

## Appendix 2: Tree Species and Quantities

Table A2.1: Tree	species and Qua	ntities		
Common	Latin Name	Туре	Size	Quantity
Name Broadleaf				
		Demonset	40.00 arm	0.007
Field maple	Acer campestre	Bareroot	40-60cm	2,087
Common alder	Alnus glutinosa	Bareroot	40-60cm	3,131
Silver birch	Betula pendula	Bareroot	40-60cm	4,365
	Carpinus	Bareroot	40-60cm	0.700
Hornbeam	betulus	<b>.</b>	40.00	2,783
Hazel	Corylus avelana	Bareroot	40-60cm	2,435
	Crataegus	Bareroot	40-60cm	
Hawthorn	monogyna			1,434
Crab apple	Malus sylvestris	Bareroot	40-60cm	1,391
Wild cherry	Prunus avium	Bareroot	40-60cm	1,391
Pedunculate		Bareroot	40-60cm	
oak	Quercus robur			6,791
White willow	Salix alba	Bareroot	40-60cm	1,391
Grey willow	Salix cinerea	Bareroot	40-60cm	1,044
Whitebeam	Sorbus aria	Bareroot	40-60cm	2,783
Small leaved		Bareroot	40-60cm	
lime	Tilia cordata			2,783
Wych elm	Ulmus glabra	Bareroot	40-60cm	348
Other Walnut	Juglans spp	Bareroot	40-60cm	696
Sycamore	Acer	Bareroot	40-60cm	1,659
5	pseudoplatanus			
Sub-total	•••••	•		36,512
Native woody sl	hrubs			
Dogwood	Cornus spp	Bareroot	40-60cm	586
Spindle	Euonymous	Bareroot	40-60cm	586
I	europaeus			
Wild privet	Ligustrum	Bareroot	40-60cm	586
I	vulgare			
Wyfaring tree	Viburnum	Bareroot	40-60cm	586
,	lantana			
Guelder rose	Viburnum	Bareroot	40-60cm	586
	opulus			
Osier	Salix viminalis	Bareroot	40-60cm	586
Sub-total				3,516
Total				40,028
				10,020

## Appendix 3: Glyphosate Guidance

#### Contractor Guidance for Norfolk County Council Weed Spraying

Norfolk County Council (NCC) is committed to minimising the use of herbicides, including those containing glyphosate, to control weeds or other undesirable plant species on its land, whilst still maintaining safe and healthy spaces fit forpurpose and appropriate use by its communities.

The <u>NCC Policy for the use of glyphosate</u> applies to any organisation or any individual who is contracted to work within any of the sites that the Council is responsible for, or who has consent to undertake weed spraying activities withinsuch sites. It seeks to give particular attention to the following four areas:

- Safety to practitioners, people and society in the use of glyphosate products across the Council's operations;
- Environmental protection and nature recovery, ensuring future use of glyphosate products will be balanced against the Council's work to maintain and improve Norfolk's environment;
- Establishing how weed control will be managed to lead to reduced reliance on glyphosate products whilst ensuring safe and sustainable spaces fit for purpose and meeting community expectations;
- Carbon footprint, ensuring approaches to weed control take fully into account carbon emissions and meeting agreed NCC targets in this respect.

#### **Assurance Scheme Membership**

NCC will only use contractors who can demonstrate that they operate to best practice and legal requirements by being members of an approved assurance scheme, recognised by the UK Amenity Standard. This will give assurance that theyhave schemes of continuing professional development (CPD) in place for their operators and managers and are fully up to date with current practices.

Contractors will be required to provide details of their applicable assurance scheme as well as relevant training certification, equipment testing certification and details of their glyphosate storage, handling and disposal; these details should be provided at the start of any contract and resubmitted annually from the 1<sup>st</sup> April.

#### **Recording and Monitoring of Glyphosate Use**

NCC is legally required to record and monitor glyphosate use across NCC. Where any herbicides are used, a detailed record must be kept as to the date, time, duration, site, area, target weed(s) and amount and type of chemical used. Therefore, all weed spraying contractors must capture and make readily available this information on a timely basis, and at a minimum of once a week during the weedspraying treatment period/programme.

The method of communication of this information is by sending a weekly update to tree.planting@norfolk.gov.uk. We will record training and CPD, equipment calibration and testing and confirmation of required assurance scheme membership.

Appendix 5 of NCC's Glyphosate Policy states the requirements for all operatives, including contractors who use pesticides including glyphosate. For ease of reference, it is detailed in full below:

## Appendix 5

## Training and Health & Safety for Operatives Using Pesticides

# **1.** Requirement for users of plant protection products (pesticides) authorisedfor professional use to have a specified certificate (formerly certificate of competence)

Users of professional pesticide products are required to hold a certificate showing they have sufficient knowledge of the subjects listed for their use (these certificates are called a specified certificate, formerly a certificate of competence). Previous certificates of competence remain valid under the legislation. A list of recognised specified certificates is available on the HSE pesticides website.

Everyone who uses pesticides professionally should have received adequate trainingin using pesticides safely and be skilled in the job they are carrying out as well as holding a specified certificate. This applies to:

- users, operators and technicians (including contractors);
- managers;
- employers;
- self-employed people; and
- people who give instruction to others on how to use pesticides.

Guidance on the safe use of plant protection products exists in the Codes of Practicefor Using Plant Protection Products. A new Code of Practice is expected later in 2022. In the meantime, there is guidance available for those affected by the Regulations on the HSE website. Although some of the underlying legislative framework has changed, the general guidance contained in the Code remains appropriate. If there is any inconsistency between the Code and the HSE guidance, the advice in the HSE guidance takes precedence.

Under the previous UK legislation governing pesticide use, those born before 31 December 1964 who used an agricultural product on their own or their employer's land were exempt from the requirement to hold a certificate of competence. This wasknown as a grandfather rights exemption. This exemption was withdrawn on 26 November 2015, after which everyone who purchases a professional product must ensure that the intended end user holds a recognised specified certificate.

#### 2. Training Requirements

Before using a pesticide, the need for training in the subjects set out below is established by HSE.

**a.** All relevant legislation regarding pesticides and their use.

**b.** The existence and risks of illegal (counterfeit) plant protection products, and the methods to identify such products.

**c.** The hazards and risks associated with pesticides, and how to identify and controlthem, in particular:

I. risks to humans (operators, residents, bystanders, people entering treated areas and those handling or eating treated items) and how factors such as smoking exacerbates these risks;

II. symptoms of pesticide poisoning and first aid measures;

III. risks to non-target plants, beneficial insects, wildlife, biodiversity, water and the environment in general.

**d.** Understanding integrated pest management strategies and techniques, biologicalpest control methods, information on the general principles and sector-specific guidelines for integrated pest management.

**e.** Initiation to comparative assessment at user level to help professional users make the most appropriate choices on pesticides with the least side effects on human health, non-target organisms, water and the wider environment among all authorised products for a given pest problem, in a given situation.

**f.** Measures to minimise risks to humans, non-target organisms, water and the wider environment: safe working practices for storing, handling and mixing pesticides, and disposing of empty packaging, other contaminated materials and surplus pesticides (including tank mixes), whether in concentrate or dilute form; recommended way to control operator exposure (personal protective equipment).

**g.** Risk-based approaches to applying pesticides which take into account the localwater extraction variables such as climate, soil and crop types.

**h.** Procedures for preparing pesticide application equipment for work, including its calibration, and for its operation with minimum risks to the user, other humans, non-target animal and plant species, biodiversity and the environment, including water resources.

**i.** Use of pesticide application equipment and its maintenance, and specific spraying techniques (e.g. low-volume spraying and low-drift nozzles), as well as the objectives of the technical check of sprayers in use and ways to improve spray quality. Specific risks linked to use of handheld pesticide application equipment or knapsack sprayers and the relevant risk management measures.

**j.** Emergency action to protect human health, the environment including water resources in case of accidental spillage and contamination and extreme weather events that would result in pesticide leaching risks.

**k.** Special care in protection areas established under Articles 6 and 7 of Directive 2000/60/EC, (Requirements for sales of pesticides; Information and awareness-raising)

**I.** Health monitoring and access facilities to report on any incidents or suspected incidents.

**m.** Record keeping of any use of pesticides, in accordance with the relevant legislation.

# **3**. A requirement for anyone who uses a pesticide to take "reasonable precautions" to protect human health or the environment

When using a pesticide product, authorised for professional use, it would help a userto meet the requirement to take "reasonable precautions" if he or she identified the most appropriate method (or combination of methods) of control, chose the product/method of control that minimised risks and the amount of pesticide applied whilst achieving an appropriate degree of control. They should then identify and mitigate any risks following practices that are consistent with those detailed in the Code of Practice and the guidance on the HSE pesticides website.

In the case of non-professional products following instructions on use and disposal of the product in accordance with instructions on the product label would help a user comply with the requirement to take "reasonable precautions".

## 4. A continued obligation to confine pesticide application to the target area

Users are required to confine pesticide applications to the land, structure or other material intended to be treated. Enforcement action may be taken against users, for example, who directly overspray a watercourse or spray in inappropriate weather conditions causing a risk of adverse effects on people or the environment adjacent to the treated area.

## 5. Requirements in relation to storage, handling and disposal

There is a requirement to take reasonable precautions to ensure that: storage, handling and disposal of products, their remnants (old products and unused tank mixes) and packaging; and cleaning of equipment do not endanger human health,water or the wider environment. When handling, storing or disposing of products taking the following steps would help in satisfying the requirement to take "reasonable precautions"-

- in the case of non-professional products, following instructions on storage and disposal of the product in accordance with instructions on the product label.
- in the case of professional products, identifying and mitigating any risks; and following good filling, storage and disposal practice such as that detailed in the Code of Practice.

### 6. Specific measures to protect water

There is a requirement to give preference to particular types of products where: theuse of a product represents a risk to the aquatic environment and/or drinking watersupplies; and there is more than one product authorised for a particular situation.

The legislation provides that, so far as is reasonably practicable, preference should be given to products not classified as dangerous for the aquatic environment and not containing priority hazardous substances. Priority hazardous substances are listed inAnnex II of Directive 2008/105/EC (link to external website).

Many factors (product toxicity, mobility, user practice, application of risk mitigation, method of application, condition of machinery, crop or situation, topography, soil typeand weather) will determine whether use of a pesticide presents a risk to the aquatic environment or drinking water supplies. It is important, however, that users and advisors assess all risks (human health and the environment) and do not afford a disproportionate emphasis to any particular area. For example, it would not be appropriate to give preference to a product that may be assessed as posing less of arisk to the aquatic environment, if use of the alternative product posed a substantiallygreater risk to human health.

## 7. Requirement to minimise use in specific areas

There is also a requirement to ensure that the amount of pesticide used and the frequency of use is as low as reasonably practicable where products are used in a number of specific areas. These areas are: roads, railways, very permeable surfaces or other infrastructure, close to surface water and groundwater; sealed surfaces witha high risk of run-off to surface water and sewage systems; areas used by the general public or vulnerable groups; in the close vicinity of healthcare facilities; in conservation areas; and areas which will be used by or accessible to amenity workers. ('Sealed surfaces', in practice, means surfaces that do not allow liquid to pass through them, e.g. tarmac. "Capped soil" is not a sealed surface.)

Users need to take into account the appropriate level of pest, weed or disease control necessary in particular situations when deciding their control strategy. For example, the control strategy required for a football pitch in a public park may differ from that on the greens of a championship golf course. Given that needs will differ and that the level of pest, weed and disease control and local risks can vary official guidance does not specify the level of control and consequently what constitutes anappropriate amount or frequency of use, for all circumstances which might arise.

## 8. Using pesticides without a Specified Certificate?

If you need to have a specified certificate to do your job, but you do not have oneyet, you must be working under the direct supervision of someone who has the necessary certificate (because you are undergoing training to obtain a specified certificate). If you are supervising someone who does not have a certificate, you should be ableto see and hear the person doing the job to supervise them. You should be able to see the person doing all parts of the job, including:

- preparing and mixing the pesticide;
- filling equipment and making sure the dose levels are correct (calibrating);
- applying the pesticide;
- cleaning equipment and disposing of washings, leftover pesticides and the containers.

## 9. Continuing professional development (CPD)

Once you have achieved a specified certificate, it is important (and a requirement of the Amenity Standard) that you continue to develop your technical knowledge and practical skills in using pesticides. You should make sure that you keep your trainingup to date and that you know the latest information on how to protect human health, wildlife, other plants and creatures you don't intend to treat, water and the environment.

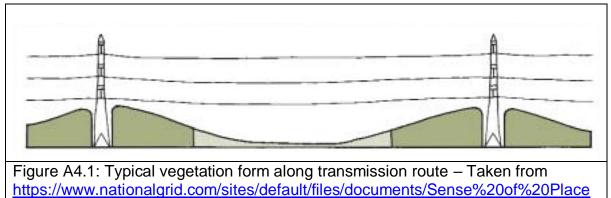
You should keep a record of all the training you receive. It is the easiest way for youto prove that you have the necessary training, knowledge and skills. You can get evidence of your continuing professional development by being a member of:

- the BASIS Amenity Training Register or the National Register of Sprayer Operators (if you use pesticides); and
- the BASIS Professional Register (if you sell or supply pesticides).

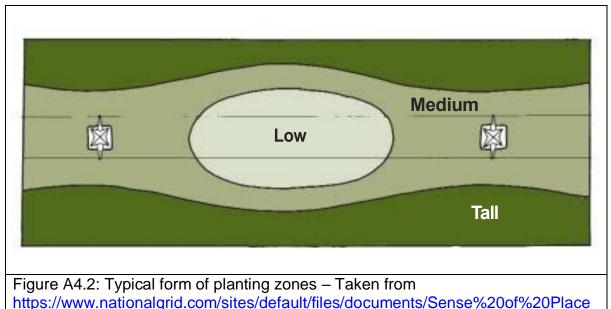
You will need the appropriate specified certificates to join these registers. To continue to be a member, you will need to attend a sufficient number of appropriate raining events and conferences, in line with the terms of each scheme.

Any questions and queries regarding the above should be directed to <u>tree.planting@norfolk.gov.uk</u>

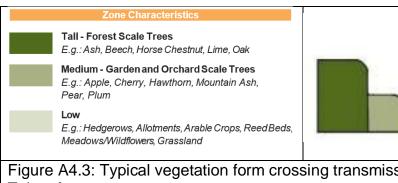
# Appendix 4: Planting near high voltage overhead lines



%20-%20National%20Grid%20Guidance.pdf



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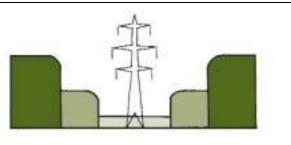


Figure A4.3: Typical vegetation form crossing transmission route at mid-point – Taken from

https://www.nationalgrid.com/sites/default/files/documents/Sense%20of%20Place %20-%20National%20Grid%20Guidance.pdf

## Appendix 5: Anglia Water sewer pipes and tank



Figure A5.1: Orange line crossing the field within area 1 shows the location of the sewer pipe. Sewer tanks located at top of the field near settlement.

#### Within the Easement:

a) There shall be no building erected or tree-planting (including temporary structures that could become a future hazard e.g. static caravans or solar panels).

- b) Plant will not usually be allowed to be stored or operated within the easement.
- c) Ground levels must not be adjusted if they leave the main shallower than 900mm or deeper than 1200mm. This applies to temporary features (e.g. a stock pile) or permanent (e.g. an embankment).
- d) Access to the easement must be maintained (e.g. it cannot be surrounded with dense trees).

e) The entire easement must be protected from the effects of ground movement (including vibrations) and the maximum shock received at the crown of the pipe must not exceed a Peak Particle Velocity of 25mm/s. Typically – this means that AW would expect to pre-approve written calculations relating to:

- i. any explosions detonated within 400m (e.g. quarrying)
- ii. any demolition, pile driving, 3D seismic surveys, tunnelling or bore holing within 10m
- f) Temporary crossings over the pipe will require pre-approval and must not generate a weight pressure of more than 8.5kNm^2 at the crown of

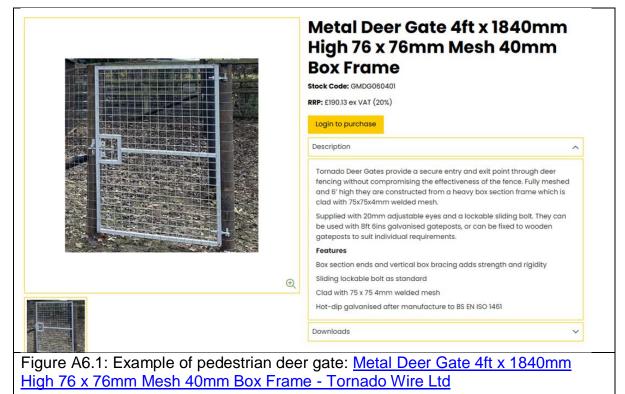
the pipe. Their life must be timebound and all aspects of the crossing, including creation and removal must be pre-approved with calculations demonstrating how the pipe is being protected.

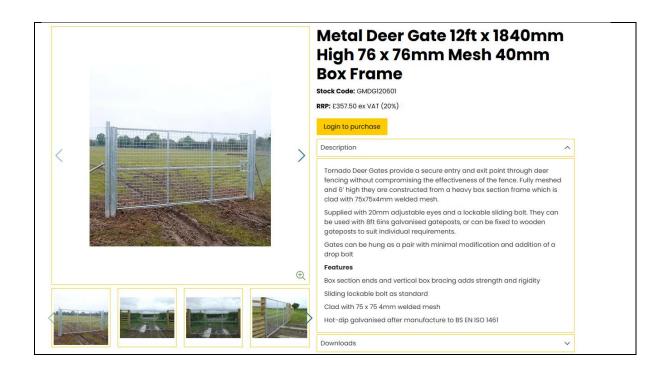
g) Permanent Crossings are not encouraged and their effect on the pipe must be fully calculated and pre-approved.

Pipe Nominal Diameter (mm)	Easement Width (m)
DN ≤ 149	4.0
DN150 - DN249	4.0
DN250 - DN449	5.0
DN450 – DN599	6.0
DN600 – DN749	7.0
≥DN750	7.0

Figure A5.2: Anglian Water restrictions and conditions associated with works/ tree planting within the Easement:

## Appendix 6: Gates





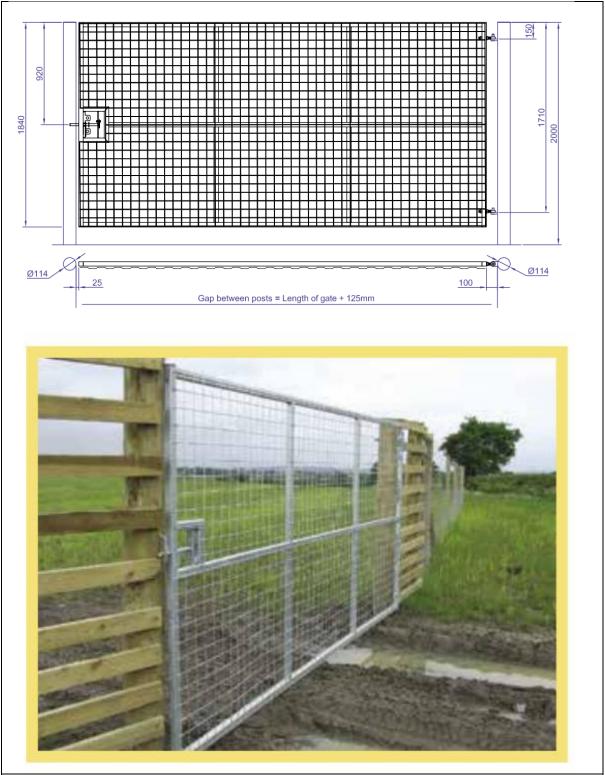
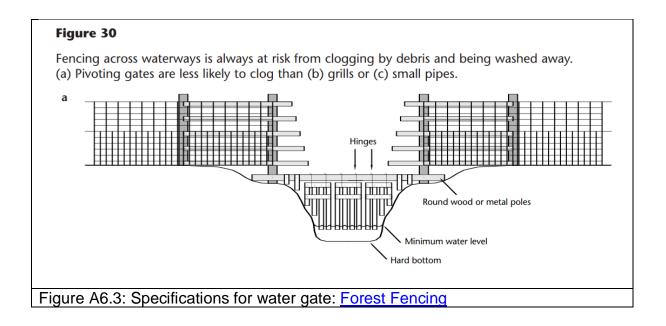


Figure A6.2: Example of vehicle deer gate: <u>Metal Deer Gate 12ft x 1840mm High</u> <u>76 x 76mm Mesh 40mm Box Frame - Tornado Wire Ltd</u>





# **Tree Planting and Resilience Strategy**

Adopted 6th April 2020



# **Contents**

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# Introduction

Trees, hedgerows and woodlands are some of the earths oldest living organisms. They provide multi-functional benefits and are one of nature's greatest sources of natural capital.

In our urban areas they cool us down, absorb pollutants, improve our well-being and increase property values. In the wider environment they provide oxygen, combat climate change, reduce the risk of flooding and slow rain water run-off. Trees also provide food for people and wildlife, are a habitet for animals, fungi and other plants, are an important source of pollen and necter for insects and help form our landscape and sense of place.

Our nation's tree stocks are under threat from pests and disease, climate change, development and population increase.

The UK has only 13% tree cover, compared with 31% in France or 72% in Finland! The Government's Committee on Climate Change wishes to increase the UK's tree cover to 17% by 2050 (this equates to approx. 1.5 billion trees).



Ash Dieback (c) Tom Russell-Grant

Construction site at Martham(c) Anne Crotty

## **Pests and diseases**

Tree pests and diseases are increasing rapidly in the UK. Of particular concern at present are ash dieback, Dutch elm disease, acute oak decline, oak processionary moth, sweet chestnut blight, and *Phytophthora* diseases including *P.ramorum* and *P.kemovia* which affect a wide range of trees including larch and beech.

Other serious diseases or pests yet to arrive in the UK (some of which are already in Europe) include emerald ash borer beetle, bronze birch borer beetle, oak wilt fungus, Asian and citrus longhorn beetles and *Xylella fastidiosa* - the last three can affect a range of broadleaved hosts.

## **Climate change and development**

Trees help fight climate change. They remove carbon dioxide from the air, store carbon in their timber and the soil, and release oxygen into the atmosphere.

Increasing development across Norfolk is changing our land use and impacting on existing trees and hedges. Norwich, Broadland and South Norfolk Districts have 35,000 new homes allocated by 2036, this is expected to rise to around 44,000.

In 2018 the population of Norfolk was 904,000. It has increased by 100,000 since 2002 which is a 12.5% population growth. It is expected to increase by another 50,700 over the next 10 years.

# **The Strategy**

This strategy has not been written in isolation; it has been informed by national Defra and Tree Council guidance and has been drafted alongside a range of local stakeholders whose input has been invaluable.

The focus of this strategy is to increase the resilience<sup>1</sup> of our tree, woodland and hedged landscape and help Norfolk adapt to future climate change, pests and diseases.

The strategy will fit with policy and strategy <sup>2,3,4,</sup> at a local and national level. It will help identify where the greatest gains can be made through tree and hedge planting and enable NCC to submit strong bids for the grant funding that is likely to become available in the future.

This strategy will increase woodland cover, but the primary aim is not to offset carbon through the planting of very high numbers of trees as this may have adverse impact on other important habitats and existing landscape functions in Norfolk. We will encourage natural approaches to tree establishment such as natural regeneration and rewilding as well as planting hedgerows and trees.

NCC manages a significant land holding including 16,900 acres of the County Farms estate (1.27% of Norfolk), closed landfill sites, school grounds, trails and public rights of way, council premises and highway verges (currently 5,965 miles).

The strategy will ensure that current ecological network maps and existing tree location data will inform decision making on the best places to plant trees, creating corridors for wildlife and to achieve the maximum environmental and health benefits that trees provide.

Information exchange and close working relationships with key landowners, stakeholders and community groups will ensure consistent good practice on tree planning, planting, establishment and management across the whole of Norfolk.



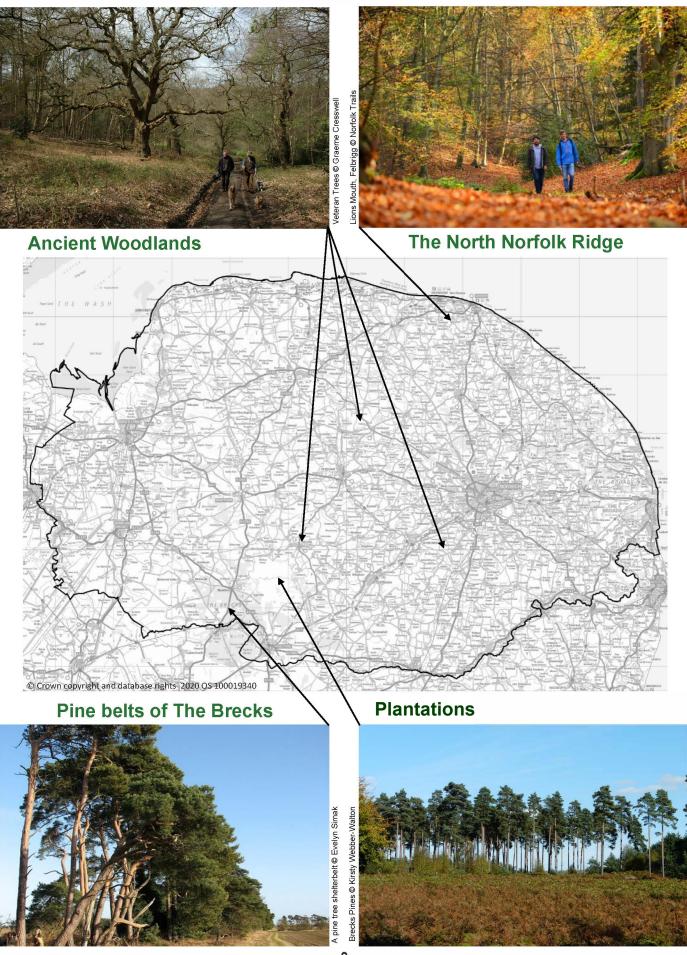
- 1. DEFRA: Tree Health Resilience Strategy. May 2018.
- 2. NCC: Tree Policy. V3 2018.
- 3. HM Government: A Green Future Our 25 Year Plan to Improve the Environment. 2018.
- 4. NCC Environmental Policy. November 2019.

# **Strategy Principles**



- 1. Ensure the right tree or hedge is established in the right place to ensure it thrives to maturity
- 2. Protect, improve and expand current tree, hedge and woodland populations
- 3. Connect fragmented woodland and create new 'stepping stone' woodlands
- 4. Celebrate, promote and raise awareness of the value of trees
- 5. Improve resilience to climate change and pests and diseases, by increasing species diversity using native and non-native trees as appropriate
- 6. Use robust biosecurity measures to avoid importing or spreading pests and diseases
- 7. Work in partnership with other organisations at both local and national levels to ensure a joined-up approach to tree establishment and maintenance in Norfolk
- 8. Engage and empower local communities to plant and care for new trees, hedges and woodlands
- 9. Use NCC owned land to pilot and demonstrate best practice in tree establishment and management.
- 10. Consider people, wildlife and landscape benefits when specifying trees
- 11. Use strong evidence to secure external matched funding to deliver this Strategy; providing best value for NCC
- 12. Support existing local businesses within the rural economy to create employment opportunities in the lifelong care of trees and woodlands
- 13. Reduce the use of plastics, peat derived compost and pesticides

## **Trees of Norfolk**



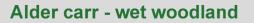






Hedgerow at Seamere Farm © Sue Perkin









## Wellbeing

Tree planting and young tree maintenance improves wellbeing, creates a sense of purpose, reduces social isolation and bonds communities.

It is an intergenerational activity suited to all and improves both mental and physical wellbeing. The trees then provide a legacy of green space with all the health benefits this brings.





## Flooding

There are several ways that trees can help to reduce or prevent flooding:

- By direct interception of rainfall
- By improving soil structure and infiltration rates
- By absorbing and storing water
- By preventing soil erosion from water run off
- By increasing frictional resistance thereby slowing water flow over land

## Damage to young trees

Few woodlands are reaching their full potential because trees, shrubs and plants are extensively browsed by mammals. Damage by non-native species such as some deer and grey squirrel is growing and likely to increase as climate change creates better conditions for these mammals.

Effective management will allow better and more diverse habitat to develop for the benefit of all wildlife and allow the natural regeneration of trees which is one of the very best ways to establish healthy woodlands.



## **Oak tree facts**

Oak trees cover more of the UK than any other tree.

2300 total species use oak trees, including 38 bird species, 229 bryophytes, 108 fungi, 1178 invertebrates, 716 lichens and 31 mammals.

Oaks live for a long time the Bowthorpe Oak in Manthorpe near Bourne, Lincolnshire is perhaps England's oldest oak tree with an estimated age of over 1,000 years.

Kett's Oak, Norfolk's most famous oak, was believed to be planted in the mid 1200s.

The timber, prized for its strength and durability, is still used in the construction of houses, furniture making and shipbuilding. A mature oak can absorb up to 70 litres of water every hour.

# Why write a Tree Planting and Resilience Strategy?

### Objective

To produce, adopt and implement a collaborative strategy for developing and managing a thriving, benefit-generating treescape that is in tune with local needs and aspirations.

#### Benefits

- Provides the most effective mechanism to achieve a good general tree coverage
- Helps ensure that evidence-based and consensus-driven decisions are made
- Creates accountability within defined timeframes
- Provides a basis for shaping robust planning policy in relation to trees<sup>5</sup>

'Norfolk County Council (NCC) resolves to build on its new Environmental Policy which acknowledges that trees are a vital resource of help in combating climate change alongside rewilding for carbon sequestration. Therefore, this council agrees to work with communities, landowners and partners to plant 1 million trees over 5 years which must amount to a net increase around Norfolk which will not only reduce carbon levels but will also benefit wildlife and provide valuable green space to improve the lives of Norfolk residents for years to come.' <sup>6</sup>



Bradwell community woodland planting (c) Ed Stocker

- 5. Trees in the townscape a guide for decision makers' Trees and Design Action Group. 2012.
- 6. Motion passed at full Norfolk County Council Meeting. 25th November 2019.



Thetford forest © Kirsty Webber-Walton

Weavers Way © Norfolk Trails



