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The Sheffield street tree dispute: a case of "business as usual" urban management?

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Press coverage of the Sheffield street tree dispute showed images of protestors and yellow ribbons on trees threatened with felling as part of a highly charged and public argument between the council and some of its citizens. However, a closer analysis of the highways management programme shows that it was not simply a case of two parties in conflict. This paper pulls on a wide range of secondary data sources to explore Sheffield's street tree dispute by examining the urban management approach taken by the local authority. Using the place-keeping concept as an analytical framework, the paper will demonstrate how the Sheffield case reflects "business as usual" maintenance practices undertaken by local authorities when contracting out management work. The analysis also provides evidence showing how the Sheffield case demonstrates poor contract design, governance processes, evaluation and communication practices that had ramifications for the city that went beyond its street trees.

List of Acronyms: SCC: Sheffield City Council; STAG: Sheffield Trees Action Groups; ESD: Ecological Services Department (as part of SCC); PFI: Private Finance Initiative; PPP: Public-private partnership; CCT: Compulsory Competitive Tendering; LGSCO: Local Government and Social Care Ombudsman; ITP: Independent Tree Panel; SSTP: Sheffield Street Tree Partnership ; NVDA: non-violent direct action

Keywords: decision making; governance; public-private partnership; place-keeping; street tree management

1. Introduction

"It's a highway maintenance contract, not a tree programme."

"Nobody on the Council has a penchant for felling trees – the goal is always retention of trees."

Paul Billington, Sheffield City Council, Strategic lead for highways maintenance (quoted in Crump, Payne, and Stribley 2022, 306–307).

It is an opportune time to write about street trees as countries around the world suffer their hottest years on record and the urban experience becomes more uncomfortable. Residents

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living on streets without tree canopy are exposed to significant heat compared to those in leafier neighbourhoods (Taleghani *et al*. 2019) where street trees and vegetation cool the buildings and road surfaces (Taylor, Salih, and Cameron 2017). In England, there is political support for tree planting: the government is promoting and funding urban tree planting, through its Urban Tree Challenge Fund. Street trees are long-term assets which are largely managed by local authorities but are often considered risky (Woudstra and Allen 2022) and hazardous when planted along roadways transporting fast-moving traffic (Goodwin 2017). Set amidst climate and biodiversity concerns, as well as ongoing budget cuts, local authorities face the difficult challenge of managing existing and new street trees. This paper takes the case of Sheffield, a city often described as the UK's greenest, and examines how street trees have been managed through its *Streets Ahead* programme.

Against a backdrop of significant cuts to the council's budget, Sheffield City Council (SCC) signed a 25-year Private Finance Initiative (PFI) contract, named *Streets Ahead*, with Amey, a private contractor, for highways and pavement maintenance which included the city's street trees (2012–37). Major works were planned in the first 5 years (called the core investment period), which involved the felling and replacement of thousands of street trees. This paper will outline how this prompted protests around the city as well as criticism by experts.

To examine Sheffield's approach to street tree management, this paper applies the place-keeping analytical framework where place-keeping is a holistic concept made up of inter-related *dimensions*. In this way, place-keeping permits a critical discussion of the implementation of *policy* instruments employed in the *Streets Ahead* contract. As a framework applied to long-term management, place-keeping helps illustrate how the *design and maintenance* of SCC-endorsed urban tree management was flawed, but not wholly controversial, often enacted elsewhere in the UK (Woudstra and Allen 2022). The paper will also demonstrate that the *Streets Ahead funding* and *partnership* client-contractor arrangements are found elsewhere. The paper highlights instances of poor practice in Sheffield centred around the *governance*, the way in which *evaluation* was used to inform the decision making and, crucially, how this was *communicated* to a wider public.

2. A brief overview of Sheffield and its street trees

Sheffield has over 36,000 street trees within a tree population of 2.7 m managed by the local authority (SCC 2018). The street trees have varied historical precedents as the city expanded and industrialised. For example, between the 1850–70s, landscape designer Robert Marnock was employed to lay out the Victorian suburb of Nether Edge with tree-lined streets. In less affluent areas of the city, street tree planting was overseen by city committees. An avenue of 130 roadside lime trees was planted on the newly constructed Rivelin Valley Road in the early 1900s by the water committee and provided much-needed employment (Winson 2017). 97 street trees were planted in 1919 in western Sheffield to "commemorate the sacrifice and service of … former pupils" of local schools who died during World War 1 (Allen 2022, 118). Street trees were planted in Garden City-influenced council housing estates of the 1930s, e.g. Parson Cross, Shiregreen and Firth Park. As trees aged and street tree works were required, SCC's Ecological Services Department (ESD) engaged with local communities. However, this was lost in the 1980s when ESD was abolished and tree maintenance was transferred to the Highways Maintenance Department (Flinders and Wood 2019). In the 1990s, there was a "continued acute shortage of resources allocated for trees" in the city (Lewis 1991, 267).

This shortage continued until the *Streets Ahead* programme was announced in 2012, discussed after the outline of the paper's methodological approach.

3. Methodological approach of the paper

The paper applies the normative approach of place-keeping to the management of Sheffield's street trees with particular focus on the core investment period of the *Streets Ahead* programme when the majority of tree work was carried out. This builds on the author's research approach of in-depth exploration of urban management in practice (e.g. Dempsey, Burton, and Duncan 2016).

Place-keeping evolved as a conceptualisation of open space management building on longstanding normative models (e.g. Carmona, de Magalhães, and Hammond 2008; Wild, Ogden, and Lerner 2008) and has been applied to various urban settings (e.g. Jansson *et al*. 2019; Buijs *et al*. 2019; Mattijssen *et al*. 2017). Place-keeping developed in response to the over-emphasis in policy and practice on the *place-making,* or design, phase of place (Figure 1; Dempsey and Burton 2012). Place-keeping focuses scrutiny on ongoing stewardship and management driven by the need to manage, maintain and invest in newly created/regenerated places post-implementation, once the design phase is completed (Dempsey, Smith, and Burton 2014). To do this, place-keeping conceptualises inter-related dimensions of partnership, policy, governance, funding, evaluation, design and maintenance (Dempsey, Smith, and Burton 2014) and communication.

The paper calls on publicly available data including newspaper archives, televised interviews, non-/academic publications, blogs, recordings of "Independent Inquiry into the Street Trees Dispute" public hearings (in 2022–23) and previously unpublished council documents made available through Freedom of Information requests, including the redacted *Streets Ahead* contract and the city's street tree strategy. Data were analysed via a process of content analysis using thematic and deductive coding, allowing nuanced scrutiny of the place-keeping dimensions themes according to allow the phenomena of urban management to be described and explained (Tesch 2013; NatCen Learning 2012). It also permits an examination of existing data sources in the context of "business as usual" tree management practices.

This study has limitations. First, it is outside the scope of this paper to explore the full range of relevant aspects of the Sheffield street tree dispute, including the legal, ecological and economic ramifications of decisions made and actions implemented. These are explored elsewhere (e.g. Mynors 2022; Flinders and Wood 2019). Second, this study does not call on primary data (e.g. interviews), focusing wholly on secondary data. Between 2015–2020, as public scrutiny intensified and legal proceedings conducted, academic research involving Council staff was limited (Flinders and Wood 2019 is a notable exception). The legal proceedings closed down on-the-record conversations about the dispute. Research conducted elsewhere by the author asking participants to reflect critically on decision-making processes underlines the importance of doing this as part of a retrospective longitudinal case study. People need time to be able to effectively evaluate their own performance which can be difficult to do "in the moment" of a project when "success" is the focus and if there is potential risk to participants' professional standing if a project is considered to be a failure (after Syed 2015; Dempsey, Burton, and Duncan 2016). It is therefore hoped that academics will revisit the dispute in years to come. All data analysed are in the public domain at the time of writing. The author was not directly involved in the street tree dispute nor part of the street tree protests.

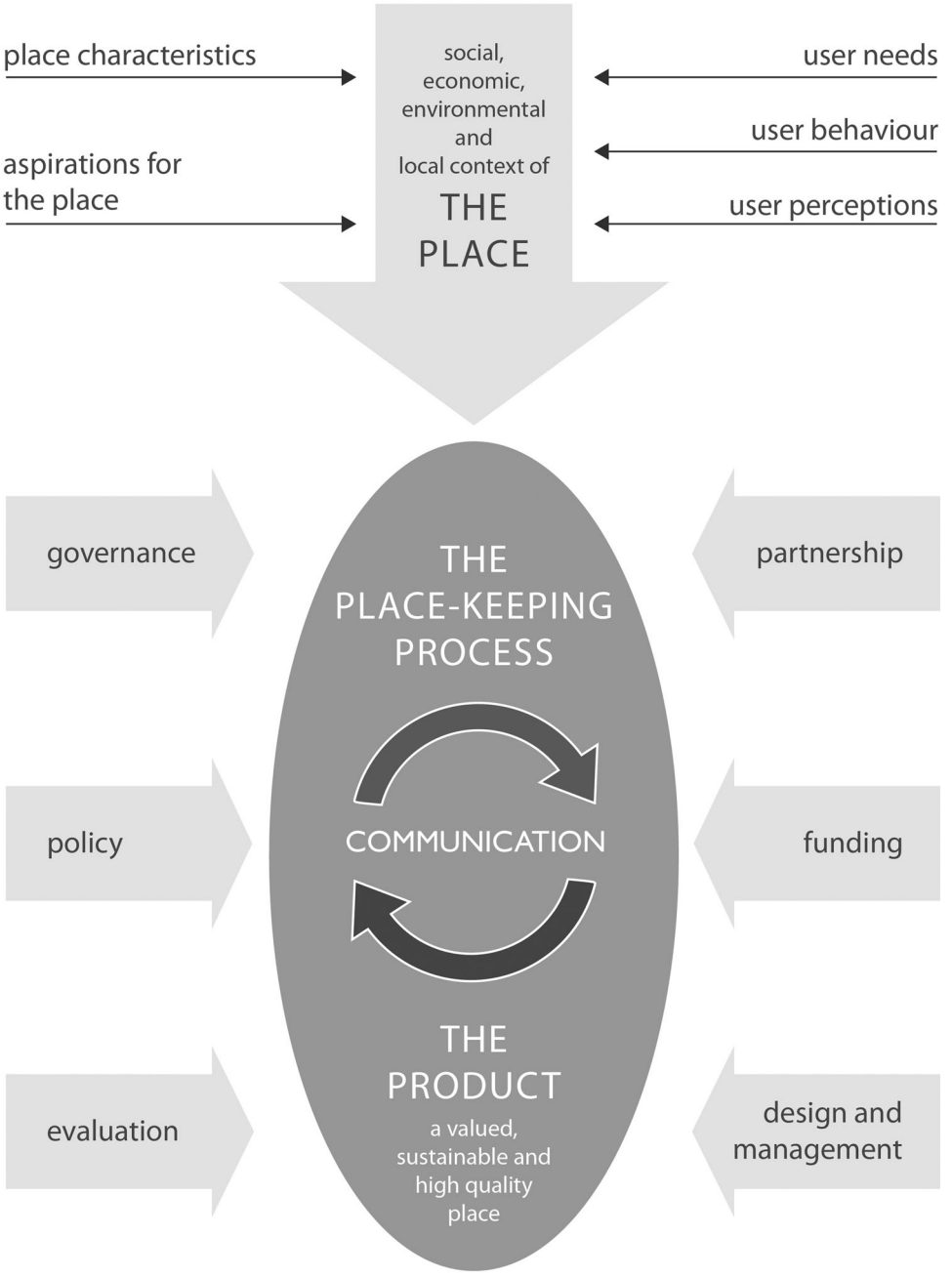

Figure 1. The concept of place-keeping employed as an analytical framework.

4. Local authorities and urban tree management in the UK

The legal right for UK local authorities to plant and manage street trees goes back to the 1890 Public Health Amendment Act (Woudstra and Allen 2022, 155). Many of the UK's street trees were planted during the Victorian or Edwardian eras (Johnston 2017). As early as the 1930s, highways engineers had the legal responsibility for tree

planting but not always the enthusiasm, favouring an approach that kept roadways and pavements clear for freely moving traffic (Pettigrew 1937). Street trees were often removed when electric trams were introduced (1890s–1900s) as the overhead cabling infrastructure left inadequate space for tree crowns (Johnston 2015). Where street trees were planted, limes and plane trees were favoured by Victorians to counter the polluted city air. However, this led to inevitable problems in streets that local authorities continue to deal with: large-growing trees that "outgrew these confined spaces" (Johnston 2015, 184).

UK local authorities are now bound by the 1980 Highways Act to ensure that no tree will "hinder the reasonable use of the highway by any person entitled to use it, or so as to be a nuisance or injurious to the owner or occupier of premises adjacent to the highway" (HM Government 1980, 96). In this way, Pettigrew's observation still holds today. The Act also stipulates that the local authority is liable to pay compensation to injured parties in the event of any damage. The implementation of these legal requirements can be problematic when local authority budgets are cut, as was the case in the 1980s.

5. The legacy of marketization in urban management

In the 1980s, the Conservative government introduced Compulsory Competitive Tendering (CCT) to local authorities through the Local Government, Planning and Land Act 1980. CCT was designed to open public service delivery to the market, making contracts available to non-government sectors in the pursuit of reducing costs (Boyne 1998). Even if a local authority demonstrated that they were more cost-effective at delivering public services than their non-public sector counterparts, CCT regulations barred them from applying, meaning marketization was inevitable (Dempsey, Burton, and Selin 2020). Lindholst *et al*. (2020) recently conducted a large-scale international survey of urban management, examining the delivery of roads management in Norway, Sweden, Denmark and England. They found that private contractors are the sole practitioner employed by 32% of the English local authorities surveyed, compared to 21% in Sweden, 13% in Denmark and 11% in Norway. The research shows that "the majority of municipalities in England rely on one predominant provider type" while the Scandinavian countries rely more on a mix of providers to deliver road services (Lindholst *et al*. 2020, 204). English local authorities reported using private contractors to achieve low costs, benchmark prices and achieve high quality. This echoes Britt and Johnston's (2008) research (a decade earlier) that most UK local authorities contracted out their urban tree works. The continued contracting out of public service provision, while achieving cost savings, has had significant negative effects, including de-skilling the workforce, standardising tasks and the loss of specialist arboricultural knowledge (Britt and Johnston 2008; Dempsey, Burton, and Selin 2020).

5.1. Public-private partnerships in the UK

Perhaps an inevitable result of CCT, the public-private partnership (PPP) emerged widely in the 1990s. Described as a form of public investment into a partnership between public, private and sometimes third sector organisations, PPPs became a popular governance structure for delivering a range of public services at the large scale. These include school and hospital construction as well as public realm services

(Grimsey and Lewis 2005; Bovaird 2006). Akintoye and Chinyio (2005) described Private Finance Initiative (PFI) as the main mode of delivery for PPP schemes where public sector services are delivered by the private sector on behalf of government. Introduced in 1992, PFI was a financial mechanism to secure private finance and "increase investment in … infrastructure without affecting public borrowing" (Whitfield 2001, 5).

PFI has been particularly popular for road infrastructure (Eadie, Millar, and Grant 2013) as it lends itself to long-term projects and highways-based PFIs can be found in Birmingham (started in 2010), Hounslow (2012), Isle of Wight (2012) and Sheffield (2012). As many PFI contracts last for 25-30 years, Kurul, Zhou, and Keivani (2013, 235) state that "in principle, PFI should have a natural relationship with Sustainable Development," given its implicit long-term nature "to achieve maximum benefits and reduce the risk transferred to the private sector." However, this has not been borne out in practice (Marx 2019) for a variety of reasons including fluctuating project requirements and costs and a limited role of the "public" (Henjewele, Fewings, and Rwelamila 2013). Sherratt, Sherratt, and Ivory (2020) argue for more analysis of PPPs within their wider contexts, as the societal impacts can often be ignored. It is worth noting that since 2018, the UK government has withdrawn the PFI model for all new investments (discussed later). However, it continues to honour existing operational PFI contracts as some of them will be funded until 2050 (National Audit Office 2020).

Marketization has therefore been a long-standing and significant driver in UK public service management, the legacy of which is still evident in many local authorities today (Dempsey, Burton, and Selin 2020). It is against this backdrop, and within the context of national austerity measures brought on by the 2008 global financial crash, and loss of public sector arboricultural skills, that this analysis of urban tree management in Sheffield takes place.

6. Managing Sheffield's street trees: the policy and funding context

The *Streets Ahead* urban management programme was designed to improve Sheffield's highway network between 2012 and 2037 and is not just about street trees. Alongside replacing half the city's street trees, *Streets Ahead* is upgrading the city's roads, including carriageway and pavement resurfacing, bridge refurbishment, new traffic signal installation and street light replacement. The £2.1bn programme aims to "change Sheffield's reputation from pothole city and all the connotations of decline and greyness that suggests" (Whitelaw 2012, 13). Originally negotiated by the Liberal Democrat party then in power, *Streets Ahead* was signed off by the Labour council in 2012. According to SCC's Chief Executive at the time, "PFI was the only game in town" (Mothersole 2022). Applying a citywide improvement programme was considered by the council to be the best way to tackle decades of underinvestment in all aspects of streetscene, exacerbated by ongoing national funding cuts (Flinders and Wood 2019).

The UK government's Department of Transport have contributed £1.2bn, making it a significant financial contributor alongside SCC. This is unsurprising given the scale and long timeframe of *Streets Ahead*, alongside the national policy support for PFIs already discussed. *Streets Ahead* is underpinned by a legally binding 25-year contract which the private contractor, Amey, won, which included the task of street tree replacement and maintenance on behalf of SCC. At the outset of the contract, SCC

stated: "75% of the city's street trees were assessed as being mature or over mature with the potential of a catastrophic decline in the health and safety of a number of street trees being highly likely if a sustainable programme of replacement was not undertaken" (SCC and Amey 2012a, 3). This statement is referred to later. Most of the work (e.g. resurfacing, streetlight replacement and tree works) was done during the 5-year core investment period (2012 onwards). Sidders (2010, 3) points out that outsourcing tree contracts is not unusual, citing examples of Birmingham, Nottinghamshire, Buckinghamshire and most London boroughs.

The contract was considered to be commercially sensitive and so, not unusually, it was not made publicly available. However, SCC and Amey (2012a) produced the *Streets Ahead* Tree Management Strategy 2012–17, designed to provide the public with an accessible document. Examination of other PFI programmes shows that the creation of such a document is unusual. Normally, a council uses its website and local press to inform the public of streetscene activities, e.g. street closures. SCC did this, but also produced this public-facing strategy focusing on one single element of the urban management programme – its street trees. This strategy "was not part of the contract itself" (Local Government and Social Care Ombudsman (LGSCO 2020, 13) and SCC had no legal obligation to produce it. There is no formal requirement to have a tree strategy: Hand *et al*. (2022) report that only 40% of English local authorities have one in place. SCC's decision to produce a strategy might have been due to the aforementioned long-standing public engagement around the city's trees.

Strategies are normally revised on a 5-yearly (or longer) basis (Hand *et al*. 2022). Between 2012 and 2018, Sheffield's Street Tree Strategy was revised seven times. These revisions have been examined elsewhere showing how text was revised, removed, inserted and removed again (Dempsey 2022). For example, the 2012 *goal* to "*maximise* potential canopy cover through species selection, good establishment and *good* arboricultural management" (SCC and Amey 2012a, 2) was removed and replaced in 2017 by an *outcome* of "*sustainable* tree population through *appropriate* species selection, *appropriate* management whilst considering environmental/climatic changes … " (SCC and Amey 2017, 3 emphasis added) – indicating how indicators measuring tree canopy were no longer desirable.

These annual strategy text changes reflected the changing management practices, and public responses to them. A vocal proportion of Sheffield residents expressed concern about how SCC could claim to be practising good arboricultural (or appropriate) management by replacing half the city's street trees, when this meant felling healthy trees (Flinders and Wood 2019). The felling of a 450-year old veteran tree in January 2014 was the first of many public protests as groups started to form around the city, some of which became part of the Sheffield Trees Action Groups (STAG) (Flinders and Wood 2019). Over time, these protests were widely publicised in national and international press. By March 2018 – 6 years into the contract – almost 5,500 trees had been felled, and several Labour MPs called for the end of the programme (Perraudin 2018). The Forestry Commission started an inquiry into the legality of felling this number of trees without a licence and SCC and Amey paused the "street tree felling programme" (Halliday 2018). Every iteration of the strategy read that: "the projected replanting rate to maintain the current street tree numbers will be in the range of 200 to 400 trees per annum" (SCC and Amey 2012a, 2017). However, if the maximum number of trees were to be felled and replanted during the programme, that would be 10,000 trees (i.e. 400 trees × 25 years), not 17,500 as specified in the contract,

indicating a lack of coordination between the policy instruments, which the paper explores later.

The pause continued and mediated talks between client, contractor and parts of the community (STAG members) began in September 2018, culminating in the co-authored *Street Trees Joint Position Statement* (SCC, Amey, and STAG 2019). This led to the formation of the Sheffield Street Tree Strategy Partnership by SCC, Amey, STAG, Sheffield and Rotherham Wildlife Trust (independent chair) and the Woodland Trust (2021). The dispute has resulted in a number of independent assessments of the *Streets Ahead* programme conducted by national organisations, including the Forestry Commission (2019), LGSCO (2020) and the recent report from the Independent Inquiry into the Street Trees Dispute, chaired by Sir Mark Lowcock. Since September 2018, fewer than 1% of street trees earmarked for felling evaluated by the Partnership have been removed (LGSCO 2020, 24).

The following analysis explores these findings by presenting them as inter-related aspects of place-keeping. This analysis is underpinned by the earlier discussion of the *policy* context, with analysis on *funding* limited to the PFI arrangement. Reflecting how events unfolded in a non-linear way, the following sections refer to aspects of *partnership*, *governance*, *evaluation*, *design and management* of the programme, and *communication* in various ways.

6.1. A partnership without the community?

A partnership is where two or more partners agree to share responsibility to deliver a shared aim (Dempsey, Smith, and Burton 2014). The *Streets Ahead* partners are SCC (public sector client) and Amey (private sector contractor). The partnership's potentially contradictory and changing aims in the public-facing strategy have already been outlined. However, in the contract's 19 performance requirements around street trees, two are unambiguous. Both parties agree to "no overall decrease in the total number of highway trees" and Amey will "replace Highway Trees … so that **17,500 Highway Trees are replaced** by the end of the term" (SCC and Amey 2012b, 18, emphasis added). Throughout the dispute, SCC categorically and vehemently denied that this number was a target until SCC was forced to publish a redacted version of the contract in 2018 (6 years into the programme).

As public opposition to the programme increased, other stakeholders were brought in, but not as partners per se. This included South Yorkshire Police (via a Memorandum of Understanding created by the police but never signed by SCC) and the Independent Tree Panel (ITP). Distinct from Amey with its formal contract, the roles of these providers depended on SCC. For example, in December 2016, SCC reported that they took advice from the police when planning the felling of the trees on Rustlings Road due to the presence of protestors. However this was later corrected by SCC when forced to put all communications in the public domain: "the police 'had no input into writing the plans or finalising start times and merely provided operational support based on our plan'" (LGSCO 2020, 11). Paul Billington (SCC strategic lead for highways maintenance) said that SCC appointed the ITP in response to public concerns (discussed later), and how ITP was given instructions in line with the *Streets Ahead* strategy. Billington stated that the council would "consider any ITP advice provided before making a final decision" on retaining street trees. Considered but largely

not followed: SCC rejected 92% of the ITP recommendations (Crump, Payne, and Stribley 2022).

There was no real community involvement in the *Streets Ahead* partnership or decision-making processes, which is not unusual for a public-private partnership (Dempsey, Burton, and Selin 2020). Community groups across the city began to question the *Streets Ahead* approach to managing Sheffield's public realm, and later disrupted Amey's working practices through non-violent direct action (NVDA). These groups, under the umbrella of Sheffield Tree Action Groups (STAG), did not represent all citizens, but acted as a vocal and well-mobilised critic of *Streets Ahead*: "we were slowing the arbs [arborists] down as much as possible, challenging everything" (Crump, Payne, and Stribley 2022, 92). Despite not being a partner, STAG would be instrumental in changing the decision-making processes as the next section outlines.

6.2. Dubious governance, evaluation and communication practices

Alongside the goal to "improve public relationship with highway trees through positive engagement and good management," the strategy aimed to "improve understanding of benefits of urban trees through communications and events" (SCC and Amey 2012a, 15). Initially, this did not go beyond the pinning of notices to the trees being replaced. This was revised in the 2013 strategy, stating that information would be "disseminated to Community Assemblies and residents groups" who would be "involved in the decision making process with regard to replacement species" (SCC and Amey 2013, 11). Residents therefore could not challenge the decision to remove a street tree. The 2013 strategy also highlighted promotional opportunities including community events, website information, information leaflets and open days. There were roadshows and street walks reported in the programme's first three years which "stopped when [Amey] staff started to receive excessive abuse from some people" (Clark 2018) as public relations worsened.

As already mentioned, the council's decision to remove mature street trees is reflective of wider practice. UK local authorities felled over 150,000 trees between 2010 and 2017 – on average, 58 trees per day (Kirby 2017). To explain to Sheffield residents how decisions were reached to replace street trees, SCC devised a system of evaluation called the 6Ds. Trees would only be replaced if they were categorised as dead, dying, dangerous, diseased, damaging (to roads or pavements) or discriminatory (causing potential issues for people using wheelchairs, pushchairs or mobility scooters) (SCC and Amey 2017). The 6Ds do not feature in the *Streets Ahead* contract and appear for the first time in the seventh iteration of the public-facing strategy (2017 – 5 years into the programme).

Other inconsistencies relate to "engineering solutions" which "should always be considered before trees are recommended for removal and replacement" (SCC and Amey 2014, 11) but none are actually listed in the 2014 strategy when they are first mentioned. Reference to solutions disappears from the strategy until 2017, when 6 engineering solutions (including flexible paving and removal of displaced kerbs) are listed alongside 8 alternative solutions (such as root pruning and creation of larger tree pits) for "whenever a tree is found to be either damaging or discriminatory" (SCC and Amey 2017, 11). The 2017 Strategy also mentions 11 "other solutions" (e.g. permanent closure of footpath) but makes it clear than these are outside the scope and budget

of the contract, calling into question why they are even mentioned. These solutions, and the 6Ds, are discussed later.

To counter local and national critiques, SCC supplied a statement to the national TV programme Countryfile (2017) that "the vast majority of Sheffielders support our plans and … the activists remain out of touch." This statement cited a citywide survey SCC had conducted with around 27,000 households where "**fewer than** 7% said they disagreed with the plans" (emphasis added). The reporting of these numbers has been heavily criticised (Heydon 2020) for two reasons. Firstly, SCC did not transparently declare that only 3,574, or 13% of the 27,000 households contacted, actually responded to the survey. Secondly, SCC never reported the similarly small (7%) percentage who actually **agreed** with the plans.

It is interesting to consider these selectively reported numbers alongside some others. In October 2015, a public petition with over 10,000 signatures was presented to a full Council meeting, citing concerns over *Streets Ahead* felling of healthy trees and insufficient public consultation (SCC 2015). Responding to this, SCC initiated the Independent Tree Panel (ITP) in January 2016 to "put people's views at the heart of our decision making" (LGSCO 2020, 7). The ITP would consider the justification for any given tree earmarked for felling, which SCC would "conscientiously take [into] account" (LGSCO 2020, 7) before making a final decision. However, trees were referred to the ITP only when over 50% of residents in a street expressed opposition to the proposed felling. This meant that a). not every tree earmarked for felling was referred to the ITP and b). over half a street's residents had to be prepared to disagree with SCC's approach. SCC's flawed survey process has been soundly critiqued by Heydon (2020), not least on the grounds of validity. SCC was demanding, and reporting, very different levels of responses from residents as it suited them.

A specific examination of this process in practice is useful here. The street trees removed in Rustlings Road is an example of how SCC ignored both the ITP's recommendation – in favour of retaining almost all the trees examined and applying engineering solutions – and the requisite resident opposition (well over 50%) to the proposed fellings. While the ITP's decisions were published and explained in a transparent manner, the same transparency did not apply to SCC, who did not explain how the ITP's recommendation informed SCC's final decisions (LGSCO 2020; Heydon 2020) to remove the earmarked trees.

There is no legal requirement for a client to take account of commissioned expert advice, nor for a council to consult with its public – even when they concur as in the Rustlings Road example (Flinders and Wood 2019). Here, SCC operated without resident support, engaging in a "largely one-way flow of information" which is counter to UK residents' expectations of meaningful engagement in decision-making (Barton 2018, 65). The ITP is discussed further in 6.4.

One final point about communication relates to the cover letter accompanying the survey to households on affected streets. It contained the leading text that SCC was carrying out the tree replacement to "prevent a catastrophic decline in street tree numbers in coming years" (Heydon 2020, 108). This is substantively different to the wording about street trees in the original strategy: "**potential** of a catastrophic decline **in the health and safety of a number of street trees** being highly likely if a sustainable programme of replacement was not undertaken" (SCC and Amey 2012a, 3, emphasis added).

6.3. *Flawed and fragmented tree management across a city*

In some local authorities where CCT led to the contracting out of tree management, this has led to a lack of integration across different departments, e.g. where a highways department manages highways trees while woodlands are managed by a parks/countryside department (Britt and Johnston 2008). This can lead to a lack of liaison and coordination and no strategic leadership taken in relation to trees across a city (Lewis 1991). In this way, there was real potential for the *Streets Ahead* programme to provide this strategic lead for street trees across Sheffield. However, institutional divisions within SCC prevented this. For example, there was no involvement of, or consultation with, SCC's Trees and Woodlands team in the *Streets Ahead* programme. SCC's Trees and Woodlands Strategy (2018–33) states that "this Strategy covers all trees and woodlands across Sheffield **except the Council's 36,000 highways trees**" (SCC 2018, 1 emphasis added). Street trees may constitute less than 1% of the trees in Sheffield, but it is problematic to separate them from the council's wider vision for Sheffield's urban forest. It is claimed in the Trees and Woodlands Strategy that the 2021 Street Tree Partnership strategy will be a "sub strategy," but analysis of meeting minutes to date show that there has no one from SCC's Trees and Woodlands team sits as a permanent member of the Sheffield Street Tree Partnership (SSTP). However, these minutes do show that, since its inception in 2020, a wide range of stakeholders being invited to help inform SSTP's decision-making – much wider than the original partnership – including a Trees & Woodlands Community Forestry Manager, university researchers and a regional Woodland Creation Officer. This indicates potential for a wider cross-sector partnership sharing knowledge and expertise, which may help to address the longstanding loss of arboricultural skills.

The 25-year *Streets Ahead* contract was based on all street works including tree replacements being completed within the first five years and maintaining that standard for the remaining 20 years. While contracting out arboricultural works on street trees is not rare and regularly happens in UK cities, it is the large scale of tree removal and replacement carried out across the entire city in a relatively short time which is exceptional in Sheffield. This approach was soundly criticised by the Forestry Commission (2019). They describe as inaccurate SCC's contention that because many of Sheffield's street trees are mature, they needed to be replaced en masse. Their investigation argued that SCC's aim to replace the originally stated 17,500 trees in a short period of time runs counter to good arboricultural practice of having trees of different ages. The Forestry Commission concluded that SCC and the contractor have "perpetuated the same issues for later generations that they have been aiming to resolve" (2019, 25) by replacing a large number of trees at the same time. In addition, SCC and Amey "admitted that the majority of the trees removed or scheduled for felling are completely healthy" (Flinders and Wood 2019, 5) which goes against good arboricultural practice. However, it has already been highlighted that it is not unusual practice for local authorities to cut down street trees in a risk-averse manner (Woudstra and Allen 2022), particularly like Sheffield if they did not conduct an asset valuation of the trees and therefore saw them as costs, not a beneficial resource (Flinders and Wood 2019): "the problems caused by trees are hugely outweighed by the benefits they bring. This kind of reasoning seems to be absent in Sheffield" (Dalton 2017a, 17).

Finally, maintaining the programme necessitates community involvement. For example, it is simply not feasible for Amey to water regularly all the newly planted trees across the city. Some new trees are clearly under stress in recent hot and dry

Figure 2. Residents are asked to water newly-planted trees in Sheffield.

summers as the climate changes. This request from *Streets Ahead* for residents to water newly-planted trees (Figure 2) assumes a sense of community on the part of citizens, calling on their sense of public spirit and attachment to the tree outside their home (after Miller 2022). It is ironic for SCC to ask residents to look after the newly planted trees but did not involve them in the decision-making process to fell the mature trees these saplings replace.

6.4. Mixed messages in programme design when evaluating tree removals

There were some misleading communications around how the post-ITP decisions were made on evaluating tree removals. As highlighted earlier, the ITP would often recommend that a tree is retained and an engineering solution suggested. In March 2017, Ian Dalton (2017a, 4), a Tree Officer not based in Sheffield conducted an ad-hoc, independent site-based report for STAG, highlighting that "these engineering solutions are simply not being employed where they should be." Paul Billington, giving evidence in Leeds High Court, July 2017, stated that "the Council has never had any budget for engineering solutions outside the options in the PFI and if it required such solutions then it would have to pay for them outside the PFI" (Crump, Payne, and Stribley 2022). It was not until 2019, when the tree replacements had been paused, that SCC clarified that all the engineering solutions listed in the strategy were "not part of the *Streets Ahead* programme … [and] not specified in the contract" (SCC, Amey, and STAG 2019, 4). This demonstrates the ongoing lack of clarity when SCC communicated with the wider public. The LGSCO (2020, 20) later described it as unacceptable

to produce a publicly available policy document – the *Streets Ahead* strategy – that did not accurately reflect the contract and working practices. In giving the *Streets Ahead* strategy to the ITP as the basis of the Panel's instructions for recommending non-felling solutions, SCC must have known that they would not be able to follow the panel's advice. SCC later accepted the findings of the LGSCO report (Burn 2020) and apologised for failings in the implementation of the *Streets Ahead* programme.

As part of the mediated discussions outlined earlier, SCC published a "Lessons Learned & Actions" document (2019). This pointed out the flaws in the process of identifying trees for removal. The use of the 6Ds was found to be highly problematic in some cases where a notice was posted on a tree citing one of the Ds as a way of "simplifying messages to aid public understanding" without reference to the original reason for replacing a tree (SCC, Amey, and STAG 2019, 2). The report reiterates that the original reason may have been due to the "focus on tree removals to fulfil the Authority's duties under the Highways Act" (SCC, Amey, and STAG 2019, 8) through the *Streets Ahead* contract.

7. Discussion: the scale and long-term nature of street tree management

The 5,500 trees felled and replaced through the *Streets Ahead* programme is far fewer than the 17,500 trees originally outlined in the contract. Should this be considered a failure? Because of commercial sensitivity, we will not know until well after the contract has ended the impact of not achieving this goal for Amey and SCC (and their budgets). In today's context of what is known about the important part that urban vegetation plays in addressing Sheffield's climate and biodiversity emergency (declared in Feb 2019 and May 2021 respectively), retaining mature trees is entirely sensible (Cameron and Hitchmough 2016). However, as this paper's opening quote indicates, if *Streets Ahead* is considered a highway, and not a tree, programme, then it is inevitable that trees are seen as a problem to be removed in the pursuit of free moving traffic. A lot of what happened in Sheffield happens elsewhere in UK cities. In line with the Highways Act 1980, local authorities are generally reluctant to engage in planting trees in existing roads so the norm tends to be the risk-averse practice of tree removal with minimal replacement (Woudstra and Allen 2022). It was arguably the city-wide scale of the tree replacements, usually conducted by local authorities on a much smaller and ad-hoc scale, which galvanised public opposition in Sheffield and the wider, high-profile support from outside the city.

7.1. Why this contract design did not deliver effective street tree management

In a way, the government has already addressed this issue by withdrawing its support for the PFI model, described as the result of "some of the costliest experiments in public policy-making and infrastructure investment" (Mahoney 2018). Chiming with Henjewele, Fewings, and Rwelamila (2013) and Sherratt, Sherratt, and Ivory (2020), Dalton states that "PFI contracts should not be used for trees" (2017a, 17). The experience in Sheffield suggests that taking a city-scale and uniform maintenance approach as per the PFI model cannot be applied to urban nature. Many of the *Streets Ahead* contract activities (e.g. road resurfacing) found in other PFIs around street scene work (e.g. waste collection, street cleaning) are predicated on taking a similar approach in every street (or street type). But this model is challenged when applied to street trees,

which vary greatly in species, age, location. Street trees simply do not all grow in the same way. In addition, the street tree dispute showed how people can have very strong feelings about street trees (which they may not have about street lights or pavement surfaces). Miller (2022) reflects on how, for some people, street trees are part of the understanding of home, perhaps explaining why the idea of such widespread felling was reviled in certain, leafier parts of the city.

Barrell (2016) takes the lack of engagement with engineering solutions to task when examining the *Streets Ahead* PFI, arguing that there was no justification "for mass felling in this modern age of feasible solutions." SCC's decision to translate a contract which did not feature any solutions into a strategy document which explicitly did, was woefully misguided and widely challenged. This decision cannot even be put down to the asymmetry of negotiating power that Mahoney (2018) states is a disadvantage to PFIs. We do not know (but it seems unlikely) that Amey would have put their client under pressure to declare they will do something in a public-facing document which does not feature in the contract. It would seem more likely that this decision was made by SCC.

A further query about the design of the contract is the mismatch between the inherently long-term and sustainable outcomes of a citywide street improvement programme which do not easily relate to urban nature. Replacing streetlights across the city in the first five years which are then maintained for the duration of the contract makes financial and logistical sense. Removing thousands of mature trees in the first five years and replacing them with saplings is easier (and cheaper) than looking after those mature trees when there are 20 years left of maintenance in a PFI contract. But such a shift from mature to young trees reduces the size of the city's tree canopy (Goodwin 2017), reducing biodiversity habitats (Papastavrou 2019). The number of species that can be supported by a mature tree is vast compared to a young/semi-mature tree (Cameron and Hitchmough 2016). It can also hamper efforts around urban cooling, storm water management and carbon sequestration (Barton 2018). By valuing the tree stock as a cost, a PFI arrangement will always seek efficiencies to eliminate high-risk expenses - here, mature trees (Barrell 2018).

Contractually, this approach also arguably renders it impossible for SCC to achieve its original 2012 strategy aim of maximising potential canopy cover (see Section 6), which has been reinstated by the Sheffield Street Tree Partnership (SSTP 2021). It is outside the remit of this paper to examine how long or whether the tree canopy will recover to its former level, but the strategy (SCC and Amey 2012a, 13) indicated that large trees, e.g. *Tilia cordata* – small-leaved Lime (which can grow to over 20 m) were being replaced with smaller cultivars, e.g. *Tilia cordata* × *T. mongolica* "Harvest Gold") which have a more compact canopy (Hirons and Sjömann 2019), indicating that more of these smaller canopied trees will have to be planted.

7.2. Business as usual, poor practice and room for improvement

The place-keeping analytical framework (Figure 1) helps demonstrate that there were significant problems with how the *policy* instruments (i.e. the contract and the iterations of the strategy) were interpreted and implemented by Sheffield City Council as client, concurring with empirical and independent accounts of the Sheffield dispute examined in this paper (Heydon 2020; Flinders and Wood 2019; LGSCO 2020; Forestry Commission 2019; Dalton 2017a). The original *partnership* did have shared,

collective aims (after Dempsey, Smith, and Burton 2014); however, it is not unreasonable to expect a partnership working in the public realm to respond, and be accountable, to public opinion (as per calls by Papastavrou (2019) in Bristol). This paper shows that while a partnership does not need to include community stakeholders, it – and urban nature – may fare better if it does, as Sheffield's Street Tree Partnership seems to be demonstrating.

There is a different *governance* structure now at play in Sheffield, not just in the management of the street trees, but in the council executive as well. At the time of the street tree dispute, SCC was run by the "strong leader and cabinet" model of governance where the leader was "an elected councillor chosen by a vote of the other elected councillors" with a cabinet of 10 of the 84 councillors (It's Our City 2021). Emerging from the street tree campaign, a petition signed by over 26,000 people and organised by Sheffield community group, It's Our City (Rotherham and Flinders 2019) was presented to the Council in 2019. This prompted a referendum in 2021 where Sheffield residents rejected the strong leader model and moved to a committee system where one or more committees are made up of elected councillors (Axelby 2021). This vocal group of campaigners understood how to use the political system, marking a shift from minimal citizen involvement (Heydon 2020) to "critical citizens" being involved in decision-making (Flinders and Wood 2019, 11). The Chair of the Sheffield Street Tree Partnership is independent and not connected to SCC, Amey or STAG. It is hoped that this will permit robust accountability and a new transparency in how decisions are reached about street trees in the future.

The *evaluation* processes in the *Streets Ahead* programme have been widely criticised, particularly around the way in which SCC used the ITP. Improvements in practice are planned by the Street Tree Partnership through a new strategic outcome to "increase the value and benefits that flow from Sheffield's street trees." This will be assessed using CAVAT (Capital Asset Valuation of Amenity Trees), measures of air pollution, carbon stored and sequestered and alleviated storm water (Sheffield Street Tree Partnership 2021). None of these measures had been reported by *Streets Ahead* prior to the Partnership, despite existing CAVAT valuations reporting substantial values for street trees (e.g. Dalton 2017b), marking new terms of reference for the city's street trees.

Finally, the flaws in the *maintenance* approach of SCC-endorsed urban tree *management* have been discussed and are not uncommon and can be found elsewhere in the UK (e.g. Bristol; Papastavrou 2019) albeit at a smaller scale (Woudstra and Allen 2022). In light of the calls for increased urban tree planting and growing understanding of the potential benefits of street trees, there is real scope for future research to challenge existing practices and explore approaches to adapt highways for street trees and urban vegetation. Where better to start than to consider how *Streets Ahead* could be a trees programme rather than a highways programme?

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The author reports there are no competing interests to declare.

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