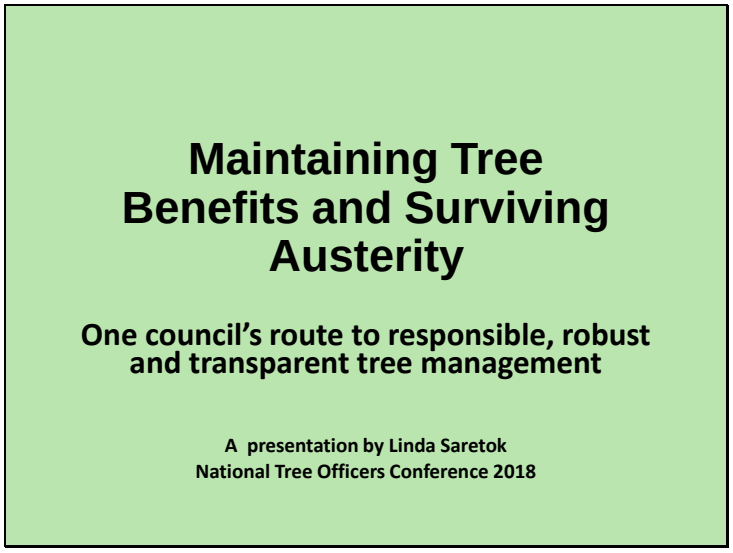
Slide 1



The Tree Risk Management Plan was adopted by full Council in 2011 and again in 2016 following a major revision. My team and I use the Plan to ensure we can retain and improve tree benefits and minimise the impact of financial constraints while meeting legal requirements and providing a great service to our citizens.

Slide 2

This is one of the larger urban conurbations in the district, Clevedon, with Bristol Channel to the left, the M5 motorway to the east and surrounded by rural landscape and villages. A typical mix of the urban and the rural.

Slide 3

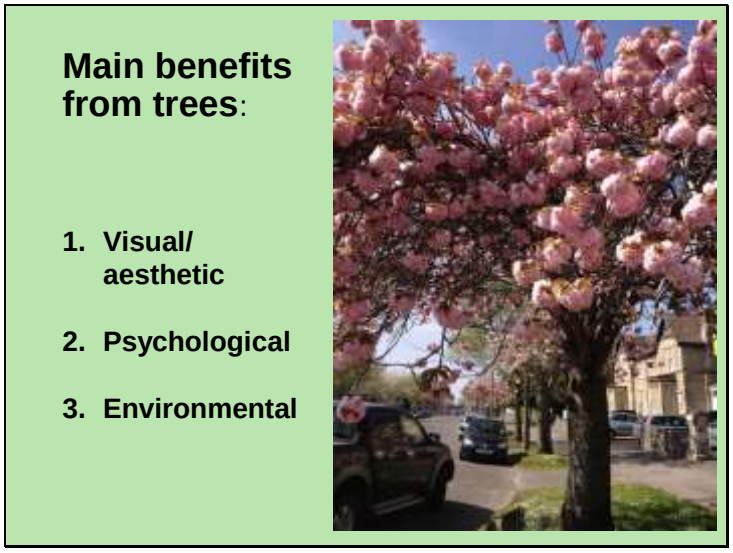
North Somerset: the numbers

- **145 square miles**
- **210,000 residents**
- **680 miles of public highway**
- **900 hectares of public open space**
- **1.2 million trees (2013 iTree survey)**
- **300,000 trees on council land**

Slide 4

I manage a team of tree officers whose tasks span the entire spectrum of local authority responsibilities, from looking after the trees we own, to planning obligations and other regulatory work.
I get to work out the policies and strategies, the details of our procedures, and make sure my team delivers on these, but I also get involved with the bigger picture on a holistic green infrastructure level, that reaches beyond authority boundaries, working with groups like the West of England Nature Partnership, writing for example a joint green infrastructure plan for 4 local authorities in the southwest. For me, in this job, being a manager of hundreds of thousands of trees, and potentially have control over a million more, there is a real sense of working for the greater good. But the job comes with great responsibility and I think also a moral obligation to do the best we can in maintaining the benefits of trees whilst keeping people as safe as possible.
It’s worth reminding ourselves of the tree benefits from the residents’ point of view:

Slide 5



You should by now all be aware of Dr John Flannigan's research into resident's feelings towards street trees. Basically residents love trees and they believe tree benefits are really important to their wellbeing. And it's important to understand that residents first and foremost like trees because they:
1. enhance the look of streets/buildings/gardens
2. contribute to a sense of wellbeing
3. mark the seasons, and support wildlife – their primary concerns are not things that us professionals talk about al the time, reduction in pollution, SUDs

How do we best maintain the benefits? That is almost a separate subject for another conference, but one thing is sure: if you get tree risk management wrong, it is highly likely you will reduce the benefits of trees by unnecessary tree felling or too regular reduction work.

Slide 6

The background to the Tree Risk Management Plan is that the Council I work for has been under severe austerity measures for some 12 years since the leading political party decided to kickstart the project of savings and cuts that all council now suffer badly from. Many teams within the Council have had to find inventive ways of keeping services going.
For me, the challenges have been around dealing with a 50% cut in the number of tree gangs and budget, and the loss of one full time tree officer, plus the increased workload for my two tree officers when colleagues in supporting roles have left the organisation and not been replaced.

My annual budget for tree work is now £150,000, which covers the daily use of one team of three tree surgeons. It also has to cover the cost of any complicated traffic management, road closures, and extra teams for the annual pollarding of street trees and removal of epicormics etc, as well as any tree planting and watering of new trees.

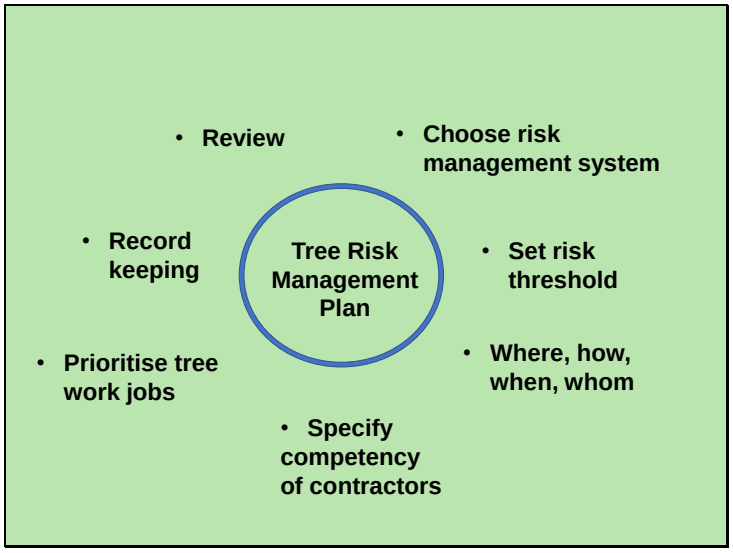
The main priority for my employer is to keep risk of harm to an acceptable level, across all its land, buildings and activities, but another priority, specific to trees, is to maintain the benefits of a growing green resource. In a risk averse organisation, the balance between the two often leans towards health and safety management, to the detriment of the benefits of trees. The management of our own tree stock also needs to be balanced with my team's other duties, which are necessary and valued by the community.

How on earth do you manage 300,000 trees on £150K, managing the risk and at the same time making sure the stock keeps providing the benefits that most of the residents want?? How many trees can you realistically inspect or survey knowing that the officers have a million other things to do too? How can you get all the most necessary tree work done? On the face of it, this seems a real challenge to deliver. I will show you how I did it, how I have

made efficiency savings whilst maintaining a strong team, and protecting my employer and the citizens of the district. I can also add that I have not had any significant cuts to my tree budget since this plan was adopted, which is testament to its effectiveness.

I needed to design a Plan that would ensure that we sustain the tree population, that we meet the Council's legal obligations, that our response to the risk from trees is proportionate, and as far as possible, keep the risk of harm to people as low as is practicable within our resources.
The Plan follows best practice in risk management, let's have just a quick look at the pertinent sections.

Slide 7



So it may look simplistic, but it is the detail that makes it robust and defendable.

My worst nightmare is no longer being audited, because I can lean on the detail in the Plan, and the working documents that support it.
I will not be able to go through all the detail of the plan today. Instead I will focus on a few bits that really changed the way we manage trees: the risk management system, the trees that should be proactively surveyed, and the prioritising of the tree work.

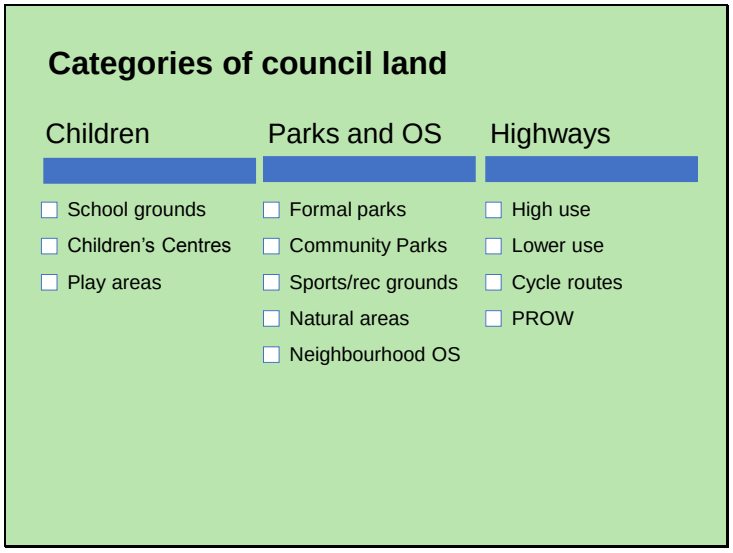
Slide 8

It made complete sense to use QTRA as the basis for our policy, because, we have miles and miles of roads like this one in the photo but also because it's robust and relies on facts and common understanding of risk.

We've been using it since 2009 both for our own trees and for protected trees, in terms of disputing 5 day notices or refusing tree work applications for example. It helps us identify, analyse and prioritise risk, but it also helps us communicate with colleagues and citizens, as the process is similar to how other parts of society calculates and compares risk. It also supports us in that we won't ever say a tree is "safe" as the tree risk falls somewhere along a spectrum, and it's comforting to think that we'll never have to be on a witness stand defending that we said something wouldn't happen to a particular tree. This is particularly important if you don't have enough resources to look at every tree.

There are roughly 300, 000 trees on council land and I have two tree officers in my team - where do you draw the line, when you can't proactively inspect every tree? It's essential that you can explain how you decided where to draw the line, especially since it may have to be used in court to defend the council. Let's look at how I did it.

Slide 9



I listed the categories of land that we are responsible for and looked at the usage of the sites within each category to figure out which sites should be proactively surveyed, and in what order. It looked something like what you see on the screen.

For those of you who are not familiar with QTRA, it's very valuable for this exercise in that it uses land use ranges, and each of these relate to a range of occupancy levels by cars, pedestrians and timeframe for anyone who might be stationary under the tree. You can use this to put your categories of land into the most relevant land use range for prioritising.

Some categories were more straight forward than others: anything to do with kids we've always surveyed proactively, and we always make conservative assessments and assume constant occupancy under each tree (ie high value target).

For the parks and open spaces I used data from visitor surveys as well as my and my team's local knowledge.

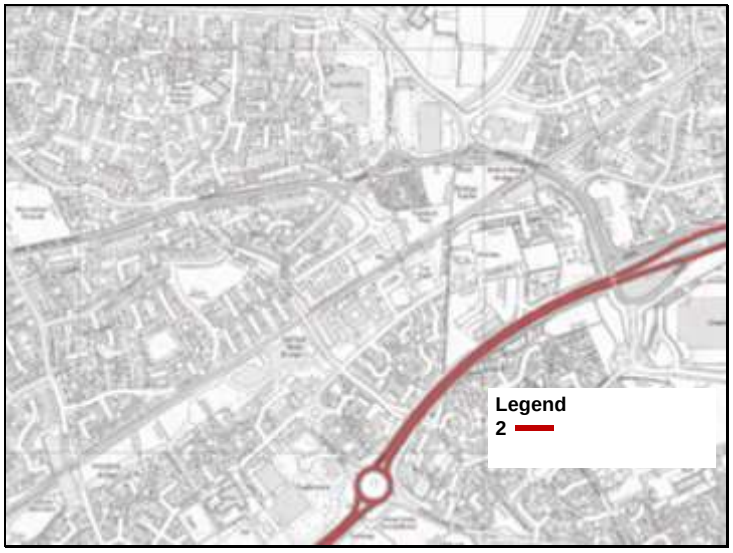
The roads were trickier. There's a total of 680 miles of highway. The majority of them tree lined. There was no way we could proactively survey all 680 miles, so a line had to be drawn somewhere and this is how I worked that out:

Slide 10

This is a bit of our road network.

I used the so-called “road hierarchy categories” which replace the old system of A, B, C and D roads. Each local authority is meant to assign these to its network, and our highways team had done this in 2015 and helpfully made a dataset for our mapping system. The hierarchy categories explain in a much more detailed way how roads link together in terms of importance to the day to day functionality of the network. It relates to traffic count numbers, but also to the destination of the road, and which other roads it links with.

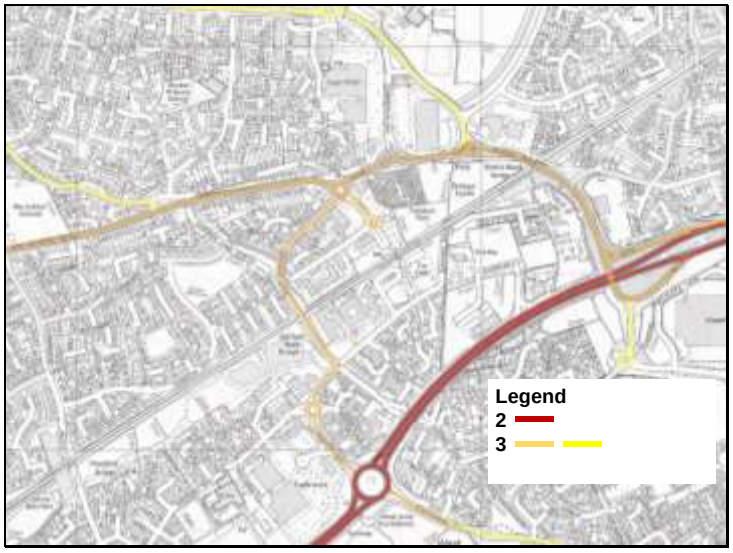
Slide 11



Hierarchy 2 is the main spine of the network, the A roads, the strategic routes that must cope with heavy traffic between the larger towns.

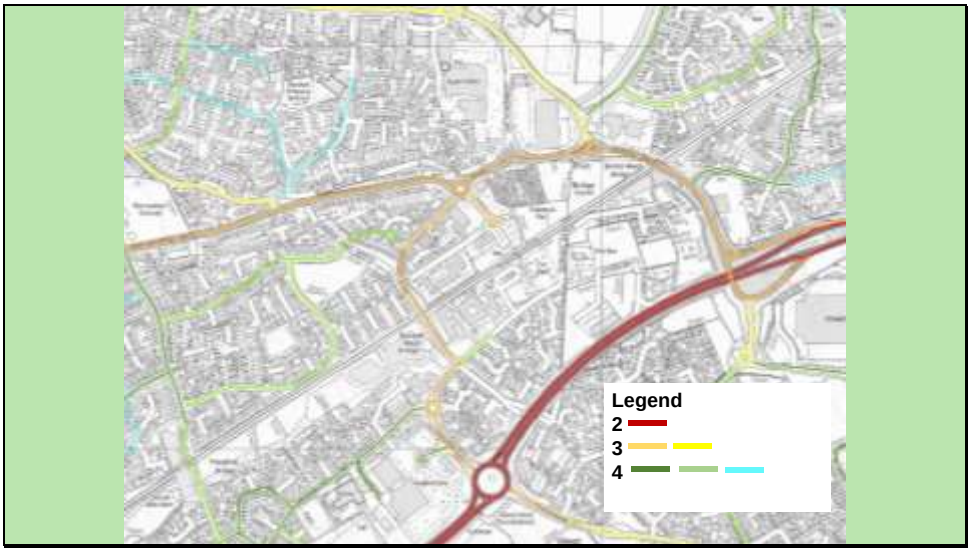
(Hierarchy 1 is the motorway, if you're wondering, and they're not maintained by local authorities.)

Slide 12



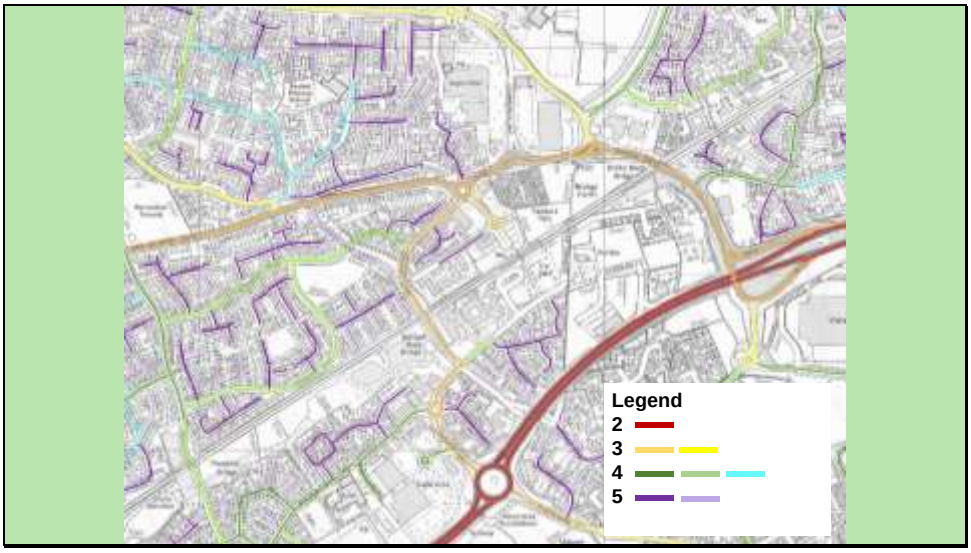
Hierarchy 3 are main and secondary distributor routes, it can also be main routes within urban areas, some of these are B roads.

Slide 13



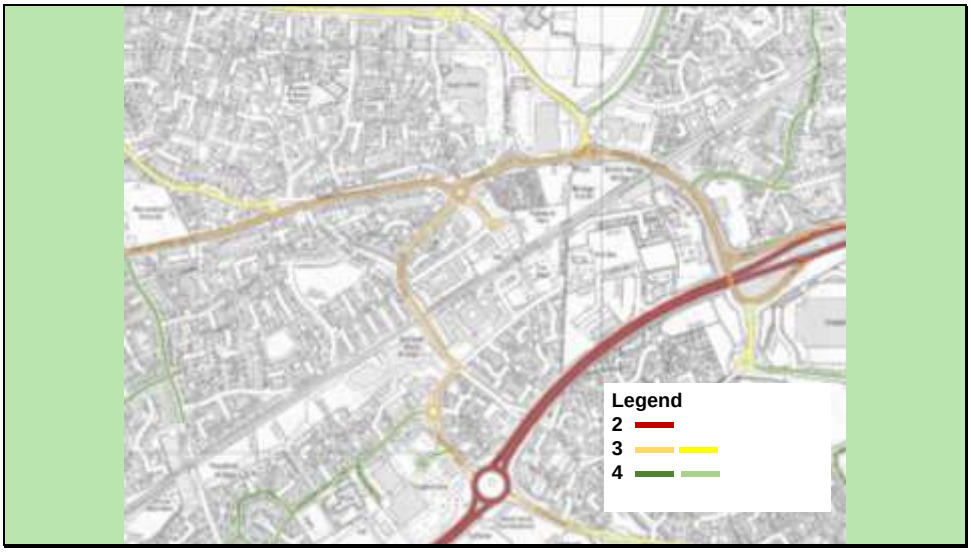
Hierarchy 4 are generally roads that link the distributor routes but also local access roads and some estate roads.

Slide 14



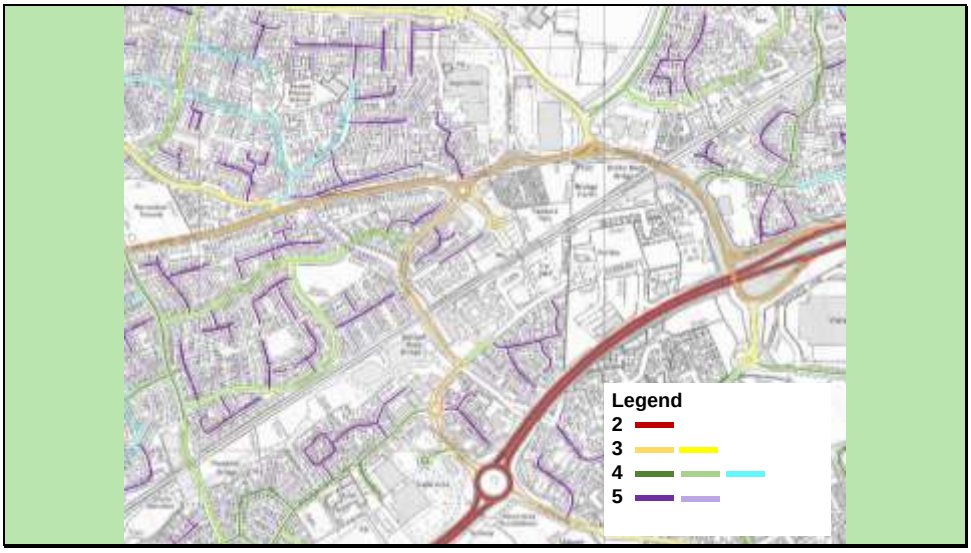
Hierarchy 5 are mostly rural through routes and access roads. Hierarchy 4 and 5 roughly corresponds with D roads.
So, where to draw the line? Looking at the character and traffic counts I drew the line between 4 and 5, as there is a distinct change in character and drop in traffic levels. These roads are within QTRA land use or target ranges 1-4. And so I ended up with this:

Slide 15



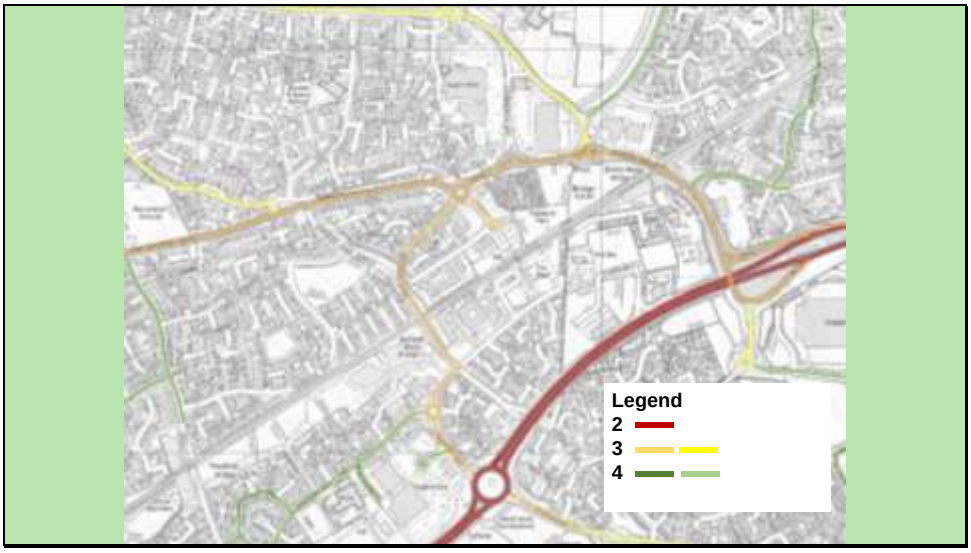
247 miles of the total 680 miles of highways to **proactively** survey. The roads that aren't in colour on this map will not be proactively surveyed.
Going back again to the view of all the hierarchy road for comparison…

Slide 16

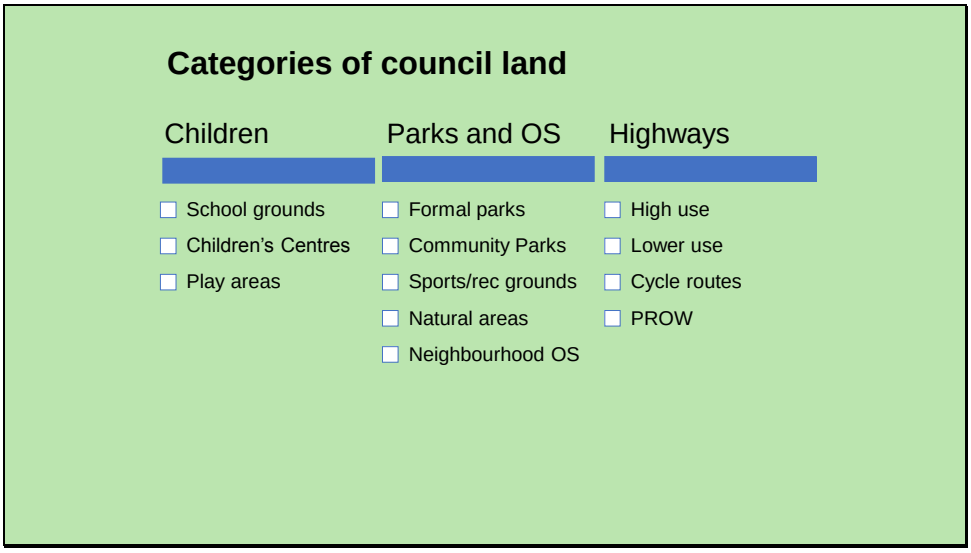


You can see there are many roads we will not survey proactively at all.

Slide 17

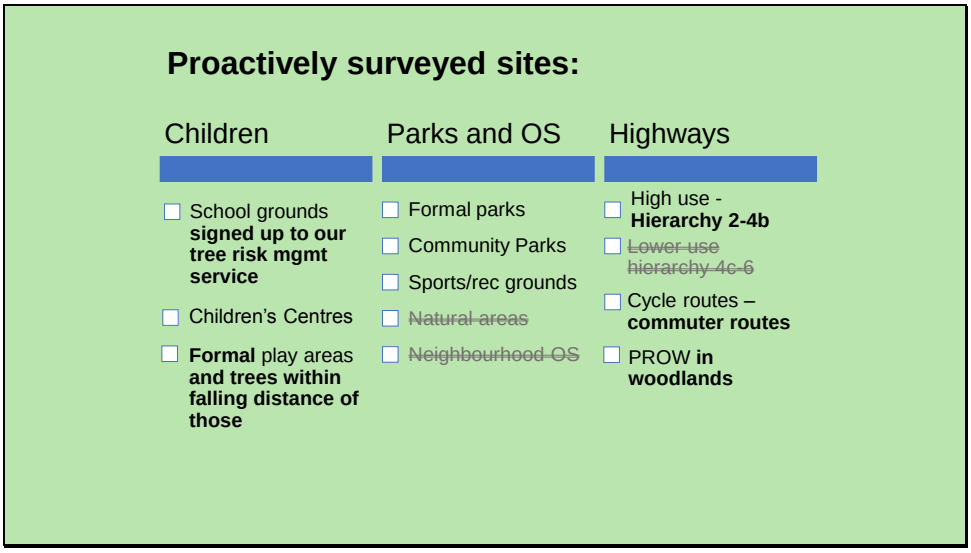


Slide 18



I went through all our sites in a similar way, and could go from this list that you've saw before:

Slide 19



to this modified list:

These are now the sites that are proactively surveyed. Trees in other site may be looked at on an ad-hoc basis, triggered by citizen enquiries or other site visits. The modifications included:

For schools, only trees at schools that pay a subscription to our schools tree risk management service are surveyed. We do children's centres, and we do only the formal play areas.

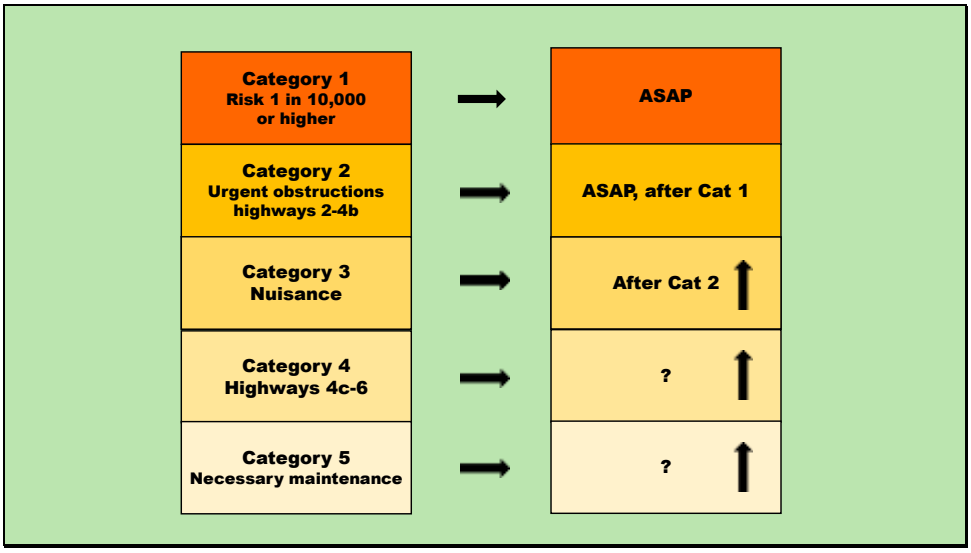
In parks and open spaces, I removed natural areas such as woodlands and the so-called neighbourhood open spaces which are occupied in much lower numbers than formal parks and so on.

The high use highways were defined as belonging to hierarchy 2, 3 and to 4b. We do the high use commuter bike routes too, and the public rights of way in our woodlands, as these are used a lot.

So this is now what we survey proactively every four years. All these sites fall within QTRA land use ranges 1-4. It saves us a considerable amount of time. Surveying all the 247 miles of highway takes 12 days, 60 schools take 9 days, 73 formal play areas take 5 days, 25 formal parks and open spaces take 4 days. The woodland PROWs take 4 days. This includes travel time between the sites and record keeping. So, roughly 35 days for the lot.

The amount of work we instruct to our contractor as a consequence of our risk surveying has greatly reduced. And this leads me on to the third and final bit that I want to look at in a bit more detail: prioritising tree work instructions for our contractor.

Slide 20



This relates to all tree work we instruct, not just work to reduce risk of tree failure. We really have to be super strict with the work that we instruct. Having these priorities adopted by full council means that we can lean on them if we get complaints or queries.
I have 5 broad categories of tree work, each with a number of sub-categories.

Category 1 is the unacceptable risk, a result of proactive or ad-hoc QTRA risk assessments. The work is prioritised according to the risk index for the tree, so the highest risk gets reduced first. If traffic management equipment and additional staff have to be organised and that causes a delay in seeing to the higher risk job, then lower risk work may be carried out – this way we are using our resources in the best way.

Category 2 is complete or partial obstructions on the most important highways, the sub categories here would be for example trees forcing persons into the carriageway or obstructing visibility splays. This work is done after the Category 1 jobs, or in between those.

Category 3 is for trees that cause damage to property, and because of the potential cost to the council if these aren't done, they are third on the list.

Category 4 is similar work as in category 2 but on highways that are less important to the network.

And category 5 is for any necessary maintenance to our own trees, which might be to facilitate organised public events, to facilitate access to open space and removal of dead but not dangerous trees. The gang will work away at Cat 4 and 5 as best they can after the top 3 categories.

Certain jobs in categories 2-5 may at any time be pushed up the list due to changing priorities to the council, but they never trump any Cat 1 job.

If a resident requests work, and it doesn't fit into any of the sub categories, then we won't instruct any works in that instance. We have to be ruthless with this, as we have such limited resources.

This system really leaves no questions around what the reasons must be for us to instruct tree work in the first place, and how it is prioritised. It helps us communicate with citizens around our priorities and their expectations. Having the priorities included in the policy means we can lean heavily on them if we get complaints or queries about how we spend our resources.

Example from the Key to Priorities:

Slide 21

Coming to the end of this talk…

There's a red thread through my Tree Risk Management Plan, of foresight, responsibility, transparency and duty. I wanted us to be open about our processes, and in that way protect the citizens of North Somerset and the Council. Also, I wanted the outcome of my team's work in relation to this Plan to be the delivery of maximised tree benefits. And the evidence over the past 7 years is that it has delivered on all those points, by producing the framework for surveying, by reducing unnecessary tree work and supporting me in retaining a strong team and a sustained budget for tree work.

Thanks for listening and…get in touch if you have questions.

Slide 22

Contact:
linda.saretok@n-somerset.gov.uk

www.n-somerset.gov.uk/trees

Slide 23

Example from Key to Priorities on next slide…

Slide 24

Category 1. "H&S"		
Trees which:	Group ID	Group priority:
A. Pose a risk of 1/10,000 or higher following QTRA, or have already failed but where risk of injury/damage is still unacceptable	1A	1. QTRA index 1/1 to 1/1K 2. QTRA index 1/3K to 5/5K 3. QTRA index 1/10K (4. QTRA index 1/30K to 1/50K)
B. Have already caused serious accidents, such as smashed bus windows	1B	As soon as practicable, after QTRA index 1/1 - 1/1K
C. Clearing of growth to allow safety inspection	1C	
Category 2. "Urgent highway obstructions"		
Trees which:	Group ID	Group priority:
A. Completely obstruct traffic (all roads)	2A	1. Highway hierarchy 2, AND footpaths in play areas, on school routes 2. Highway hierarchy 3a AND footpaths in formal parks, community parks, sports/rec grounds, council car parks. Toll Road (Kewstoke Road) 3. Highway hierarchy 3b AND Strawberry Line 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br AND woodland PROW 7. Highway hierarchy 4bu

		8. Highway hierarchy 4cr/cu 9. Highway hierarchy 5 10. Highway hierarchy 6
B. Force persons into road	2B	1. Highway hierarchy 2 2. Highway hierarchy 3a 3. Highway hierarchy 3b 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br 7. Highway hierarchy 4bu
C. Cause physical injury or damage (eg. sharp ended branches, stiff low hanging branches)	2C	1. Highway hierarchy 2 AND footpaths in play areas, on school routes 2. Highway hierarchy 3a AND footpaths in formal parks, community parks, sports/rec grounds, council car parks, Toll Road (Kewstoke Road) 3. Highway hierarchy 3b AND Strawberry Line 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br AND woodland PROW 7. Highway hierarchy 4bu AND 1. Worst consequence of impact with branches 2. Second worst consequence etc
D. Obstruct visibility splays on roads (hierarchy codes 2, 3, 4ar-4bu) or junction with these roads	2D	1. Highway hierarchy 2 2. Highway hierarchy 3a 3. Highway hierarchy 3b 4. Highway hierarchy 4ar

		5. Highway hierarchy 4au 6. Highway hierarchy 4br 7. Highway hierarchy 4bu
E. Force vehicles into oncoming traffic on bend or at a junction	2E	1. Highway hierarchy 2 2. Highway hierarchy 3a 3. Highway hierarchy 3b 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br 7. Highway hierarchy 4bu
F. Obstruct bus routes / bus stops / waste vehicle routes	2F	1. Worst consequence of impact with branches 2. Second worst consequence etc
G. Obstruct road signs, zebra crossings, traffic lights, street lights	2G	1. Highway hierarchy 2 2. Highway hierarchy 3a 3. Highway hierarchy 3b 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br 7. Highway hierarchy 4bu AND 1. warning signs, traffic lights, zebra crossings 2. direction signs 3. information signs 4. speed signs
Lower priority than categories 1 and 2:		
Category 3. "Nuisance"		
Trees which:	Group ID	Group priority:

A. Are causing damage to private property	3A	1. Highest cost of repair/compensation 2. Next to highest cost etc If equal sort by work instruction date and do oldest first
Category 5. "Necessary maintenance"		
Work required:	Group ID	Group priority:
A. To facilitate organised public events	5A	Sort by date of event
B. To facilitate access to open spaces: **• Public access** **• Grass cutting/works access**	5B	1. Most used open space, If equal sort by work instruction date and do oldest first
C. Removal of dead but not dangerous trees	5C	1. Highest impact on use/appearance of open space public visibility If equal sort by work instruction date and do oldest first
D. Repollarding (branch growth at stage where pruning is required or else branch is will fail within 6 months to 1 year)	5D	1. Highway hierarchy 2, railway AND footpaths in play areas, on school routes 2. Highway hierarchy 3a AND footpaths in formal parks, community parks, sports/rec grounds, council car parks, Toll Road (Kewstoke Road) 3. Highway hierarchy 3b AND Strawberry Line 4. Highway hierarchy 4ar 5. Highway hierarchy 4au 6. Highway hierarchy 4br AND woodland PROW 7. Highway hierarchy 4bu 8. Highway hierarchy 4cr/cu

		9. Highway hierarchy 5 10. Highway hierarchy 6
E. Turn into pollard by topping (where required for tree not to collapse within 1 year, and suitable for species)	5E	
F. Anti-social issues	5F	
G. Good management and maintenance for healthy and sustainable tree cover	5G	
H. Work agreed following formal complaint	5H	
i. Obstructing access to private property	5i	
J. Obstructing CCTV visibility splays	5J	