2 - Responses required where vegetation is growing in the immediate action zone

Contact Network Operations to start the required mitigation if immediate action to make the railway safe cannot be carried out.

Notify the RAM responsible where immediate action has been identified for vegetation growing out of structures.

NOTE: Consulting with the RAM responsible for structures will help avoid damage occurring to the structure when vegetation is removed.

Agree on the extent and method of the immediate work prior to it being carried out.

On receipt of a report of a hazardous tree categorised as 6 or 7 using the THREATS process within NR/L3/TRK/003/TEF3077 or NR/L3/TRK/003/TEF3245, arrange for the removal of the tree within the timeframes detailed within the inspection report.

Emergency and late notice work shall be managed in accordance with 5.5.3 of NR/L3/MTC/PL0215.

2.6 Clearance within the action zone

Manage vegetation within the action zone where it presents a risk.

Upon completion of any vegetation management the person responsible for the work shall confirm:

- a) the required clearance zone has been created;
- b) the work has been effective in removing the risk;
- c) the site is left safe so that the work has not created a further risk to the railway or third parties;
- d) the earthwork or structure upon which the vegetation exists has not been affected by the activity; and
- e) the surrounding environment and protected areas have not been affected by the work.

Identify additional activity required and raise a WAIF where work has not been effective in removing the risk.

NOTE: Site Management Statements are available for sites within SSSI, these provide details regarding the required maintenance activities, the process for gaining permissions and appropriate management of the vegetation within NR estate. These can be found on Connect or from the Route Environmental Specialist.

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2.7 Planning maintenance within the action zone limit

Undertake cyclical maintenance activities to prevent weed growth within the ballast area and to prevent the re-establishment of woody vegetation where previously cleared.

Activity to maintain vegetation within the action zone shall be assessed to check it has been effective.

NOTE: This might involve re-assessment after a period of time by checking that clearance zones have been achieved.

2.8 Undertaking maintenance activity within the alert zone

Maintenance work should be carried out to prevent growth into the action zone. It will also include works to prevent:

- a) establishment of invasive plants;
- b) spread of Invasive Non Native Species plants including where it is presenting a nuisance to lineside neighbours; and
- c) re-growth from stumps causing risk to earthworks.

Maintenance may also include removal of undesirable species and replacement with more suitable species.

3 Vegetation management methods

3.1 Chemical treatments of vegetation

A person with BASIS certification shall specify the method of application of the chosen herbicide for the type of vegetation to be treated.

NOTE 1: Prior to selecting a chemical application alternative treatments should be considered.

A competent person shall select the herbicide and dosage rates before work commences.

NOTE 2: Competency is satisfied by holding NPTC PA1 'Safe Use of Pesticides' and NPTC PA6 'Handheld Application'.

NOTE 3: Biological methods for controlling the spread of specific plants are not part of this standard control framework.

The extent of the areas to be sprayed and any restrictions on use shall be provided to the operator in advance of the works.

Vegetation above two metres in height shall not be treated by the weed spraying train.

Complete NR/L3/TRK/003/TEF3069 when applying chemicals.

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3.2 Mechanised methods of vegetation removal

The selected mechanised methods shall be capable of:

- a) clearing the size of vegetation to be removed;
- b) undertaking its intended operation on site and at access and egress points; and
- c) operating within machine clearance zones;

The use of flail machines shall be limited to;

- a) maintaining areas that have been previously cleared of trees and planned cutting has restricted the size and height of woody re-growth; and
- b) maintaining hedge lines, where planned cutting has established a hedge.

3.3 Manual methods of vegetation removal

The safest method of undertaking the manual activity of work shall be adopted having considered and discounted other methods.

4 Protecting other assets when undertaking vegetation management

4.1 Lineside assets

The ground area around lineside assets shall be maintained free of vegetation to a distance of one metre.

NOTE: This is to enable, for example, access, inspection and fire prevention.

4.2 Rock cuttings, soil cuttings and embankments

The RAM who has responsibility for geotechnics shall be consulted where vegetation management will take place on rock cuttings, soil cutting and embankment slopes.

Prior to work commencing consultation with the RAM who has responsibility for geotechnics shall establish:

- a) access onto the site, removal of trees, roots and other vegetation does not compromise the stability of the slope or rock face;
- b) current stability condition of the slope proposed for vegetation removal;
- c) locations of embankments vulnerable to desiccation;
- d) agreement on the extent of work and any restrictions; and
- e) remediation required to manage stumps identified at risk of failing and presenting a hazard.

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Consultation shall review the effects of tree felling and establish;

- a) phases of clearance;
- b) any planting requirements;
- c) any coppicing requirements;
- d) stump treatment requirements;
- e) the preferred extent of vegetation following the works; and
- f) requirements for review one year after operations by a geotechnical engineer.

Consultation is not required where individual trees are being managed on slopes or where cyclical grass cutting, scrub cutting and tree pruning operations are planned.

Stumps remaining shall be assessed. Any categorised as 'at risk' shall have remedial action assigned in accordance with Figure A-1 (Appendix A).

Agree who owns and will carry out the work with the RAM responsible for geotechnics.

NOTE 1: High water demand tree species combined with long dry periods can result in clay shrinkage for susceptible geologies (high plasticity clays). Where trees are close to the track this might result in poor track geometry.

NOTE 2: Tree roots might assist in reinforcing soils on clay embankments, which assists the stability of the slope.

NOTE 3: Further information can be found in NR/L3/CIV/152.

4.3 Specific considerations for rock cuttings

The face of rock cuttings shall be maintained to prevent the establishment of woody vegetation.

NOTE: Tree roots can cause root jacking of blocks of rock on rock cuttings where trees are left to establish root systems.

4.4 Specific considerations for structures

Notify the RAM responsible for structures where vegetation is growing from a structure and needs specialists for removal or could cause damage.

NOTE: This does not remove the need to carry out the immediate action although the scope may be reduced to avoid damaging brick and mortar structures.

5 Leaving sites safe

5.1 Preventing wind-throw risk

Tree removal operations shall be planned so that the risk of wind-throw to the remaining trees is not increased by the work.

5.2 Lineside tidiness - disposing of cut material

5.2.1 Principle of tidiness

Vegetation work should be responsibly managed during the activity and once work has been completed.

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Material or waste created shall not be left on site if it poses:

- a) a safety or performance risk;
- b) a risk to management or inspection of other assets; or
- c) a nuisance to third parties.

5.2.2 Specific tidiness considerations

Cut wood material shall be removed from site following work.

Approval shall be requested from the RAM responsible for the lineside vegetation where material is to be left on site when chipping or removal of cut material is not possible.

Cut material that has been stacked in short section piles shall not be left on slopes with a gradient steeper than or equal to 33 degrees.

NOTE 1: *Cut and stacked material can move over time and present a hazard.*

NOTE 2: *To encourage natural breakdown of cuttings, branch and stem material should be cut into short sections and stacked in piles (known as windrowing). Shorter lengths of branches and logs should be banded to prevent vandalism.*

Wood chippings shall not be left on site where there is a risk to property, assets or the operational railway. Any remaining chipped material shall be:

- a) a minimum of three metres from any running rail; and
- b) clear of any watercourses and drainage systems.

NOTE 3: *these include open ditches that may not be immediately visible at the top of a cutting slope..*

Chipped material shall be spread evenly to a depth no greater than 100mm.

5.3 Management of stumps

5.3.1 General principles

The type of management required for stumps will be dependent on their location and their effects on the earthwork, structure or drainage asset.

The removal or grinding of stumps on slopes, within drainage channels or on structures shall be done in consultation with the RAM responsible for the asset.

Use Table 3 when stumps have been created and cannot be removed or ground out.

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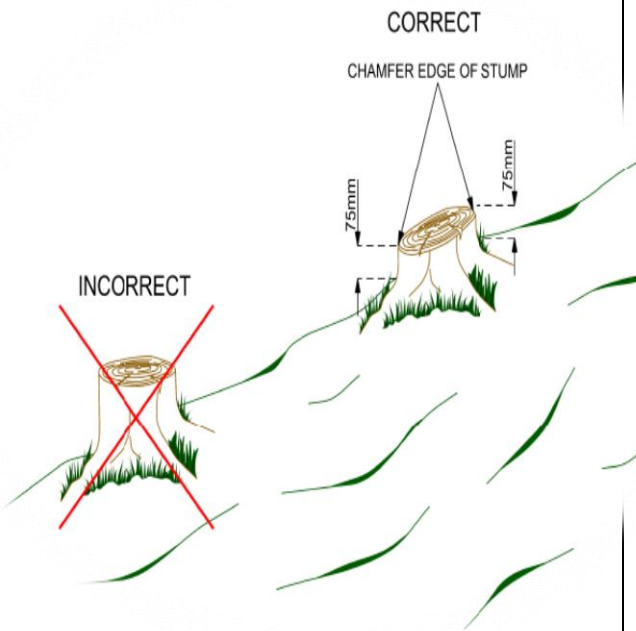
Stump treatments	Examples
<ol style="list-style-type: none"> 1. Cut to a maximum height of 75mm above ground level. 2. Cut level to the ground or level to the angle of the slope when on earthworks. 3. Chamfer the edges to reduce risk of throwing tracks of tracked vehicles. 4. Treat using capsules containing slow release herbicide inserted directly into the cambium area. <p>NOTE: Where stump diameter is too small for capsule treatment advice shall be obtained from the lineside experts within the RAM teams</p>	

Table 3 – Stump treatment

5.3.2 Coppicing / pollarding

Trees / stools to be coppiced or pollarded shall be cut no lower than 150mm above ground level with a sloping face.

This is to allow water runoff.

NOTE: For previously coppiced stools retain one stem on the stool as long as its retention does not affect any other part of this standard

6 Invasive Non Native Species (INNS)

6.1 Principles

INNS shall be managed (including entry in Ellipse) where:

- a) there is a risk posed to the safe operation of the railway;
- b) their presence inhibits other railway activities being carried out;
- c) they might impact on lineside neighbours; and
- d) their presence or growth poses an environmental risk.

6.2 Managing sites where INNS have been identified

A register of INNS shall be kept in Ellipse.

A schedule of works shall be contained in Ellipse for the management of INNS plants on Network Rail land.

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Prioritisation of remediation works should be undertaken using guidance detailed in Table 3.

Consult with the MPC where encroachment is likely to occur from third party land.

Action shall be taken to control the spread and prevent further invasion where a notice has been served.

Follow up visits shall be carried out to check the effectiveness of any treatment.

6.3 Removing INNS material

INNS shall be treated as hazardous/special waste and disposed of through a Network Rail approved method where removal is required.

NOTE: NR/GN/ENV/004 describes the approved method for waste disposal.

Priority	Descriptors	Action	Why
1	INNS within seven metres of the outside running rail	Treatment cycle to begin at timescales defined by BASIS advice.	To reduce impact on track renewals.
2	INNS within seven metres of third party land	Treatment cycle to begin at timescales defined by BASIS advice.	To prevent the need for a <i>Species Control Agreement</i> or a <i>Species Control Order</i> .
3	INNS present on both sides of the boundary	Contact adjacent land owner to agree management plan.	Proactive approach to prevent a <i>Species Control Order</i> being imposed on Network rail and/or the third party landowner.
4	INNS on third party land, within seven metres of the boundary	Contact adjacent land owner to agree management plan.	Proactive approach to prevent a <i>Species Control Order</i> being imposed on the third party landowner.
5	INNS on third party land, more than seven metres from the boundary	Contact adjacent land owner to inform presence of injurious and invasive plants.	Proactive approach to assist with the control of an invasive non-native species.

Table 4 – Prioritising INNS control

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7 Grazing for vegetation management

Grazing of livestock on the lineside might be permitted where special arrangements are in place with a specific management objective and where site conditions and security measures allow.

8 Planting and re-seeding

Planting shall be taken into account where planned clearance work will result in a loss of connected woodland or scrubland.

Planting and re-seeding should be considered where:

- a) the establishment of suitable species enhances the stability of earthworks;
- b) trees would be replaced in urban environments; and
- c) opportunity exists to enhance biodiversity.

NOTE: Lineside experts within RAM teams or the Environment and Sustainability department can provide advice on the species to be used.

9 Updating records

The planner shall update the asset records in Ellipse within 28 days of work completion with:

- a) work that has been undertaken; and
- b) any changes in the risk score of leaf fall and assessed trees arising from the work.

The forms identified in this process should be completed electronically.

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Appendix A - Process for stump management

A.1 Cuttings

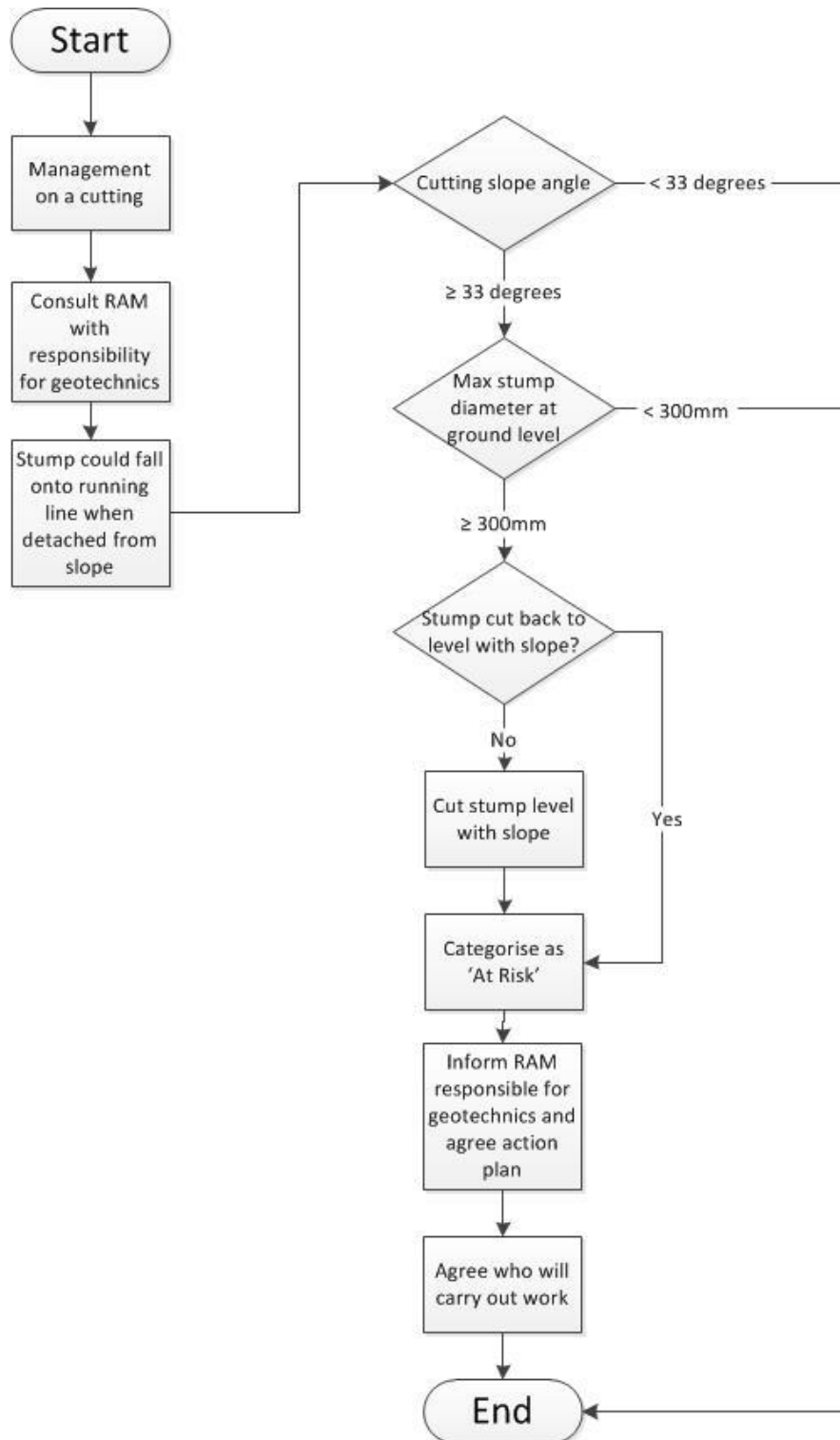


Figure A-1 – Consultation process for cuttings



Network Rail position statement regarding Jo Johnson, Rail Minister's suspension of "all felling during the current nesting season, except where safety critical"

Network Rail undertakes vegetation control to enable the operation of a safe and efficiently performing railway. Those plans should continue, in accordance with Network Rail's Standards and as set out below, which is in line with the recent instruction from the Rail Minister that all tree clearance activities in England and Wales must cease unless permitted by the guidance within this document.

Where work is continued as part of this instruction Network Rail will be required to maintain a count of the trees removed during works. Network Rail has also committed to undertake additional assurance to support this instruction.

Definitions have been derived from forestry legislation relating to felling licences and NR internal standard for vegetation management (NR/L2/OTK/5201). Current nesting season is defined in NR guidance as 1st March to 31st August.

Management scenario	Minimum activity necessary to maintain safe operations			
	Fell trees	Selective thin trees <50%	Remove trees	Lopping, topping, pruning, pollarding
	>10cm dbh	<10cm dbh only	<8cm dbh only	All sizes.
Safety critical tree hazard / condition				
Category 5, 6 and 7 trees		n/a	n/a	
Category 1, 2, 3 and 4 trees		n/a	n/a	
Safety critical due to vegetation affecting railway infrastructure and operations				
Leaf fall / known adhesion problem sites				
Within 300mm of overhead line equipment				
Blocked signal sighting				
Blocked operational sign sighting				
Blocked level crossing sighting				
Branches contacting with trains				
Construction activities				
Clearance for fencing work				
Inspection of structures / earthworks				

	Activities as defined can proceed following breeding bird surveys and all other required environmental checks
	Activities should normally be planned to take place outside of nesting season. If activities must take place, only those highlighted can take place following breeding bird surveys and all other required environmental checks. Work shall be the minimum necessary during the nesting season.
	Felling activities shall not take place between 1 st March and 31 st August

Notes

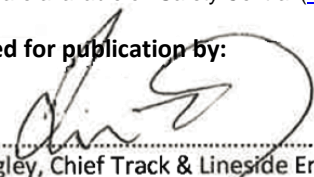
- **Category 1, 2, 3, 4, 5, 6 or 7 trees** – defined using [NR/L3/TRK/003/TEF3077](#) 'Tree Hazard: Risk Evaluation and Treatment System'; modelled tree risk assessments (e.g. POLESTORM, FAILSAFE) require use of TEF3077 to confirm Category 5, 6 or 7 before safety critical tree removal.
- **Selective thin (<50%)** – removal of up to 50% of stems <10cm dbh within an area of woodland. If used in leaf fall risk areas, number of leaves capable of causing issues will be reduced.
- **dbh** – diameter of tree measured at 1.3m up the trunk [diameter at breast height]
- **Breeding bird surveys** – forms and guidance available on Safety Central ([Biodiversity](#))
- **Environmental checks** – if required framework ecological consultants contact details are available on Safety Central ([Biodiversity](#))

Content approved by:

 11/5/18

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 11/5/2018

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