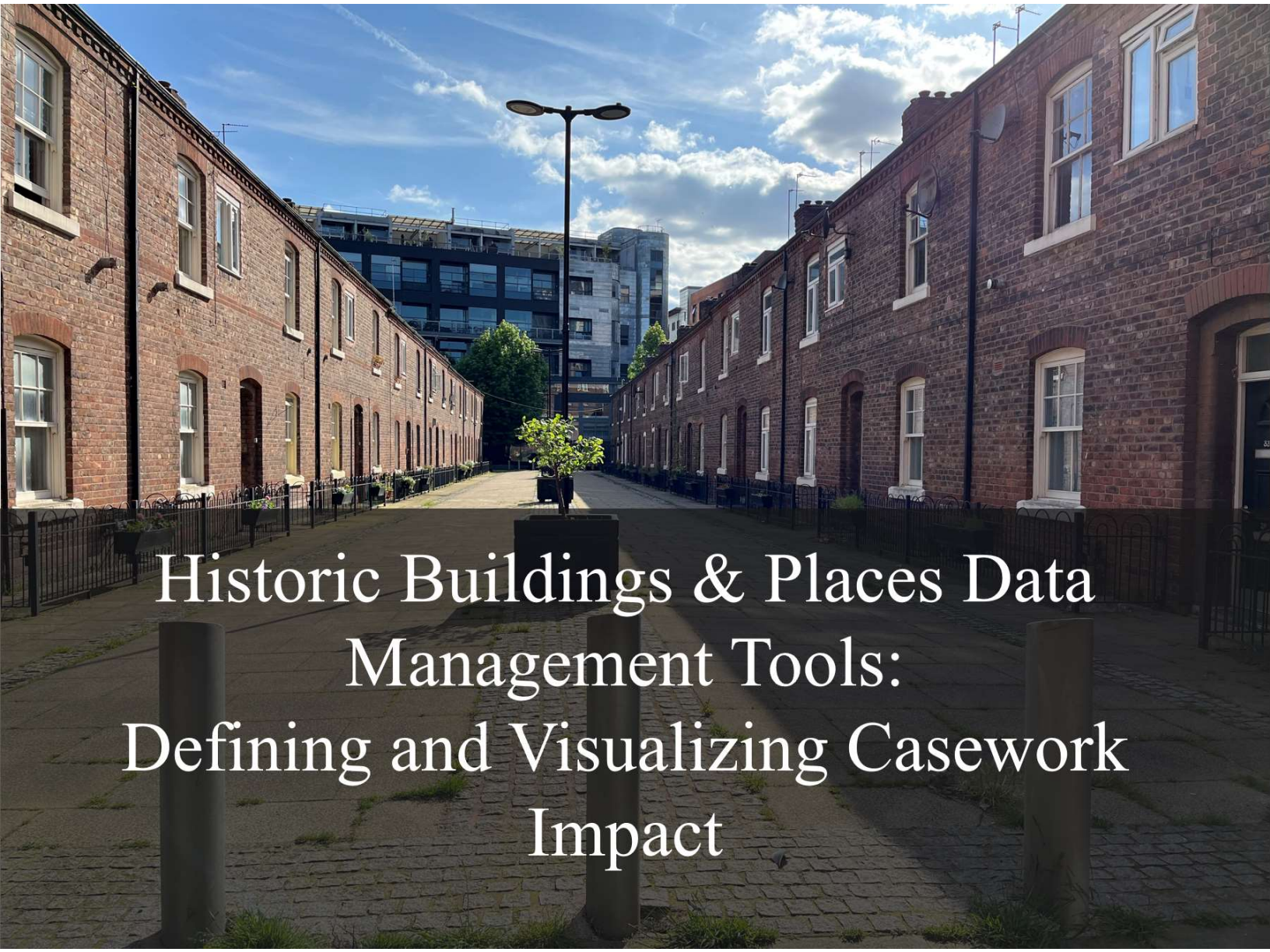

Historic Buildings & Places Data Management Tools: Defining and Visualizing Casework Impact

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degree of Bachelor of Science

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Abstract

HB&P is a National Amenity Society that assists in the preservation of built heritage in England and Wales. HB&P has faced pressure to highlight its impact for the sake of acquiring more membership and sharing updates with trustees. Our project goals were to define and create an impact assessment for HB&P, identify trends within their data, and create recommendations for future data analysis. To achieve these goals, we interviewed HB&P trustees and other amenity society representatives, surveyed HB&P membership, and compiled and analyzed casework data. From this we created a comprehensive impact analysis which showed a positive impact while using interview and survey feedback to advise HB&P on future data collection.

Acknowledgements

We would first like to thank Professor Shamsnaz Bhada and Professor Ruth McKeogh for being our project advisors. Their guidance throughout this process was imperative to the successful development and implementation of our methods along with their overall feedback.

We would like to thank our trustee interviewees for helping us learn about the intricacies of heritage in England and Wales: Kathy Fishwick, Moe Horikawa, Bob Kindred, Tim Moore, Anthony Peers, and Kate Solecki. These interviews were integral to developing a comprehensive understanding of HB&P's goals.

We would like to thank our interviewees from other National Amenity Societies for teaching us about systems used across the heritage sector: Catherine Bell and Daniel Bowles. These interviews helped us develop a holistic system for Historic Buildings & Places casework analysis and approach.

We would like to thank HB&P's marketing and communications officer for distributing our survey and for feedback on our visuals: Stefanie Turza. Our graphics creation would not be possible without her input.

We would like to thank our sponsors at Historic Buildings and Places for their continued guidance throughout the project and for putting us in touch with trustees and caseworkers from other organizations: Ross Anthony and Liz Powers. Without these contacts our interviews would not have been possible. We would also like to thank them for inviting us to their Annual General Meeting where we could network with members of the HB&P community.

Executive Summary

Background

Historic Buildings & Places (HB&P) was established in 1924 and is a member of the Joint Council of National Amenity Societies (JCNAS) (HB&P, 2021). HB&P works with local planning authorities (LPAs) in England and Wales on a variety of preservation initiatives, including applications to have a site listed or de-listed in the National Heritage List for England (NHLE). Listed buildings have additional legal protections, the most relevant being the required consultation of National Amenity Societies (NAS) on Listed Building Consent (LBC) applications (Planning (Listed Buildings and Conservation Areas) Act, 1990). LBC applications make up the majority of HB&P's casework and are submitted to LPAs when the renovation of a listed building involves an aspect of demolition. National Amenity Societies do not have the power to halt a construction process, but offer letters of support, objection, or advice to LPAs while they are making their decision.

HB&P advises on applications and advocates for heritage preservation. Our team organized their casework data, looked for trends, and demonstrated the impact of their organization's casework. We defined impact in terms of their casework and identified criteria that can be used in its assessment. The organization has been unable to conduct data analysis in the past due to limited resources; therefore, we wanted to make it as easy as possible for staff to continue analysis after the end of our project. Our final objectives were: (1) Define impact in terms of HB&P's casework; (2) Identify trends within casework for their current and historic data; and (3) Provide recommendations for future data collection and analysis. To do this, we used a mixed methods approach of surveys, semi-structured interviews, and data analysis.

Methods

To address our objectives, we used mixed methods of surveys and interviews. By using surveys and semi-structured interviews, we were able to collect perspectives from a variety of stakeholders. Surveys were geared towards HB&P members, who contribute financially to the organization, and individuals that have an interest in built heritage preservation. HB&P's marketing team distributed the survey electronically through the HB&P members email list and

on their website. We also conducted semi-structured interviews with trustees, who are HB&P volunteers with more knowledge on built heritage and involvement in the organization.

To help define impact, we asked stakeholders about their values and perspectives on impact for HB&P casework and their input on mock visualizations our team had created. Their feedback on impact helped us define goals which informed data categories we should analyze, and their feedback on mock visuals provided insight on which graphs we should create from our analysis. Our interviews with other NAS caseworkers also guided our analysis as it allowed us an understanding of systems used across the sectors. A flow chart outlining the ways our methodology informed our objectives is seen in Figure 1.

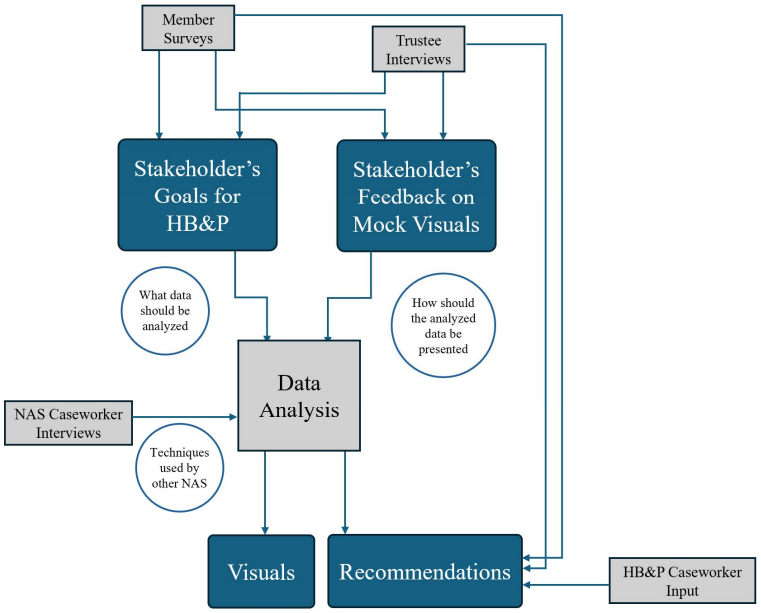

Figure 1: A flow chart highlighting the methods we used and their relationship with our findings.

Trustees and survey respondents were both highly interested in the outcomes of applications. However, HB&P has not tracked this data previously, as decisions are posted on individual LPA websites and can undergo multiple rounds of appeals or re-applications. Therefore, as part of our impact objective we were able to determine whether LPAs referenced HB&P's advice in their decision for non-pending LBC applications in the 2023-2024 fiscal year.

For our second objective, the casework analysis data came from physical documents starting in the 1950s, multiple Excel sheets of HB&P's consultations, and the JCNAS database of

applications and responses from different National Amenity Societies. From this data, we conducted in-depth data analysis for different application types, NHLE status, building types, and regional distribution for both the number of applications and responses. For each category, we divided responses by applications to see the percentage of cases that received answers from HB&P to identify if there are points of focus or overlooked categories within their casework.

To address the final objective, we centralized HB&P's historic data, created manuals and templates of our analysis, and provided additional categories for them to track on Excel which fall under the recommendations block in our methods flow chart (Figure 1). These recommendations came from our own experience while conducting data analysis, survey responses, and semi-structured interviews with HB&P trustees and caseworkers from other National Amenity Societies. We asked in both our survey and trustee interviews for additional information stakeholders would like to see from HB&P's casework, and we asked other NAS employees which metrics are tracked in their databases. When organizing their data, we also identified missing fields that we believe HB&P would benefit from collecting. We created an infographic for HB&P members with a summary of our data analysis and provided a template to our sponsors for them to update as an annual impact report. The manuals contain procedures and instructions so that their analysis can be updated as casework continues.

Findings

Our findings identified members and trustee's goals and desired impacts of HB&P, which types of data visualizations are most accessible, and the results from data analysis of HB&P's current and past records.

Goals and Impact

We found that stakeholders wanted HB&P's casework to address a diverse range of cases. Every trustee we interviewed mentioned the importance of working with cases from different site types, grades, and regions and addressing a broad range of application types. From a multi-select question, 46% of survey respondents chose working with different building types as an important metric to evaluate casework impact. Additionally, a majority of members wanted publications that show casework by building type (67%) and regional casework distribution (51%). Both members and trustees also indicated an interest in HB&P's work focusing on continued use of

historical sites, with 72% of survey respondents selecting it as an area of interest. In interviews, some trustees also mentioned that they were willing to sacrifice some of a site's historical authenticity to extend its building's life span. Both groups also mentioned that they wanted HB&P's work to support LPAs, with one trustee highlighting that empathetic responses are more likely to be well received and the advice followed.

Visualization Types

We found that stakeholders wanted to see clustered columns, heat maps, and composition graphs. Across multiple data categories, 58% of members and 83% of trustees preferred clustered column charts with one trustee saying that clustered columns provide consistency to visualizations since they work for each data category we graphed. Other than clustered column charts, 43% of members wanted heat maps for regional distribution data and most trustees found composition graphs, such as pie charts, helpful for illustrating data with one dominant response.

Data Analysis

Within regional distribution, western regions receive the most responses, while the North East and the Greater London Area receive the least, but this is in part due to the varying number of listed sites per region. Staff mentioned concerns about HB&P's work focusing on London, so this highlights regional diversity within casework. For site type, grade, and application type the percentage of consultations responded to for each category was relatively constant; however, one category generally received most of the responses. The constant percentage of consultations responded to highlights that HB&P addresses a wide range of cases across multiple categories. Across site type, grade, and application type around 5% of consultations received responses. For site type, the majority of HB&P's responses were for domestic sites and Grade II buildings. For application type, most responses were for Listed Building Consent applications; however, two outliers within consultation response percentage were de-listings and pre-applications. About 40% of de-listings and 20% of pre-application requests received responses, but this is due to those categories having fewer overall applications. Finally, we found that 70% of response types were letters of advice. This aligns with HB&P's goal of supporting LPAs, since their focus isn't on writing objections.

Outcome Assessment

One of the primary goals of this research was to understand multiple factors of the outcome of HB&P's casework. Next, we developed a system of comparing response letters with LPA decisions to determine HB&P's influence on casework outcomes. Based on criteria we created based on our findings, we found that the majority of analyzed responses had a positive impact with 44% as fully positive, 14% as slightly positive, and only 27% as negative (Figure 2).

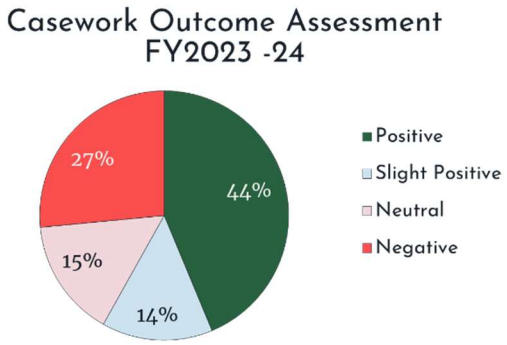

Figure 2: The breakdown of casework outcome impacts for the 2023-24 fiscal year.

After determining stakeholders' goals for HB&P, which visuals were the most accessible, and trends of HB&P's casework responses and outcomes, we created a list of recommendations for future work.

Recommendations

We developed five recommendations for HB&P curated from insights from the survey, interviews with HB&P trustees and caseworkers from other NAS, and analysis of HB&P's data. These recommendations aimed to address our three objectives of (1) defining casework impact, (2) identifying trends and casework, and (3) providing guidelines for future data collection and analysis. Our first four recommendations address Objective 3, offering new data fields and ways to continue and expand upon our analysis. Recommendations 3 and 4 also address Objective 1 by demonstrating casework impact. Our final recommendation addresses Objective 2 by providing a way to simplify regional analysis.

1. We recommend that HB&P conduct and publish a periodic analysis of their casework data. This type of publication is accessible and can be used to increase visibility and awareness on HB&P's casework. HB&P would benefit from a frequent and regular publication, but due to limited resources we recommend an annual report. We have created an infographic template and manuals demonstrating the process of streamlining, analyzing, and presenting the data. We recommend the utilization of these resources during future implementation.
2. We recommend the collection and detailed analysis of additional data fields to increase the analysis capabilities of HB&P. Recommended data fields include additional building and site characteristics, the communal value of sites, build and renovation dates, increased regional breakdowns, casework by LPA, casework overlap with other NAS, and whether a case is voluntary or obligatory. Analysis of these data categories will inform HB&P on the diversity of their casework, ensuring they dedicate their resources across a wide range of case types as well as provide a multitude of perspectives on HB&P's casework impact.
3. We recommend the addition of more qualitative analysis of the impact HB&P has on perception of heritage within England and Wales and their casework's effects on a community. Our team has primarily analyzed quantitative data and conducted surveys and interviews with members of the heritage sector. We suggest devoting resources to the surveying of communities on the effect of HB&P's casework on preserving the history and culture of their towns.
4. We recommend the detailed analysis of Change of Use (CoU) casework, by type, region, and over time. This category of casework represents the evolution of the heritage sector and shifts in community values. Analysis of CoUs can give insights into both the past and prospective future on the prioritization of distinct types of buildings and uses across England and Wales.
5. We recommend the creation of mapping software to generate customizable maps by LPA. Data for these maps is available on the JCNAS database. The use of this type of software will allow quick regional analysis and the reallocation of time and resources to other areas in the future.

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2. Background Introduction	Sarah Fenton, Parker Langa	All
2.1	Sarah Fenton	Mona Blake
2.2	Michael Nixdorf, Sarah Fenton	Parker Langa
2.3.1	Sarah Fenton	Mona Blake
2.3.2, 2.3.3, 2.3.4, 2.3.5	Parker Langa	Sarah Fenton
2.4.1, 2.4.2, 2.4.3	Mona Blake	Michael Nixdorf
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3.4	Parker Langa	Michael Nixdorf
4.1	Parker Langa	All
4.2.1	Mona Blake	All
4.2.2	Sarah Fenton	All
4.3.1	Mona Blake	All
4.3.2	Sarah Fenton	All
4.4.1	Mona Blake	All
4.4.2	Sarah Fenton, Parker Langa	All
4.5	Michael Nixdorf	All
5. Conclusions	Sarah Fenton, Parker Langa	Michael Nixdorf, Mona Blake
6.1	Parker Langa, Sarah Fenton	All
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1. Introduction

With 2.5 billion dollars spent annually on heritage tourism, there is evident global admiration of historic sites (Massachusetts Historical Commission, 2002). Historic buildings show snapshots of a nation's culture for tourists and locals alike. Within the UK, conservation efforts upticked after World War II destroyed much of the urban landscape (Betts & Ross, 2015). As London rebuilt after the Blitz, the eight-month intense bombing campaign of the city, the UK passed national legislation to protect the remaining historic buildings and preserve the nation's historical landscape (The Editors of Encyclopaedia Britannica, 2024).

In the following decades, national legislation established the National Amenity Societies as non-governmental heritage organizations with an official role to protect over 500,000 historic sites (Historic England, n.d.a). Although these societies, including Historic Buildings & Places (HB&P), are financially supported nationally, they have faced growing pressure to show quantitative results. This is accompanied by a national decrease in government funding dedicated to heritage programs, such as the Welsh government decreasing historic preservation financing by 22% in their draft budget for 2024 to 2025 (Welsh Government, 2023). As National Amenity Societies feel the effects of these changes, they must highlight the effect of their casework to ensure future funding from stakeholders.

HB&P is a registered charity established in 1924 and located in London, England. Their role as a National Amenity Society is to review and consult on renovation applications that involve the demolition of listed historical sites in England and Wales, called Listed Building Consent (LBC) applications (Historic Buildings & Places [HB&P], 2021). Given that HB&P's third largest funding source is a government grant, they need to analyze their casework to demonstrate their impact (HB&P, 2022). HB&P collected data on LBC applications and consultations in a digital centralized location since 2020 but has not analyzed this data prior to this project. Our project helped define HB&P's casework impact, identify trends within their data, and provide recommendations for future data collection based on identified gaps in current practices.

This report first reviews HB&P's work by identifying the importance of heritage globally and within England and Wales, including legislative efforts and perspectives on demolition. Our

methodology outlines the surveys and interviews we conducted with HB&P members, trustees, and other National Amenity Society caseworkers. These provided insight on types of data analysis to perform, our recommendations for future data collection and analysis protocols, and stakeholder defined impact in terms of HB&P's casework. After identifying HB&P's impact, we used data analysis techniques to create visualizations and infographics to allow their team to understand notable trends within their data. From our data analysis, we identified room to improve the efficiency of their future data collection and analysis methods.

2. Background

In this section, we first discuss the importance of historic buildings and heritage sites globally before digging deeper into the specifics of heritage in England and Wales. We discuss the legislation in place to support the preservation of built heritage in England and Wales and the charity organizations that support conservation. Finally, we transition into an overview of data management options and charity impact assessment.

Section 2.1 Global Importance of Historical Buildings and Heritage Sites

The United Kingdom has heavily influenced the modern-day selection and preservation of historic buildings. The modern conservation movement began with the French and Industrial Revolutions, which allowed the public into locations previously reserved for nobility and caused a responsive sentimentality for natural and handcrafted beauty (Betts & Ross, 2015). International tourism and the religious revival of the late nineteenth century led to an economic and theological interest in having historical sites with aesthetic appeal to visitors. In the aftermath of World Wars I and II, nations used built heritage to represent their country's strength and identity, and organizations like the United Nations set international standards in response to wartime destruction of urban landscapes. During this period of reconstruction, debates rose over whether to rebuild facsimiles of demolished sites, build new construction, or leave ruins (Glendinning, 2013). The growing Modernist movement influenced post-war architects to update privately-owned historic buildings with materials like glass and concrete, a practice that drew sharp criticism even as it grew in popularity. Similarly, a facadism movement grew, in which the outside wall or walls of a building are preserved separately with a new construction built behind it (Figure 3). Heritage preservation became increasingly influenced by professional experts, who were chiefly focused on scientific approaches to evaluating authenticity, which held the structure and its original materials as having value as opposed to its present functionality (Ashworth, 2011).

Figure 3: Example of a facade in which the historic outer wall was preserved with new construction occurring behind it. Located on the corner of Gun St. and Artillery Lane in London, England, UK.

Since the 1980s, social and cultural values have been increasingly considered as ideological values of preservation (Baker et al., 2021). Historical buildings reveal how a community regards and values its local history, as well as its resources and regulatory tolerance regarding preservation (Conde, 2007). The community inherently bestows the worth of heritage, with its benefits being both tangible and intangible (Armitage & Irons, 2013). Having the ability to visit a historic site, as well as spill-over economic benefits from cultural tourism, acts as passive or non-use values in which community members benefit from a heritage asset without ever having to enter or view it themselves. By giving nearby residents control over the continuance of heritage sites and an accessible way to teach visitors about their history, they can be a vehicle to strengthen ties with the surrounding public and promote civic education (Conde, 2007). Even when people do not strongly link financial rewards with preservation, they support conservation efforts for their roles in the neighborhood's character and cultural identity (Armitage & Irons, 2013). Organizations such as Historic England in the United Kingdom play a critical role in preservation through the documentation of built heritage and community outreach and education.

Section 2.2 Historic Buildings in Wales and England

The United Kingdom is a large island nation with a rich history which presents itself through many preserved historical sites, such as homes, places of worship, gardens, and town markets.

Preservationists value this wealth of knowledge to garner an understanding of past heritage, with historic buildings contributing to the national identity of Wales and England. Efforts made towards diminishing the decay of past heritage in the natural elements of the U.K., total roughly 500,000 sites in England and 30,000 in Wales (Historic England, n.d.-a). They are valued because they are important in understanding the past and promoting both countries' global image.

The preservation of heritage sites in the United Kingdom has drawn criticism of the history being celebrated, and its conservation through taxpayer funding. There has been criticism of a prioritization given to built heritage, with cultures that carry out preservation through food, worship, or traditional craftsmanship undervalued compared to those that leave behind physical monuments. Legislative efforts from the national government that focus on the conservation of buildings are therefore less beneficial for some citizens than others. When the community surrounding a historic site does have cultural ties to that history, they tend to favor the right of private property over the preservation and public funding of a heritage that is not theirs (Conde, 2007). Private owners, on their part, often desire the ability to have control over the architectural design of a building, which is limited by legislative efforts and documentation to protect heritage sites (Baker et al., 2021).

Part of these legislative and documentation efforts include Historic England's list of all protected sites. These listings allow buildings and structures of historical interest to be protected legally via the Planning Act of 1990 (Planning Listed Buildings and Conservation Areas Act, 1990). Historic England also offers grants to building owners to offset the high costs of renovating historic buildings if the construction is centered around repairing and preserving built heritage (Historic England, 2019). Across England, historical sites can be found and accounted for in The National Heritage List for England (NHLE) (Historic England, n.d.-b). Similarly, in Wales they can be found on the Cof Cymru or the National Historic Assets of Wales (NHAW) (Welsh Government, n.d.).

In addition to Historic England's list for heritage sites they also maintain a Heritage at Risk Register. Created by the Building Act of 1984, this register tracks sites already listed but in poor condition (Building Act, 1984). The designation focuses on several aspects for different types of sites; for example, buildings are more likely to be added to the register if they are unoccupied and parks and gardens will be added if they are being threatened by development (Historic

England, 2016). Unlike the list, sites are easily removed from the register once the elements that put them at risk have been addressed.

Although Wales and England have separate histories, their criteria for listed buildings follow similar guidelines. The building owners or other interested parties that value heritage preservation can submit a request for a site to be included as a listing, which is then examined within specific parameters (Welsh Government, 2018; Historic England, n.d.-a). These parameters include the site's architecture, history, historical associations, group value, age, and rarity. To meet the benchmark of architectural interest, the building must have fine craftsmanship, design, and decor, along with technological innovation or virtuosity. The building holds historical interest when a site illustrates aspects of economic, cultural, social, or military history. This historical interest also includes buildings closely associated with events or individuals important to Wales or England. If a proposed listing contributes to architectural history or a history that unifies with other properties like a square, village, or terrace this qualifies as group value. The last criterion that listed buildings observes the age and rarity of that property. Any buildings in Wales built before 1700 that are similar to their original state are listed (Welsh Government, n.d.). Additionally, most buildings constructed between 1700 and 1840 are also listed, however, they depend upon how original and authentic the property is. Ecclesiastical buildings fall under this system, although some may be managed differently due to the ecclesiastical exemption. These factors are considered when listing a building, but the owner must also explain why the building meets the specified criteria. Both Wales and England follow a similar grading system, however, they use differing terminology when describing case types. Once a site is listed it is given a grade of I, II, or II*. This is based on its importance, interest, and authenticity. Grade I sites comprise 2.5% of listed buildings in England and Wales and are recognized as being of exceptional interest. Grade II and Grade II* sites comprise 91.7% of listed buildings and are considered by Historic England to have special interest. Grade II* are sites of particular importance (Department for Digital, Culture, Media, & Sport, 2018).

Governmental organizations pay closer attention to the preservation of Grade I sites, which tend to be more publicly known, which creates a need for smaller organizations to dedicate their resources to sites that are more often overlooked. These organizations protect neighborhoods'

aesthetic value by limiting the demolition of sites such as historical homes, which contribute to the cultural identity of an area.

Section 3.2 Preservation and Demolition of Historic Buildings in England and Wales

2.3.1 Reasons for Demolition

Some communities support the delisting or demolition of historic buildings to protect their neighborhood. There is evidence that heritage buildings can contribute to the gentrification of a neighborhood, with character and aesthetic values for high-income buyers driving out existing residents (Conde, 2007). Importantly, there is a link between listed historic buildings and gentrification from the public's perspective. This could lead to community members supporting the delisting of a building or its modification to protect their current housing and prevent displacement (Baker et al., 2021). There are also pragmatic reasons for demolition, such as wishing to better utilize the cumulative 59,353 square miles that makes up England and Wales (Kishlansky et al., 2024). Historic neighborhoods construct new buildings that are aesthetically cohesive with heritage sites; in cities, this can mean shorter buildings that allow for fewer retail or housing opportunities when compared to taller complexes (Avrami, 2016). This is especially a problem in areas with limited land to compensate for a growing population or those that hope to reduce suburban sprawl (Baker et al., 2021). Older homes are often more expensive for their inhabitants to upkeep even without needing repair, with poorer insulation and higher heating costs (Power, 2008).

Environmental impacts are important factors to consider when evaluating the need for demolition. In 2022, the building and construction sector accounts for roughly 34% of all global energy demand (United Nations Environment Programme, 2022). Operational emissions such as lights and temperature control are lower with modern construction; however, embodied impacts, such as those that come from the acquirement, production, and transportation of materials, can lead to lower life-cycle impact in retrofitted historic buildings (Baker et al., 2021). One study found that retrofitted historical buildings, which have improved energy efficiency and thermal insulation while maintaining their heritage value, performed 57% better in life-cycle carbon assessment than cases of demolition and rebuild (Wise et al., 2019). These retrofits can be small and relatively inexpensive interventions, including one case in which adding thermal curtains to

the original windows of a heritage building reduced life-cycle energy by 3%. Traditional building frames made from wood were also found to have lower life-cycle carbon when compared to concrete, brick, and steel. Various models have been unable to reach a consensus on the sustainability of historic buildings due to the varied design and administration choices (Baker et al., 2021). There is also a lack of incentive for private businesses, building owners, and developers to calculate or track embodied carbon, with a majority saying that they would not dedicate the resources to do so unless mandated by governmental policy (Wise et al., 2019). Although there is enough evidence of built carbon reduction in retrofitted heritage sites to warrant further study, there is a lack of resources dedicated to life-cycle assessments. This means that it can be difficult to justify the operational emissions of traditional buildings compared to modern ones without a broader view of built carbon and embodied impacts.

2.3.2 Listed Building Consent Application

To preserve national heritage and prevent the demolition of historic buildings, the United Kingdom passed legislation requiring conservation experts to approve planned renovations. The most notable legislation was the Planning (Listed Building and Conservation Area) Act of 1990, which created the Listed Building Consent (LBC) application process (Planning (Listed Buildings and Conservation Areas) Act, 1990). This application process pertains to buildings on the NHLE, managed by Historic England, which contains every historic site that is nationally protected (Historic England, n.d.-b). Once Historic England adds a building to the NHLE, any act of demolition, including renovations and alterations that include an aspect of demolition, require approval by a local planning authority or higher government body (White, 2015). Although Welsh historic buildings fall under The Planning Act, the Welsh government passed the Historic Environment (Wales) Bill to consolidate preexisting legislation and clarify legal framework surrounding the protection of built heritage (Welsh Government, 2022). Although the English Government has phased out some types of applications, including Conservation Area Consent, as Wales creates their own policies they have continued to use these terms. Given the continued divergence of English and Welsh policies, it is necessary to analyze their consent applications separately.

The versatility of LBC building permits allows them to apply to a range of heritage site types across both England and Wales as the NHLE protected buildings cover everything from privately

owned homes to castles and national monuments (White, 2015). Given the sheer number of protected buildings and LBC applications, local authorities take on the task of reviewing applications. However, these authorities often lack the specialized knowledge and resources regarding the preservation of built history, so they seek support from knowledgeable experts. Applications vary in length and detail but must include a current description of the property and the proposed changes, as well as a heritage statement that details the building's history and the impacts of the proposed change. Once the application is submitted, local planning authorities request consultation about the application from those knowledgeable in conservation. These consultants, referred to as Conservation Officers, can work for the planning authority or a third-party consulting agency, but are generally members of the professional body of historic building conservation practitioners: the Institute of Historic Building Conservation (Institute of Historic Building Conservation, n.d.; White, 2015). Conservation Officers review the submitted materials and analyze the applications based on if the proposed changes would affect the historical special interest of the building (Historic England, 2021). If the proposed changes fall outside of National Planning Policy Framework guidelines, the Conservation Officer generally recommends denying or altering the intended renovations (White, 2015).

The Planning Act and NPPF guidelines aim to preserve all aspects of historic structures, so special attention is paid to applications that wish to replace elements of a building (Historic England, 2021). Authorities generally only approve major renovations, such as replacing the entirety of the internals of a historic building, when it ensures the continued functionality of a building. Similarly, the only time local authorities allow alterations to listed buildings without first submitting an LBC application is when the building requires immediate action to prevent total disrepair, and even then, they only support minimal changes (Planning Listed Buildings and Conservation Areas Act, 1990).

Once a local planning authority receives consultation on an LBC, they either issue a building permit with altered approval, full approval, or denial with the option to appeal if the owner disagrees with the decision (White, 2015). If approved, legislation allows the building’s owner three years to begin enacting the changes allowed under the provided permit (Planning Listed Buildings and Conservation Areas Act, 1990). However, the legislation does not outline what counts as the start of construction and there is no time period the changes need to be fully

enacted by. This makes it difficult for local planning authorities to track whether builders have abided by the building permit's requirements. Additionally, given the high volume of listed building consent applications that local authorities process every year, it may prove difficult to check whether builders are complying with the provided guidelines. If the local planning authority alters the application or denies it entirely, there is an option for appeal. If an appeal is requested, local authorities raise the application to the Secretary of State or the Welsh Ministers, who make the final decision (White, 2015). When appealing, the governing body allows building owners to motion to delist their building if there is reason to support it no longer holding historic value, but these delisting requests are rarely approved. Regardless of the content of the appeal, if the Secretary of State or Welsh Ministers decide to uphold the decision of the local planning authority, no more appeals are possible.

2.3.3 Ecclesiastical Exemption

Despite the versatility of LBC, legislation doesn't require all listed buildings to follow its constraints. The Ecclesiastical Exemption allows for certain religious buildings to avoid the LBC system if they are from one of five denominations: the Church of England, the Roman Catholic Church, the Methodist Church, the Baptist Union of Great Britain, and the United Reformed Church (Mansfield, 2007). Legislation passed in 1994 noted that any ecclesiastical building from one of the five denominations does not require an PBC permit for renovations, alterations, or demolitions unless the building is solely used for housing or the residence of a religious leader (The Ecclesiastical Exemption Listed Buildings and Conservation Areas Order, 1994). The selection of these denominations revolved around their internal historic building review process, the Faculty Jurisdiction, which provides a comparable system to the listed building consent process. This system also requires consultation from a conservation specialist, and although not specifically noted as one from the National Amenity Societies, several NAS regularly consult the church on Faculty Jurisdiction cases. An ongoing dialog continues between the public, the government, and affected religious organizations about the validity of the exemption, but while the current system exists legislation provides the named churches some freedoms while still having a process in place to control changes.

2.3.4 National Amenity Societies

Any governing body that requires consultations on historical renovations works with the National Amenity Societies, which exist as a third party of experts knowledgeable about the historical significance of built history as well as proper conservation techniques (Joint Committee of National Amenity Societies [JCNAS], 2010). The 1968 Town and Country Planning Act requires the notification of the National Amenity Societies when an LBC involving an aspect of demolition is submitted. These societies consist of conservation and historical experts who comment on the impact of proposed renovations to support national conservation efforts. Today, the umbrella of the Joint Committee of National Amenity Societies (JCNAS) covers all seven National Amenity Societies and arranges multiple yearly meetings for members of each organization to discuss the changing policy and techniques within conservation. Although the local planning authorities or national government control the final decision on an application, these amenity societies provide critical insight into certain specializations (Planning Listed Buildings and Conservation Areas Act, 1990). Out of the seven societies, six have specific aspects of listed heritage they specialize in while one, Historic Buildings & Places (HB&P), covers all aspects of heritage (JCNAS, 2010). Most of Historic Buildings & Places' work focuses on providing consultation on LBC applications; however, they also help individuals prepare to submit applications and work with churches under the Faculty Jurisdiction (Historic Buildings & Places [HB&P], 2023). Within LBC applications, other amenity societies comment solely on applications that fall under their range of expertise, but due to HB&P's large scope they work to guide all submissions to JCNAS.

2.3.5 Overview of Historic Buildings & Places

Historic Buildings & Places' work grew significantly over the last century as the cases they address expanded both in geographic location and scale. Originally called the Ancient Monument Society (AMS), John Swarbrick founded the organization in 1924 to focus on the north-west of England (HB&P, 2021). The designation and role of a National Amenity Society didn't exist until 1968, meaning that HB&P volunteered on previous consultations and concentrated on a narrow scope of cases. As HB&P expanded into new regions and national legislation mandated its role, the organization grew to see hundreds of cases annually. Now, its

caseworkers collaborate with the other National Amenity Societies to provide consultation on all LBC applications through a joint platform.

Currently, HB&P primarily uses the JCNAS Planning Casework Database. Used in conjunction by seven national amenity societies, this database collects the list of all demolition applications in England and Wales. Although JCNAS generates reports that document the type of application, authority responsible for the application, site grade, and building type, HB&P struggles to produce effective data analysis given the database's lack of data analytic or trend identifying system.

Due to limitations with the database, HB&P's caseworkers also collect data in Excel Spreadsheets. This results in the duplication of certain data fields and general inefficiency. The data fields recorded in the Excel sheet include those collected in the databases as well as information such as the region of the site, application type, and response type.

As HB&P's work grew, so did its funding needs. They receive funding from three main funding sources: individual membership, grants from Historic England, and returns from their investment portfolio (HB&P, 2022). HB&P is facing increasing pressure to provide these donors with documentation highlighting the impact of their work. To continue receiving grants from Historic England, HB&P must illustrate their impact through identifying the trends in their casework such as the types and quantity of buildings they consult on and if they've consulted on buildings from areas throughout England and Wales. Paper records from 1953 exist but they are focused on case studies and lack information on casework totals and trends (Figure 4). Although they also possess digital records from 2007 onwards, they contain inconsistencies due to a major change in staff in 2021. HB&P aims to highlight trends from their collected data to interested third parties. The lack of consistency in the categories that HB&P's paper and digital records track has made it difficult for them to create clear visuals highlighting their impact and trends over time. Given that they receive a notable amount of funding through membership, they also wish to identify what their membership body wants to see their work achieve.

Figure 4: Some of HB&P's existing paper records dating from 1953 to 2021.

Section 2.4 Data Management and Impacting Reporting

2.4.1 Data Collection, Storage, & Uses

Effective data collection and management is the baseline to a successful heritage organization. While several types of collection and storage methods exist, heritage groups benefit from a system that assists in demonstrating their impact on heritage conservation efforts. The publication of these impacts assists charities self-evaluate, set measurable goals, and demonstrate the cost to benefit of their activities to shareholders (Breckell et al, 2010).

Many charities in the UK do not currently conduct in-depth analysis of their data due to a lack of resources in personnel, time, and money. Funded primarily by donations and grants, organizations are wary of acknowledging the failure to achieve their goals in fear that it reduces their funding appeal. Combined with the difficulty of data management, these organizations often forgo extensive impact reporting.

Data in the heritage sector is complicated by nature; it contains data collected over decades or centuries of a shifting world. Organizing this data illustrates key issues. Over the years, the definitions of data fields have shifted. Sites previously defined as just historical buildings, for example, may now include gardens or architectural sites. Compiling data with a constantly shifting definition requires additional care; it cannot simply be translated. Organizations must identify and update databases with the required design changes (Gardner et al., 2003). This requires a multifaceted approach that ensures comprehensive documentation since records are the primary guide for data collection in the heritage sector (Robinson, 2007).

2.4.2 New Zealand's Heritage System

Heritage New Zealand Pouhere Taonga (HNZPT) is the primary government organization in New Zealand that works towards the protection of heritage. Similar to HB&P, they aim to spread knowledge of New Zealand's history, identify and support the inclusion of sites on their national heritage list and advise site owners on the management of their heritage buildings or places (Heritage New Zealand Pouhere Taonga [HNZPT], n.d.). To demonstrate their impact, they release an annual statement of performance expectations that outlines their goals and non-financial Key Performance Indicators (KPIs). Within the report, they list the KPIs, a way to measure it, data from past years, anticipated data for the upcoming year, and the resulting trend. Examples of their KPIs include measuring the number of heritage sites where damage has been reduced, the response rate to applications, their annual events or initiatives, and engagement in their content (Dorday, 2003). Additionally, HNZPT releases a triennial national assessment of heritage protection. Within this report, they identify the percentage of districts in New Zealand successful in meeting their KPIs. Their interdisciplinary data analysis uses historical data, architectural and cultural assessments of the sites, and demolition type. They use various methods in their data visualization such as stacked, grouped, or regular bar charts, tables, pictorial charts, and map-based charts (HNZPT, 2022).

2.4.3 Impact Reporting

The UK currently has over 161,000 registered general charities, which are facing increasing pressure by internal and external stakeholders to produce tangible results of their effectiveness (Hyndman & McConville, 2018). Stakeholders include the central government, sector interest groups, funders, individual donors, charity managers, and beneficiaries. Successfully reporting impact creates a transparency that organizations can then utilize to increase their accountability, improve their decision-making, and legitimize their work to shareholders. Charity Finance Directs' Group defines this impact as the "broader or longer-term change resulting from their activities" (Breckell et al, 2010).

To demonstrate impact, organizations can first identify the metrics they wish to utilize with their KPIs. Upon identifying their goals and purpose, organizations can use KPIs to track their progress or fulfillment. Each KPI is paired with a way it can be measured. Although this measure is usually quantifiable, such as an increase in applications, it can also be the accomplishment of a

task such as creating a publication or hosting an event. Other KPIs measured in the heritage sector include tracking the applications, listings, demolition, community involvements, event attendance, or social media engagement (Historic England, 2023-a).

In addition to KPIs, charities can also utilize a stakeholder-focused framework that focuses on transparent reporting. This framework outlines a comprehensive story of an organization's work. It details measures comparable to KPIs, then expands into the context of these measures such as their comparisons annually and to similar organizations. Charities should diversly format these measures, numerically, narratively, or through a case study. In an impact report there should be "no numbers without stories, no stories without numbers" (Hedley et al, 2010). Organizations should also provide proof of the reliability of their claims. A charity's impact or effectiveness can be broadly demonstrated through the use of five measures: output, individual outcome, societal outcome, output-based and outcome-based effectiveness (Hyndman & McConville, 2018).

Although a variety of reporting tools exist, most NGOs in the UK still fail to demonstrate their impact. In a survey from 2008, only 8% of charities specifically report on impact (Breckell et al, 2010). Although most believe in the value of impact reporting, charities fail to do so because of financial or staffing complications. Most comprehensive impact reporting methods are time-consuming. In England and Wales, 76% of charities have an annual income of less than 100,000 pounds (Breckell et al, 2010). For small organizations, the cost both financially and temporally often outweighs the benefits.

The UK government has historically financially prioritized organizations that report their outcomes in a detailed and quantified manner (Hyndman & McConville, 2018). With over half a million listed buildings in England and Wales, HB&P and other amenity societies' consultations provide critical support to the preservation of authenticity (Historic England, n.d.a). To support HB&P's preservation goals and funding requirements, our team referenced these tools and guidelines to streamline their data analysis and make recommendations. To accomplish this, we collaborated with various stakeholders and representatives from other NASs to establish a clear definition of impact and create visualizations that assist impact reporting.

3. Methods

Our project identifies ways Historic Buildings & Places can define impact within the scope of their casework and help them demonstrate this impact to appeal to potential donors and stakeholders, using graphs and infographics. We also helped establish protocols for more efficient data collection and analysis in the future. To accomplish these goals, we split our project into three main objectives:

1. Determine the definition of impact within casework; according to both trustees and members;
2. Identify and illustrate trends within casework about site type, location, and changes over time;
3. Provide recommendations for future data collection based on identified gaps and streamline the process of data collection and analysis.

To accomplish these objectives, we used a mixed methods approach. We started with interviews and surveys of HB&P trustees and members to identify their goals for HB&P casework as well as ways they would like to see those goals visualized. After we had identified categories to highlight and how to best illustrate them, we used data analysis techniques to identify trends within their prior casework and graph them to highlight HB&P's impact. Casework data came from a variety of sources, as shown in Figure 5. When performing this data analysis, we also interviewed representatives from other NAS to understand techniques they used. Our data analysis resulted in the creation of visuals highlighting trends, some of which were included in an infographic to be used in marketing materials. Lastly, we used information from trustee interviews, member surveys, input from current casework, and gaps we identified during data analysis to create recommendations for future data collection. The flow chart below (Figure 1) illustrates our workflow with our specific timeline laid out in Appendix A. The grey boxes represent our methodology of surveys, interviews, and data analysis. Although input from HB&P caseworkers is not explicitly laid out in our methods, their continued input throughout the project informed our recommendations. The blue boxes represent the outputs of each method. The arrows between boxes illustrate the order of our methodology and how elements of the project built on each other. The blue circles provide an overview of what informed our data analysis,

given that was the most intensive element of the project. The next sections provide a more detailed description of the methods used to accomplish each objective.

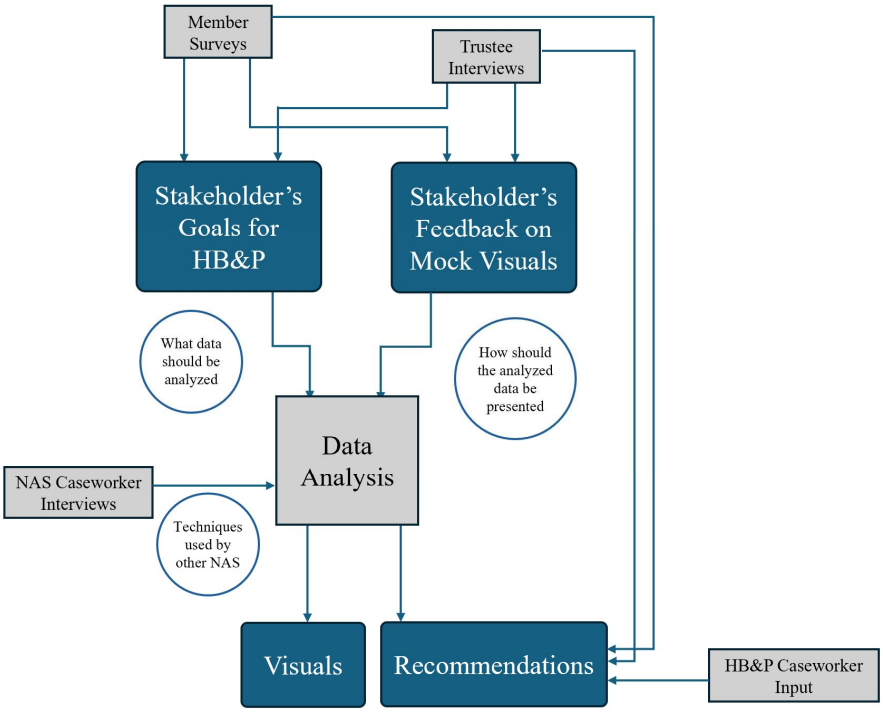

Figure 1: A flow chart highlighting the methods we used and their relationship with our findings.

3.1 Objective 1: Defining HB&P's Impact Within Casework

A definition of impact is the basis for an effective organization. It allows HB&P to share its work and demonstrate its contribution to heritage conservation across England and Wales with its members, stakeholders, and funders. It also allows employees to formulate their actions in a unified direction. HB&P needed a definition of impact tied to its goals and as a guide for future data collection and analysis. To create a functional and comprehensive definition of HB&P's impact, we conducted semi-structured interviews with HB&P trustees and NAS caseworkers and HB&P trustees and an online survey for members.

We started by interviewing HB&P trustees on the impact of casework, goals, and visualizations. Our sponsors introduced us to trustees via email. We also attended HB&P's annual general meeting in Manchester celebrating their centennial anniversary. This allowed us to network with trustees and collect additional contact information. We structured interviews using a list of

predetermined questions (seen in Appendix B) but were open to change following the discretion of the interviewer. In addition to creating minutes, we also requested temporarily recording and storing the interviews for our review. We chose this method of semi-structured interviewing since the trustees came from a wide variety of backgrounds and had different opinions on the preservation of historical buildings. We valued the ability to explore a range of topics depending on the trustee's experience. This interviewing method enabled us to collect detailed qualitative data on all our desired topics and accommodated probing or follow-up questions. Our team reviewed the minutes and recordings to identify and incorporate the nuanced perspectives of experts on HB&P's casework data, impact definition, and visualizations.

During the interviews with NAS caseworkers, we focused on the goals and data collection of their organizations. To schedule these interviews, we used HB&P's connections to reach out to multiple societies and were able to meet with caseworkers from the Council for British Archaeology and The Gardens Trust. Similar to interviews with HB&P trustees, we opted for semi-structured interviews since they allowed each interviewee to go into detail about their organization and specialization. Each caseworker had a unique perspective and expertise, so the flexibility of interviews allowed us to tailor our follow-up questions to the interviewee's focus. We interviewed NAS caseworkers on the methods their organization utilizes to collect data and define and measure their impact (see Appendix C for full list of questions). Following our NAS interviews, we analyzed our minutes to inform our data analysis and aid in the creation of our recommendations for future work based on their definitions of impact and data collection process.

We created an online survey for HB&P members collecting data on their opinions of casework impact and preferred visualization style and content. HB&P's marketing team digitally distributed our survey to HB&P's current members and non-members who interact with their publications and email outreach. HB&P currently has over 1,000 members who contribute financially towards HB&P's mission. As our largest group of stakeholders, we identified that a digital survey as the most accessible to most existing members and interested parties. A survey also allowed for the quick analysis of responses. Although this method may exclude members who primarily use physical mail or telephones to communicate with HB&P, we did not have the time or resources to rely on mail or telephone surveys. Telephone surveys also would not have

allowed us to present impact illustration examples. Completed using WPI Qualtrics and lasting just under 5 minutes, the survey asked members about their demographics (age, region of residence, and membership status and length if applicable), casework reporting expectations for HB&P, and their preferences regarding mock visualizations of casework. We asked participants to rank several factors such as “preventing renovation with an aspect of demolition” to “addressing diverse types of buildings,” in terms of importance when evaluating HB&P's impact and to provide feedback on data fields or trends they would like to see from the organization (See Appendix D for the complete survey). Following the survey’s completion, our team sent a report of the amalgamated and anonymized results to our sponsors and used the insights to inform our data analysis prioritizations.

By using the mixed-method approach of surveys and interviews, we were able to obtain quantitative and qualitative results on the way different stakeholders view and value the impact of HB&P’s casework. This directed our team’s analysis goals and methods discussed in Objective 2.

3.2 Objective 2: Analyzing Case Data

Our team investigated themes and trends over time in HB&P’s casework. The organization is interested in preserving historical sites of all ages, grades, and types, and is the only NAS without a specialization; therefore, they are interested in quantitative assessments that highlight their involvement in a variety of geographic regions and site types. In addition to understanding metrics HB&P stakeholders wanted to visualize, we also gathered data on which graphics clearly illustrated different trends. Our team showed mock visualizations to members and trustees to determine which graphs were understandable for different audiences. The input on mock visualizations from trustees and members ensured that recommended changes were functional, user-friendly, and conducive to effective data interpretation. Input from our survey and interviews directed our organization and analysis of HB&P’s records. As seen in “Sources of Data” in Figure 5, these included physical records dating to 1953, Excel spreadsheet dating to 2007, Excel spreadsheet starting in 2020, and data from the JCNAS database.

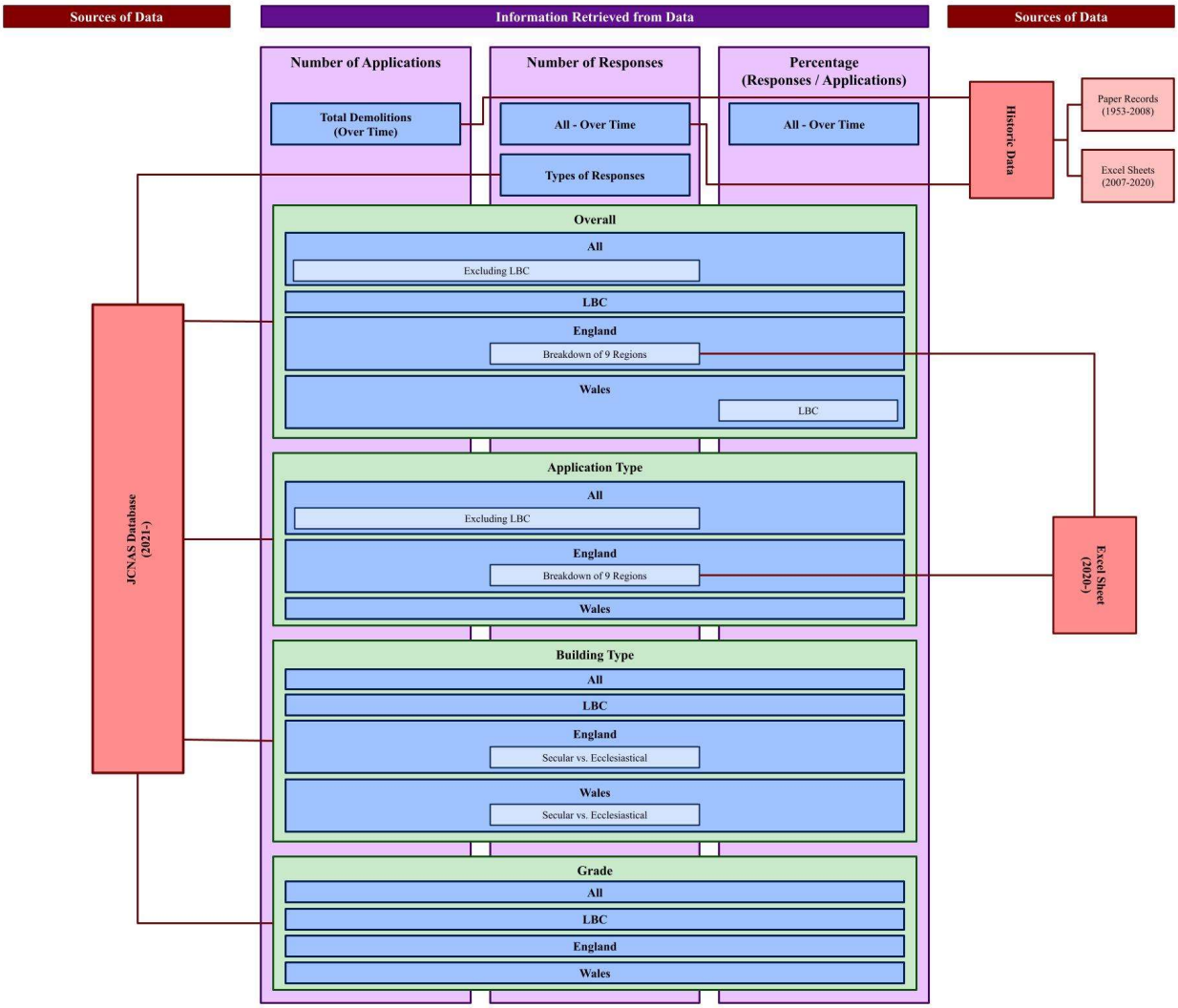

Figure 5. Breakdown of references for the creation of our visualizations and data analysis. Red boxes represent sources of data, purple boxes represent the vertical axes of our graphs, green boxes represent the category of casework being analyzed, and blue boxes represent the horizontal axes of our graphs. Each source of data is linked to which graphs or categories they provided values for.

Starting in 2020, HB&P has stored their current casework in a database shared by the six National Amenity Societies, the JCNAS Planning Casework Database, and in a manually logged Excel workbook. The JCNAS database uses the Heritage360 platform and is managed by a different NAS, the Council for British Archaeology. Although it launched in 2020, the Heritage360 platform didn't track complete data until 2021, so that is when we started our

analysis using the database. It tracks all applications sent to HB&P and their responses and can be filtered for application type (e.g. LBC) or constituent country (England or Wales), represented by the blue boxes in Figure 5. The database provides reports of application type, local planning authority, grade, building type, and the response from HB&P if applicable (see Figure 5). HB&P uses an Excel workbook to track other details of their responses, such as the application's region or if the renovations are for change of use (see Appendix E for the complete list of categories). HB&P possesses records dated before 2020 that are not centralized, including Excel files and physical archives. Our team read journals and minutes from Annual General Meetings dating back to the 1950s to look for larger trends over time. Due to the differences in reporting throughout the decades, we collected incomplete data on the number of consultations HB&P responded to and the number of total demolition applications when tracked (see Figure 5). As the preliminary step of our data analysis, our team organized all historical data sets into two Excel workbooks: one with all information taken from Excel files and the other with relevant casework information from paper records.

We started data analysis by working with the JCNAS database to identify trends within current applications from local planning authorities. This database is the only way to track all applications, as thousands are submitted to HB&P every year and the organization is unable to offer substantial responses to all cases. We used this database to analyze categories of applications that do not receive responses. We also divided the number of responses per data category by the number of applications to identify the percentage of applications that receive responses. This contextualized categories by their availability.

The database also tracks when the application receives a substantial response from HB&P, defined as site visits, informal contact, not for action, or letters of support, objection, advice, or no comment. We generated reports for the applications and responses from the past three fiscal years (March 31, 2021 to April 1, 2024), as well as filtering to focus on England, Wales, and LBC applications. After converting these reports to Excel format, we created visualizations to show differences in the frequency of different category types. This would include applications like appeals, de-listing, LBC, and planning application; building types, such as commercial, domestic, religious, or agriculture; and grading or status as defined by Heritage England. We could analyze local planning authorities only to a limited degree, as the JCNAS database only

tracks the fifty authorities that submitted and received the highest number of applications, meaning we could only track the most active LPAs.

Based on these breakdowns, we found the majority response types of HB&P's casework. Additionally, by dividing each category of response by its number of applications, we determined which cases HB&P focused its resources on and identified if the organization overlooked certain categories. To illustrate how their casework changed from 2021 to 2024, our team primarily used clustered column charts, but also used line graphs, stacked column charts, and pie charts. We created different graphs for applications, responses, and the percentage of responses per category of application. By creating visuals for how each site and application type varied over time, we helped HB&P employees understand the distribution of their current work and how it changed over the past three years. This allowed HB&P employees to understand not only which types of cases they were handling the most, but also which were being overlooked or focused on when it comes to the number of responses per application they were receiving. This understanding will allow caseworkers to alter future case selection if they feel a certain category is being overlooked or under-analyzed.

The Excel workbooks starting in 2020 contain details of every case HB&P has responded sorted by year and allow for further insight into their casework. Our sponsors were specifically interested in the distribution of their data regarding Wales and the nine regions in England and used Excel to track this information. We created visuals for heat maps, cluster columns, and pie charts to show the distribution of cases. These graphics were used to assist HB&P's understanding of the areas they currently focus on, and the specific regions can be seen in the heat maps created for findings (Figure 12). In addition to the current Excel workbook, there is incomplete Excel data from 2007-2015. These records yielded an understanding of broad changes in their consultations and responses. To identify these trends, we combined past Excel sheets into one workbook sorted by category. This compilation allowed us an overview of past consultations and casework since we could easily identify themes across the years. Despite compiling the data, inconsistency in the data recorded and varying terminology prevented us from creating clear visuals. Although our team reviewed these resources to backdate the trends in data when available, we prioritized recent trends due to the limited timeline of our project.

We interviewed caseworkers from other NAS and discovered that they track impact by analyzing the outcomes of their cases. We used this information to create a similar system for HB&P where we reviewed the websites of local authorities and recorded the available outcomes of HB&P's recommendations from the 2023-2024 fiscal year. For each of the cases tracked in Excel, we used the JCNAS database to locate the decision of the local planning authority and compare it with the responses submitted by HB&P caseworkers. We noted the decision of the available applications, which included withdrawal, denial, approval, and approval with conditions. We categorized each listing as a negative, neutral, slightly positive, or positive impact based on HB&P's initial recommendation and the LPA's resulting decision. For the cases still awaiting a final decision, we reviewed the current application documents to determine if there were any amended plans submitted that reflected the recommendations of HB&P's caseworkers. For cases where this could not be determined, we noted the impact as pending. We highlighted the influence of HB&P by identifying the frequency in which LPAs reference the organization in the outcomes of applications.

The trends identified across the physical data, Excel data, and the information stored in the JCNAS provided a holistic understanding of HB&P's casework and consultations. As HB&P collects data on every total demolition application each year, the relative frequency of different cases can reflect larger changes in the prioritization of heritage preservation in England and Wales. This information can be used by HB&P to better reflect the larger community's changing needs and attitudes toward heritage preservation. Prior to our work, HB&P had not determined if there were trends or commonalities in the results of their consultation. The trends we highlighted can lead to a clearer understanding of the current focuses of their casework and guide which cases they choose to respond to in the future.

3.3 Objective 3: Making Recommendations for Future Data Collection and Analysis.

Improving data collection and analysis for HB&P is vital for a more comprehensive understanding of their work's impact in the future. Our team made recommendations for HB&P to implement in future data collection to fill gaps and maximize their utility. These gaps were identified as we organized and analyzed their data but also with the suggestion of trustees and caseworkers. We shared an organized Excel workbook with our sponsors of HB&P's past data

that has been compiled from various Excel sheets, printed journals, and meeting summaries dating back to 1953. Our survey and interviews acted as ways to assist HB&P in making more informed decisions when conducting data analysis and demonstrating their impact.

From our survey and interviews with both HB&P trustees and other NAS caseworkers, we also made recommendations on data categories HB&P can collect. Our interviews with HB&P trustees covered various aspects related to perceptions of HB&P's impact regarding their preferences for data analysis and their opinions on data that should be collected. Insights from these interviews helped identify gaps trustees see in their current work. We also interviewed caseworkers from other National Amenity Societies which enabled the comparative analysis between HB&P's current data collection and impact reporting efforts to those of other societies. These comparisons also informed us of the strengths and weaknesses of different data organization methods and different perspectives on collecting data to highlight impact. Along with these methods of comparison, we spoke with HB&P caseworkers to understand categories they might want to include in future data. Finally, we surveyed members to identify data they would like to see graphed. To understand which visuals members were interested in, we recommended recording data that could be used to create these graphs. Combining information from all four groups led to a list of recommendations about categories that would be useful to track in the casework Excel workbook in the future.

As we performed our data analysis to create visualizations, we recorded our process of organizing and graphing their current data so that it can be replicated in the future. We provided HB&P with templates for future graphics and visualizations of their casework. The analysis performed on the Excel workbook they currently update is transferable to future years through the standardized formulas we used. Our team also determined that creating manuals would ensure that this data analysis can be conducted easily by HB&P employees in the future. One example of such a manual consists of a numbered procedure, including screen captures as needed, for how to convert the JCNAS database report summary into a usable Excel format. Our sponsors reviewed an early draft of this manual to ensure understanding and clarity. HB&P can streamline its data collection and continue analysis through our recommendations, fostering a more detailed understanding of its work and impact on heritage preservation.

3.4 Limitations

Each of the methods we utilized to accomplish our objectives came with its own set of challenges and limitations. Due to the size of HB&P's membership, we used surveys to understand valued metrics in HB&P's work. HB&P's marketing team advised us that roughly 10% of their membership answered their previous survey which was available for a longer period of time. We surveyed both members and people interested in HB&P's work and received roughly 100 responses. Of the 90 people who answered the question regarding membership, 60 were current members, representing roughly 5% of their membership. The marketing team distributed the survey via email and the HB&P website; since people who are highly involved with HB&P are more likely to interact with these communications, our survey is affected by voluntary response bias. This means that the people who were most likely to support HB&P were also the most likely to give feedback, and when that factor is combined with the small total number of responses, it is difficult to generalize the survey responses with the opinions of HB&P members.

We used semi-structured interviews with HB&P trustees and caseworkers from other National Amenity Societies to get their input on impact definition and data collection techniques and results. These interviews provided more holistic responses than surveys, given that participants weren't limited in their answers; however, time constraints limited the number of interviews we held. We wanted to interview members of HB&P's board of trustees, but given that they were volunteers with limited availability, we were only able to meet with a handful. Another limitation came with contacting interviewees; through HB&P's connections, we were able to meet with caseworkers from two other NAS, but we were unable to connect with representatives from the other four.

Finally, using data analysis to accomplish our second objective allowed us to identify trends but also limited us to information HB&P already collected. HB&P's data is stored across multiple digital mediums, one of which is a database that limits exports. Although HB&P has digitized data starting in 2007, it lacks consistency in categories collected and terminology used. This made creating clear illustrations of data trends across multiple years difficult. HB&P has tracked the total number of building demolition applications since 1979 in their paper records; however, we were not able to find data for all the years. Additionally, their defined time ranges have

shifted year to year, so creating cohesive visualizations over time proved difficult. HB&P caseworkers recorded data consistently starting in 2020; however, this limited the length of trends we can show. The trends graphed from recent data used fiscal year intervals, so although we had consistent data starting in 2020, the first full interval of data was the 2021-2022 fiscal year. Additionally, due to the adjustment period of starting to use a new database, JCNAS data can only be used from the 2021-2022 fiscal year and onwards. Digital data is sorted by category, but titles may have shifted between staff transitions, making comparison attempts more difficult. These challenges were addressed by being transparent with HB&P when we presented our visualizations so that they understood potential shortcomings.

4. Findings

4.1 Introduction

Our findings were structured around the first two objectives previously defined in our methods and based on the flow chart seen in Figure 1. We interviewed two groups—trustees and other NAS caseworkers—and surveyed members. For our member survey, we had between 84 to 96 responses for each question regarding respondents' views on the impact, the importance of HB&P casework, and on their reactions to mock visualizations.

Starting with our first objective of identifying HB&P's casework impact, we found that stakeholders valued the organization addressing a diverse range of applications across multiple categories. Stakeholders also expressed an interest in understanding the outcome of HB&P's casework, which expanded our data analysis approach. Next by asking about mock visuals, we determined that audiences positively responded to line graphs, clustered column charts, and heat maps, we could illustrate HB&P's work through these avenues.

For objective two, we conducted data analysis of HB&P's current and past casework records to create visuals highlighting the trends of their work. This included data from the shared JCNAS database, their current casework Excel document, past physical records, and the outcomes of recent casework. Through this analysis, we determined that HB&P currently responds to a diverse subset of cases with a relatively even response distribution across consultation frequency. Additionally, our analysis of HB&P's casework outcomes demonstrated their positive impact on

local planning authorities by quantifying how each LPA decision aligned with HB&P's response. After creating these trends, we fulfilled our second objective of identifying and illustrating trends with casework by combining them into an infographic which could be distributed by the marketing team for public distribution.

We begin fulfilling Objective 1 with our findings regarding the definition of casework impact for HB&P as detailed in section 4.2. Stakeholder input on mock visualizations and data analysis are detailed in sections 4.3 and 4.4, respectively, to complete our second objective. In section 4.5, we detail the outcomes of non-pending cases for the 2023-2024 fiscal year as a continuance of Objective 1. Our final objective is incorporated into our recommendations and the gaps in data we identify throughout our findings.

4.2 Goals and Casework Impact of HB&P

4.2.1 Interview Results

From our interviews with six trustees, we discovered a wide variety of perceived goals and impact of HB&P. Beyond protecting historic buildings, trustees believe the goal of HB&P is to provide support through their consultations, focus on the continued use of a buildings through the renovations or repurposing, and work within a wide range of cases. Trustees have a diverse view on impact, believing that HB&P's casework impact can be shown in their influence on LPA decisions, a decrease in demolition and badly written applications, work on re-consultations and pre-applications, and the proper renovation of sites.

Being a supportive and informed organization that supports building owners through the stressful process of submitting LBC applications is a goal of 66% of trustees. They believe that the goal of HB&P is to provide aid to building owners and conservation officers in the preservation of historic sites by being involved and providing recommendations that are balanced and adaptable. Trustees believe that an empathic attitude is important to a positive reception to responses. Support leads to progress and work towards sustainability and adaptations for the future. Conversely, several trustees highlighted their concerns that unsupportive advice or a strong objection will lead to building owners believing renovations are unfeasible and too burdensome. Instead of updating their applications, they may instead take no action and cause the future dereliction of a site. While trustees held differing views on the level change that should be

allowed to historic buildings, they generally valued providing supportive and versatile recommendations.

Trustees also strongly value focusing on the continued use of a building through renovations or repurposing, allowing them to evolve with the area's interests. Trustees acknowledged the importance of balancing its authenticity with recent changes in varying ways. Some trustees saw the value of new architecture styles or retrofitting to the character of a building. They expressed support for allowing buildings and HB&P to reflect a changing cultural landscape, noting the natural progression of architectural styles throughout history. HB&P should work to support the evolution of current ideas and incorporate them into their work to preserve the historical fabric it originated from. Other trustees expressed a more pragmatic support for renovations and repurposing. Renovations, especially when done mindfully through the incorporation of historic or original methods, can support a site's structural integrity and ensure its future usability. Trustees also conveyed their beliefs that green conservation or sympathetic re-use can make sites more habitable, affordable, and attractive to the general public. They valued increasing the environmental sustainability of a building and its contribution to addressing the UK's goal of carbon neutrality by 2050. Trustees valued repurposing because it can make a site more community focused and accessible to a larger diversity of people. Most trustees strongly support focusing casework into adding value to historic buildings through such changes to assist in preservation long term.

Trustees also emphasized diversity in both building type and region as an HB&P goal. Many reiterated the particular emphasis HB&P has on protecting everyday heritage, a term used to describe local, often community sites that may be overlooked in favor of a large manor or chapel. HB&P trustees hope to address the gaps or heritage that are hidden or overlooked. One trustee noted the importance of pushing for the protection of sites that are not valued by the public because of the lack of support for its preservation. For example, sites that are not aesthetically pleasing can still hold historic value. Some trustees also believe HB&P does not currently prioritize regional diversity and casework outside of the greater London area. Trustees value the importance of working across all regions and with a diverse population.

Trustees all had a similar view on HB&P's casework and how it demonstrates impact. A noted that the clearest demonstration of impact comes from whether HB&P has an influence on the

resulting decisions by local authorities on planning applications. Although it is difficult without a direct mention by the LPA to specifically attribute which cases HB&P are impactful in, interviews with other NAS case workers also showed that they used this type of system as their metric of impact. Understanding the difficulty in collecting this data, trustees also highlighted some other measures of impact.

One such example includes a trending decrease in casework, specifically problematic casework. A request for full demolition may be a sign that HB&P has had a change on the overall image England and Wales has on its historical makeup. A decrease in applications missing key details could be indicative of HB&P's impact on informing local councils and building owners the detriments of bad preservation habits. Similarly, an increase in well informed, detailed, and successful applications can show an increasing appreciation for historic sites. Re-consultations are also highly valued by trustees. Trustees see them as a sign of strong community ties and that building owners and local authorities are open to input and willing to work with HB&P to make positive changes to their plans. Pre-applications were also noted for this reason, but some trustees expressed concern in the speculative nature of pre-applications and their often lack of details. A trustee also noted that a key impact of HB&P's work is the proper renovation of sites. Through casework, HB&P can advise on ways to preserve buildings not only aesthetically but also on a structural level so that the building ages well.

4.2.2 Survey Results

We asked the members to select their three most important metrics for evaluating the impact of HB&P's casework. 69 of the 96 responders (72%) had one of their selections include prioritizing the continued use of the building and working with building owners and developers. Two relevant responses under "Other" were to "Prioritise working with non-designated heritage assets (the most vulnerable to demolition) where notified," and "Finding new uses for redundant buildings, particularly military." Our later findings for HB&P's current casework supported the prioritization of non-listed buildings, which found that a high percentage of locally listed or undesignated applications were responded to by the organization.

When we provided a multi-select asking which types of publications that they would like to see from HB&P, members primarily wanted to see diversity in casework, such as region and building type (61 and 45 out of 89, respectively) (Figure 6). Similar answers were given in the

question regarding the impact of HB&P, with 46% of responders choosing working with diverse types of buildings and 30% selecting working across Wales and all nine regions in England. Two responses from the open textbox option wanted to see if there were differences among local planning authorities or the level of construction. From this feedback, we made sure to create to show casework across building type for all HB&P casework and specifically in England and Wales, as well as regional breakdowns for overall casework responses.

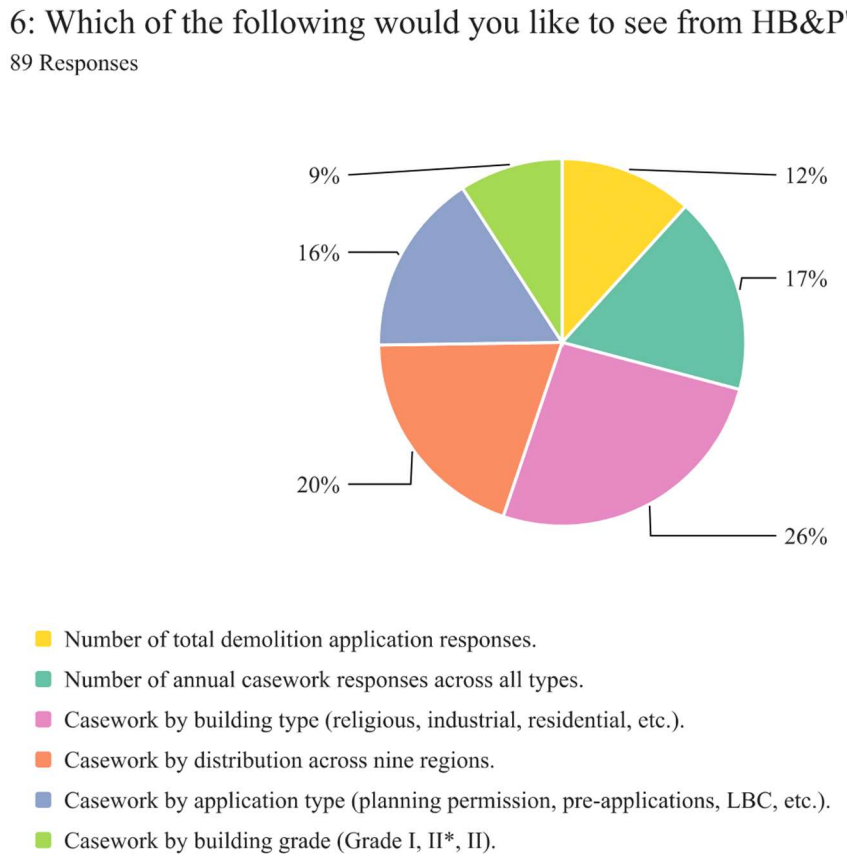

Figure 6: Breakdown of survey respondents selected answers when asked “Which of the follow would you like to see from HB&P’s casework?” The two largest responses were an interest in breakdown by building type and regional distribution.

The survey also contained an open textbox where respondents could write anything else they would like to see from HB&P’s casework, and eight of the fourteen relevant responses (57%) discussed wanting to know the outcome of an application or whether LPA’s considered HB&P’s

advice. This supported feedback from trustees, and our team determined the impact and outcome of HB&P's consultations

for all non-pending cases from the 2023-24 fiscal year as discussed in Outcomes Assessment.

4.3 Visualization Feedback

4.3.1 Interview Results

Interviews with HB&P trustees informed us on the best graphics to make our visualizations. Trustees prefer clustered columns across all categories for their simplicity and readability. Five out of the six trustees interviewed (83%) expressed an interest in seeing data graphed with a clustered column. Stakeholders generally supported clustered columns for most of the trends: regional, building, and application distribution; changes over time; and substantial responses. Since clustered columns are suitable for many types of data, they can help ensure continuity in the graphics. In addition to clustered columns, we found that heatmaps were popular with 66% of trustees for depictions of regional trends due to their pictorial nature and legibility. Multiple trustees expressed an additional interest in heatmaps for LPA and individual regional breakdowns. Trends such as the distribution of building type, grade, and application type, often have one dominant category that makes up over 70% of all responses. In bar or column charts, this results in difficulty during the interpretation of other categories.

As a result, half of trustees found this type of data easier to visualize in the form of a composition graph such as tree maps and pie charts.

4.3.2 Survey Results

To demonstrate changes over time, 32 of the 84 respondents (38%) preferred line graphs. For regional distribution, the majority (43%) chose the color map, and to demonstrate types of consultation 58% preferred horizontal bar graphs. We chose to use clustered columns for non-regional data, which were either the highest or second-highest choice for the survey responders. This allowed for a cohesive series of visualizations, and our team believed that columns had a better demonstration of quantity than horizontal bars. We used the color map for regional data, which stakeholders and our sponsors noted as being a clear visualization across regions.

4.4 Data Analysis

After hearing from trustees and members about the information they wanted to see highlighted and graphical representations they found accessible, we analyzed several different categories of data HB&P had collected. We started with looking at the compiled data predating 2020, then moved on to analyze the current data stored in the casework Excel sheet and the JCNAS database.

4.4.1 Compiled Data Predating 2020

HB&P provided numerous data files containing information regarding overall figures for demolition applications, consultations, and case responses. HB&P stored these figures in Excel sheets dating to 2007 and physical records dating to 1953. Due to evolving reporting habits in these files, trends are only available for select periods and often contain gaps. We first compiled general trends for demolition applications followed by consultations and responses over time.

The declining trend of demolition applications starting from the fiscal year of 1979 to the most recent fiscal year of 2023 illustrated in Figure 7 demonstrates an overall positive impact and fulfillment of HB&P's mission. There has been a decrease from a maximum of 649 applications in 1987 to only 12 in the 2023-2024 fiscal year. This success is bolstered by the contrasting trending increase in listed buildings during the same period (Historic England, 2024). This decrease may demonstrate the changes in public interest and valuation for historic sites or the success of HB&P's casework. Additional figures illustrating the trends in total demolition applications in Wales are included in Appendix F.

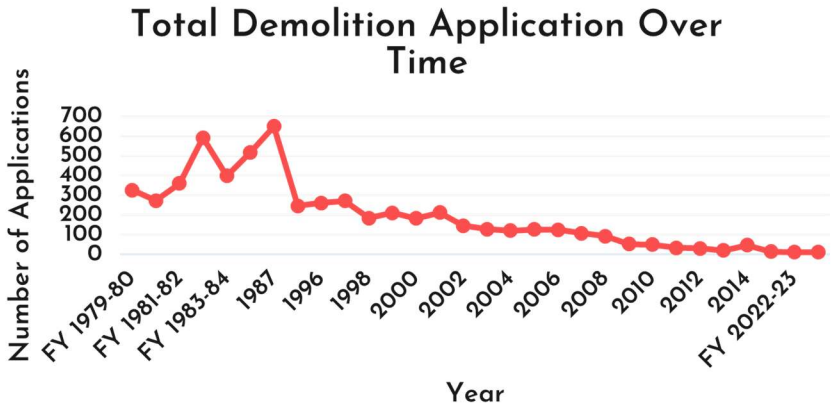

Figure 7: The total demolitions applications per year from the fiscal year of 1979 to the fiscal year of 2023 with gaps in time between 1984 and 1995 and between 2014 and 2021. This highlights a downward trend in demolition applications with the number stabilizing to just over 10 in recent years.

The files also illustrated the number of cases received and the number of responses sent by HB&P. Using the number of consultations and responses per year, we were able to determine the percentage of consultations with responses for each year as seen in Figure 8. The graphs showing the trend in consultations appear in Appendix G. Figure 8 demonstrates the changes in number of consultations, staff, and resources within HB&P, and what constitutes as a response over the years. Since 2007, the number of consultations received by HB&P has significantly increased from approximately 5000 to 7238 in the fiscal year of 2023-2024. During this time, HB&P has also experienced significant decreases in resources and staff, with a major staffing change in 2020. This staffing change is represented in the graph. The lowest percentage of responses of 2.9% occurred during the fiscal year of 2021-2022. Following the turnover of staff in 2020, general trends show that responses and the percentage of responses to consultations have stabilized to an average of 5.4% for the 2021, 2022, and 2023 fiscal years. During these years, the number of responses has also been consistently higher than those between the year of 2013 and the 2021 fiscal year. During the 2021, 2022, and 2023 fiscal years, HB&P created approximately 440 responses each year. Between 2013 and the 2021 fiscal year, HB&P submitted an annual average of 260 responses.

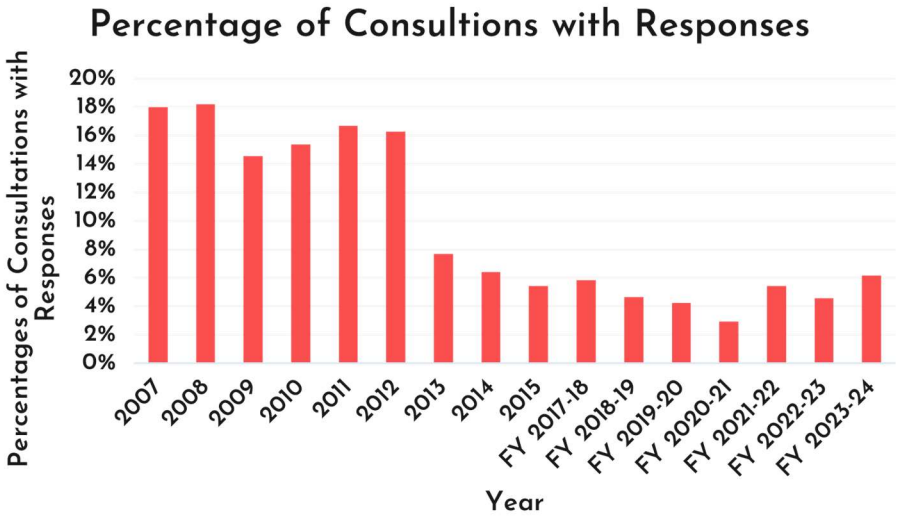

Figure 8: The percentage of annual consultations with responses from 2007 to the fiscal year 2023. This percentage is found by dividing the annual response by consultations. There is a gap in time between 2015 and the fiscal year 2017-18.

4.4.2 Current Casework

After analyzing the older data, we looked at the information consistently tracked after 2020. Because the same caseworker compiled this data, we could ensure categories tracked were consistent across all four years of data. However, due to staff transitions, the 2020-2021 fiscal year only started tracking responses in September, whereas other years started in April, leading to fewer total cases that year. Due to this discrepancy, we omitted the 2020-2021 fiscal year from our graphs.

The current casework was from a combination of the JCNAS database and manually maintained Excel workbooks. For certain categories, the JCNAS reports allowed our team to find the number of applications, number of responses, and the percentage of applications that received responses. We calculated this by dividing the number of HB&P responses per category by the number of applications they were assigned for that category. This allowed our team to determine if there were certain types of applications, buildings, or grades that HB&P prioritized in their casework. In addition to total HB&P casework, breakdowns were provided for England, Wales, and LBC casework. The JCNAS database did not provide regional data within England or track

Ecclesiastical Exemption cases, so we graphed that information from the HB&P Excel casework register.

Application Type

Our team wanted to determine which types of applications HB&P receives and responds to. JCNAS tracks 16 application types as well as the total number of applications. We simplified the list of 16 types into a list of 10: Appeal, Cathedral and Church, Conservation Area, De-listing, Full Application, Listed Building Consent, Listing Application, Planning, Pre-application, and Other (see Appendix H for the full list of application and grade types tracked by JCNAS). The total number of responses and applications were provided both including and excluding LBC applications (see Appendix I), as LBCs composed roughly 75% of all applications and 65% of all responses throughout the past three fiscal years. Besides LBC applications, Cathedrals and Churches received the highest number of responses overall in England and Wales. Full applications had a high number of responses across all casework and in England, though not in Wales. On average, 4.6% of applications through JCNAS received responses, but de-listing applications, which averaged about 21 per fiscal year, received the highest percentage of responses per application at an average of 38% (see Figure 9). This aligns with HB&P's goal of protecting historic buildings, as once a building is de-listed the legislative protections no longer apply. It is worth noting that HB&P has only received one de-listing application for Wales throughout the past three fiscal years, and it therefore has a response rate of 0% for de-listings. Many trustees also expressed interest in the number of pre-applications, which are voluntary and show a desire for the input of a conservation society before legally required to do so. These had the second-highest response rate after de-listings and had a high percentage of responses to pre-applications, especially in the past fiscal year. In Wales, this was their highest response rate of 37.5% for the 2023-24 fiscal year.

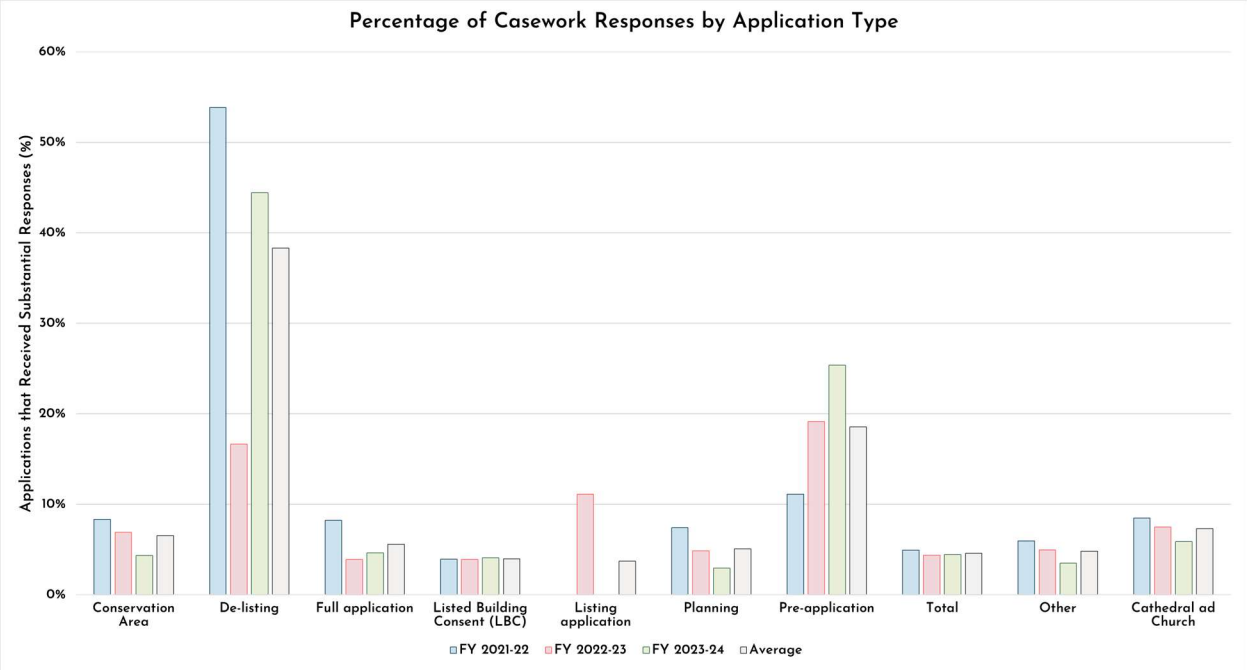

Figure 9: An overview of HB&P's responses per application type for the 2021-22, 2022-23, and 2023-24 fiscal years, as well as their average. Their average response rate was 4.58%. Listed Building Consent applications received the largest number of responses and were answered at a rate of 3.98% on average. Delisting applications received the highest percentage of responses with an average of 38.32%.

After looking at application types across several years, we analyzed the frequency of these types by region. Due to differences in the English and Welsh planning system legislature, each system has slightly different application categories so were graphed separately. Given that the JCNAS database didn't track regions of responses, the data analyzed was from the manually updated Excel sheet. To start our analysis, we graphed the top six case types divided by region with and without listed building consent applications included to highlight the priorities of each region. Although there were more than six types of applications, categories with few responses were combined to more succinctly highlight trends. Additionally, we opted to create a version of the graphs excluding LBC applications to focus on the nuances of the other categories. We only created these graphs for the 2023 - 2024 fiscal year, however our deliverables included documentation on creating additional graphs for different data sets.

The regional and type distribution graph that included LBC application responses (Figure 10) highlighted that while LBC applications receive the most responses, unlike other regions London sees more Planning Permission (PP) responses. The JCNAS exporting feature doesn't allow us to compare this statistic with the number of LBC and PP consultations London receives; however, given the dominance of LBC responses in other regions it is noteworthy. The graph with LBC applications removed (Figure 11) highlighted the prevalence of responses to Church cases, especially within the South West. Given that many trustees were interested in seeing HB&P respond to pre-application consultations, this graphical representation also highlighted the infrequency of pre-application responses especially in regions outside of the South West. Given that HB&P had a relatively high response rate of 18.54% to pre-application consultations (see Figure 9), this lack is probably caused by a lower number of pre-application consultations in general.

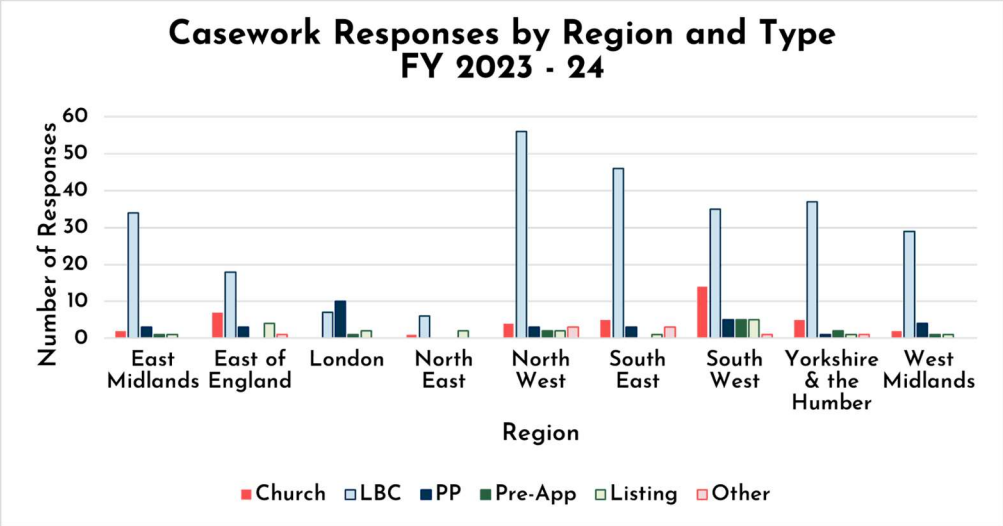

Figure 10: HB&P's responses for the 2023-2024 fiscal year separated by application type and region. The application types illustrated are ecclesiastical consultations (Church), Listed Building Consent (LBC), Planning Permission (PP), Pre-applications (Pre-app), Listing and Delisting applications (combined under Listing), and Other applications. The other category combines Diocesan Advisory Committee and Conservation Management Plan applications. Most regions see a majority of LBC responses, however London had a larger number of Planning Permission responses.

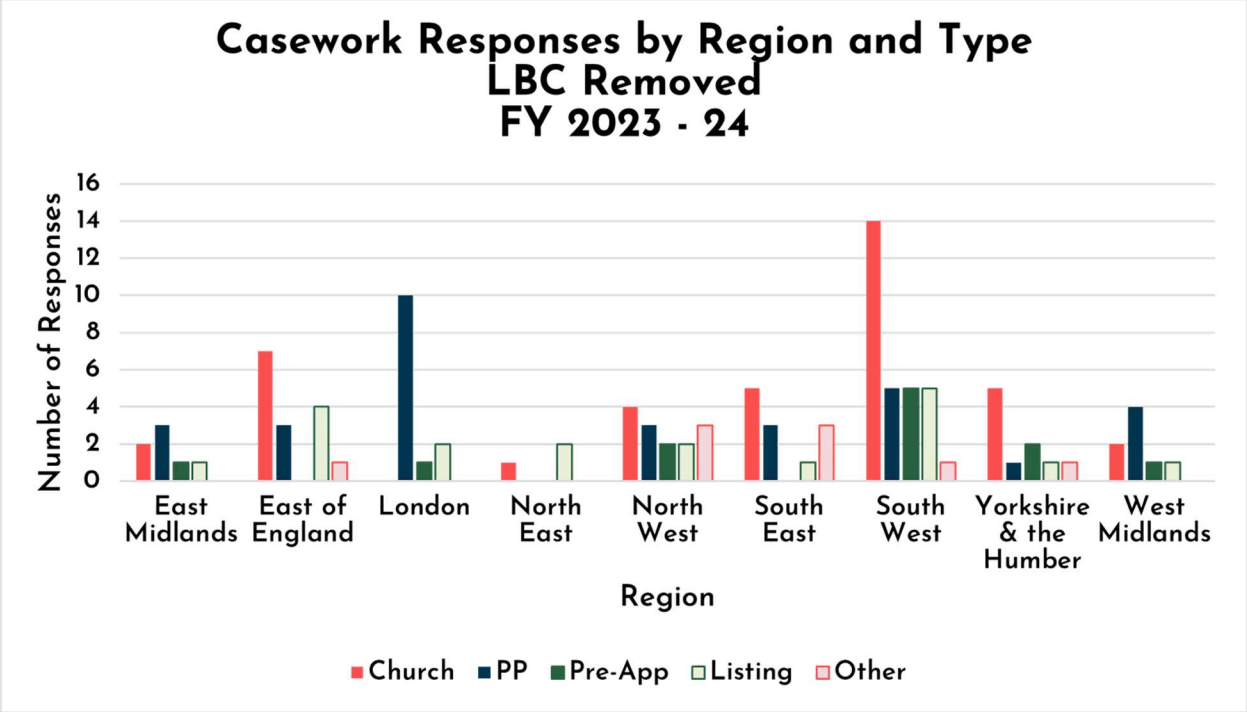

Figure 11: HB&P's responses for the 2023-2024 fiscal year separated by application type and region. The application types illustrated our ecclesiastical consultations (Church), Planning Permission (PP), Pre-applications (Pre-app), Listing and Delisting applications (combined under Listing), and Other applications. The other category combines Diocesan Advisory Committee and Conservation Management Plan applications. Most regions except London, saw the most Church type responses.

Regional Distribution

Next, we analyzed the regional distribution of cases, without focusing on application type breakdown. To illustrate regional distribution and identify relevant trends we started by creating heat maps for each fiscal year (Figure 12). This allowed us to see which regions receive the most casework responses. The map was broken down by regions within England and Wales and while we wanted to illustrate the subregions within Wales, the software used didn't provide that as a template. In addition to the heat mapping, we also created a clustered column chart to concisely highlight the regional distribution across multiple years (Figure 13). These two methods highlighted that the majority of HB&P's responses fell in the West with the North West, South

West, and Wales regularly receiving the most responses, with the least number of responses occurring in the Greater London Area and the North East. In preparation for our project, HB&P staff mentioned that previously casework has centered in London given its high number of listed buildings, so these trends highlight the shift in heritage work. We hoped to compare the number of regional responses with the number of consultations from each region, however given limitations with the JCNAS database reporting function, we were unable to acquire that information. However, in attempts to determine the top regional consultations of the 50 LPAs, none fell within the North East. Additionally, Historic England published the number of listed buildings per region which showed fewer overall sites within the North East and Greater London Area (Historic England, 2023-b). Because of this, the North East and Greater London Area's limited responses may be representative of fewer overall consultations and buildings.

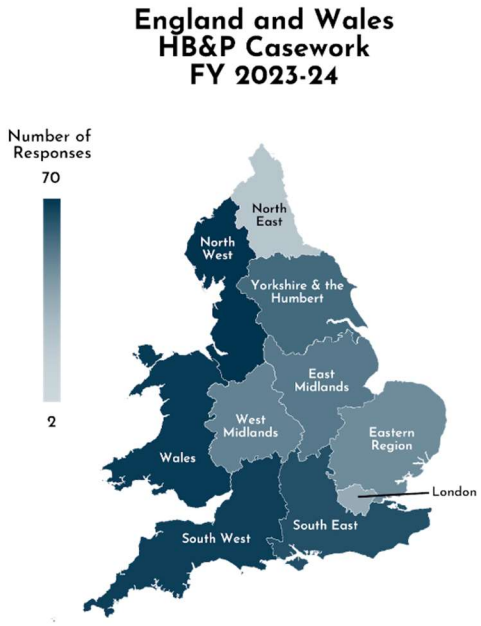

Figure 12: Regional distribution of HB&P casework responses for the fiscal year of 2023-2024. The color of each region in the heat map is more saturated for regions with more responses. This highlights the North West, Wales, and South West receiving the most responses, with the North East and London receiving the least.

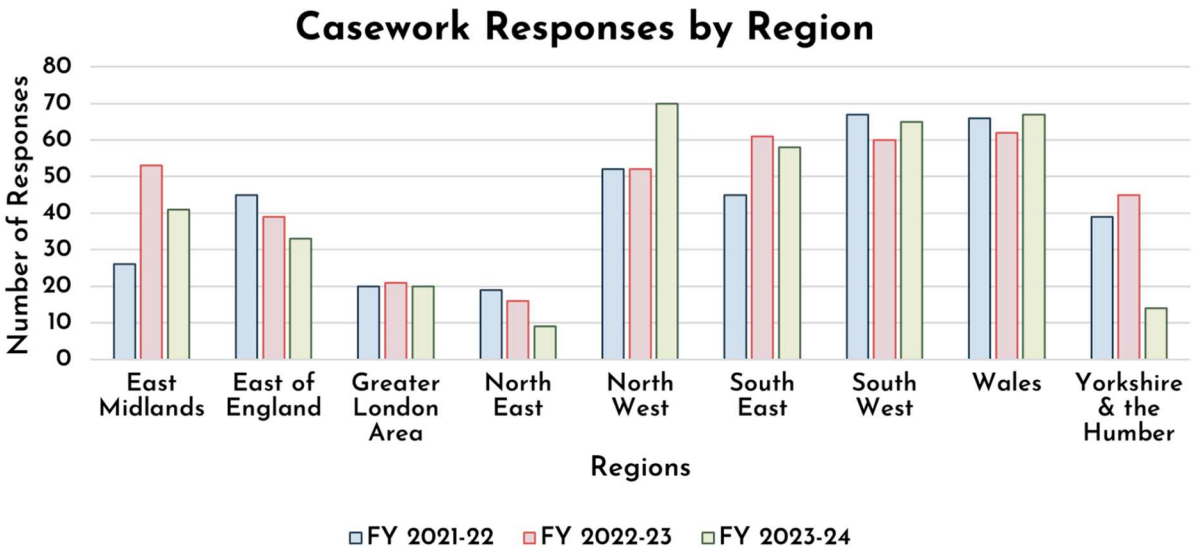

Figure 13: An overview of the regional distribution of HB&P casework responses across the fiscal years of 2021-2022, 2022-2023, and 2023-2024. Across all years the North West, South West, and Wales tend to have the most responses, although the South East is a close runner up, with the North East and Greater London Area receiving the fewest.

Building Type Distribution

After identifying trends within casework region, we looked at trends within site type. Starting with religion, we compared the number of secular and ecclesiastical responses within England and Wales (see Appendix J). We saw that for both countries more secular cases were responded to, but we were unable to compare the number of responses to the number of consultations since ecclesiastical information isn't tracked within the JCNAS database. Ecclesiastical consultations are voluntary, so receiving fewer of these case types would be expected.

Although the JCNAS database doesn't track information about ecclesiastical cases, it has a further breakdown of building types which allows for more in-depth analysis (see Appendix K for the full list of building types). Due to the number of building types, we focused on the five highest rankings of responses and response rate. These were, from highest to lowest: domestic, religious, commercial, agriculture, and civil for responses (Figure 14); and religious, maritime, health and welfare, transport, and civil for percentages (Figure 15). It is worth noting that maritime sites submit a relatively low average of 43 applications per year when compared to the

other site types. However, we believe it is still significant as HB&P does not have a verbalized interested in these site types but is responding to them at twice their average rate.

In Wales, religious buildings received a higher average number of responses than domestic buildings, and defense and commemorative buildings had the highest percentage of applicants receiving responses. In England, the highest rate of responses were maritime buildings, though domestic still had the highest number of total responses. Graphing HB&P's responses by type distribution is important to understand the focuses of their casework, especially given stakeholders' interest in responding to a diverse range of cases. Seeing similar percentages across many categories of responses highlights how their current work addresses this interest.

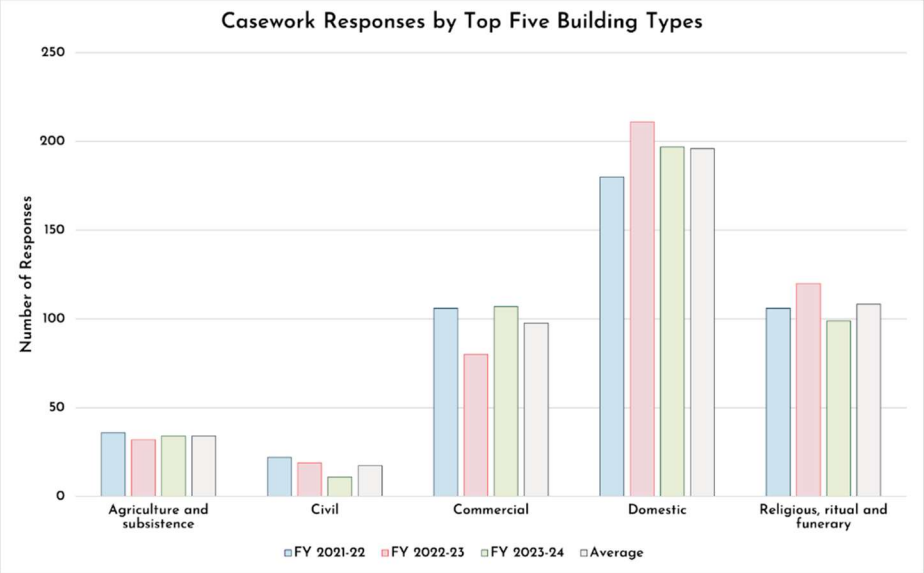

Figure 14: The top five building types that received the most HB&P casework responses for the 2021-22, 2022-23, and 2023-24 fiscal years. Across all three years domestic buildings received the highest number of responses, with religious, ritual, and funerary receiving the next highest number.

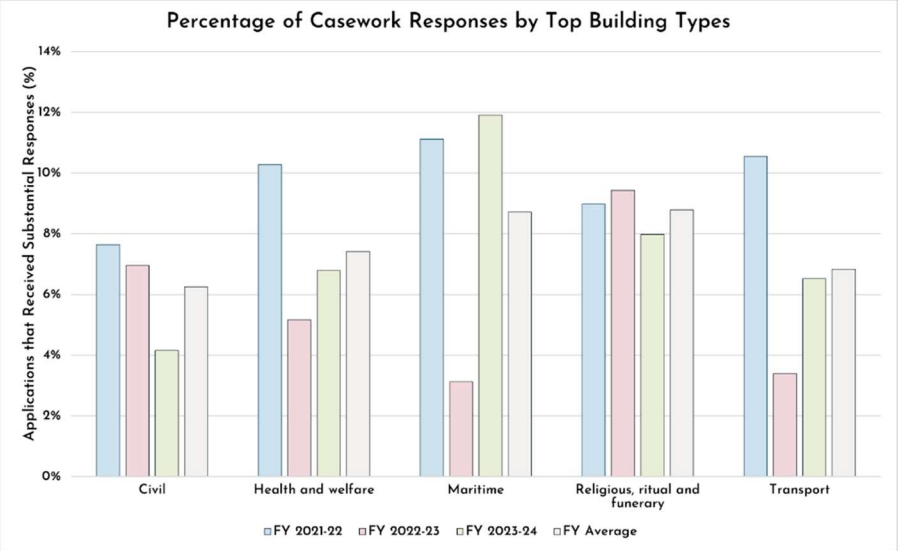

Figure 15: The top five building types with the highest responses rate from HB&P. These values were calculated by dividing the number of responses for each type by the number of consultations. Maritime and religious sites receive the highest average response rates.

Grade Distribution

The last case distribution we looked at related to the site grade of each application. Similar to application and building type, we were able to graph these trends by both the total number of responses per grade and by the percentage of applications addressed. Across all years most casework responses were Grade II sites, with 78.5% of HB&P's 2023-24 fiscal year responses being Grade II. However, when the percentage of responses for each category is graphed (Figure 16) the value is relatively constant across categories at around 4.5%. The highest percentage of responses were regarding locally listed or undesignated buildings, with an average of a 6.3% response rate for the 450 applications of that type. This statistic reflects HB&P's goal to focus on sites overlooked by Historic England and protect common heritage. When we talked to trustees, multiple mentioned the importance of working with communities to protect heritage, so this response percentage reflects and supports that value.

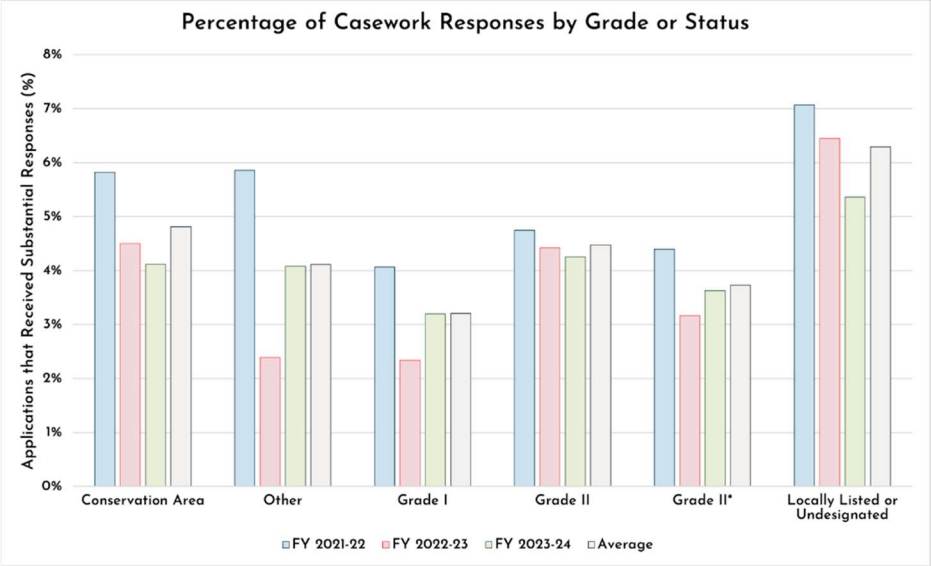

Figure 16: The percentage of consultations responded to by site grade. This percentage was calculated by dividing the number of responses for a given grade by the number of consultations. Although the percentage is relatively constant across all grades, locally listed and undesignated sites have the highest percentage of consultations addressed.

Response Distribution

Outside of the breakdown within case factors, we also looked at the distribution of HB&P's response types. JCNAS defines substantial responses as one of the following: informal contact; site visit; not for action; and letters of support, objection, advice, and no comment. HB&P mostly submits letters of advice, which makes up around 70% of their responses (see Figure 17). This high amount of advisement is reflective of the working relationship HB&P is trying to build with developers and local planning authorities, which often do not have the expertise or background to make informed decisions regarding built heritage preservation.

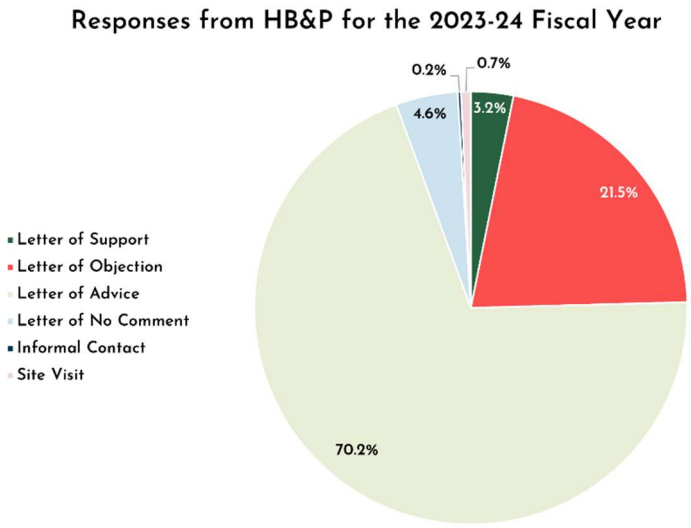

Figure 17: The breakdown of types of responses from HB&P for the 2023-24 fiscal year. The largest response type is Letters of Advice which make up around 70% of their responses.

4.5 Outcome Assessment

Inspired from other NAS, our outcome assessment depended on whether LPAs adhered to the advice supplied by caseworkers. We created criteria of "Positive", which meant that the LPA followed the advice given completely. "Slight Positive" indicated that the LPA somewhat listened to the advice that had been given. "Neutral" signified that a case HB&P assessed a case but left no comment, that the LPA decision was not public access, or the overall decision was not found or posted. When the LPA did not adhere to HB&P's advice we assigned a "Negative" impact. Lastly, we included a pending category which consisted of cases that have yet to be fulfilled and concluded. For the sake of logistics regarding the decisions of these cases, we excluded pending from these graphics. These visuals reveal primarily positive outcomes based on the criteria of our outcome assessment with 44% of the total cases being positive and 14% being slight positive, with a total of 58% being overall positive (see Figure 18). Excluding pending status, this total of assessed cases sits around 260 total cases for the fiscal year of 2023-24. This can also be seen across various regions with the highest ratio of positive to negative

outcomes being in the West Midlands, London, and South East. On the opposite end, is the North East with the lowest proportion of positive outcomes (see Figure 19).

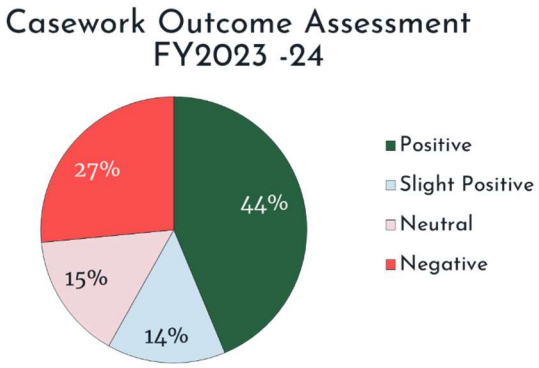

Figure 18: The breakdown of the positive, slight positive, neutral, and negative impact of HB&P's casework on the outcomes of LPA decisions for the 2023-24 fiscal year. HB&P had mostly positive responses, with 44% being fully positive and 14% being slightly positive.

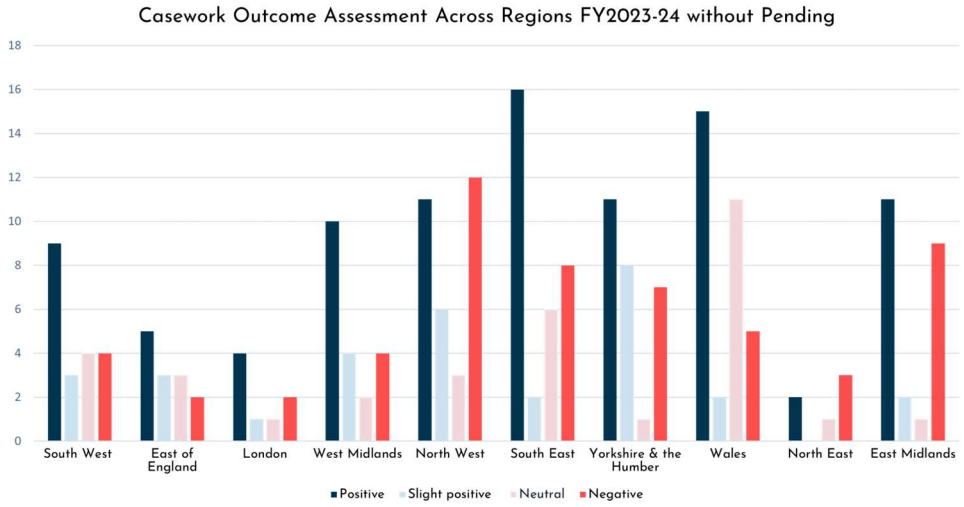

Figure 19: The regional distribution of casework outcomes for the 2023 - 2024 fiscal year. The regions with the highest ratio of positive to negative outcomes is the West Midland, London, and the South East. The region with the lowest ratio of positive to negative outcomes is the North East.

5. Conclusions

Our team analyzed historic and current data, as well as surveying and interviewing interested parties, to determine the values and best representation of HB&P's casework. We were also able to identify the outcomes of applications for the 2023-24 fiscal year to show the organization's impact on local planning authorities' decisions. We created an infographic and recommendations for continued data analysis to help HB&P with future impact assessment and resource allocation.

We started by identifying members and trustees wants for HB&P's casework. Both groups wanted to see HB&P deal with a diversity of cases across building type, application type, site grade, and site region. They also wanted to see the results of the organization's casework, which we found especially important given that it wasn't a provided option, so stakeholders mentioned it without suggestion. Another trustee goal for HB&P was to support a site's longevity through supportive and empathic interactions with building owners and conservation officers. This longevity advocacy could also be through supporting work that led to the continued use of a building through building renovation or change of use. Stakeholders also wanted to see HB&P focus on pre-applications since it provided more time for their caseworker's suggestions to be considered for renovations.

After determining trends stakeholders wanted to see highlighted, we received input on which visuals proved the most effective for illustrating these trends. Both trustees and members preferred heat maps for regional data and clustered columns for other categories such as grade or building type. Additionally, trustees liked composition charts, such as pie charts or tree maps, for categories with one dominant response.

Analysis of historic and current data found a trending decrease in annual total demolitions applications. We also saw that HB&P responded to the most cases in the western regions such as the North West, South West, and Wales and fewer cases in the North East and the Greater London Area. However, we couldn't compare these values with the number of consultations or listed buildings in each area, so some regional trends may be influenced by those factors. These response rate trends were relatively consistent across the three fiscal years analyzed, which also

supports HB&P's goals to extend their casework outside of London. Our data analysis found that HB&P responds to casework at an average rate of about 5%, with a slightly lower response rate for England and slightly higher one for Wales, reflective of the fact that Wales typically submits about one-tenth of the applications that England does. In England, LBC applications, Grade II buildings, and domestic buildings receive the highest number of responses for their respective categories but were not responded to at the highest rate per application submitted. In Wales, religious, ritual, and funerary buildings had the highest number of responses. Seeing responses extend beyond domestic sites addressed stakeholders' interest in seeing HB&P support a diverse range of cases.

When we analyzed the types of responses submitted by HB&P caseworkers, we found that the majority of responses were letters of advice. Given that stakeholders want to see the organization's casework support building owners and developers and help them work responsibly, it was beneficial to see that responses generally worked to provide this support.

Our outcome assessment found that HB&P as an organization had a primarily positive impact based on our criteria for the fiscal year of 2023-24. For that fiscal year, around 260 total cases were assessed, and excluding pending cases, HB&P had a positive impact 58% of the time, with 44% being positive and 14% being slightly positive.

6. Recommendations

6.1 Documentation

6.1.1 JCNAS Conversion

Converting the JCNAS database to Excel allows HB&P team members to continue updating the infographics and visualizations with data compiled by Heritage360. JCNAS allows reports to be broken down into only certain types of applications and sorting for England or Wales. We provided HB&P with compiled and organized JCNAS data up to early 2024. We also created a manual with a step-by-step guide on how to convert the PDF into an Excel worksheet, including screen captures, so that our sponsors can download further reports and continue data analysis as needed. We recommend continuing JCNAS analysis since it can track all applications sent in as well as responses. We used percentages of applications that received responses to help identify which categories are receiving the most resources from HB&P.

6.1.2 Heatmaps with Power User

To create the heat maps used to illustrate the number of responses for each region, we used a free Excel extension called Power User. Once installed it allows the user to create heat maps for many regional breakdowns. For our analysis we only used the breakdown of the United Kingdom by region, however it also offers an option to subdivide by county if HB&P ever wanted to create a map with more detail. To ensure that HB&P could create heat maps in the future, we created a written guide to installing Power User and the steps we took to graph casework response data.

6.1.3 Explanation Documents and Future Graph Creation

As we centralized and consolidated old Excel workbooks and physical data, we wrote up explanations of the new workbooks we created to ensure HB&P could either use the condensed data themselves or give our work to a future group to build upon. These explanation documents detailed the content of each Excel workbook, any terminology used, and how we graphed the workbook's data. We also wrote documents detailing the process used to create graphics based on HB&P's current casework so that it could be easily replicated for future fiscal years. These documents would ensure consistency for future data analysis and visualization and allowed HB&P to navigate their previous data with ease.

6.1.4 Infographic

We also created an infographic to distribute to HB&P members. We expected it to be distributed in a brochure format, with A4 paper size and either four or eight pages long. We created our infographic using fonts and colors according to HB&P's branding guidelines and using a style cohesive with other publications from the organization that were shown to us as examples. Sinve HB&P wanted to distribute this to non-experts, we included a legend of terms for the reader's reference and kept the information easily digestible. We used a free Canva account to create our infographic and sent our sponsors a link to an editable version of the infographic so that they can adjust it as needed in the future.

We provided both the completed infographic and a blank template to HB&P, which will allow them to update and alter as needed over time. We used only features that are available on the free version of Canva, which would allow for the sponsors to use a free account, and they would only need to put in an email address. The infographic is open to editing by all users, and since they are provided a link to the infographic, they can edit it from any email, preventing future challenges that might come with personnel change.

6.2 Collection and Analysis of Additional Data Fields

HB&P can conduct more comprehensive analysis, appeal to their stakeholders' interests, and increase their productivity through the collection and analysis of additional data fields. We recommend the collection of data fields that increase the understanding of the distribution of HB&P's casework and the collection of data fields that can be used to demonstrate impact. An increased understanding of the diversity of HB&P's casework can increase HB&P's productivity and reduce redundancies. To do this, we recommend the collection of building type and usage, building and site characteristics, build and major renovation dates, the regional breakdown of Wales, LPA and further regional breakdowns, and overlap with NAS societies. To provide additional perspectives on impact, we also recommend the collection and extensive analysis of whether cases are voluntary or obligatory, their community value, and overlap with NAS societies.

Understanding of the types and of sites that HB&P's casework addresses can help HB&P dedicate their resources towards diversifying their casework. We recommend the collection of

building type and usage, building and site characteristics, and build and major renovation dates for this purpose. Currently, HB&P only collects data on Excel regarding site grade, council, region, and its secularity. Building and site characteristics such the height of buildings, their visibility from the street, and surrounding historic makeup, build and major renovation dates, and building type and usage can help HB&P visualize and understand the types of sites their casework addresses. Using this data, they can identify site types that they currently over or under prioritize and redirect their casework. Using this data concurrently with a regional breakdown, HB&P can ensure that they are accurately representing the nuances of each region and reducing redundancies.

Although HB&P collects the address, council, and region of each case they consult for, we recommend the collection of the regional breakdown of Wales, LPA and further regional breakdowns, and overlap with NAS societies for increased regional insights and prioritization goals. Unlike England, HB&P does not currently divide its Welsh casework into regions. The addition of a regional breakdown of Wales can help draw insight into its cultural, legislative, and historic landscape and allow HB&P to tailor their casework to the constituent country accordingly. We also recommend tracking overlaps with other NAS societies to identify redundancies among heritage organizations. From our interviews with NAS caseworkers, we found that Historic England specifically disproves redundancy in cases. Since HB&P lacks a specialization and works with all building types, HB&P could especially benefit from this analysis. This data is currently available in the JCNAS database. Through this analysis, HB&P can identify areas where they can reallocate their resources, increasing their capability to protect more sites that are forgotten or fall through the gaps of other heritage organizations. This could also be used to see which society HB&P has the strongest overlap with and increase collaboration. Collecting data about HB&P's interactions with specific LPAs and further regional breakdowns would support trustees' interests and allow for a more detailed impact assessment. We recommend the collection of the number of consultations by council, whether the consultations are listened to or taken into consideration, and the application quality by council. Data on application quality can be used to show councils that greatly value preservation and where HB&P should dedicate more resources or be more supportive. Since each LPA varies

in site diversity, resources, and number of listed buildings, a breakdown by LPA can show the specific gaps in heritage preservation and where HB&P has an impact.

Since HB&P's impact is multidimensional, they can benefit from the incorporation of different perspectives. We recommend the analysis of the following fields to demonstrate this impact: voluntary versus obligatory, overlap with NAS, and community value of sites. Voluntary casework such as pre-application could show that site owners and conservation officers value HB&P's input and recommendations. Since the consultation is voluntary, they are expected to be more open to advice, thus HB&P would have a greater impact on their decisions. Identifying cases with HB&P as the sole consultant allows for future analysis that can determine HB&P's individual impact. For applications with multiple commenting NAS caseworkers, it is impossible to determine if the resulting decision by an LPA is made due to HB&P's advice, another NAS's advice, or a combination without a direct attribution. HB&P's casework can also have far reaching effects on a community. Interviews with a NAS representative informed us that during their evaluation of new casework, they review the communal value of the site. This evaluation can be completed by collecting whether the sites are used by a community and are important gathering areas for a diverse range of people, such as pubs or cinemas. By tracking casework preserving sites that are community orientated, HB&P can show the impact they have on preserving a community's cultural identity with their casework. This perspective is supported by a trustee who believes in the importance of ensuring casework builds community and reaches a diverse range of people. The combination of these data fields and their analysis will provide HB&P with an increased representation of their casework impact.

6.3 Qualitative Analysis

Our work focused on a quantitative review of casework, but we believe a qualitative analysis of community impact would support HB&P in highlighting the effect of their work. When interviewing trustees about their goals for the organization, several mentioned wanting HB&P's work to connect with a diverse group of people, especially when it came to community buildings. Using interviews to conduct a qualitative analysis on the reach of historical community sites would allow a new perspective on impact. Members of HB&P staff also mentioned that working with buildings used by diverse groups is a heritage sector wide issue, so

conducting this analysis for an individual national amenity society could benefit more than those just at HB&P.

6.4 Assessment of Change of Use Casework

Change of Use (CoU) casework is the change of functionality for heritage that may face demolition, this is vital in HB&P's goal of demolition prevention. Through many interviews that offered differing perspectives, it was evident that HB&P's impact lay within its ability to prevent the demolition of heritage. It became obvious that many of these historic buildings were being demolished due to their inability to be utilized and lack of functionality. Many trustees and members recognized this and found that repurposing heritage, with sustainability in mind, was the best way to save these structures. Trustees noted that these sites were especially impactful when they became communal spaces and allowed the community to interact with them. Although this requires renovation that may limit the site's authenticity, trustees are willing to accommodate these buildings and balance authenticity to be carbon literate and embrace the change to allow the heritage to stay standing, rather than be demolished. CoU casework can aid in the evolution of heritage as we progress with architecture and our ever-growing cityscapes. Narrowing the scope of CoU cases and how these cases allow heritage to be preserved as relics of time can illustrate their impact on communities as functional and carbon literate architecture. This could encompass assessing the quantity of CoU cases while observing the variety of building types along with the overall outcome of preventing demolition. Generally, these CoU cases can be a catalyst that illustrates the importance of renovation for preservation, and these illustrations can be captured by continuing the various positive impact assessment visuals while gathering the regional information to provide context. Ultimately, CoU casework is a progressive outlook on English and Welsh heritage going into the future.

6.5 Mapping Software

We think HB&P could benefit from the creation of a mapping software which allows us to make heat maps more detailed than the ones created for our report. During our work we saw positive responses to mapping visualizations as stakeholders found them easy to understand. We were able to create regional maps using free software; however, there were no available tools to create maps of local planning authorities. The UK government keeps an updated, free to use, list of all

LPAs with their regional boundaries with some default mapping options which highlight broad categories such as conservation areas. We recommend using this geographical data to create software that would allow for easy creation of customizable LPA maps. This would allow for more detailed visualizations of the work we did with heat maps and would further illustrate HB&P's area of impact. Creating mapping software with a straightforward user interface that could convert Excel sheets of LPA data to map visuals would also allow for easier regional analysis in the future.

6.6 Recommendations Conclusions

Our recommendations span many aspects of HB&P's future work from more detailed casework analysis but also other opportunities for highlighting impact. Our project deliverables support these recommendations through detailed descriptions of work completed to ensure consistency with future projects. The broad range of recommendations provides HB&P with changes that can be immediately implemented into their current workflow while giving options for larger projects in the future.

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Appendix A: Overview of Interview and Survey Timelines

TASK TITLE	START DATE	DUE DATE	DURATION	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
				05/13-05/17	05/20-05/24	05/27-05/31	06/03-06/07	06/10-06/14	06/17-06/21	06/24-06/28
Surveys & Interviews										
Survey sent to HB&P members	5/13/24	5/24/24	11							
Interview trustees	5/15/24	6/5/24	20							
Interview NAS Representatives	5/15/24	6/5/24	20							
Data Analysis										
Analyze Data	5/13/24	6/11/24	28							
Analyze Interview & Survey Results	6/5/24	6/14/24	9							
Visualizations and Presentations										
Determine which visuals to create	5/27/24	6/11/24	14							
Create visuals and deliverables	5/30/24	6/26/24	0							
Final Presentation with visuals	6/26/24	6/28/24	2							

Figure A1: The Gantt chart with our project timeline.

Appendix B: Interview Questions for Trustees

Interview Preamble

We are a part of a student-led project group from Worcester Polytechnic Institute (WPI). We are interested in interviewing [trustees/employees of Historic Buildings & Places/representatives from National Amenity Societies] on behalf of Historic Buildings & Places (HB&P) to demonstrate the impact of their organization. We have analyzed their collected data and are working to create a set of tools and protocols for future data collection and analysis. Participation is entirely voluntary, and interviews will last around 20 to 30 minutes. You can choose not to answer any of the questions and withdraw from the interview at any time.

With your consent, we would like to audio record and take notes of the interview to review while creating our report. The interview recording/notes and any personal data you choose to share with us will be stored securely and disposed of by May 13th, 2029, in line with the UK General Data Protection Regulation 2018.

WPI and Historic Buildings & Places will produce research reports and other outputs using the data we collect from the survey. If we would like to attribute quotes to you, we will ask for your approval of quotes prior to publication. However, we can report your feedback anonymously if you prefer.

If you have any queries about the survey please contact WPI's team at gr-LonE24.HBAP@wpi.edu or ssvirani@wpi.edu, or HB&P at office@hbap.org.uk.

Do you have any questions before we start?

Introduction

1. Please introduce yourself and talk a little bit about what you do.
    - How long have you been involved with HB&P?
    - Have you had experience with heritage preservation before HB&P?
    - What drew you to heritage preservation?
    - What drew you to HB&P?

Mission, Goals, and Impact

1. What do you think the goals of HB&P's casework should be?
    - Do you have measurable goals you look for?
2. How do you define impact in terms of casework?
3. What part of HB&P's casework do you value the most?
4. What category(ies) do you feel are the most important to have analysis of?
    a. Changes over time
    b. Frequency across site type
    c. Frequency across region

Visualizations

1. Which example visualization do you think best demonstrates changes over time?
    a. Line graph, stacked bar graph, scatter plot (see below)
2. Which example visualization do you think best demonstrates regional distributions?
    a. Color chart, bubble plot (see below)
3. Which example visualization do you think best demonstrates case type distribution?
    a. Line graph, stacked bar graph, pie chart (see below)
4. Open-answer: Any additional comments?

For Employees

1. What data do you use the most?
2. Is there a field in the data set that you find yourself missing?
3. Do you find Heritage360 helpful? In what ways?
4. If not, what improvements would be most beneficial?
5. Are there aspects of the casework and data collection process that you feel can be streamlined?
6. What do you find yourself spending the most time on regarding casework applications?

For Marketing Chair

1. Would you want data-related visuals for your outreach?
2. Are there specific visuals you would find helpful?

Note: These are examples of the visualizations we will use. They are not based on real data.

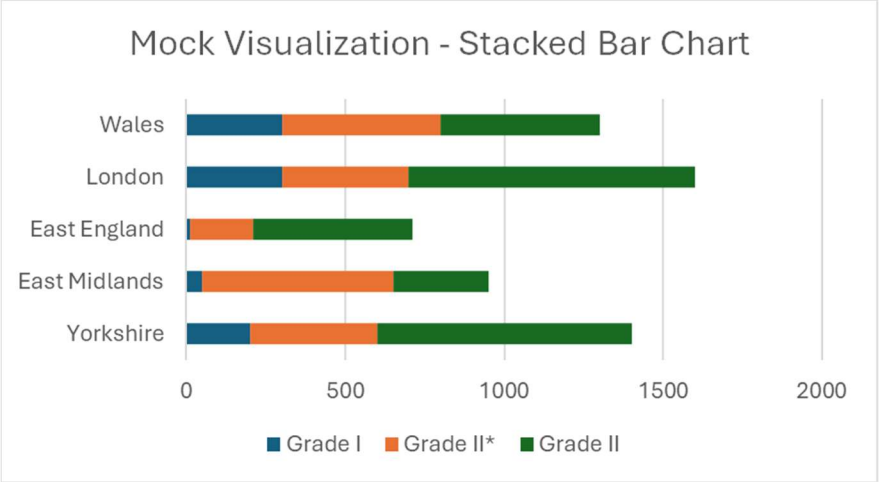

Figure B1: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

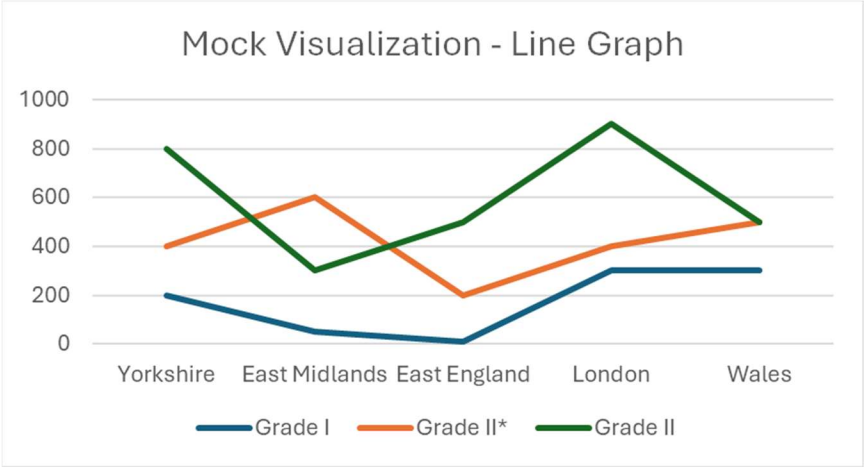

Figure B2: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

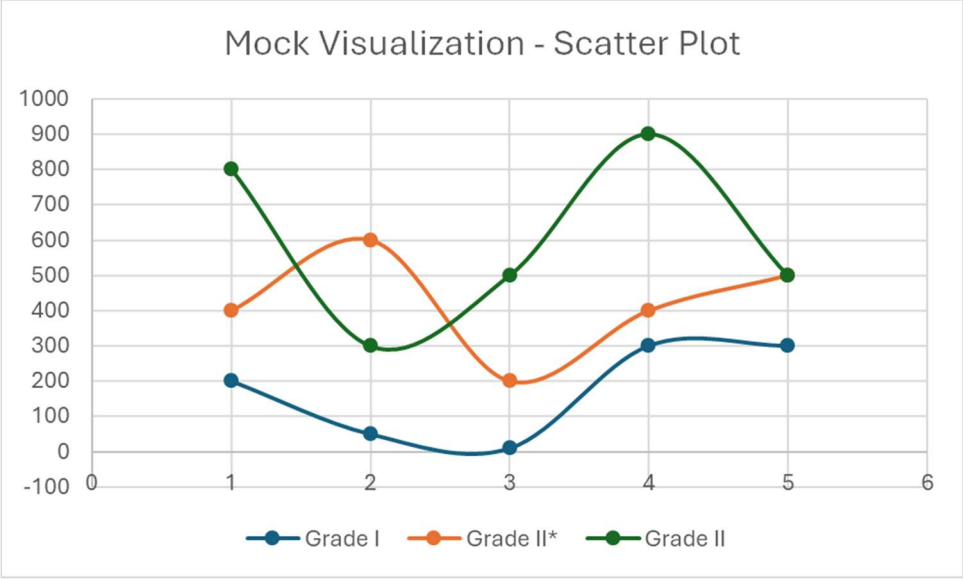

Figure B3: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

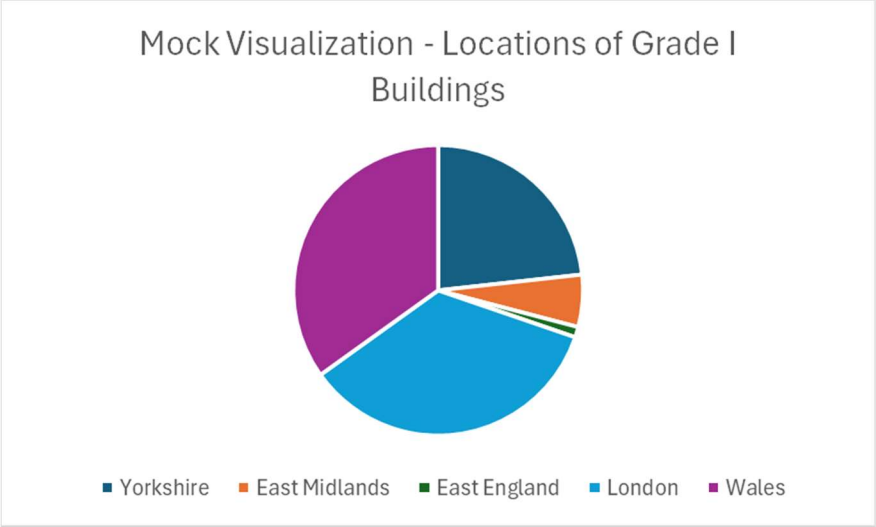

Figure B4: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

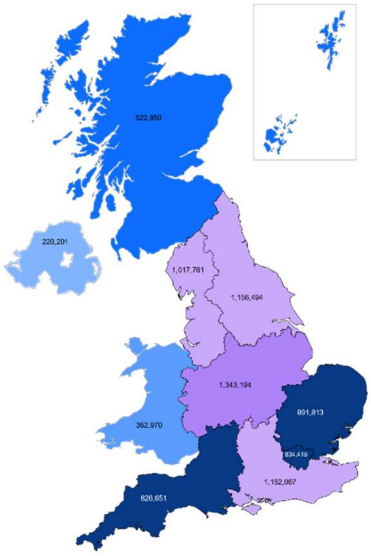

Figure B5: Example of a visualization that is based on data unaffiliated with HB&P (Crep171166, 2021).

Appendix C: Interview Questions for Representatives of other National Amenity Societies

Interview Preamble

We are a part of a student-led project group from Worcester Polytechnic Institute (WPI). We are interested in interviewing caseworkers from National Amenity Societies on behalf of Historic Buildings & Place (HB&P) to demonstrate the impact of their organization. We have analyzed their collected data and are working to create a set of tools and protocols for future data collection and analysis.

Participation is entirely voluntary, and interviews will last around 20 to 30 minutes. You can choose not to answer any of the questions and withdraw from the interview at any time.

We would like to audio record/take notes of the interview with your consent. The interview recording/ notes and any personal data you choose to share with us will be stored securely and disposed of by May 13th, 2029, in line with the UK General Data Protection Regulation 2018.

WPI and Historic Buildings & Places will produce research reports and other outputs using the data we collect from the survey. If we would like to attribute quotes to you, we will ask for your approval of quotes prior to publication. However, we can report your feedback anonymously if you prefer.

If you have any queries about the survey please contact WPI's team at gr-LonE24.HBAP@wpi.edu or ssvirani@wpi.edu, or HB&P at office@hbap.org.uk.

Do you have any questions before we start?

Introduction

1. Please introduce yourself and talk a little bit about what you do.

Mission, Goals, and Impact

1. Do you have measurable goals you look for within your organization?
2. How do you define impact?

a. How do you define impact for a historical society?
b. What part of [their organization name]'s work do you value the most?

Data Collection

1. What data do you currently collect?
    a. How do you collect it?
    b. What are the strengths and drawbacks of your current system?
    c.
2. What category(ies) do you feel are the most important to have analysis of?
    a. Changes over time
    b. Frequency across site type
    c. Frequency across region

Appendix D: Survey Questions for Historic Buildings & Places Members

Survey Preamble

We are a part of a student-led project group from Worcester Polytechnic Institute (WPI). We are undertaking this survey on behalf of Historic Buildings & Places (HB&P). We want to demonstrate the impact of their casework by analyzing their collected data and to create a set of tools and protocols for future data collection and analysis. We are surveying HB&P's current members to gain an understanding of how members define impact for HB&P.

This survey is entirely voluntary and will take around 10 minutes of your time. You can choose to not answer any questions asked and/or to stop participating at any time. No names or identifying information will appear on the survey or in any reports or publications. WPI and Historic Buildings & Places will produce research reports and other outputs using the data we collect from the survey. All data will be aggregated and reported anonymously.

Any personal data you choose to share with us will be stored securely and disposed of by May 13th, 2029, in line with the UK General Data Protection Regulation 2018.

If you have any queries about the survey please contact WPI's team at gr-LonE24.HBAP@wpi.edu or ssvirani@wpi.edu, or HB&P at office@hbap.org.uk.

If you have any questions about how Historic Buildings & Places uses data, please see Historic Buildings & Places' Privacy Policy hbap.org.uk/privacy-policy or email office@hbap.org.uk

Demographics: Radio Buttons

1. What age group do you fall into?
    a. Under 20, 20-29, 30-39, 40-49, 50-64, 70+
2. What region do you reside in?
    a. East Midlands, East of England, London, North East, North West, South East, South West, Wales, West Midlands, and Yorkshire
3. How long have you been a member of HB&P?
    d. < 1 year, 1- 3 years, 3-5, 5-10, 10+

3. What type of membership do you have?
    a. UK or International: Individual, joint, under 30, lifetime, institution

Defining HB&P's Casework Impact

1. Rank these options in terms of their importance to you when evaluating HB&P's impact?
    a. Preventing renovation with an aspect of demolition
    b. Preventing full building demolition
    c. Working in a diverse group of regions
    d. Addressing diverse types of buildings
    e. Working with building owners to renovate responsibly
    f. Recommendations that lead to re-consultations
    g. Supporting renovations that ensure the building's continued use
2. What would you like to see from HB&P's casework?
    a. Rank: # of cases, buildings saved, response rate, regional statistics, etc.
3. Open-ended response: Are there any other things you want to see from HB&P?
4. Open-ended response: How do you define HB&P's casework impact?

Visualizations

1. Which example visualization do you think best demonstrates changes over time?
    a. Line graph, stacked bar graph, scatter plot (see below)
2. Which example visualization do you think best demonstrates regional distributions?
    a. Color chart, bubble plot (see below)
3. Which example visualization do you think best demonstrates case type distribution?
    a. Line graph, stacked bar graph, pie chart (see below)
4. Open-answer: Any additional comments?

Note: These are examples of the visualizations we will use. They are not based on real data.

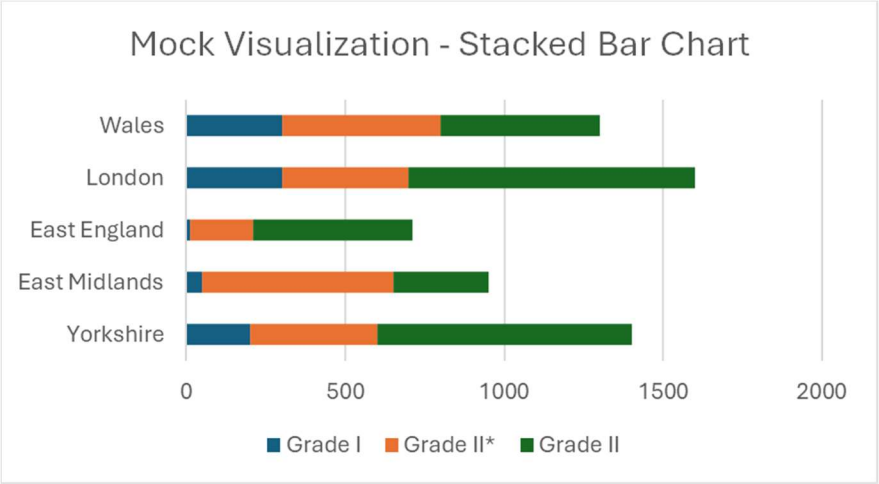

Figure D1: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

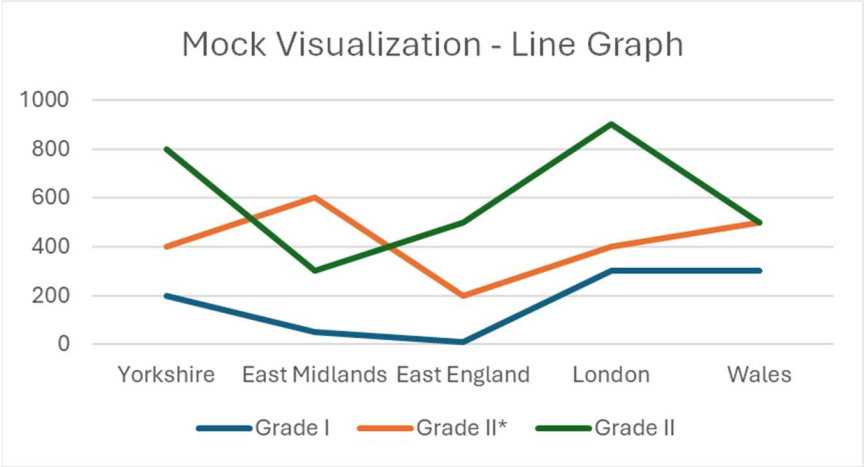

Figure D2: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

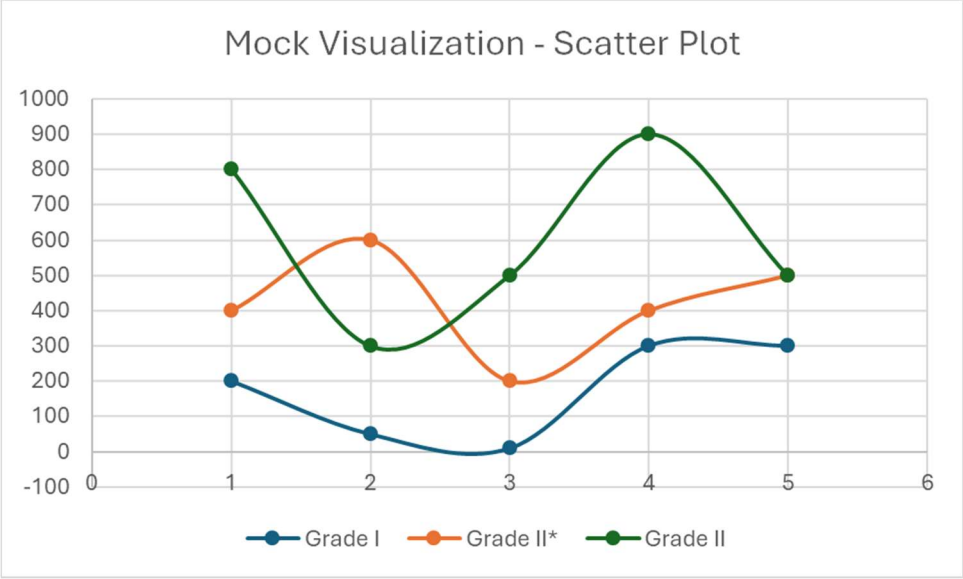

Figure D3: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

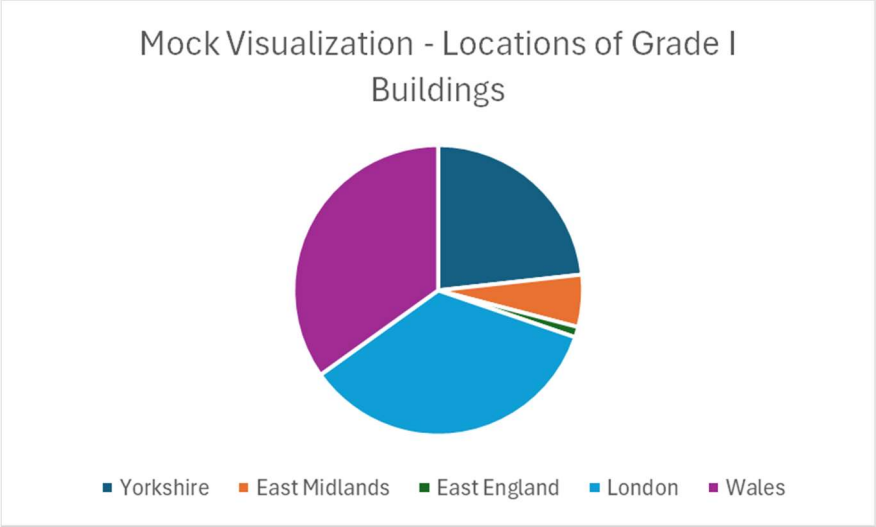

Figure D4: Example of mock visualization. Made by team on Excel. Not based on real data analysis conducted on HB&P's casework.

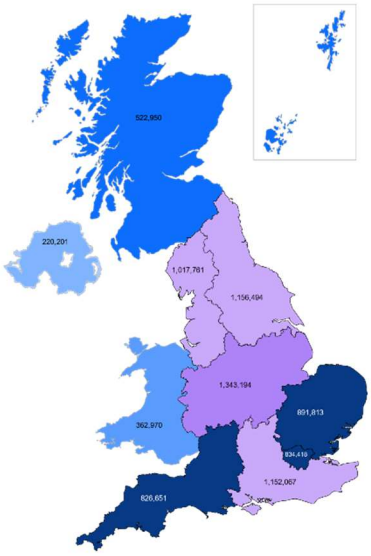

Figure D5: Example of a visualization that is based on data unaffiliated with HB&P (Crep171166, 2021).

Appendix E: Legend of Excel Terms for Casework Data

Table E1: Application types for HB&P consultations. The table includes the acronym for each option under the "Type" heading as given in HB&P's Excel datasheet, as well as the term spelled out.

Type	
Acronym	Definition
CAC	Conservation Area Consent
CMP	Conservation Management Plan
DAC	Diocesan Advisory Committee
Full	Full Planning Permission
GPO	General Planning Order
LBC	Listed Building Consent
OP	Outline Planning
PDR	Permitted Development Rights
PP	Planning Permission
Pre-App	Pre-Application

Table E2: The acronym for each option under the “Grade” heading as given in HB&P’s Excel data sheet, as well as the term spelled out. Note that some sites might fall under two or more sites, in which case a forward slash will mark each distinction.

Grade	
Acronym	Definition
I	Grade I Building: Exceptional Interest
II*	Grade II* Building: More than Special Interest
II	Grade II Building: Special Interest
CA	Conservation Area
LL	Locally Listed
NDHA	Non-Designated Heritage Asset
NL / UL	Not Listed / Unlisted
SAM	Scheduled Ancient Monument

Appendix F: Welsh Demolition Application Trends

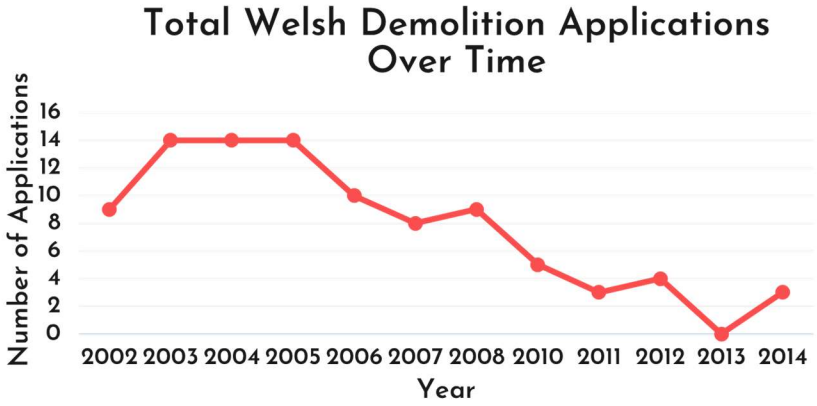

Figure F1: The number of Welsh demolition applications between the years of 2002 to 2008.

Appendix G: Consultation and Response Trends

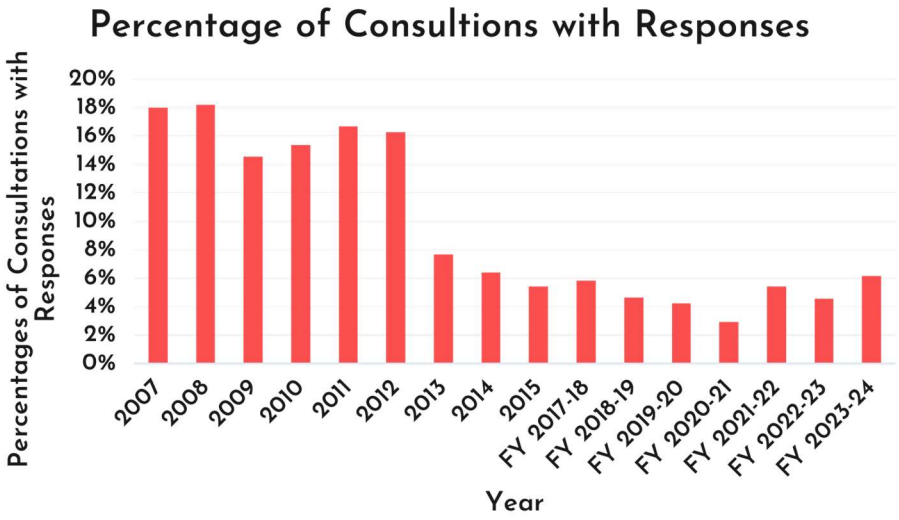

Figure G1: The number of HB&P consultations between 2007 to 2023. Historically, there was a relatively constant amount between 4000 and 6000, but in recent years this spiked to between 10000 and 7000.

Appendix H: List of JCNAS Casework Types

Table H1: A list of all casework type terms available in the JCNAS database for types of applications.

Application Type	
Simplified	**Original**
Appeal	Appeal
Cathedral and Church	Cathedral
	Church
Conservation Area	Conservation Area
De-listing	De-listing
Full application	Full application
Listed Building Consent (LBC)	Listed Building Consent (LBC)
Listing application	Listing application
Other	Designation - 3rd party support
	LBC & FUL
	Listing consultation
	Other
	Outline
	Prior Approval/Permitted Development Rights
Planning	Planning
Pre-application	Pre-application
Total	Total

Table H2: A list of all casework type terms available in the JCNAS database for types of applications.

Building Type	
Simplified	**Original**
Conservation Area	Conservation Area
Grade I	Grade I
	Park/Garden - Grade I
Grade II	Grade II
	Park/Garden - Grade II
Grade II*	Grade II*
	Park/Garden - Grade II*
Locally Listed or Undesignated	Locally Listed
	Park/Garden - Undesignated
	Undesignated
Other	Battlefield
	Curtilage Listed
	Scheduled Ancient Monument
	World Heritage Site

Appendix I: Trends of Applications and Responses by Application Type

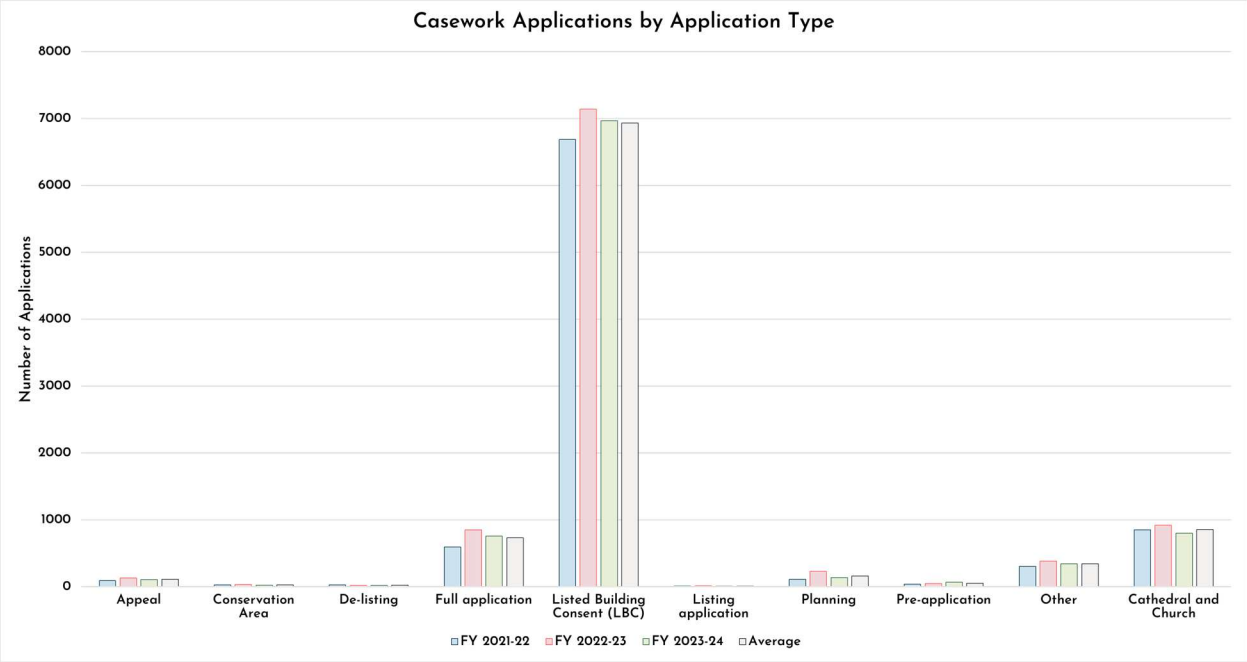

Figure I1: A cluster column depicting the number of applications for the fiscal years of 2021-22, 2022-23, and 2023-24 split up by application type. The most applications are Listed Building Consent with the next largest category being Cathedral and Church.

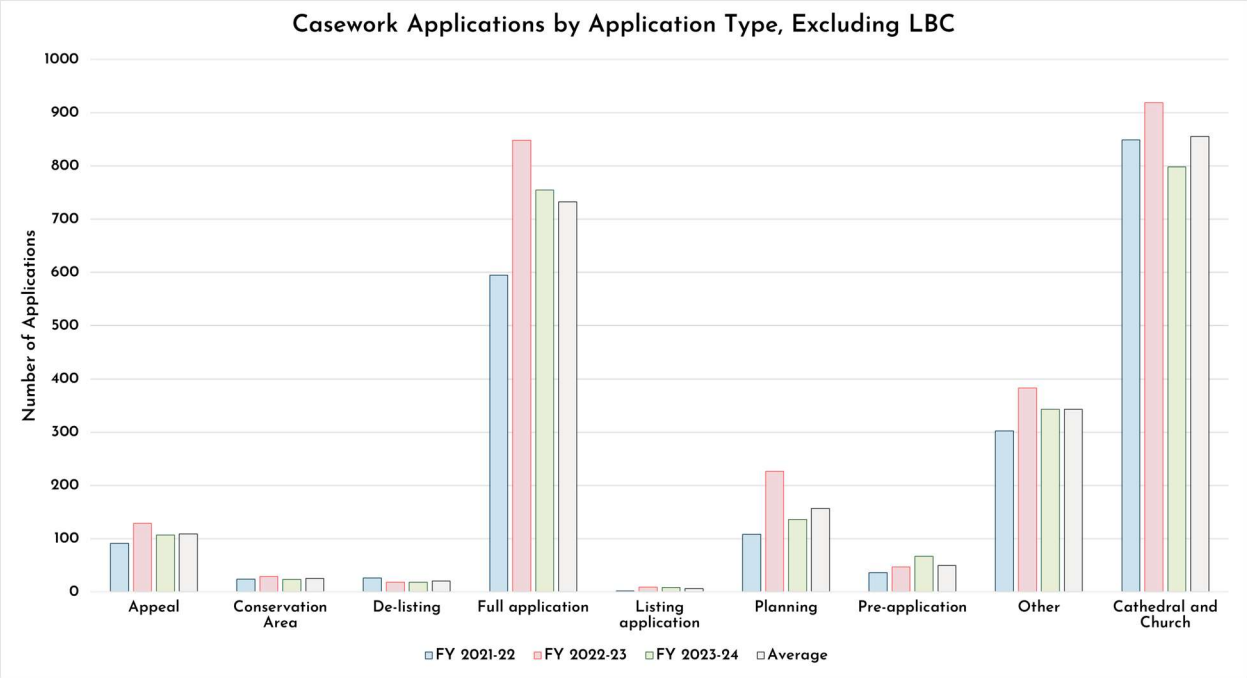

Figure I2: A cluster column depicting the number of applications for the fiscal years of 2021-22, 2022-23, and 2023-24 split up by application type with Listed Building Consent Applications removed. The two largest application types are Cathedral and Church and Full Applications.

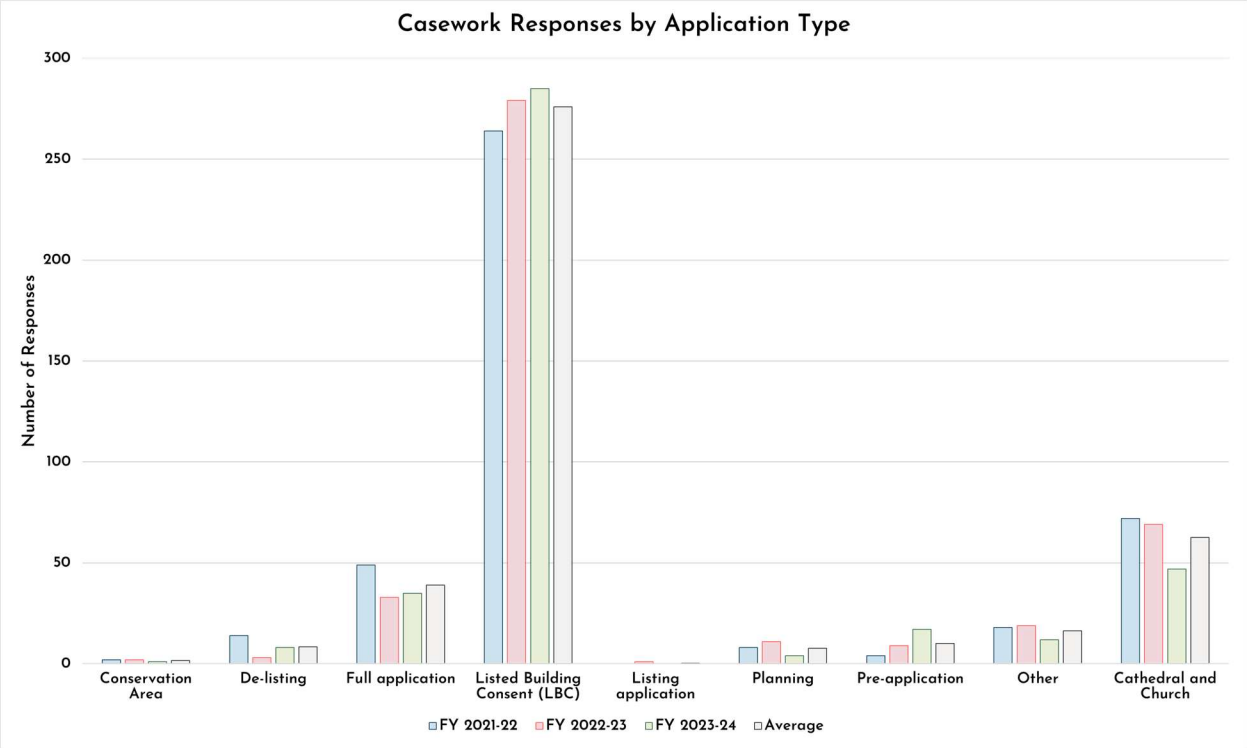

Figure I3: A cluster column depicting the number of HB&P casework responses for the fiscal years of 2021-22, 2022-23, and 2023-24 split up by application type. The most responses are Listed Building Consent with the next largest category being Cathedral and Church.

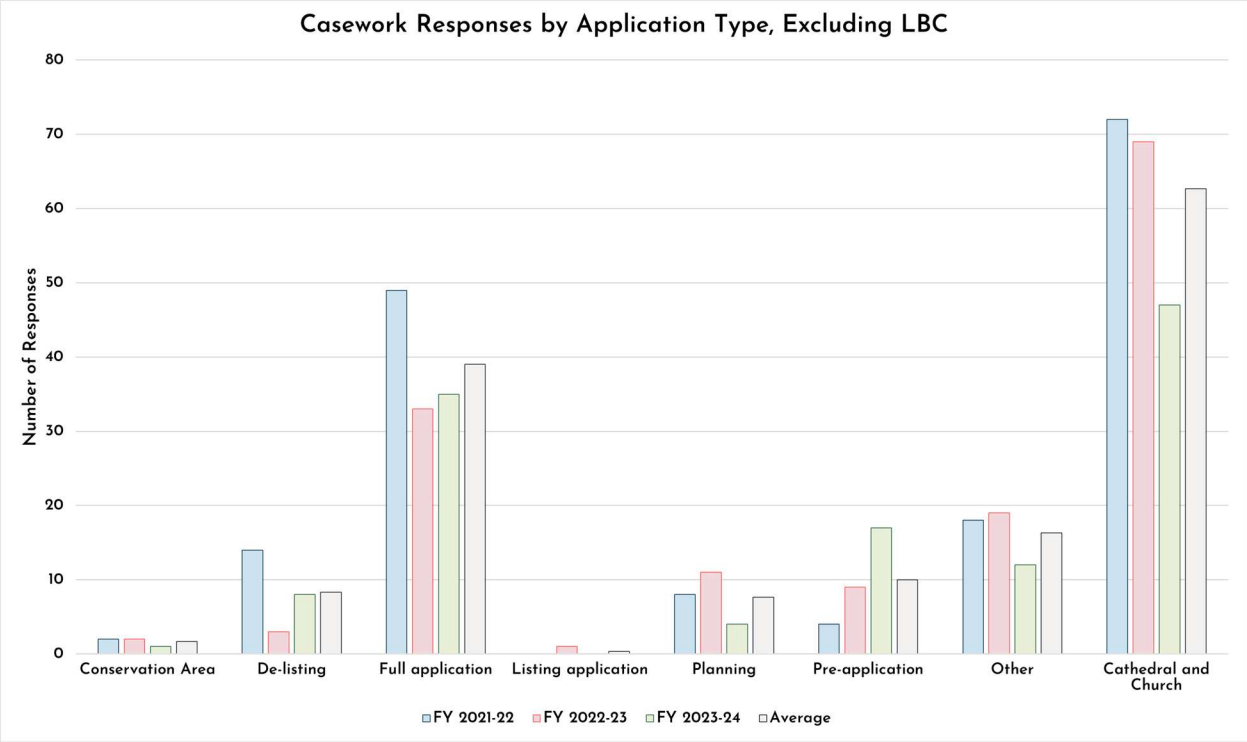

Figure I3: A cluster column depicting the number of HB&P casework responses for the fiscal years of 2021-22, 2022-23, and 2023-24 split up by application type with Listed Building Consent applications removed. The most responses are for Cathedral and Church and Full Applications.

Appendix J: Distribution of Secular and Ecclesiastical Casework Responses

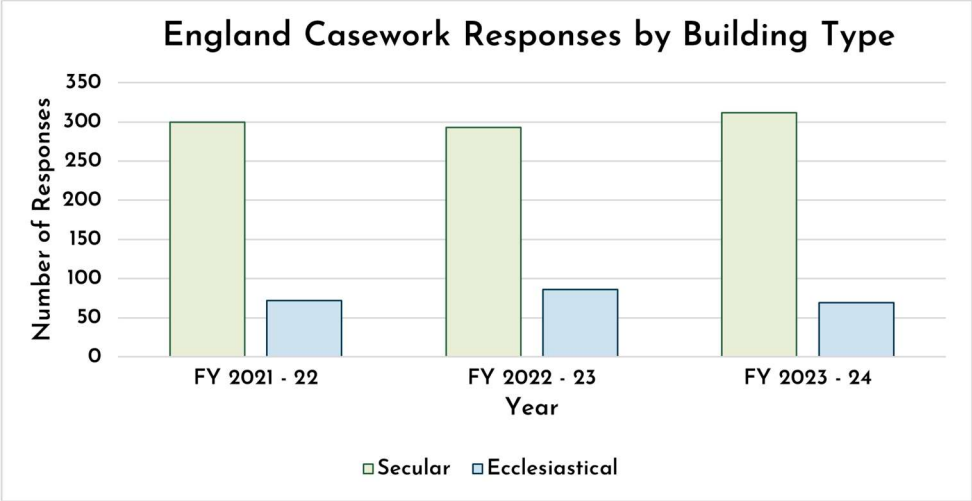

Figure J1: The distribution of secular and ecclesiastical English casework responses for the fiscal years for 2021-22, 2022-23, and 2023-24. For all three years there were around 300 secular and 60 ecclesiastical responses.

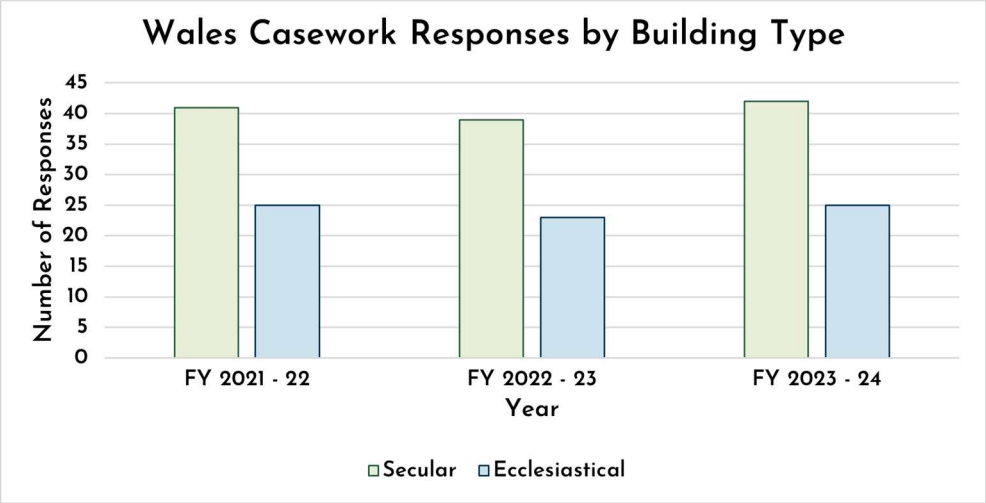

Figure J2: The distribution of secular and ecclesiastical Welsh casework responses for the fiscal years for 2021-22, 2022-23, and 2023-24. For all three years there were around 40 secular and 25 ecclesiastical responses.

Appendix K: List of JCNAS Casework Types

Table K1: A list of all building type terms available in the JCNAS database.

Building Types	
Agriculture and subsistence	Health and welfare
Civil	Industrial
Commemorative	Maritime
Commercial	Monument
Communications	Recreational
Defence	Religious, ritual and funerary
Domestic	Transport
Education	Unassigned
Gardens, parks and urban spaces	Water supply and drainage