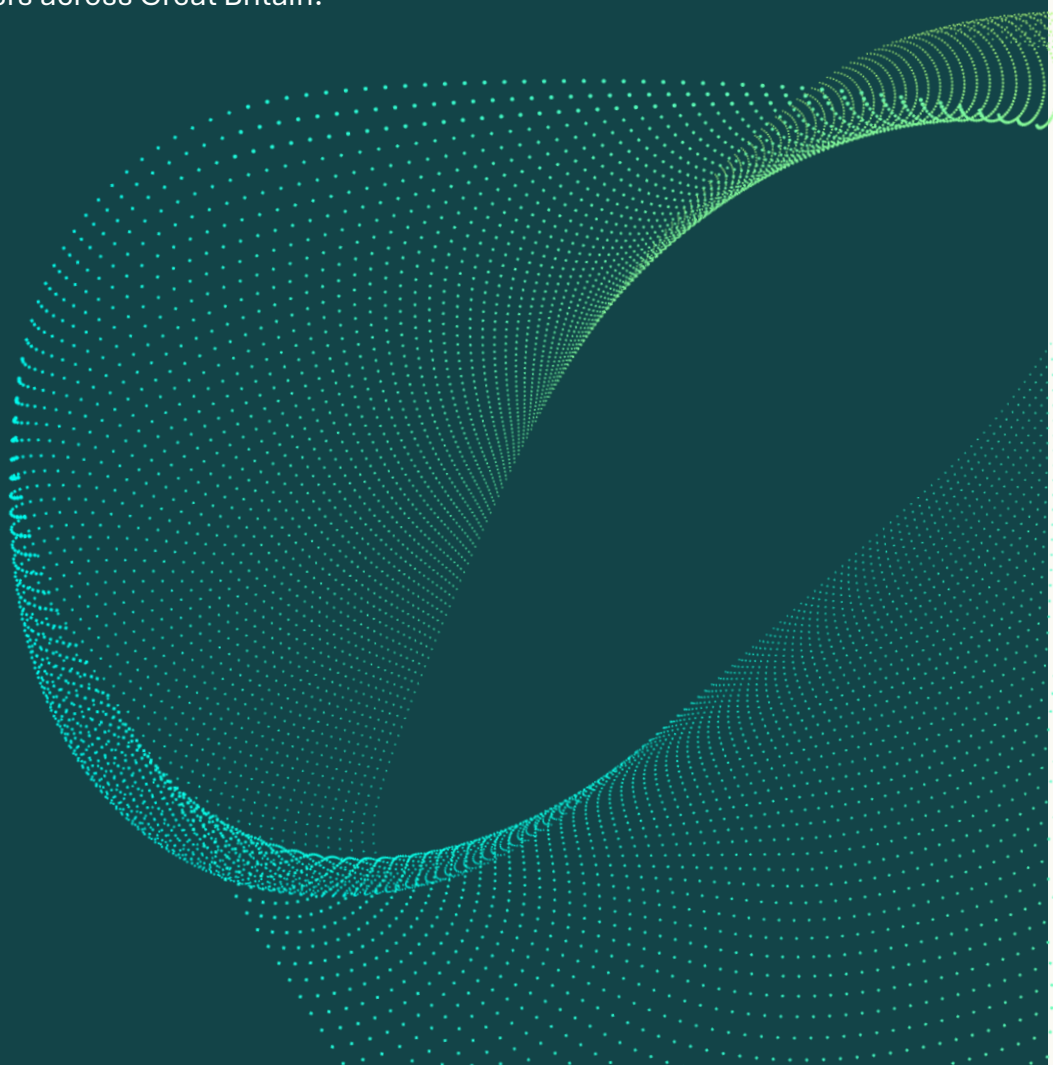
REGEN

Climate Outreach and IPPR

The value of public engagement

This report examines whether community engagement is related to planning outcomes for onshore renewable projects, drawing on survey responses from developers across Great Britain.

MAY 2026



About Climate Outreach

Climate Outreach works with organisations to help create new climate stories and unlock more ambitious climate action. With 20 years of insight and expertise on how to communicate effectively on climate change, it is currently coordinating a group of organisations to push the government to be more ambitious on public engagement (ACE Coalition). This research will supplement the coalition's existing advocacy to government on scaling up public engagement on climate change

About Regen

Regen provides independent, evidence-led insight and advice in support of our mission to transform the UK's energy system for a net zero future. We focus on analysing the systemic challenges of decarbonising power, heat and transport. We know that a transformation of this scale will require engaging the whole of society in a just transition.

Acknowledgements

We would like to express our sincere appreciation to all those who contributed to the successful completion of this report. We are particularly grateful to IPPR for their support throughout this project. This research was made possible by the generous participation of developers and industry professionals who shared their insights through the survey.

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Version	May 7, 2026

Executive summary

Meeting the UK's CP30 goals requires renewables to be built out at a far greater pace. Achieving this target depends not only on technical considerations like grid expansion and strategic planning but also on effective public engagement to build and maintain public support. This report examines how renewable energy developers currently engage with local communities and whether that engagement leads to better planning outcomes.

Our five key findings:

1. **Most developers are already engaging with communities:** The average engagement score for our sample was 6.6 out of 10, with the most typical project scoring 6.9, on the boundary between moderate and strong engagement. The findings below identify what works best, rather than a case for doing more.
2. **For solar and wind projects, responsiveness appears to distinguish outcomes** Although approved projects scored only slightly higher overall (7.4 vs 7.1), they differed more substantially in how they engaged: reaching a wider range of stakeholders, making nearly twice as many design changes and undertaking almost twice as many additional activities in response to opposition.
3. **Battery storage projects tell a different story:** Appealed battery storage projects had higher engagement scores than approved ones (7.4 vs 5.8) – the opposite pattern to solar and wind. Battery storage projects also faced less local opposition overall (23% of approved projects vs 50% for solar and wind), suggesting fundamentally different community engagement dynamics. Further research is needed to understand what drives outcomes of these projects.
4. **Opposition is common but doesn't always lead to refusal**: While local opposition was present in 100% of appealed solar and wind projects, half of the approved projects faced moderate or significant opposition and still secured approval. Approved projects may have been more successful in resolving conflict when it arises.
5. **The most effective engagement was personalised, small-scale approaches**: House visits, small group meetings and targeted outreach to local clubs were consistently cited as more effective than open-ended written consultations.

Overall, these findings suggest that community engagement represents a strategic investment. For solar and wind projects in particular, responsive engagement that genuinely shapes project design appears associated with better planning outcomes and may reduce the risk of costly appeals.

Study limitations and strengths

We received survey responses from developers representing 39 unique onshore renewable projects that have at least gone through planning across England, Scotland and Wales. The outcomes analysis (see section 3) is based on 32 of these projects that engaged the local community as part of their project (see Appendix 1: Methods and limitations).

While we can identify patterns in the dataset, we cannot definitively establish that engagement quality causes better outcomes. A key limitation is the small sample size overall, particularly the number of refused projects (n = 2, 6% of the sample), which prevents robust conclusions about what distinguishes refused projects from approved ones. The sample of appealed projects (n = 7, 22% of the sample) provides more reliable comparative insights with approved projects (n = 23, 73%).

Despite these limitations, this research represents one of the first surveys of developers that examines the relationship between community engagement practices and planning outcomes for renewable energy projects in the UK. Future research would benefit from qualitative interviews with developers across all outcome types and triangulation with community and planning authority perspectives to build a more complete evidence base.

Contents

1 Introduction 6

2 Public engagement literature review 7

What is public engagement and why does it matter? 7

3 Does public engagement lead to better outcomes? 14

Public engagement score methodology 14

Does engagement lead to better planning outcomes (all technologies) 16

Does the type of engagement matter? 18

Does local opposition and engagement timing play a role? 21

Do community benefits play a role? 23

The type of technology role in planning outcomes 27

Developers' perspective on additional potential challenges 33

Developers who did not engage local residents 36

Limitations of the findings 37

Conclusions 38

4 Lessons 39

Developers' perceptions of effective engagement 39

5 Appendix 1: Methods and limitations 44

Methods 44

Study limitations 45

6 Appendix 2: Overview data 48

Summary of developer details 48

Summary of project details 50

Summary of project outcomes 54

Summary of engagement 60

1 Introduction

The Climate Change Committee[1] concluded that, to meet the UK's CP30 targets, onshore wind installations must double in the next 5 years, and solar installations must increase fivefold. Achieving this rapid expansion will depend on technical considerations, like grid expansion and strategic planning, as well as securing public support for renewables at a local level. Understanding local perspectives, concerns and priorities is widely considered essential for developers to gain community acceptance, and can help avoid delays that could stall or halt projects.

However, the extent to which developers are engaging with communities, and whether such engagement demonstrably influences project outcomes, remains poorly understood. While government policy increasingly emphasises community engagement to achieve deployment targets, significant gaps remain in understanding which engagement practices work best and, critically, whether engagement directly influences planning approval rates and delivery timelines.

This summary report addresses these gaps by examining current developer engagement practice and whether that relates to project outcomes. It draws on 39 responses to a developer survey on onshore renewable energy projects (solar, onshore wind and battery storage) across England, Scotland and Wales.[2] The core analysis of engagement and planning outcomes is based on 32 projects that have completed the planning process and conducted community engagement, and an additional three projects that did not engage the local community, which are analysed separately (see Appendix 1: Methods and Appendix 2: Overview data, for a full data overview). The analysis reveals that engagement depth and quality matter more than quantity, and that technology type, project capacity and local context may shape the level of engagement.

The report is structured in three parts. First, the literature review introduces research on public engagement in renewables, followed by analysis of whether engagement is associated with planning outcomes. The final section presents the key lessons from developers on effective public engagement and our lessons from surveying this group. The appendix includes details on the methodology, and a general overview of the projects, outcomes and engagement practices.

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[1] Progress in reducing emissions 2024 Report to Parliament - Climate Change Committee

[2] The sample includes battery storage (32%), solar PV (30%), onshore wind (18%) and co-located projects (17%), see the Appendix for further details on the full sample.

2 Public engagement literature review

High-level literature review on public engagement and its relationship to project outcomes.

What is public engagement and why does it matter?

Public engagement has become an established component of the planning process and is a requirement of UK and Scottish Government policy.[3,4] This form of engagement refers to the ways in which members of the public are involved in shaping agendas, decisions and outcomes in processes that affect them.[5] This can range from one-way communication, where information is shared with communities, to consultation and more participatory approaches that allow the public to influence decisions.[6] These approaches vary both in how information flows and in the degree of influence communities are afforded.

More recently, the literature has placed increasing emphasis on forms of engagement that position communities as active participants in development processes, including co-creation, co-design and co-production,[7] as well as community- and citizen-led initiatives that originate outside of formal development structures.[8] In this report, the term *public engagement* is used as an overarching concept that captures this range of practices while recognising that different forms of engagement offer very different levels of influence and control.

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[3] UK government, 2022, Consultation and pre-decision matters.

[4] Scottish government, 2022, Planning circular.

[5] Suboticki, I., Heidenreich, S., Ryghaug, M., & Skjølsvold, T. M., 2023, Fostering justice through engagement: A literature review of public engagement in energy transitions.

[6] Rowe, G., & Frewer, L. J., 2005, A typology of public engagement mechanisms.

[7] Voorberg, W. H., Bekkers, V. J., & Tummers, L. G., 2015, A systematic review of co-creation and co-production: Embarking on the social innovation journey.

[8] Seyfang, G., & Haxeltine, A., 2012, Growing grassroots innovations: exploring the role of community-based initiatives in governing sustainable energy transitions.

Does public engagement lead to better outcomes?

In the context of renewable planning, research has argued that public engagement serves three key functions: it increases the likelihood of successful project delivery, it upholds communities' right to participate in decisions that affect them and it enables the incorporation of local knowledge that may not be captured through technical assessments alone.[9] Empirical evidence indicates that these functions can contribute to improved project outcomes, but significant gaps in our understanding remain.

There is limited research that examines the direct relationship between public engagement and project outcomes in the UK. One notable exception is Hussain et al. (2025), who analysed planning decisions for large-scale solar developments in England, finding that public support is statistically associated with a higher likelihood of planning approval.[10] However, the study focuses on the influence of public support as an actor in the planning process rather than directly evaluating how specific forms of public engagement shape planning outcomes. **Nevertheless, evidence clearly shows that local opposition matters; where it emerges, projects are more likely to be delayed, contested or refused (see below).** This suggests that while the direct effects of engagement remain underexplored, its importance lies in how engagement shapes acceptance and, by extension, project viability.

Clear evidence on the importance of local acceptance

Local opposition can delay or stop projects

Local opposition has been found to slow or permanently halt renewable developments, impeding the wider shift to clean energy.[11] In England and Wales during the early 2000s, wind farm applications achieved only a 40% success rate through normal planning procedures, considerably lower than other forms of development, with local opposition identified as the primary reason for rejection.[12] More recent research confirms this pattern; studies across Great Britain find that community attitudes influence planning decisions, with factors like aesthetic impact and local demographic characteristics affecting approval rates.[13,14]

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[9] Yearley, S., Cinderby, S., Forrester, J., Bailey, P. and Rosen, P., 2003, Participatory modelling and the local governance of the politics of UK air pollution: A three-city case study.
[10] Hussain, M. M., Concetti, C., Toke, D., Thomas, K., Duffy, P., & Vergunst, J., 2025, Here comes the sun: Determinants of solar farm planning at local authority level in England.
[11] Cohen, J.J., Reichl, J. and Schmidthaler, M., 2014, Re-focussing research efforts on the public acceptance of energy infrastructure: A critical review.
[12] Toke, D., 2005, Explaining wind power planning outcomes: Some findings from a study in England and Wales.

[13] Roddis, P., Carver, S., Dallimer, M., Norman, P., & Ziv, G., 2018, The role of community acceptance in planning outcomes for onshore wind and solar farms: An energy justice analysis.

[14] Harper, M., Anderson, B., James, P. A., & Bahaj, A. S., 2019, Onshore wind and the likelihood of planning acceptance: Learning from a Great Britain context.

If local opposition influences project outcomes, what leads to more acceptance?

The above research provides evidence that locally accepted projects lead to better outcomes for developers. Consequently, it is important to highlight what drives local acceptance of renewable projects. Firstly, meaningful engagement is a vital component of increasing acceptance. As previously mentioned, Hoesch et al.'s (2025) research on large-scale solar deployment found a positive association between communities' perception of their engagement experience and their attitudes toward projects.[15] Importantly, they also found that stronger engagement didn't guarantee universal support (opponents might still oppose), but both supporters and opponents tended to have more positive attitudes in communities hosting projects with stronger engagement than in areas with weaker engagement.

Additionally, a recent literature review, building on the foundation work of Walker & Devine-Wright (2008) in their framework on how to define community ownership, found that projects that operated with more local involvement and benefits tended to achieve higher support.[16,17] Similarly, research in Scotland suggests that fair decision-making processes and fair distribution of benefits are key to public support for onshore wind.[18,19] Hogan (2024) also suggests that shared and community ownership models can strengthen acceptance, particularly when they are paired with meaningful community involvement rather than purely financial offers.

In summary, locally accepted projects lead to better outcomes, and acceptance is driven primarily by meaningful engagement, particularly if that engagement involves communities in decision-making and ensures fair distribution of benefits. This raises a critical question – what distinguishes meaningful engagement?

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[15] Hoesch, K. W., Mills, S. B., Rand, J., Nilson, R., Bessette, D. L., White, J., & Hoen, B., 2025, What to expect when you're expecting engagement: Delivering procedural justice in large-scale solar energy deployment.

[16] Baxter, J., Walker, C., Ellis, G., Devine-Wright, P., Adams, M., & Fullerton, R. S., 2020, Scale, history and justice in community wind energy: An empirical review.

[17] Walker, G., & Devine-Wright, P., 2008, Community renewable energy: What should it mean?

[18] Hogan, J. L., Warren, C. R., Simpson, M., & McCauley, D., 2022, What makes local energy projects acceptable? Probing the connection between ownership structures and community acceptance.

[19] Hogan, J. L., 2024, Why does community ownership foster greater acceptance of renewable projects? Investigating energy justice explanations.

Not all engagement is effective

Given that community attitudes influence planning success, understanding how to best engage should be a crucial discussion for developers and policymakers. However, not all engagement is created equal. Research shows that the quality and nature of engagement matters as much as (if not more than) whether it simply happens.

The influence of power sharing

Arnstein's (1969) influential 'Ladder of Citizen Participation' provides a framework for understanding different levels of engagement, ranging from non-participatory approaches at the bottom to genuine citizen control at the top (see Figure 1).[20] The distinction matters because tokenistic engagement (where communities are informed or consulted but have no real influence over decisions) may create the appearance of participation without actually redistributing power to communities.

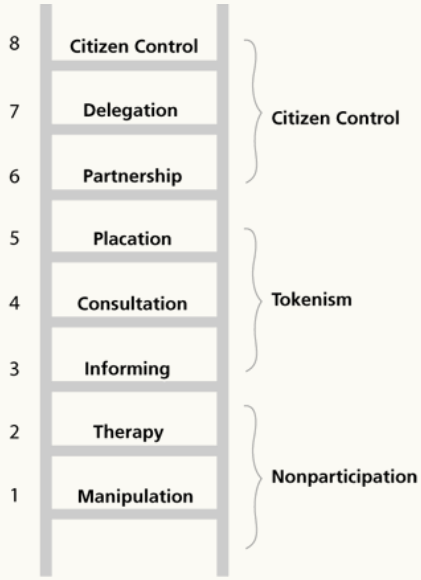
As Slotterback and Lauria (2019) note regarding Arnstein's work, the central objective of public engagement should be "the redistribution of power from the 'powerholders' to the 'have-nots'" (p. 217).[21,22] This means giving communities "the real power needed to affect the outcome of the process" (p. 216), not just the appearance of involvement.[22] This aligns closely with the findings discussed above regarding fair involvement in the decision-making process being key to more acceptable projects.[18,19]

[20] Arnstein, S. R., 1969, Citizen Participation is citizen power.

[21] Slotterback, C. S., & Lauria, M., 2019, Building a foundation for public engagement in planning: 50 years of impact, interpretation, and inspiration from Arnstein's Ladder.

[22] Arnstein, S. R., 1969, Citizen Participation is citizen power.

Figure 1: Arnstein's (1969) Ladder of Degrees of Citizen Participation



Timing and responsiveness are crucial to how public engagement is received

Ryder et al. (2022) find that the stage at which communities are engaged is a key determinant of how they respond to energy projects, particularly where engagement is perceived as meaningful rather than purely information-providing.[23] In their case studies, approaches that moved beyond the second rung of Arnstein's ladder (emphasising two-way dialogue, relationship-building, community partnership or ownership and engagement without conditions) were more likely to foster trust and positive attitudes towards developers. By contrast, engagement perceived as rushed or undertaken primarily to secure planning consent tended to undermine trust and provoke resistance, indicating that early, meaningful engagement can contribute to more stable project outcomes.

[23] Ryder, S., Walker, C., Batel, S., Devine-Wright, H., Devine-Wright, P., & Sherry-Brennan, F., 2023, Do the ends justify the means? Problematizing social acceptance and instrumentally-driven community engagement in proposed energy projects.

Developers' assumptions can undermine effectiveness

Barnett et al. (2012) found that engagement strategies are often informed by developers' assumptions about "imagined publics" rather than communities' actual preferences or capacities.[24] They argue that this may help explain why engagement falls short of community expectations.

What does this mean for the economics of projects?

While direct causal evidence linking specific public engagement practices to improved developer outcomes remains limited, the existing literature supports a robust inference: public engagement matters because it shapes local attitudes, and local attitudes (particularly opposition) impact project outcomes. In other words, where opposition is strong, projects face higher risks of delay, redesign or refusal – all of which carry financial costs.

While there is limited evidence directly linking improved public engagement to reduced financial costs for developers, research from the United States shows that developers themselves understand engagement in these terms. In a recent study, developers consistently framed public engagement as a risk-management strategy, used to identify opposition early, reduce uncertainty and avoid costly delays.[25] They also found that developers' engagement is typically positioned "halfway up" Arnstein's ladder, beyond minimal consultation but short of genuine power-sharing, reflecting its instrumental role in stabilising projects, rather than redistributing control. Although grounded in a different planning and legal context, this research highlights a rationale to further examine this topic in the UK.

[24] Barnett, J., Burningham, K., Walker, G., & Cass, N., 2012, Imagined publics and engagement around renewable energy technologies in the UK.

[25] Nilson, R., Rand, J., Hoen, B., & Elmallah, S., 2024, Halfway up the ladder: Developer practices and perspectives on community engagement for utility-scale renewable energy in the United States.

Critical evidence gaps

Despite widespread acknowledgement of engagement's importance, three significant gaps remain:

1. **We lack systematic evidence linking engagement practices to outcomes.** Few studies assess whether particular engagement approaches relate with tangible delivery outcomes like planning approval rates, construction timelines or operational success.
2. **The implementation gap is poorly documented.** Little empirical research exists on what developers actually do in practice.
    - → **Success is under-reported.** Failed or contentious projects receive more attention in academic and media coverage, while successful engagement is rarely documented.

This report addresses these gaps by examining actual developer practices and their relationship to planning outcomes, providing evidence-based insights for improving engagement effectiveness.

3 Does public engagement lead to better outcomes?

This section examines whether community engagement influences planning outcomes for renewable energy projects, and if so, what types of engagement prove most effective. Using an engagement score that captures both the breadth and depth of engagement efforts, we analyse whether different engagement approaches are associated with planning approval, appeals and refusals. The analysis reveals that engagement quality (measured through stakeholder diversity, responsiveness to feedback and meaningful project changes) may matter more than engagement quantity. Though, these patterns vary by technology type and project context.

Public engagement score methodology

We developed a composite engagement score to quantify the breadth and depth of community engagement efforts. The score ranges from 0 to 10, with 10 representing the most comprehensive engagement approach. The score comprises four equally weighted components, including activity account (weighted by engagement level), stakeholder breadth (number of stakeholder groups engaged), project stage coverage (number of early stages engaged) and responsiveness (whether they made changes to the project based on feedback).

Table 1 and

Table 2 present the decisions behind how responses were scored.

Interpreting the ‘engagement score’

The total ‘engagement score’ reflects both the breadth (the number of stakeholders and stages) and the depth (the types of activities) of community engagement efforts. A higher score indicates more comprehensive engagement that:

- Utilises deeper, more interactive engagement methods
- Reaches a wider range of stakeholder groups
- Occurs throughout multiple project stages
- Results in responsive changes based on community input

Scores can be interpreted as follows:

- **8.0 - 10.0**: Comprehensive engagement across all dimensions
- **7.0 - 7.9**: Strong engagement with some gaps
- **6.0 - 6.9**: Moderate engagement
- **Below 6.0**: Basic or minimal engagement

Table 1: Engagement score – Components. calculation and weighting

Component	Survey Question	Measurement	Maximum Points	Weight
Activity Count	"For each community engagement activity your company used for this project (if any), how effective did you find it in addressing public concerns?"	Weighted by engagement level: • Inform activities: 0.6 each (2 activities) • Input activities: 1.2 each (4 activities) • Involve activities: 1.8 each (2 activities) See Table 2 for how responses were categorised.	10.0	25%
Stakeholder Breadth	"Which stakeholder groups did you engage with during this project?"	Number of stakeholder groups engaged (1.4 per group, up to 7 groups)	10.0	25%
Project Stage Coverage	"At which stages of the project did community engagement occur?"	Number of project stages with engagement (3.3 per stage, up to 3 stages)	10.0	25%
Responsiveness	"Did your company make any changes to the project based on community feedback?"	Whether changes were made based on feedback (Yes = 10.0, No = 0.0)	10.0	25%
Total Engagement Score		*Average of four components*	**10.0**	**100%**

Table 2: Engagement activities categorised by level of community interaction

Engagement Level	Weight	Description	Activities
Inform	0.6	One-way communication where information flows from developer to community	• Information materials (mailings, leaflets, FAQs) • Media/online communications (press releases, website, social media)
Input	1.2	Two-way communication allowing community feedback and questions	• Public events (information sessions, open houses) • Door-to-door or street canvasing • Surveys or polling • Advanced visualisation (VR, 3D models)
Involve	1.8	Direct, interactive dialogue through sustained, in-depth discussion in smaller group settings	• Direct meetings with stakeholders (small groups, one-on-one) • Workshops or forums (interactive discussions, webinars)

Sample considerations

The following analysis examines 32 projects from our survey sample. These represent projects where developers conducted community engagement and completed the planning process, allowing us to link engagement practices to planning outcomes. An additional 3 projects that did not engage local communities are analysed separately below, as they represent an important aspect of this analysis. For full details on our recruitment strategy, response rates, exclusion criteria and limitations, see Appendix 1: Methods and limitations.

Does engagement lead to better planning outcomes (all technologies)?

Overall, the average engagement score was 6.6 out of 10, with the most common score 6.9, sitting at the boundary between moderate and strong engagement. Scores ranged from 3.0 to 9.5, indicating variation in practice, but even projects refused on first application averaged 5.7, above the threshold for basic or minimal engagement. **The findings that follow should therefore be read as identifying what distinguishes more effective engagement practice within an already-active group, rather than as a case for simply doing more.**

Though we found that projects with higher engagement scores were more likely to be approved on the first application, while those with lower scores had higher rates of being refused (see Figure 2 and Table 3). That said, only two projects in our final sample (6%) were refused at the first application, which means there isn't enough data to draw firm conclusions about the

engagement practices of unsuccessful projects. As a result, we can't say for certain that low engagement causes planning refusal. Even so, this early evidence suggests a link worth exploring further, particularly as one of the first surveys to capture developers' experiences of engagement.

With more responses from projects that were approved after appeal than refused, we can make a clearer comparison with projects approved on the first application. Somewhat unexpectedly, projects that went to appeal reported the highest levels of engagement, with an average score of 7.2 (compared to 6.5 for projects approved without appeal; see Table 3). This may suggest that engagement alone may not determine planning outcomes, and that its role may be nuanced.

The following sections examine possible explanations for these findings, exploring how different types of engagement, the timing and presence of local opposition, community benefits, project capacity and technology type may influence planning outcomes.

Figure 2: Engagement score by planning outcomes

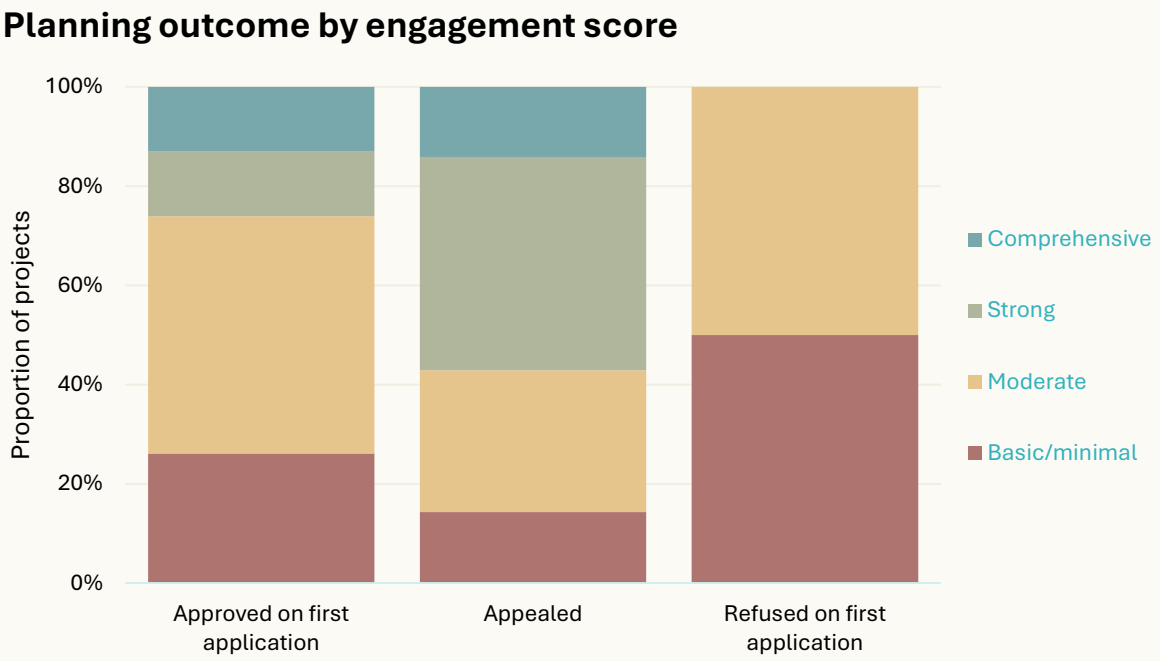


Table 3: Engagement score components by planning outcome

Planning outcome	Average engagement score	Count and % of sample
Went to appeal	7.2	7 (22%)
Approved on first application	6.5	23 (72%)
Refused on first application	5.7	2 (6%)
Total		**32 (100%)**

Does the type of engagement matter?

To better understand why higher overall engagement did not always translate into smoother planning outcomes (e.g., for appealed projects), we looked more closely at the different elements that made up the engagement score.

We found that projects that proceeded to appeal reported undertaking slightly more engagement activities than those approved at first application (5.7 compared to 5.3) and engaging across a greater number of project stages (2.6 compared to 2). A higher proportion of these projects also engaged earlier, during scoping and site selection (see Table 4).

However, this broader and earlier engagement did not appear to translate into greater influence. Appealed projects engaged a narrower range of stakeholder types (4.4 compared to 4.8) and reported making fewer changes to their projects as a result of their engagement than either approved or refused projects (1 change, compared to 1.43 and 1.5, respectively). Taken together, this suggests that while appealed projects expanded the *extent* of engagement in terms of activities and timing, engagement may have been less diverse and less likely to result in changes to the project.

This raises an important distinction between engagement as a procedural exercise and engagement as a mechanism for influence on the project. To explore this further, we examined how developers themselves described the purpose of engagement. Figure 3 and Table 5 show how engagement was framed across planning outcomes. Projects that went to appeal tended to emphasise informational motivations – i.e. all cited informing communities, and most cited identifying concerns. Over half of the appealed projects also indicated they wanted to improve project design based on community input. In contrast, far fewer described engagement as a way to build local support or reduce project risk. This pattern suggests engagement was largely understood as communication and issue management, with some seeing it as a tool for adapting projects.

Approved projects showed a slightly different goal. While informational goals remained important, these projects were more likely to cite strategic motivations such as reducing risk and building local support. Interestingly, while approved projects tended to make more

changes to the project based on community input than those that went to appeal, fewer of them put that as the main reason for the engagement.

Refused projects show a different pattern again, although this should be interpreted with caution, given the very small number of responses. In the single refused project that provided details on their engagement motivations, engagement was framed in largely procedural terms, focusing on regulatory compliance and risk reduction rather than proactive goals, such as building support or shaping project design. The other refused project identified itself as community-led, selecting this option in place of the standard engagement motivation categories, likely because engagement was embedded within the project itself.

Overall, these findings suggest that engagement goals were broadly similar across planning outcomes, with most developers prioritising informational motivations such as informing communities and identifying concerns early. There were, however, some differences in emphasis. For example, appealed projects were more likely to cite informational sharing goals, while approved and refused projects placed greater weight on risk reduction and regulatory compliance. Though these differences are modest.

Economic case: Engagement could be a potential cost-saving measure when the public can meaningfully shape projects early, but there is a limited return on investment when engagement is purely procedural.

Table 4: Engagement score components by planning outcome

Planning outcome	Activity count (average #)	Stakeholder breadth (average # of groups engaged)	Project stage coverage (average # of stages engaged)	Who engaged in early scoping/site selection (Count and %)	Responsiveness (average # of changes from engagement)	Additional work taken due to opposition (average #)*
Went to appeal	5.7	4.4	2.6	5/7 (71%)	1	2.9
Approved on first application	5.3	4.8	2	7/23 (30%)	1.43	2.7
Refused on first application	4.5	3.5	2.5	2/2 (100%)	1.5	6

**While not included in the engagement score, additional work taken due to opposition was included as an important consideration.*

Figure 3: Developer's goal for engagement compared to planning outcome

Table 5: Developer motivations for engagement by planning outcome

Motivation	Went to appeal (count and %)	Approved on first application (count and %)	Refused on first application (count and %)
Inform the community about the project	7 (100%)	11(48%)	-
Identify and address concerns early	6 (86%)	12 (52%)	-
Improve project design based on community input	4 (57%)	4 (17%)	-
Build local support for the project	2 (29%)	7 (30%)	-
Reduce project risks or avoid delays	1 (14%)	8 (35%)	1 (50%)
Expected by planning regulations or policy	1 (14%)	5 (22%)	1 (50%)
"Right thing to do," company commitments	-	2 (9%)	1 (50%)
Investor or stakeholder expectations	-	1 (4%)	-
Total	**7 (100%)**	**23 (100%)**	**2 (100%)**

Does local opposition and engagement timing play a role?

We then explored whether the nature and timing of local opposition helped explain differences in planning outcomes. Among the seven projects that went to appeal, 86% experienced moderate or significant opposition early on. By contrast, only 39% of projects approved on first application faced comparable opposition (

Table 6). At the same time, projects that went to appeal tended to have higher overall engagement scores. However, these projects made fewer changes in response to engagement compared with approved projects, suggesting that while engagement was extensive, it was less influential on project design.

Analysis of engagement timing alongside local opposition and outcomes provides further insight (Figure 4). Among projects facing moderate or significant opposition, those engaging early at scoping or site selection had higher appeal rates (71%, 5 of 7 projects) than those engaging later (22%, 2 of 9 projects). Projects without organised opposition were generally approved regardless of engagement timing (92%, 12 of 13 projects). However, the small sample sizes and uneven distribution across opposition categories limit firm conclusions.

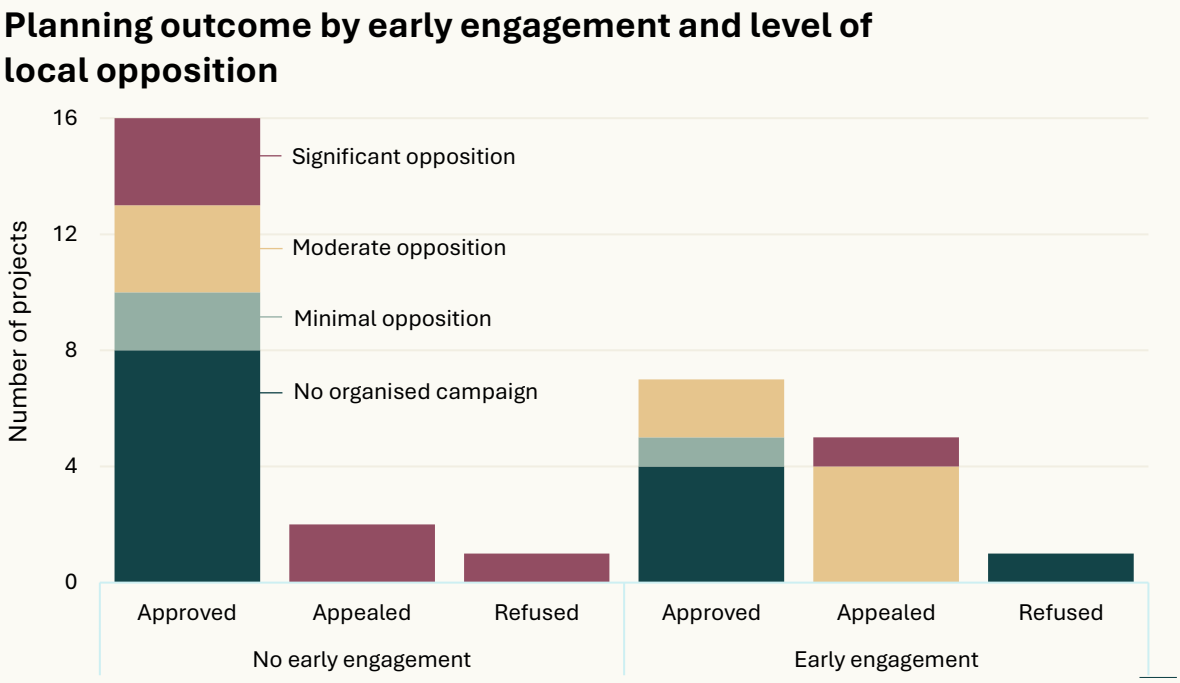
These findings suggest that local opposition plays an important role in project outcomes, with opposition present in most projects that went to appeal compared to those approved on first application. Second, we found that engaging prior to planning does not automatically reduce opposition or improve outcomes. Instead, when opposition emerges, what matters is how developers respond to concerns, not simply when they begin consultation. Taken together, these findings indicate that the value of engagement lies not in its timing or quantity, but in its quality and responsiveness, particularly in addressing opposition before it escalates to formal appeals.

Economic case: Opposition was present in most projects that went to appeal, compared to those approved on first application. This finding matters for the economic case for public engagement because unresolved opposition may lead to costly delays through the appeals process, increasing overall project costs and timelines.

Table 6: Prevalence of significant or moderate local opposition by planning outcome

Planning outcome	Count of projects with significant or moderate local opposition	Number in overall planning outcome group	Percentage of group
Went to appeal	6	7	86%
Approved on first application	9	23	39%
Refused on first application	1	2	50%
Total	**16**	**32**	

Figure 4: Planning outcomes by early engagement timing and level of local opposition



Do community benefits play a role?

Community benefit offerings have become standard practice in onshore wind development, with 86% of appealed projects, 74% of approved projects and 50% of refused projects offering community benefit funds. Only two approved projects provided no benefits at all, suggesting that offering some form of community benefit is now an expected norm, rather than a distinguishing factor.

However, beyond this baseline, developers showed little variation in their approach. For example, shared ownership or energy bill discounts were rare across all outcomes (in just 6 of 32 projects). Only 22% of approved projects (and none of the appealed projects) offered developer-operated infrastructure funding (i.e., where the community benefit fund is run through the developer rather than the community), indicating that developers are listening to calls from communities to have more say over their community benefit packages.

While these findings suggest that standardised community benefits alone may not prevent opposition or appeals, they do not imply that benefits are unimportant to communities. However, it is important to note that community benefits are not a material consideration in planning. These findings may instead reflect that the extent of community opposition is not necessarily mitigated by benefit offers alone. Understanding benefit levels relative to project capacity (MW) may nevertheless reveal important patterns in how developers approach community relations across different project outcomes.

Table 7: Community benefit types offered by planning outcome

Benefit Type	Goes to appeal (n=7)	Approved (n=23)	Refused (n=2)
Community benefit fund (operated by community)	6 (86%)	17 (74%)	1 (50%)
Direct funding for local projects/infrastructure (developer-operated)	0 (0%)	5 (22%)	0 (0%)
Energy bill discounts for local residents	1 (14%)	1 (4%)	0 (0%)
Shared ownership	1 (14%)	2 (9%)	0 (0%)
Other arrangements*	1 (14%)	1 (4%)	1 (50%)
No community benefits provided	0 (0%)	2 (9%)	0 (0%)
Under consideration/TBC	0 (0%)	2 (9%)	0 (0%)

**Other includes: Community Foundation-operated fund, community-owned project, and smaller-scale community energy projects*

The role of project capacity

Engagement intensity decreases with project size

Average engagement scores by project capacity show a downward trend as projects grow larger (see

Table 8). The smallest projects (under 5 MW) recorded the highest average engagement scores (7.0), declining progressively to 5.8 for projects exceeding 300 MW. This pattern appears closely linked to planning pathways (Table 9), where projects under 50 MW mostly went through local planning. Further investigation would be needed to understand why engagement scores differ between these planning pathways, despite the formal engagement requirements that apply to both routes.

Mid-sized projects may face a “contested zone”

Despite lower engagement scores, larger projects achieved consistently favourable outcomes, with almost all projects exceeding 100 MW approved on first application (only one proceeded to appeal in the 100-300 MW range;

Table 10). The smallest projects (under 5 MW) similarly had no appeals, though outcomes were mixed between approval (2 of 3) and refusal (1 of 3). Projects in the 6-50 MW range showed a moderate appeal rate of 18% (2 out of 11).

The outlier is the 51-100 MW capacity range, where half of all projects (4 out of 8, 50%) went to appeal, a higher rate than any other category. While 5 of the 8 projects in this category went through a national planning process, this does not immediately explain the pattern, as larger projects had no appeals. Understanding what distinguishes this capacity range requires a deeper analysis of project-specific factors beyond the scope of this dataset. However, it raises the question as to whether these projects lack the regulatory frameworks or resources that facilitate approval for larger schemes.

Table 8: Average engagement score by group capacity

Planning outcome	Average engagement score	Overall count	Tech
<5 MW	7.0	4	Solar PV and solar located solar and BESS
6-50 MW	6.7	11	Solar PV and solar located solar and BESS
51-100 MW	6.6	8	BESS, onshore wind, and co-located onshore wind and BESS
101-300 MW	6.3	4	BESS and onshore wind
>300 MW	5.8	5	Solar PV and co-located solar and BESS

Table 9: Planning determination level by project capacity

Capacity	Local planning	National planning	No response	Total
<5 MW	3 (100%)	0 (0%)	0 (0%)	3
6-50 MW	9 (82%)	1 (9%)	1 (9%)	11
51-100 MW	3 (38%)	5 (62%)	0 (0%)	8
101-300 MW	2 (40%)	3 (60%)	0 (0%)	5
>300 MW	3 (60%)	2 (40%)	0 (0%)	5
Total	**20**	**11**	**1**	**32**

Table 10: Planning outcome by project capacity

Planning outcome	Approved	Appealed	Rejected	Total
<5 MW	2 (67%)	-	1 (33%)	**3**
6-50 MW	8 (73%)	2 (18%)	1 (9%)	**11**
51-100 MW	4 (50%)	4 (50%)	-	**8**
101-300 MW	4 (80%)	1 (20%)	-	**4**
>300 MW	5 (100%)	-	-	**5**
Total	**23**	**7**	**2**	**32**

Table 11: Planning outcome by decision-making level

Planning outcome	Local planning	National planning	No response	Total
Goes to appeal	2 (29%)	5 (71%)	–	**7**
Successful	16 (70%)	6 (26%)	1 (4%)	**23**
Unsuccessful	2 (100%)	–	–	**2**
Total	**20**	**11**	**1**	**32**

The type of technology role in planning outcomes

The analysis revealed substantially different engagement patterns between solar and onshore wind projects compared to battery storage projects (including co-located configurations). These differences may help explain the seemingly counterintuitive patterns observed in the overall dataset and suggest that technology type may influence both local opposition and the relationship between engagement and outcomes.

Solar and onshore wind: engagement depth matters

For solar and onshore wind projects, approved projects had slightly higher average engagement scores (7.4) than those that went to appeal (7.1), with refused projects showing the lowest scores (5.7); Table 12). This pattern aligns with the hypothesis that more comprehensive engagement contributes to favourable planning outcomes. However, as seen in the previous section, this score alone only tells part of the story.

When looking at each component of the engagement score, alongside additional work taken due to opposition, projects approved on first application distinguished themselves through engagement depth rather than extent (

Table 13**Error! Reference source not found.**). While approved projects conducted a similar number of activities as appealed projects (6 activities on average for both), approved projects engaged a wider range of stakeholders (5.4 groups versus 4.3 for appealed projects) and demonstrated greater responsiveness, making nearly twice as many project changes (1.8 vs 1.0). Most notably, approved projects invested more in addressing opposition when it emerged, undertaking 4.2 additional activities on average compared to 2.3 for appealed projects. This suggests that willingness and capacity to respond through design changes, mitigation measures or additional studies may be critical to securing approval.

Opposition patterns reinforce this finding. Solar and onshore wind projects faced opposition frequently, with 59% of all projects in this category encountering moderate or significant opposition. However, nearly half of the approved projects (5 out of 10) had faced such opposition yet still gained approval on their first application, see *While *not included in the engagement score, additional work undertaken due to opposition was included as an important consideration*.

Table 14. This finding suggests that opposition may not be fatal to projects.

These patterns are further shaped by project capacity and planning pathway. Solar and wind projects in the 51-100 MW range faced high appeal rates (75%, 3 of 4 projects; Table 15), while solar and wind projects determined through national planning had a 50% appeal rate (4 of 8 projects;

Table 16). These findings suggest that both mid-sized capacity and national planning routes present particular challenges for solar and wind developments, reinforcing the importance of engagement depth and responsiveness.

Overall, approved solar and wind projects had slightly higher engagement scores because they combined broader stakeholder engagement with greater responsiveness to concerns. In other words, they made more meaningful project changes and invested more in addressing opposition when it emerged, rather than simply conducting more engagement activities.

Battery storage: a different story altogether

Battery storage projects showed markedly different patterns. Projects that went to appeal had substantially higher engagement scores (7.4) than those approved on first application (5.8), and no battery storage projects in the sample were refused (

Table 12). This inverted pattern suggests that battery storage face fundamentally different community engagement dynamics.

These findings may be due to opposition and engagement characteristics common for these projects. Battery storage projects faced opposition less frequently overall, with only 23% of approved projects encountering moderate or significant opposition compared to 50% for solar and wind (*While *not included in the engagement score, additional work undertaken due to opposition was included as an important consideration.*

Table 14). When opposition did emerge in battery storage projects, it often led to an appeal (100% of appealed battery projects faced opposition). Though half of the approved battery projects (7 out of 14) also faced opposition, suggesting again that opposition may not be fatal.

This pattern is further reflected in the engagement practices themselves. Battery storage projects engaged fewer stakeholder groups overall and demonstrated less responsiveness regardless of outcome, making on average one project change whether approved or appealed (

Table 13). They also undertook less additional work in response to opposition (1.6 activities for approved projects versus 4.2 for solar or wind), indicating more constrained engagement depth. Early engagement was also less common in battery projects (23-33% across outcomes versus 50-75% for solar or wind), though as discussed earlier, early timing alone does not guarantee better outcomes.

In contrast to solar and wind, battery storage projects in our sample showed more consistent approval across capacity ranges and planning pathways. Even in the 51-100 MW range, 75% of battery projects were approved (3 of 4; Table 15) compared to only 25% for solar/wind. Battery projects in our sample also proceeded through local planning routes more frequently (75% versus 50% for solar/wind;

Table 16), yet maintained high approval rates (83% of locally determined battery projects).

Overall, battery storage projects present a more ambiguous picture. Higher engagement scores among appealed projects do not appear to reflect more effective engagement. These projects made no more changes to their designs and engaged a narrower range of stakeholders than approved projects. What drives this pattern is unclear from the data alone. It may reflect developers increasing engagement in response to emerging opposition, or it may reflect other factors specific to battery storage projects, such as the nature of concerns raised or the planning routes taken. Further research, including interviews with battery storage developers, would be needed to examine this more closely.

Implications: depth over quantity, shaped by technology

These technology-specific patterns reveal that engagement effectiveness depends not just on what developers do, but on the technology itself. For solar and onshore wind, engagement that leads to meaningful project changes (i.e. projects that had broad stakeholder inclusion, high responsiveness and substantial investment in addressing opposition) appears to be associated with more favourable planning outcomes. For battery storage, developers face opposition less frequently, but the relationship between engagement and outcomes is less clear, and warrants further investigation.

These results help clarify the counterintuitive overall finding that, when looking at all projects together, appealed projects had higher engagement scores (7.2) than approved projects (6.5). This finding may have been driven primarily by battery storage dynamics rather than reflecting a universal pattern. For solar and wind, the relationship between engagement and outcomes follows the expected direction, with approved projects showing slightly higher scores and greater engagement depth.

Table 12: Average engagement score by planning outcome and technology type

Planning outcome	Average engagement score	Count and % of tech
Solar and onshore wind		
Went to appeal	7.1	4 (24%)
Approved on first application	7.4	10 (58%)
Refused on first application	5.7	3 (17%)
Total		**17 (100%)**
BESS & co-located		
Went to appeal	7.4	3 (19%)
Approved on first application	5.8	13 (81%)
Refused on first application	N/A	N/A
Total		**16 (100%)**

Table 13: Engagement score components by planning outcome and technology type

Planning outcome	Activity count (average #)	Stakeholder breadth (average # of groups engaged)	Project stage coverage (average # of stages engaged)	Who engaged in early scoping/site selection (Count and %)	Responsiveness (average # of changes from engagement)	Additional work taken due to opposition (average #)*
Solar and onshore wind						
Went to appeal	6	4.8	2.5	3/4 (75%)	1	2.5
Approved on first application	6	5.4	2.5	5/10 (50%)	1.8	4.2
Refused on first application	4	3.5	2.5	1/2 (50%)	1.5	6
BESS and co-located						
Went to appeal	5.3	4	2.6	1/3 (33%)	1	3.3
Approved on first application	4.8	4.3	1.6	3/13 (23%)	1.2	1.6
Refused on first application	N/A	N/A	N/A	N/A	N/A	N/A

**While not included in the engagement score, additional work undertaken due to opposition was included as an important consideration.*

Table 14: Prevalence of significant or moderate local opposition by planning outcome and technology type

Planning outcome	Count of projects with significant or moderate local opposition	Count and % of outcome group	% of tech
Solar and onshore wind			
Went to appeal	4	4 (100%)	23%
Approved on first application	5	10 (50%)	29%
Refused on first application	1	2 (50%)	6%
BESS & co-located			
Went to appeal	3	3 (100%)	19%
Approved on first application	3	13 (23%)	19%
Refused on first application	N/A	N/A	N/A

Table 15: Planning outcomes by project capacity and technology type

Capacity	Solar & wind			BESS & co-located		
	Refused	Appealed	Approved	Refused	Appealed	Approved
<5 MW	1	-	1	N/A	-	1
6-50 MW	1	1	5	N/A	1	3
51-100 MW	-	3	1	N/A	1	3
101-300 MW	-	-	1	N/A	1	3
>300 MW	-	-	2	N/A	-	3
Total	**2**	4	10	N/A	3	**13**

Table 16: Planning outcomes by determination level and technology type

Planning pathway	Solar & wind		BESS & co-located	
	Count	%	Count	%
Local planning	**8**	**50%**	**12**	**75%**
Approved	6	75%	10	83%
Refused	2	25%	0	0%
Appealed	0	0%	2	17%
National planning	**8**	**50%**	**3**	**19%**
Approved	4	50%	2	67%
Appealed	4	50%	1	33%
No response	**-**	**-**	**1**	**6%**
Total	**16**	**100%**	**16**	**100%**

Developers' perspective on additional potential challenges

While the quantitative analysis showed that engagement depth matters for planning outcomes, particularly for solar and wind projects, we also asked developers whether there were other factors not discussed in the previous questions that influence their project's outcomes or made engagement more challenging. Several key themes were found including: cumulative impacts of other nearby projects, organised opposition, political considerations and local specific concerns.

The considerable challenge of cumulative impacts

The most frequently cited challenge across both approved and appealed projects was the presence of nearby renewable energy developments. One developer of an approved solar project explained how cumulative developments "resulted in engagement/consultation fatigue and frustration from some, as they felt like they hadn't been listened to in previous consultations for the other developments. The project in isolation may have been seen as acceptable but together with other developments was seen as unacceptable." Similarly, another solar developer noted that there is "a proliferation of solar projects in this part of [the country] and a very large NSIP project nearby," while a third described their project as "one of four NSIPs in the wider area, which led to an active opposition campaign."

For onshore wind projects that went to appeal, previous local experience appeared particularly influential. One developer noted that local residents were "already informed by a previous failed windfarm project on the site. Their experience and their rejection of our project was influential with the host community council." This established opposition meant developers felt they were engaging with communities already mobilised against renewable developments, regardless of individual project merits.

Developers also discussed issues of longer delay times due to opposition groups present in the communities. One approved solar project faced a local opposition group that "threatened to legally challenge the committee decision…adding some 8 months to the determination process." With cumulative impacts only likely to increase with increased expansion of renewables, local opposition found in communities ahead of projects may become more prominent. Developers will need to consider carefully how to engage with these types of communities.

Proactive responsiveness overcomes obstacles in approved projects

Despite these challenges, solar and wind projects that gained approval on their first application demonstrated patterns of proactive engagement that addressed concerns before they escalated. One solar developer described managing potential obstruction from a local, well-regarded, retired planning lawyer who supported residents' concerns regarding flooding and noise concerns regarding construction. However, as they were "very proactive and responsive to all concerns and inquiries," they felt that it went more smoothly than expected.

Political factors also challenged outcomes for some approved projects. One developer described navigating "local ward councillor byelection, parish council elections where councillors were elected on one issue to oppose the project (parish council vote was tied)," which led to "delays to lease option process, grant funding processes and local council resource and process [which] exacerbated some negative opposition." These examples suggest that while political volatility and local opposition can introduce significant friction even in ultimately approved projects, early, visible, and sustained responsiveness by developers was seen to help mitigate escalation.

Appealed projects: persistence amid organised opposition

Projects that went to appeal showed evidence of sustained engagement efforts despite organised resistance. One onshore wind developer noted that while "very vocal online anti groups (that are not local) have garnered some attention (unhelpfully amplified by national press)," they "persisted to communicate with local audience so that they were more informed about the development and can make their own minds up about it." The same developer observed that COVID restrictions, while challenging, "arguably engaged a whole lot of people that maybe normally wouldn't have been involved," suggesting digital engagement can broaden participation beyond traditional methods.

Refused projects: when engagement was unable to overcome barriers

The two refused solar projects revealed perceived limits to the effectiveness of engagement when projects encountered fundamental barriers. In one case, a project located near a scheduled monument was described by the developer as facing accusations of "causing significant harm, [where] claims were made about our site which were untrue and proved as such by experts." The developer argued that "none of this was taken into account by decision makers, who went with the loudest voices who objected to change." This case suggests that technical evidence and engagement may be insufficient where decision-makers are perceived to be more receptive to vocal opposition than expert assessment.

A similar perception emerged in the community-led project, where the developer described barriers not in community opposition but in engagement with the local planning authority. Despite being "started and supported by the [local] communities, and [having] very limited opposition," the developer reported that the LPA "refused to engage in dialogue during the planning process, asked for further evidence and then disregarded it and applied no planning merit to a community-led proposal". This case suggests that community engagement alone may carry limited influence if planning authorities themselves are seen to be unwilling to engage.

Battery storage: different challenges, different contexts

Battery storage projects' responses differed notably from solar and wind. While some battery developers also cited cumulative impacts and established opposition groups, approved battery projects more frequently described positive engagement outcomes. Multiple developers highlighted the need to educate planning committees on fire safety: "Planning committees struggle to understand the NFCC guidance when assessing BESS sites. We appointed an ex fire chief to come to the planning committee to answer any queries around fire risk, this was very effective." Battery storage remains a relatively unfamiliar technology, requiring engagement and education directed at decision-makers themselves, not just local residents.

Battery developers also more frequently described successful relationship-building. One co-located solar and BESS developer credited being "just lucky that a few members of that Parish Council were open to the idea of a renewable project and were quite insistent that we were able to engage in constructive dialogue," while another noted that "early, ongoing and transparent engagement with direct neighbours allowed the planning process to progress smoothly." The battery project currently at appeal faced "politically motivated support from the MP for the opposition group during the 2024 general elections," suggesting political interference rather than engagement failure.

Implications of additional challenges

Overall, these findings contextualise the results in important ways. For solar and wind projects, the higher engagement scores and greater responsiveness found in approved projects appear critical precisely because these projects navigate more challenging contexts for local opposition (e.g. cumulative impacts, established opposition infrastructure and heightened political sensitivity). The finding that approved solar and wind projects invested substantially more in addressing opposition (4.2 additional activities versus 2.3 for appealed projects) takes on new meaning. Additional work may be necessary to overcome consultation fatigue and pre-existing opposition sentiment.

Battery storage projects' lower engagement scores alongside high approval rates may reflect not just less opposition, but different types of engagement challenges. Rather than needing to overcome organised community opposition, battery developers described focusing on

educating planning committees and building relationships with immediate neighbours. The one onshore wind developer who noted success in "a former industrial area with high levels of poverty [where] the need for jobs and social investment is felt more acutely" suggests that local economic context can create more receptive environments for renewable projects, though this advantage still requires additional research.

Overall, these responses suggest that while engagement depth and responsiveness matter for outcomes, they operate within broader constraints including cumulative development impacts, political timing, local authority attitudes and community economic contexts. Effective engagement appears to be necessary but not always enough to achieve planning approval, particularly in areas with established opposition or during politically sensitive periods.

Developers who did not engage local residents

A few developers indicated on the survey that they did not engage local residents as part of their project. Although the number of projects that did not undertake community engagement is small (n = 3), these cases provide a useful point of comparison. All three projects were Battery Energy Storage Systems (BESS), one in Wales and two in England, with capacities of 50 MW, 240 MW and 249 MW. Planning outcomes were relatively favourable, with two approved on first application, while one (the 50 MW project) has an appeal pending.

Notably, none of these projects identified local opposition as a source of delay. The delays they experienced were instead attributed to land access or ownership issues, waiting on decision makers or consultees and grid connection challenges. Planning delays stemmed from requests for additional information, with approved projects experiencing delays of less than 3 months, or 3-7 months when grid connection issues were involved. However, the project with an appeal pending experienced delays exceeding 12 months. In terms of local opposition, these projects reported either no organised local campaign group (n = 2) or provided no response (n = 1).

These findings suggest that the absence of community engagement did not trigger the kind of opposition-related delays observed in some projects that did undertake engagement. However, this does not mean these projects avoided delay altogether, as they still faced significant procedural and technical challenges, including requests for additional studies and extended decision-making timelines. This indicates that while community engagement may be important for managing local opposition and public acceptance, other factors, such as grid connection capacity, land access arrangements and the efficiency of statutory processes, play equally significant roles in determining project timelines.

Further investigation required

Interestingly, project scale does not appear to explain the absence of opposition in these cases, as two of the three non-engaging projects were large (240 MW and 249 MW), comparable in size to many projects in the sample that did face opposition. This suggests that BESS projects may face different opposition dynamics than wind or solar developments, potentially due to lower visual impact or less public familiarity with the technology, though further research would be needed to confirm this pattern.

Limitations of the findings

This outcomes analysis is based on survey responses from 32 projects (see Appendix 1: Methods and limitations). While we can identify patterns in the dataset, we cannot definitively establish that engagement quality causes better outcomes. A key limitation is the small sample size overall, particularly for the number of refused projects (n = 2, 6% of the sample), which prevents robust conclusions about what distinguishes refused projects from approved ones. The larger sample of appealed projects (n = 7, 22% of the sample) provides more reliable comparative insights with approved projects (n = 23, 73%).

Conclusions

Engagement quality may matter more than quantity

This analysis reveals that the relationship between community engagement and planning outcomes is more nuanced than that more engagement leads to better outcomes.

Three key findings emerge:

First, engagement depth may be more important than engagement breadth. Projects approved on first application didn't necessarily conduct more engagement activities, but they engaged more diverse stakeholders, demonstrated greater responsiveness through project changes and invested more effort in addressing opposition when it emerged. For solar and wind projects, approved developments undertook 4.2 additional activities in response to opposition compared to 2.3 for appealed projects, suggesting that capacity and willingness to respond meaningfully to concerns is critical. This links directly to Arstein's ladder of participation (see section 2 on Public engagement literature review), where providing residents with real power to impact outcomes of the process leads to better planning outcomes.

In summary, locally accepted projects lead to better outcomes, and acceptance is driven primarily by meaningful engagement, particularly if that engagement involves communities in decision-making and ensures fair distribution of benefits. This raises a critical question – what distinguishes meaningful engagement?

Not all engagement is effective

Second, technology type and project context may shape engagement dynamics. Battery storage projects face opposition less frequently than solar and wind developments, but when opposition does arise, the relationship between engagement and outcomes is less clear and warrants further investigation. Solar and wind projects also navigate more challenging terrain for local oppoisition - including consultation fatigue from cumulative developments, established opposition networks and heightened political sensitivity – making their higher investment in responsive engagement all the more critical.

Third, opposition may not be fatal. Nearly half of approved solar and wind projects had faced moderate or significant opposition yet still secured approval, reinforcing that how developers respond to concerns matters more than whether opposition exists.

At the same time, project capacity was seen to be important, where mid-sized developments in the 51-100 MW range, particularly solar and wind, face higher appeal rates (50%), suggesting they may occupy a particularly contested zone where projects are large enough to generate scrutiny but may lack the regulatory frameworks or resources that facilitate approval for larger schemes.

From an economic perspective, these findings suggest engagement represents a worthwhile investment when it genuinely shapes project design and addresses community concerns but delivers limited returns when treated as a purely procedural compliance exercise. Unresolved opposition can lead to appeals creates costly delays, making genuinely responsive engagement a potential cost-saving measure for developers willing to adapt their proposals. Nevertheless, these findings should be interpreted with caution given the study's limitations, particularly the small sample size (Appendix 1: Methods and limitations).

4 Lessons

Several key lessons that came out of the research

Developers' perceptions of effective engagement

When asked to reflect on particularly effective community engagement approaches across their renewable energy projects, developers highlighted several key practices that improved community relations. Their responses reveal important distinctions between successful engagement strategies and suggest that effectiveness varies by technology type and project context.

Personalised, small-scale engagement builds trust

The most frequently cited effective approach across all technology types and planning outcomes was personalised, small-scale engagement with immediate neighbours and affected communities. Developers emphasised that smaller workshops and one-to-one discussions "tend to be more constructive than open-ended written consultations," with several noting the value of house visits to nearest residents and tailored meetings with specific community groups.

One developer of an approved solar project described holding "in-person meetings with each household and adapted plans to reflect their feedback," noting that "while not all were satisfied, they were able to see how we had responded to their comments." Similarly, a BESS developer emphasised that "dedicated meetings with nearest neighbours can help alleviate concerns," while another highlighted the importance of "having numerous meetings with smaller groups in the community following a consultation event - such as speaking to cricket clubs, social clubs."

However, developers acknowledged this approach requires community willingness to engage. As one BESS developer noted, meetings with smaller groups in the community "have often been organised by the groups coming to us, indicating a positive attitude - if a community is against a proposal in principle, then this is unlikely to help." This suggests developers need to carefully map stakeholder sentiment within communities (identifying which groups may be receptive, which are opposed, and which remain undecided), and tailor their engagement strategies accordingly, rather than assuming a uniform approach will work across all community segments.

Independent expertise and transparency matter

Developers across technology types emphasised the importance of bringing independent technical experts directly to communities, rather than filtering information through the development team. One BESS developer explained that "the presence of external consultants (for example, specialists in fire safety, transport and other technical disciplines) at community events is highly beneficial," noting this approach "is often more effective than information being relayed by the in-house team or through third-party community or political representatives, who may not always be perceived as impartial." This comment also aligns with multiple battery storage developers specifically mentioning the need to educate planning committees on fire safety.

Transparency about potential impacts also emerged as important. One co-located solar and BESS developer described hosting "open book sessions with our expert consultant" on specific concerns like ecology, noting that "sometimes they are not well attended but hosting them sends the right signal that we aren't hiding any negative impacts."

Visual and interactive tools help communities understand impacts

Advanced visualisation tools were highlighted as particularly effective in helping communities understand what projects would actually look like. A co-located solar and BESS developer noted that "since we have started using interactive 3D models at exhibitions, people have responded extremely well to this, even if they don't like what they see, they appreciate the transparency and ability to see what it would look like from their homes." While it didn't lead to less opposition, the developer felt this form of modelling helped engage the communities more transparently.

A developer of an appealed solar and BESS emphasised the importance of

> "advanced tools of visualisation (either virtual or augmented) [and] contextualising feedback where comments can be made directly to plans or maps [as] it's important to try and communicate a project based on what people will actually experience when it is built, rather than relying on top-down plans which overstate the expanse of a project."

Site visits to existing renewable energy facilities were also mentioned as valuable by multiple developers, allowing communities to see operational projects firsthand.

Consistency, follow-through and written commitments

Several developers emphasised that delivering on promises and maintaining consistent engagement throughout long project timelines builds trust. One co-located solar and BESS developer noted that "most communities have experience of a developer not delivering on promises" and found it helpful "to provide them with written commitments (e.g. on transport route, community fund) so that they have peace of mind."

The same developer highlighted that:

> "a community liaison manager stays with the project throughout each stage, so the community have some consistency of interaction with our company, in what can take over 10 years to get through development-construction-operations."

Another emphasised simply: "following through with everything that we say we will." Overall, developers felt that making sure communities see them follow through on their commitments help build trust in their project.

Reaching beyond the vocal minority

Several developers of approved solar projects described strategies to engage '*silent renewable supporters*' who might not otherwise participate in consultation. One developer explained:

> "We have sometimes hosted community events in the local area (in addition to public consultation 'village hall' type sessions) to raise awareness of a project and to promote the opportunity to make representations on the project to the Council. This is sometimes an opportunity to gather the 'silent renewable supporters' from residents in a wider area but still local area to the development site."

Developers also highlighted partnerships with local climate action groups, which:

> "have encouraged local residents who can write in on planning applications and the group itself produced strong support responses to the application. In some cases, they have spoken in favour of our projects at Planning Committee."

This finding is particularly interesting considering most of the developers that completed the survey did not engage with these sorts of stakeholders. The focus of developers on opposition groups may lead them to forget about possible allies in the community.

An onshore wind developer that went to appeal described using polling tools like 'Give My View' to engage "a younger audiences and those who don't typically engage with renewables," emphasising the importance of trying "to reach people beyond the people that have a very strong opinion so that more of a balance is reached." As indicated above, this may help developers to find a more balanced view on engagement.

Tailoring approaches to different communities

Developers emphasised that "what works in one community, might not work with another," requiring flexibility in engagement strategies. One BESS developer advised having "an organised approach to engagement but be prepared to tailor activities." An appealed onshore wind developer noted that "Community Relations Meetings (in the right context) were very useful to dispel misinformation in one central place" but cautioned this "isn't a given as it has definitely not worked in certain areas." Several developers also mentioned adapting approaches based on COVID-19 restrictions, with one noting that remote engagement "arguably engaged a whole lot of people that maybe normally wouldn't have been involved." Overall, developers found that every community is different, and engagement needs to be tailored, but there are ways to try and engage a wider range of respondents, such as using online or hybrid events.

Technology-specific considerations

Battery storage developers more frequently mentioned the need to address specific technical concerns around fire safety and educate decision-makers, while solar and wind developers more often emphasised visual impact concerns and the need for extensive stakeholder mapping and supply chain engagement.

One onshore wind developer described comprehensive engagement including:

> "mapping communities with quantitative and qualitative information, quality early and then consistent engagement throughout, specific engagement with young people, quality partnerships with education and skills institutions and engagement with potential local supply chain, inclusion of social value in contracts, creating and facilitating community liaison groups, charity partnerships and staff volunteering policy."

What doesn't work

Notably, the three developers whose projects were refused had little to report on effective engagement approaches, with one simply responding "No" when asked. One developer of a refused solar project mentioned Community Liaison Groups as effective "at building trust locally" while another referenced "early surgeries on identifying the preferred sites for development [and] project specific websites," but these responses lacked the specificity and enthusiasm found in responses from developers of approved projects.

Implications

These developer insights reinforce the findings that engagement quality matters more than quantity, while revealing the specific practices that distinguish effective engagement. The most commonly cited effective approaches all require significant investment in relationship-building and responsiveness rather than simply conducting more consultation activities.

Critically, developers emphasised that effective engagement cannot follow a standardised template. The acknowledgment that methods working well in one community may not work in another suggests that successful developers invest time in understanding local context, stakeholder sentiment and community dynamics before designing their engagement approach. This context-sensitivity distinguishes strategic engagement from procedural compliance.

The contrast between approved and refused projects is particularly telling. Developers whose projects secured approval provided detailed, specific examples of engagement strategies, often describing how they adapted approaches mid-process or invested heavily when facing opposition. In contrast, developers whose projects were refused offered minimal or generic responses, with one simply answering ‘no’ when asked about effective approaches. This disparity suggests that struggles with planning outcomes may reflect deeper challenges in recognising what constitutes meaningful engagement. This gap in understanding may have resulted in developers turning first to doing more consulting, rather than working to understand how to build trust, respond to concerns and adapt proposals in ways that demonstrate genuine community influence.

5 Appendix 1: Methods and limitations

Methods overview, sample details and study limitations

Methods

We employed a multi-channel recruitment strategy to capture developer perspectives on community engagement practices. We contacted 92 developers from Regen's planning working group and membership. We then identified an additional 35 developers through the Renewable Energy Planning Database 2025, focusing on onshore wind, solar and battery storage projects not represented in our primary contact list. Contact details for Development Managers and community engagement personnel were sourced through company websites, where possible.

We contacted these 127 developers using Vaske's 4-contact method: one initial email explaining the survey, followed by three reminder emails. In total, we received 38 responses from this method. We also posted the survey twice on LinkedIn, which generated an additional 4 responses. **In total, we received 42 responses.** See Table 17.

Three responses were excluded from the full analysis (see Table 18 for details on all exclusions), leaving **39 unique project responses** from 37 unique developers (some developers submitted responses for multiple projects). For the email recruitment, this represented a 28% response rate (36 projects from 127 developers contacted; Table 17). We cannot calculate a response rate with the LinkedIn recruitment included, as the total number of potential developer respondents who saw the LinkedIn posts is unknown.

Sample considerations for the analysis

From the 39 unique project responses, we conducted analysis at two levels. First, all 39 responses were used for descriptive overview analysis (see Appendix 2: Overview data). Second, we excluded an additional 7 responses from the engagement practices outcomes analysis because they could not be linked to planning outcomes: 3 respondents had no projects that completed the planning process, 3 did not engage communities at all, and 1 was excluded as an outlier that skewed the dataset (see Table 18 for full list of exclusions). **This left a final analytical sample of 32 responses for examining the relationship between community engagement practices and planning outcomes. The 3 responses where developers did not engage communities were analysed separately within this section.**

Study limitations

The core analysis examines 32 projects that completed both community engagement and the planning process. While this represents a good response rate for developer surveys, the sample shows a pronounced skew toward approved projects (n = 23, 72%) with very few refused projects (n = 2, 6%). This prevents robust conclusions about what distinguishes refused projects, and patterns observed should be interpreted as indicative rather than conclusive. Similarly, differences between battery storage and solar/wind projects are based on relatively small subsamples (16 projects each), warranting confirmation through larger studies.

Due to the small sample size, statistical causality *cannot* be established. While we can identify patterns in the dataset, we cannot definitively establish that engagement quality *causes* better outcomes. Other factors not fully captured (such as site characteristics, grid capacity, land ownership or local economic context) may also influence outcomes.

The skew toward approved projects likely reflects developers' greater willingness to discuss successful projects. Consequently, engagement practices reported here may represent better-than-average cases rather than typical industry practice. Additionally, this analysis relies entirely on developer self-reporting and does not capture how communities or planning authorities experienced the same engagement processes or whether communities felt their input genuinely influenced decisions.

Despite these limitations, this research represents one of the first surveys of developers examining the relationship between community engagement practices and planning outcomes for renewable energy projects in the UK.

Future research directions

These limitations point to clear opportunities for strengthening the evidence base. Complementary qualitative approaches, particularly in-depth interviews with developers across all outcome types, would provide richer narratives about how engagement evolved throughout the planning process and might build rapport that encourages more open discussion of less successful projects.

Critically, triangulating developer perspectives with community surveys and planning authority assessments would provide a more complete understanding of engagement effectiveness. Longitudinal tracking of projects from initial engagement through to operation would help establish whether early engagement practices predict long-term project success. Finally, larger sample sizes would enable more robust analysis of technology-specific patterns and capacity-related effects.

Table 17: Summary of survey respondents by survey stage

	Developers contacted	Total responses received	Excluded responses as multiple responses on same project	Total unique project responses received	Total unique developers	Response rate from unique developers	Overall response Rate from unique projects
Email (Working group/ membership & Renewable Energy Planning Database)	92 + 35	38	2	36	34	34/127 = 27%	**36/127 = 28%**
LinkedIn responses	-	4	1	3	3	N/A	**N/A**
Total Responses	**127**	**42**	**3**	**39**	37	N/A	**39 / 131**

Table 18: Summary of data cleaning/exclusions

Response #	Excluded from full analysis	Excluded from engagement score analysis	Reason
14	No, but data is **only** available for general questions (e.g. main challenges for the organisation in engaging, lessons)	Yes	The developer had no projects completed the planning process
15	No, but data is **not** available for practical engagement questions.	Yes	Did not engage with local community
17	Yes	Yes	Not the appropriate person to complete the survey (indicated they do not work on community engagement)
22	No, but data is **only** available for general questions (e.g. main challenges for the organisation in engaging, lessons)	Yes	The developer had no projects completed the planning process
29	No, but data is **only** available for general questions (e.g. main challenges for the organisation in engaging, lessons)	Yes	The developer had no projects completed the planning process
30	Yes	Yes	Duplicate response from the same organisation
32	No, but data is **not** available for practical engagement questions.	Yes	Did not engage with local community
36	Yes	Yes	Provided aggregated multi-project responses rather than responding about one project
38	No	Yes	Outlier (skewed engagement scores)
41	No, but data is **not** available for practical engagement questions.	Yes	Did not engage with local community
Total excluded	3	10	
Total included	39	32	From a total of 42 responses.

6 Appendix 2: Overview data

Overview and summary data of projects, outcomes and engagement practices

Sample considerations

The following overview analysis examines 39 unique project responses. For full details on recruitment, response rates and exclusion criteria for this section, see Appendix 1: Methods. Note that developers did not response to every question, and the percentage calculated is based on those who responded.

Summary of developer details

In terms of the group of developers who responded, there was a roughly even split in terms of business size, with about 28% (n = 11) from a large, 31% (n = 12) medium-sized and 28% (n = 11) small businesses (Figure 5). Most of the developers conducted their engagement in-house (n = 21), followed by using external PR/community energy organisations (n = 10). Only two developers used a combination of both (

Figure 6).

Figure 5: Size of organisation

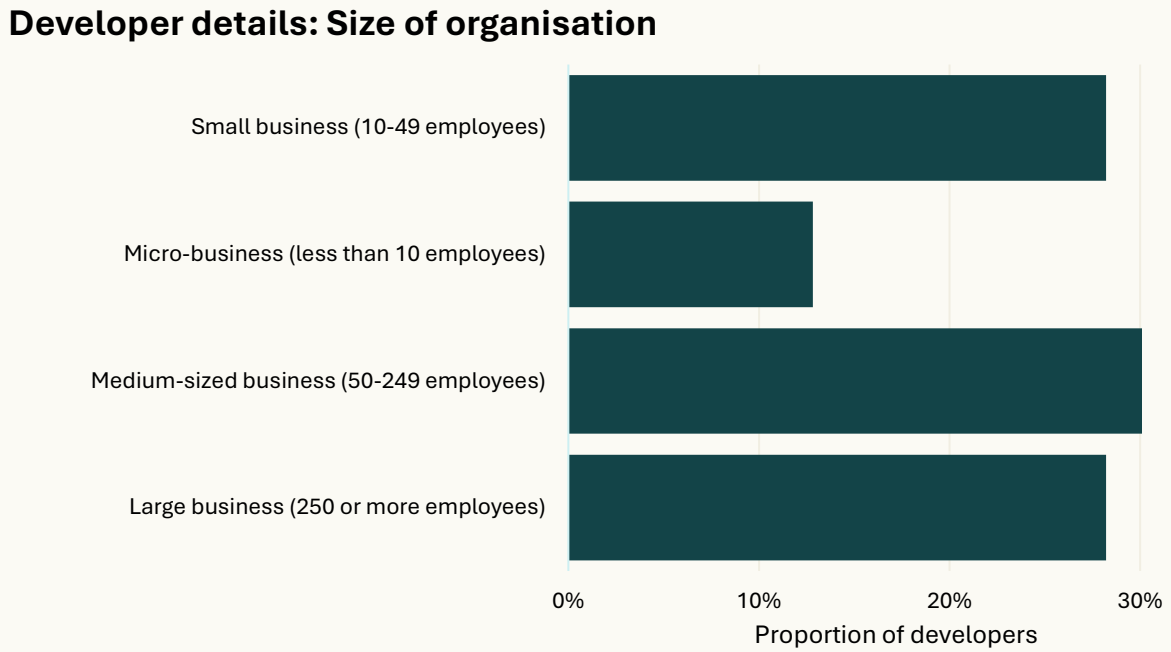
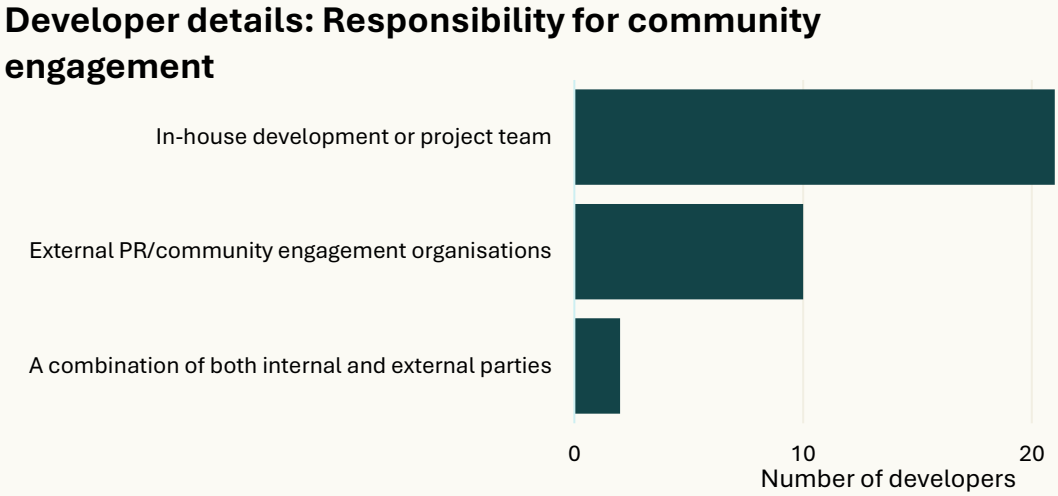
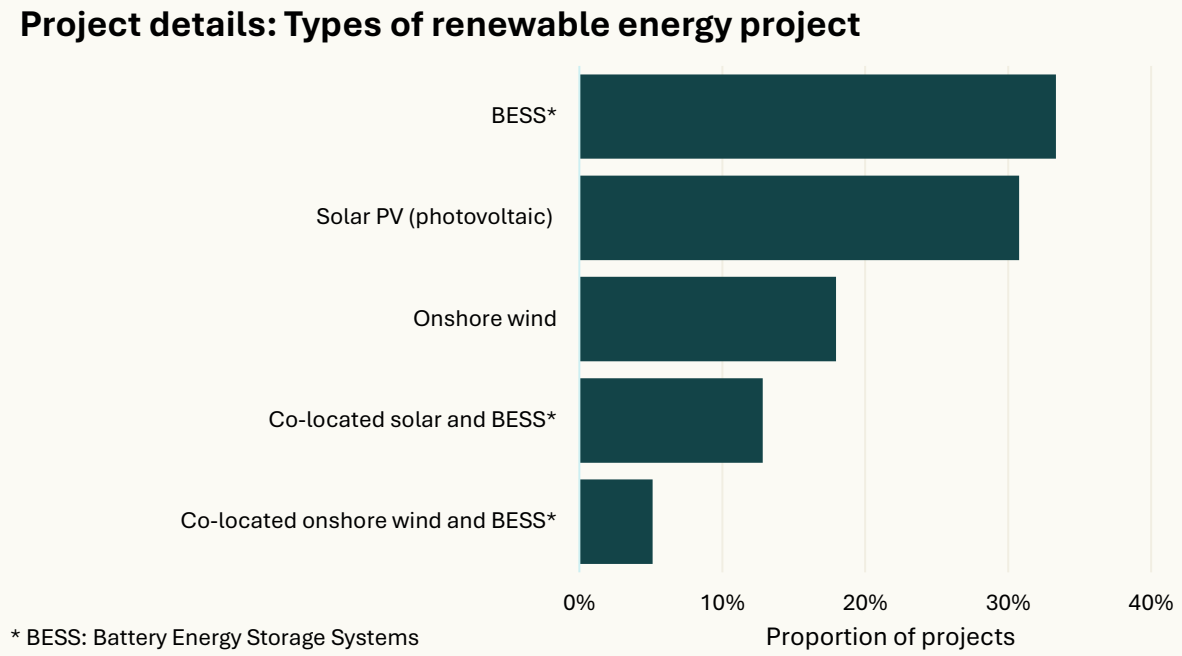


Figure 6: Who was primarily responsible for community engagement



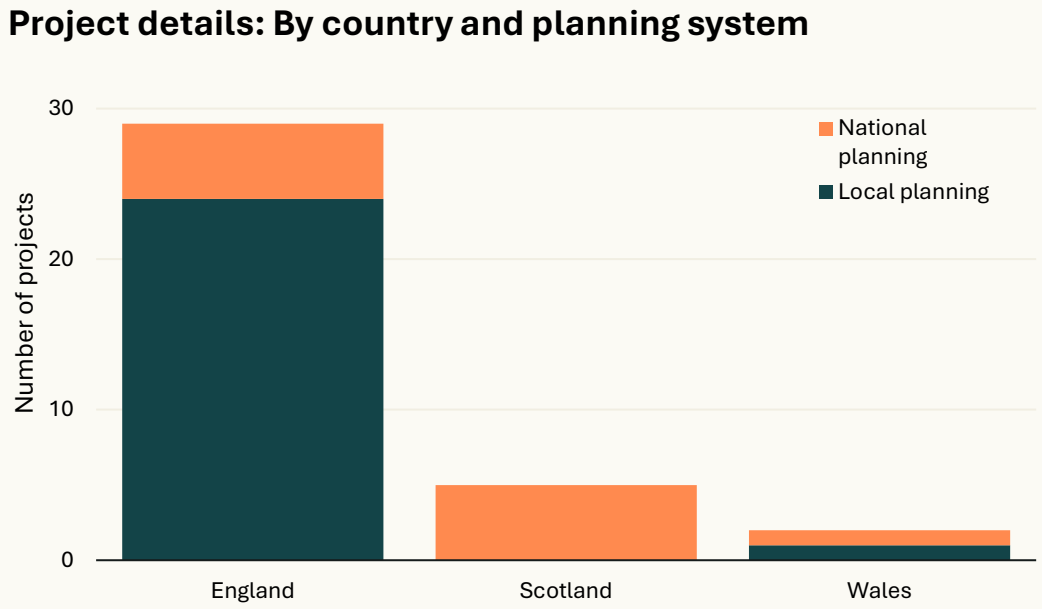
Summary of project details

Figure 7: Types of onshore renewable projects by percentage of respondents



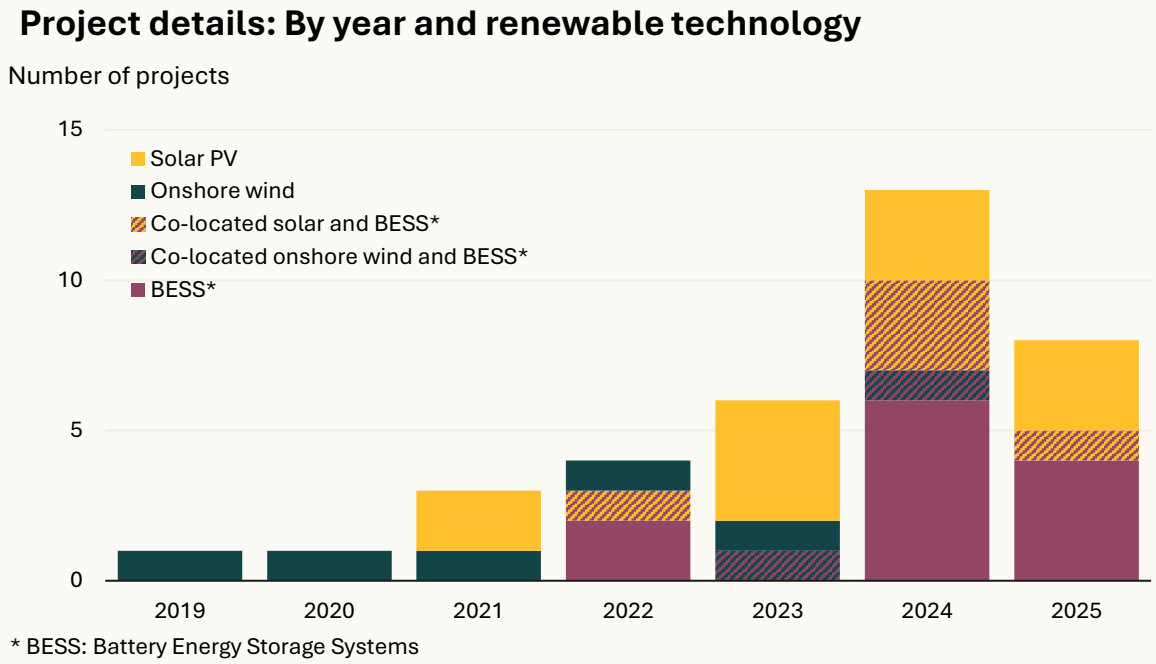
As anticipated, most of the respondents were from BESS (13; 33%) or Solar PV (12; 31%) projects, followed by onshore wind (7; 18%), %), co-located solar and BESS (5; 13%) and co-located onshore wind and BESS (2; 5%), see Figure 7.

Figure 8: Count of projects by nation and planning system



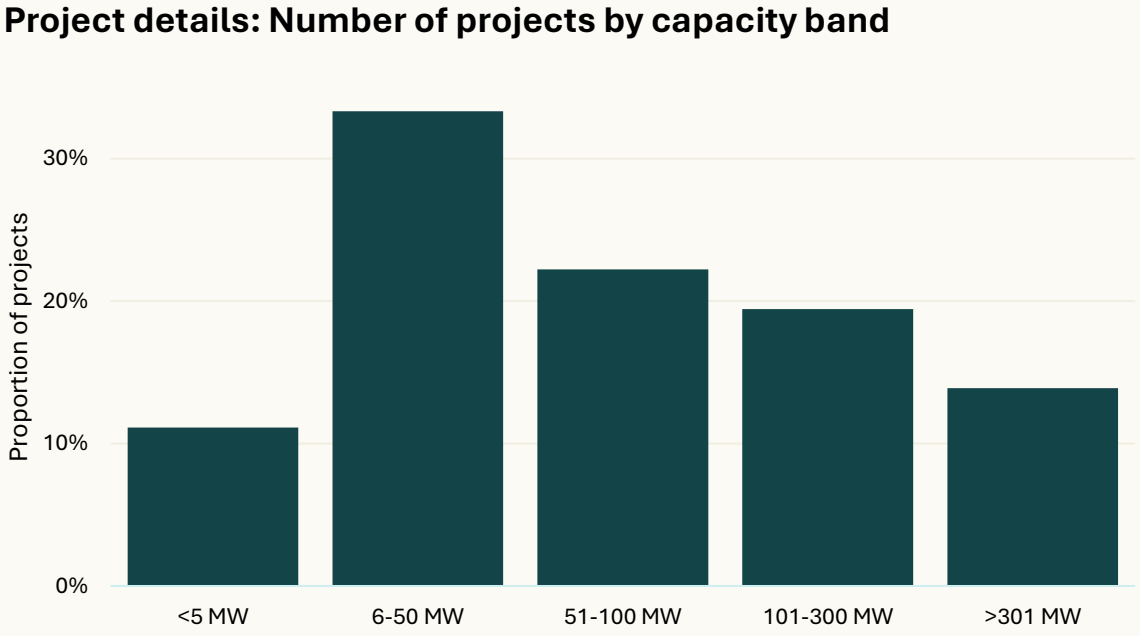
The majority of project examples are within England (n = 29), followed by Scotland (n = 5) and Wales (n = 2). More projects were submitted to the local planning system (n = 24) than to the national planning system (n = 11), see Figure 8. Notably, most of England's projects went through the local planning system, whereas Scotland's projects were all submitted through the national planning system. As expected, nearly half of the onshore wind projects were in Scotland (n = 2) or Wales (n = 1); the de facto onshore wind ban in England, only lifted in 2024, created a pipeline gap for recent projects in England.

Figure 9: Year planning permission was submitted and technology type



Most projects were submitted for planning between 2023 and 2025 (n = 27) but dates ranged from 2019 to 2025. As seen in Figure 9, there are differences across technology: onshore wind projects tended to be submitted between 2019 to 2023, and solar PV and BESS tended to be submitted mostly between 2023 to 2025.

Figure 10: Project capacity



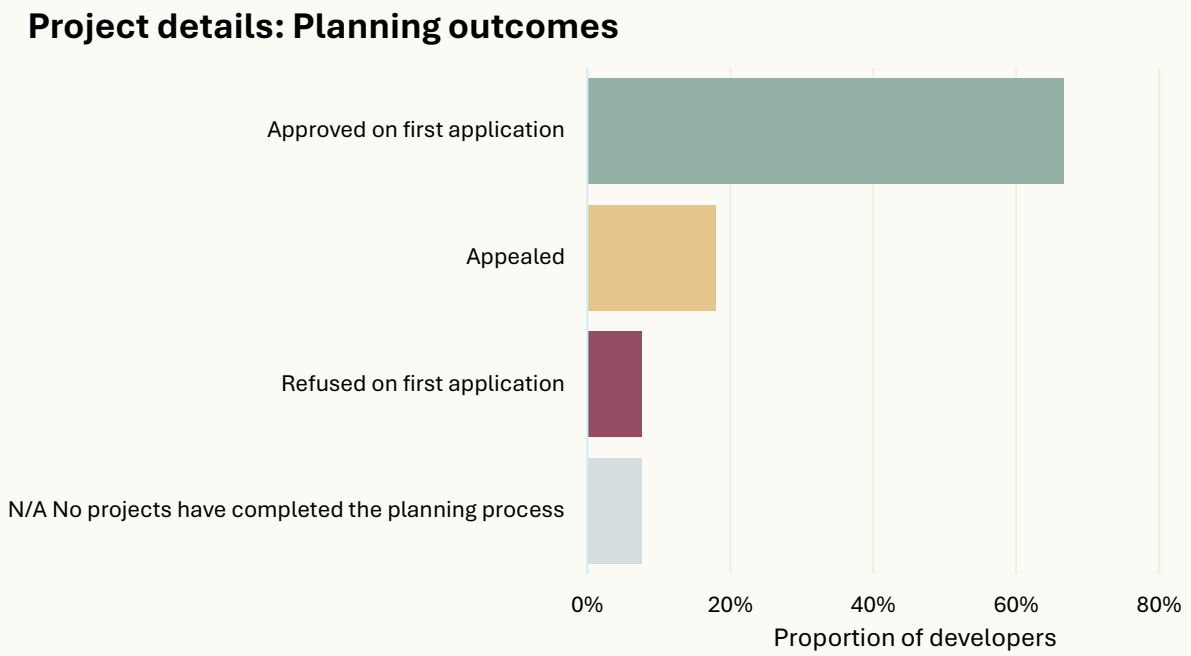
The capacity for the projects varied (see Figure 10), with most projects tending to be between 6 and 50 MW (n = 12), followed by between 51 and 100 MW (n = 8). This also differed by technology. For solar PV, capacity varied widely from 1 to 500 MW, with most between 6 and 50 MW (n = 7). For BESS, responses ranged from 70 to 1,400 MW, with a good mix across the capacity groups. For onshore wind, responses were less variable, with project capacity between 63 and 130 MW, and most projects between 51 and 100 MW (n = 4). Together, the co-located projects varied between 1 and 105 MW.

Finally, most projects have not begun construction (n = 21), followed by a smaller number under construction (n = 8). Only one project is operational, a few are considering their options for next steps after refusal or awaiting appeal (n = 3), and some are not proceeding (n = 3). As the survey asked about recent projects, it makes sense that the sample is focused on projects that have not yet been constructed.

Summary of project outcomes

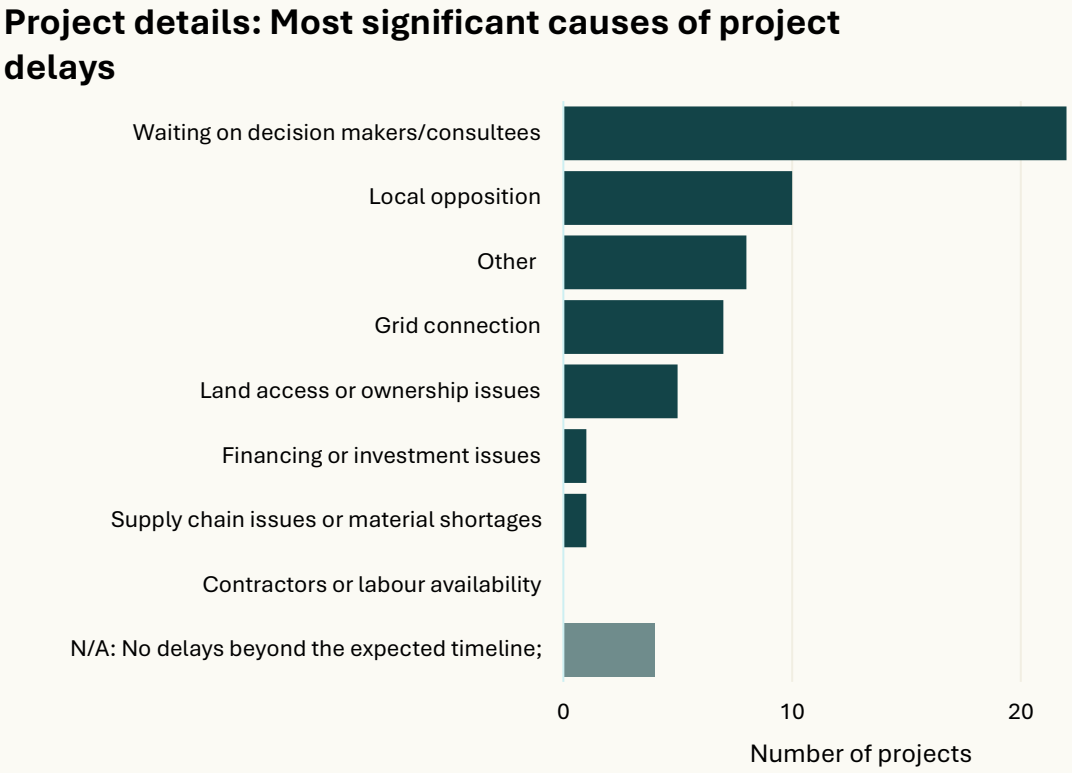
When it came to project outcomes, most of the projects were approved on the first application (72%; n = 26). For the remainder, a similar number of projects had appeal pending (n = 3), were approved on appeal (n = 4) or were refused on first application (n= 3). There were also three developers who responded but did not yet have a project that has completed the planning process, and one non-response to this question. For the purposes of analysis in a later section, we combined all appealed projects (i.e., appeal pending, approved on appeal) into one category, resulting in a total of 7 projects (18% of the sample, see Figure 11).

Figure 11: Project outcome



Common project delays

Figure 12: The three most significant factors that delayed the project



Developers were also asked to identify the top three most significant factors that delayed their projects. Overall, the most significant factor was waiting on decision makers and consultees (n = 22), followed by local opposition (n = 10), grid connection (n = 7) and land access or ownership issues (n = 5). Overall, the findings indicate that delays are driven primarily by the operation of decision-making and consultation processes, rather than by technical or site-specific constraints. However, local opposition was still seen as a major issue for delays.

Common delays in planning and length of delays

Figure 13: The main cause(s) of the delay in planning

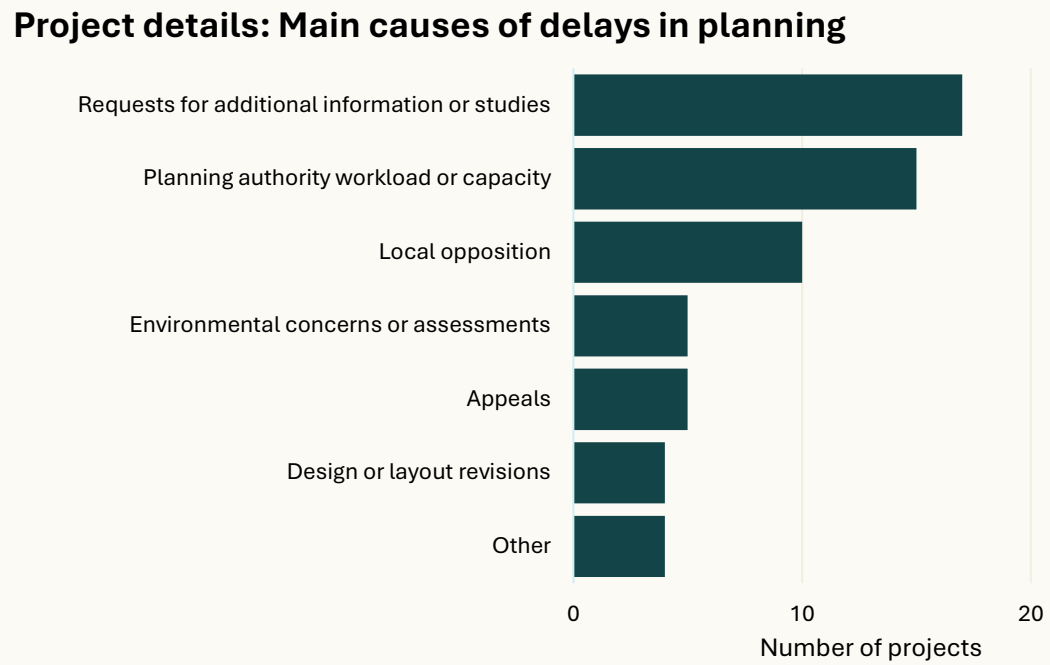
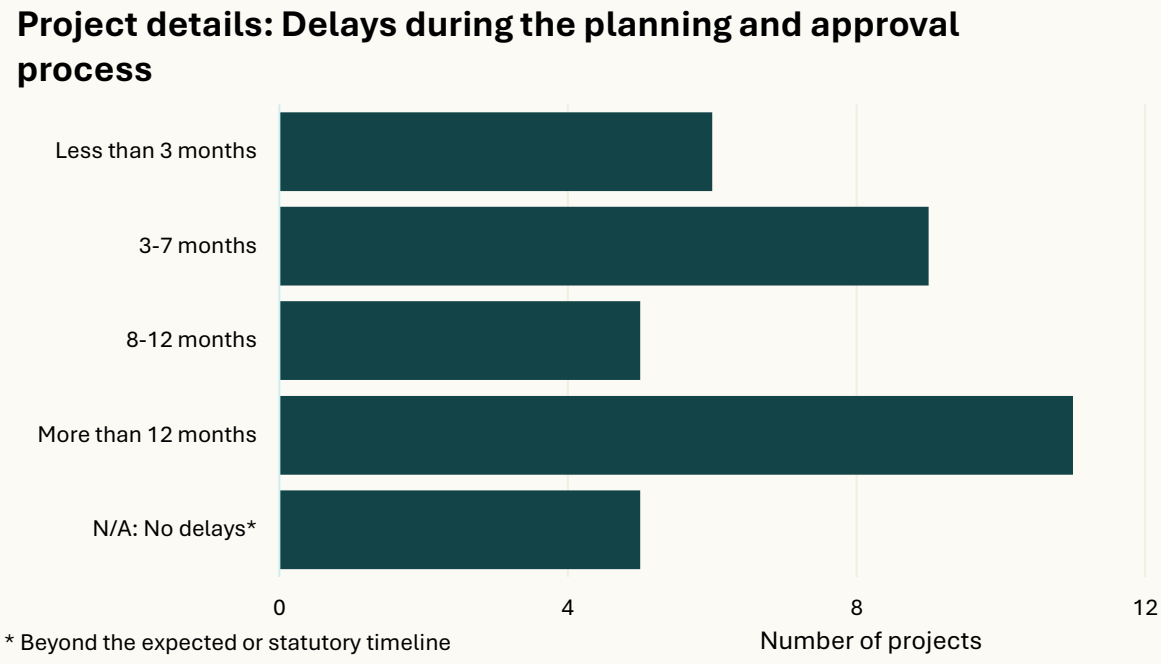


Figure 14: Delays during the planning and approval process



When asked specifically about delays during the planning and approval process, the most frequently cited causes were requests for additional information or studies (n = 17), followed by planning authority workload or capacity (n = 15) and local opposition (n =10). As the planning process requires the planning committee to ensure they have enough information to make a decision, it makes sense that additional information or studies would be a key delay factor.

The second most common cause (planning authority workload or capacity) highlights resource limitations within local planning departments. This may be due to local planning departments often lacking sufficient staffing, resources or time to process applications within expected timelines. This finding is consistent with responses to the broader question about overall project delays, where waiting on decision-makers and consultees was also commonly reported, suggesting systemic capacity constraints within planning authorities.

Local opposition was identified as a significant planning delay, demonstrating that community resistance can slow the planning process even when it does not ultimately prevent approval. Environmental concerns or assessments (n = 5) and appeals (n = 5) were less frequently mentioned, while design or layout revisions (n = 4) were the least common causes.

Four projects reported other specific causes, including:

- Delays from negotiating Biodiversity Net Gain monitoring fees
- Battery fire safety concerns
- Extended Section 106 agreement timescales
- Local authority reluctance to engage during planning
- Co-joined public inquiries with other projects
- Post-committee Section 106 negotiations that delayed final consent letters.

These responses highlight the procedural and regulatory complexity of the planning system, where delays arise from administrative processes, legal negotiations and evolving policy requirements.

Developers were also asked whether their projects experienced delays during the planning and approval process, and, where applicable, the duration of those delays. The most frequently reported delay category was more than 12 months (n = 11), suggesting that a substantial number of projects faced prolonged planning and approval challenges. A similarly high number of respondents reported delays in the 3–7 month range (n = 9), indicating that medium-length delays are also widespread. Notably, several respondents indicated that their projects experienced no delays beyond the expected or statutory timeline (n = 5), highlighting that while delays are prevalent, they are not universal across all developments. Four developers did not respond to this question.

Overall, the findings suggest that planning and approval delays often extend well beyond a year. This has implications for project costs, delivery timelines and investment certainty. When considered alongside the reported causes of delay, the duration data suggests that extended planning timelines are largely the result of systemic and procedural factors

rather than discrete project failures. In particular, capacity constraints within planning authorities and iterative requests for additional information appear to contribute to both the frequency and length of delays, helping to explain why a substantial number of projects experienced delays of more than 12 months.

Additional work is undertaken if local opposition is present

The most frequently reported responses were community engagement or consultation activities (n = 14), alongside engagement with the planning authority (n = 12), both of which were cited by a large majority of respondents (Figure 15). This suggests that opposition was primarily managed through intensified communication, negotiation and formal planning processes, rather than through substantive redesign or abandonment of projects.

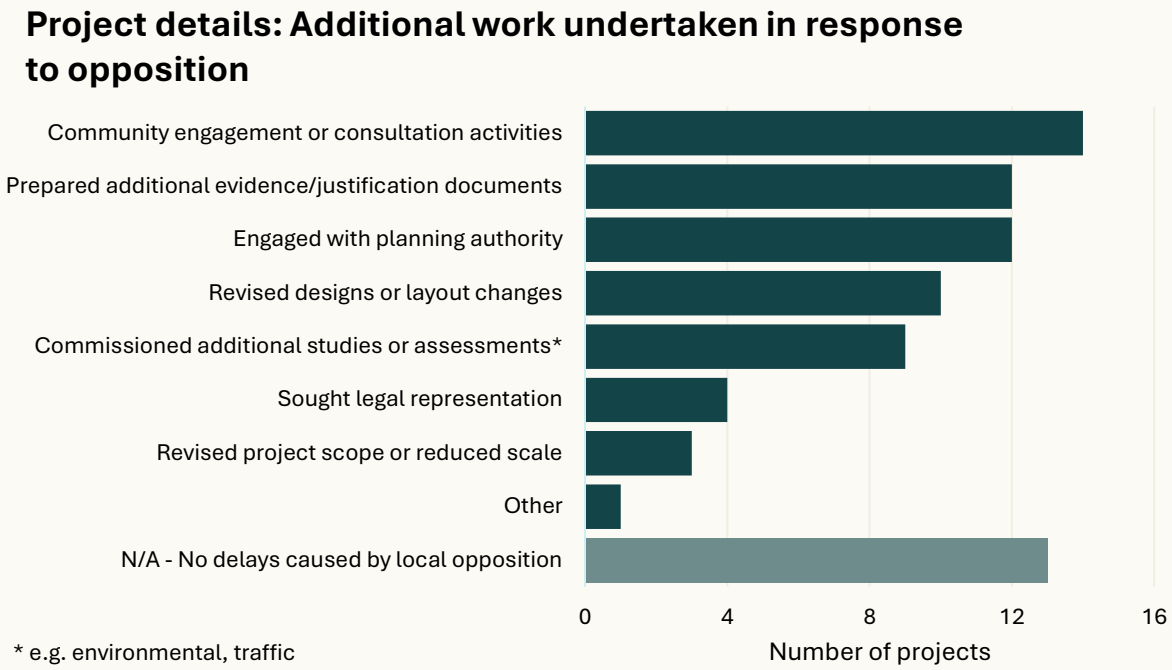
Similarly, a high number of respondents reported preparing additional evidence or justification documents (n = 12), indicating that opposition often required developers to strengthen the technical, legal or policy rationale for their proposals. This aligns with the relatively high incidence of commissioning additional studies or assessments (e.g. environmental or traffic assessments; n = 9), pointing to opposition requiring further demands for expertise, documentation and proof rather than outright rejection.

By contrast, revisions to project scope or reductions in scale were reported far less frequently (n = 3). This suggests that while opposition increased workload and costs, it did not commonly result in major concessions affecting the overall size or ambition of projects. Revised designs or layout changes were more common (n = 10), implying that where changes did occur, they were more often spatial or aesthetic adjustments aimed at mitigating specific local concerns.

Finally, a notable number of respondents indicated that no delays were caused by local opposition (n = 10), highlighting that opposition does not uniformly translate into disruption and may, in some cases, be absorbed within standard development and planning timelines.

While local opposition is often framed as an external barrier to development, these findings suggest it also has clear economic implications for project delivery. Opposition most commonly triggers additional procedural labour, including further studies, evidence preparation, and intensified engagement with planning authorities and communities. These activities increase development costs and extend pre-construction timelines, even when projects ultimately proceed largely unchanged.

Figure 15: Additional work undertaken in response to opposition



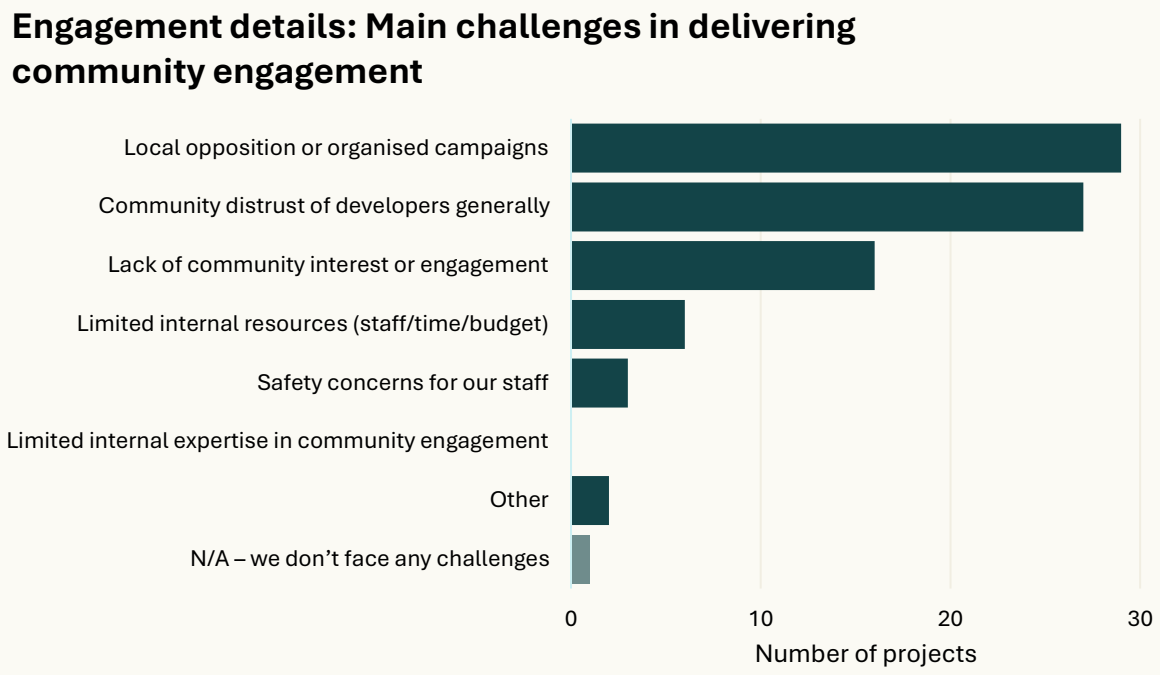
Summary of engagement

Main challenges in delivering effective community engagement

The developers were first asked to identify up to three of the main challenges their organisation faces in delivering effective community engagement on their projects. The main challenge identified was local opposition or organised campaigns (n = 29), followed by community distrust of developers generally (n = 27), lack of community interest or engagement (n = 16), limited internal resources (staff/time/budget; n = 6), and safety concerns for our staff (n = 3), see Figure 16. One developer responded 'other', indicating that a significant challenge faced is "misinformation spread locally."

These results indicate that challenges in delivering community engagement are mainly in the form of opposition and distrust, rather than logistical or resource constraints.

Figure 16: Main challenges in delivering community engagement



Challenging stakeholders to engage

In an open question, developers were then asked whether there are any stakeholders that they found particularly challenging to engage constructively on onshore renewable projects. They most frequently identified organised opposition groups and direct neighbours as the most challenging stakeholders to engage constructively, often citing entrenched views, emotional responses and the circulation of misinformation. For example, some respondents noted that "evidence is not considered by communities," describing difficulties engaging with "organised, well-resourced objection groups led by a few vocal individuals often disseminating misinformation and an anti-development agenda."

However, developers also highlighted challenges engaging with parish councillors, elected members and MPs, where political incentives, limited technical understanding, and concerns about conflicts of interest were seen to constrain open dialogue. In some cases, local authority representatives were perceived to "cater to the demands of the vocal minority" and to have "limited knowledge of planning issues, climate change and renewable technology." Others reported that councillors declined to engage, citing conflicts of interest due to their role on planning committees, which "makes it difficult to correct misinformation." MPs and councillors were also described as prioritising political positioning or social media visibility over engagement aimed at developing a substantive understanding of projects.

Several developers also noted difficulties engaging older residents, described by some as "generally more anti-renewables or resistant to change." By contrast, neutral or supportive community members, as well as younger and marginalised groups, were found to be under-represented or difficult to reach. This suggests that current engagement practices may disproportionately encourage, and therefore reflect, the views of those most motivated to oppose projects, rather than the wider community.

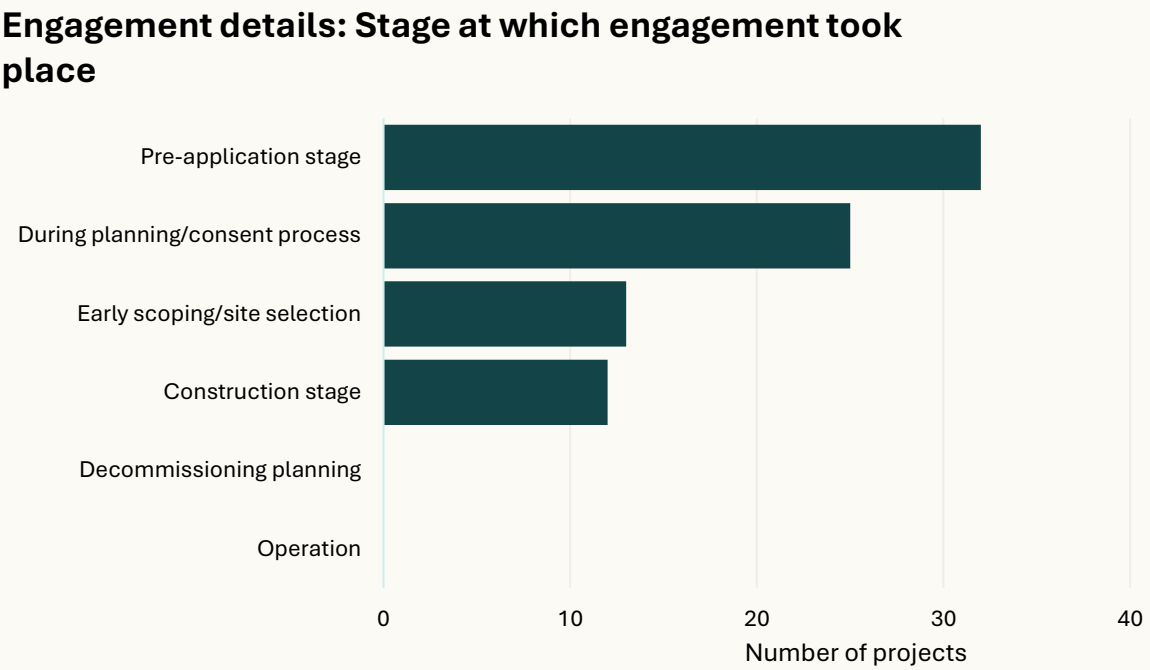
Finally, one developer highlighted the emerging use of AI-generated objections, which were perceived to increase administrative workload while weakening the local and deliberative character of engagement.

Overall, these findings suggest that challenges in community engagement are shaped not only by opposition itself but by political dynamics, uneven participation and evolving information practices, all of which influence whose voices are most visible within engagement and planning processes. Current engagement techniques appear inadequate for reaching diverse community groups.

Engagement practices

The majority of the sample engaged the local community as part of the project, but there were three developers who did not. Almost all projects engaged during the pre-application stage (n = 32), and during the planning/consent process (n = 25), but less in early-scoping and site selection (n = 13) or construction stage (n = 12; Figure 17). Of the developers that responded to this question, 81% (30 of 37) engaged at multiple project stages. Most projects that were engaged at only one stage (6 of 7) had not yet started construction, suggesting they may undertake additional engagement as their projects progress. Only 9 projects in the sample had reached the construction stage or beyond. Of these, 80% (4 of 5) held engagement during or in the lead up to construction, suggesting that a majority of the sample are engaging across their project timescales.

Figure 17: Stages the developer engaged



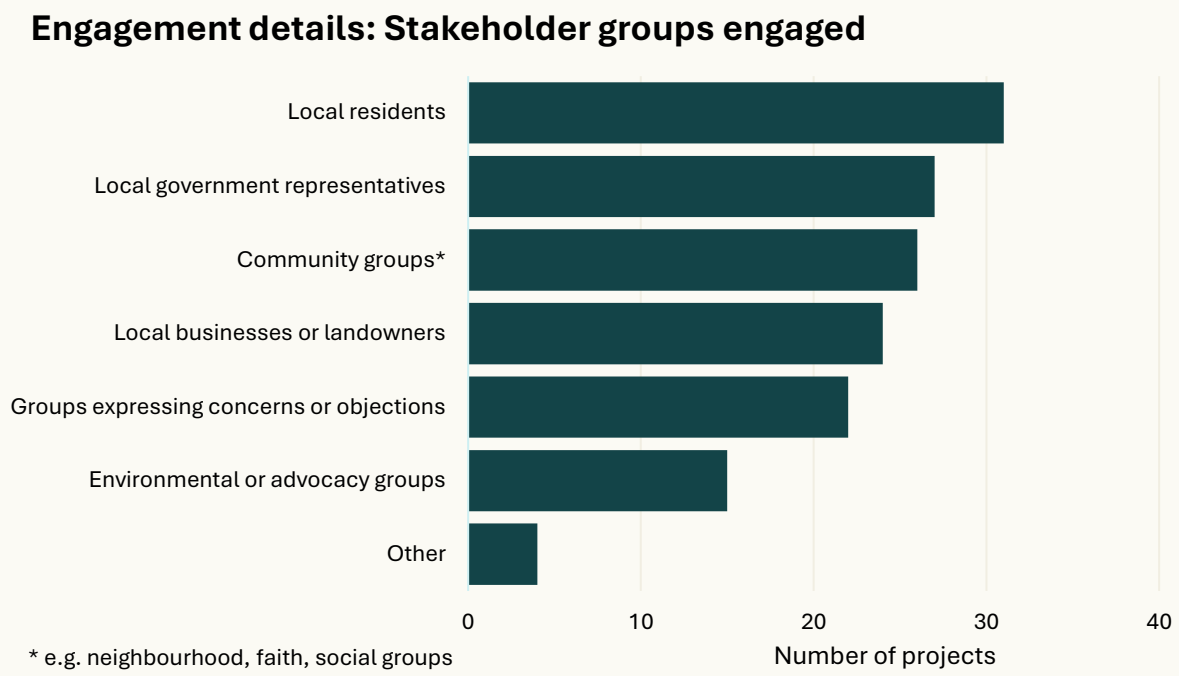
Groups engaged

Developers reported engaging a broad range of stakeholders throughout their projects. Local residents were the most commonly engaged group (n = 31), followed by local government representatives (n = 27) and community groups including neighbourhood, faith and social organisations (n = 26). Local businesses or landowners were also frequently engaged (n = 24).

Some developers also reported engaging groups expressing concerns or objections (n = 22), demonstrating responsiveness to community feedback. Environmental or advocacy groups had the lowest engagement level among the categories reported (n = 15).

These findings indicate that developers are adopting relatively comprehensive engagement strategies, with particular emphasis on direct community stakeholders (i.e., residents, local government, and community organisations). The high levels of engagement with local residents and businesses suggest developers recognise the importance of building support among those most directly affected by development projects. The engagement of objector groups reflects efforts to address concerns proactively, though lower engagement with environmental and advocacy groups may represent an area for expanded outreach in future projects.

Figure 18: Stakeholder groups engaged

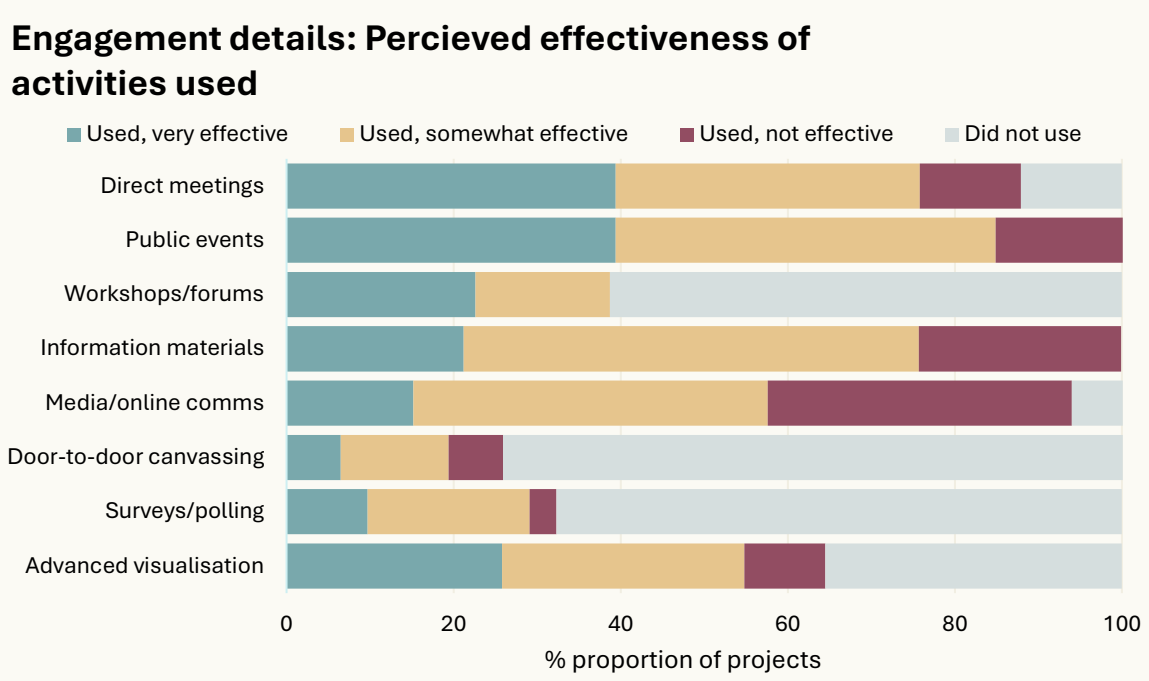


Engagement activities

Developers rated the effectiveness of their engagement activities in addressing public concerns. The most commonly used methods were information materials (n= 33) and public events (n = 33). Information materials were rated mostly as somewhat effective (54.5%), while public events showed stronger results, split between somewhat effective (45.5%) and very effective (39.4%). Media and online communications (n = 31) performed poorly, with responses split between not effective (36.4%) and somewhat effective (42.4%). Direct meetings (n = 29) showed similar effectiveness to public events, with ratings split between somewhat effective (36.4%) and very effective (39.4%).

These findings show a misalignment between method usage and effectiveness that could contribute to ongoing community tensions and project delays. While each community requires tailored approaches, certain widely used techniques (particularly information materials and media communications) consistently underperformed, suggesting developers may benefit from prioritising more interactive engagement methods.

Figure 19: Perceived effectiveness of activities used



Developers were also asked to specify any community engagement activities they used beyond the ones outlined above. Of the responses provided (n = 33), approximately 60% reported no additional activities or provided minimal detail, while 40% described substantive supplementary engagement.

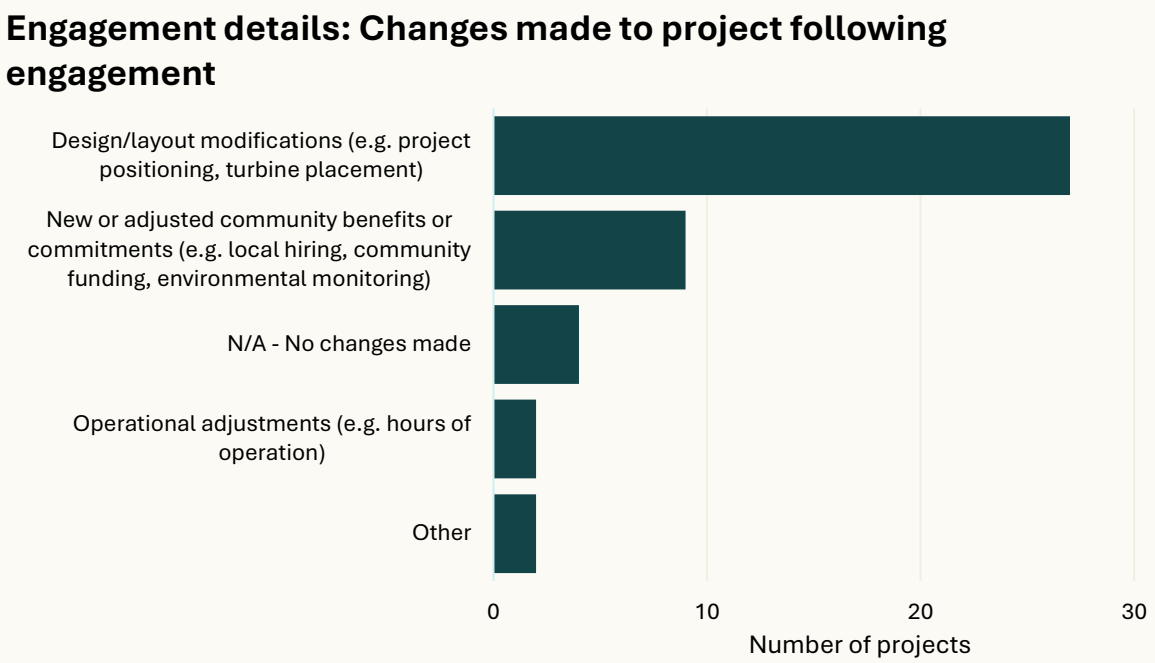
The most frequently mentioned additional activities included visual demonstrations such as flag installations to show panel positioning and site visits to existing operational facilities (n = 5). Structured consultation forums were also common, including Q&A sessions facilitated by parish councils, webinars and Enquiry by Design workshops (n = 8). Several developers employed targeted stakeholder outreach through agricultural liaison officers for landowners and direct engagement with local businesses and political stakeholders (n = 4).

A smaller number of developers (n = 3) implemented proactive community investment approaches, including early-stage support for local initiatives, assistance with grant funding applications and multi-year volunteering programs. One respondent demonstrated comprehensive community partnership by mapping local social investment priorities, establishing community liaison groups and local grants panels, and agreeing to early release of community benefit funds at the construction stage.

These findings suggest significant variation in developers' commitment to supplementary engagement beyond regulatory requirements. The more comprehensive approaches (particularly those combining multiple methods and demonstrating long-term community partnership) may offer models for improving engagement effectiveness.

Project modifications resulting from engagement

Figure 20: Changes made to project following engagement

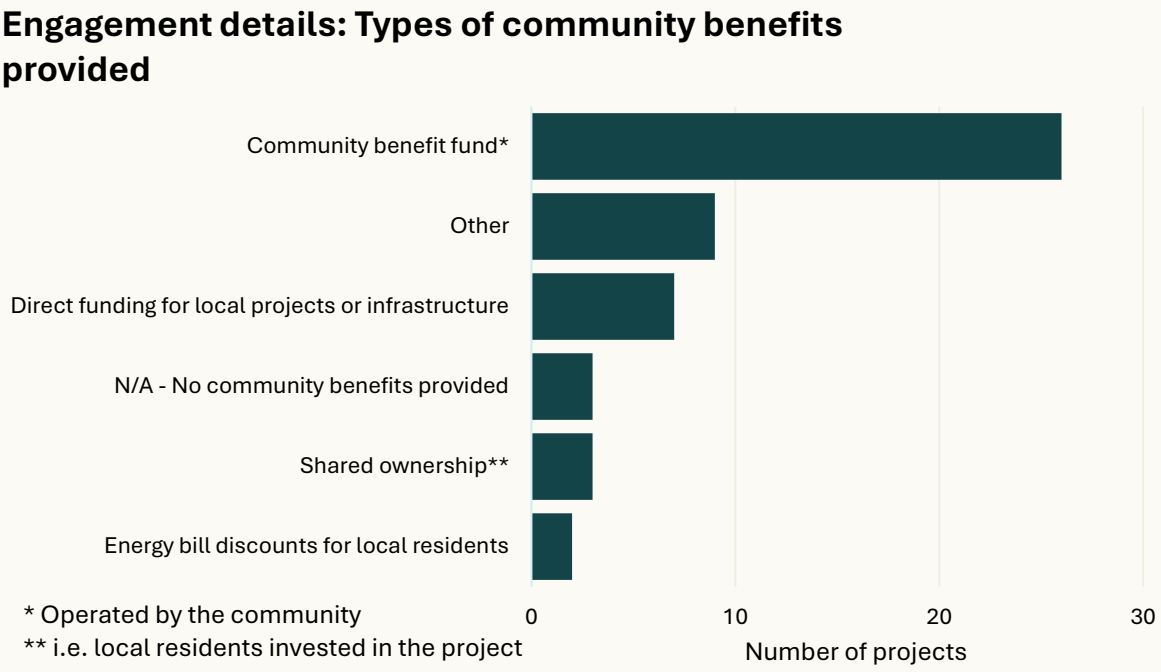


Developers reported making substantive changes to their projects in response to community engagement feedback. Design and layout modifications were the most frequently implemented changes (n = 27), including adjustments to project positioning and turbine placement (Figure 20). This represents the primary way developers responded to community input. New or adjusted community benefits or commitments were also relatively common (n = 9), encompassing measures such as local hiring initiatives, community funding arrangements and environmental monitoring programs. Operational adjustments, such as modifications to hours of operation, were less frequently reported (n = 2). Only a small number of developers indicated that no changes were made in response to engagement (n = 4), suggesting that in most cases, the engagement process led to tangible project modifications.

These findings demonstrate that community engagement often translates into project changes, with design and layout modifications being the most responsive area. The prevalence of design changes suggests that developers retain flexibility in technical aspects of their projects and are willing to adapt based on community concerns. The implementation of changes to community benefits offerings following engagement indicates recognition of the need to provide local value; however, the relatively lower frequency compared to design changes may reflect constraints in what developers can offer or negotiate. The fact that most projects underwent some modification supports the value proposition of early engagement in identifying opportunities for project improvement and conflict resolution.

Types of community benefits provided

Figure 21: Type of community benefit provided to the community



Developers reported offering various forms of community benefits as part of their project. Community benefit funds operated by the community were the most common mechanism (n = 26), representing a substantial majority of benefit arrangements (Figure 21). These funds typically provide ongoing financial resources that communities can direct toward local priorities.

Direct funding for local projects or infrastructure was reported by a smaller number of developers (n = 7), offering more targeted support for specific community needs. Shared ownership models, where local residents can invest in the project, were implemented by some developers (n = 3), as were energy bill discounts for local residents (n = 2). A small number of respondents indicated that no community benefits were provided (n = 2); these were a BESS and a collocated BESS with a solar project. There were also three projects where community benefits were under consideration.

The predominance of community benefit funds suggests this has become a standard practice in development projects, likely reflecting both community expectations and regulatory frameworks that encourage or require such arrangements. These funds offer flexibility for communities to address their own priorities, while providing developers with a structured mechanism for demonstrating local value. The relatively limited uptake of shared ownership models, despite their potential for deeper community investment and long-term benefit sharing, may reflect numerous barriers to implementation. The low incidence of energy bill discounts could indicate practical challenges in administration or limited applicability, depending on project type and energy distribution arrangements.

Motivations for public engagement

Developers identified multiple strategic and practical reasons for conducting public engagement on their projects (Figure 22). The most cited reason was to inform the community about the project (n = 26), followed closely by identifying and addressing concerns early in the development process (n = 23). Building local support for the project was reported by a moderate number of developers (n = 13), as was improving project design based on community input (n = 11). Risk mitigation was also a factor, with developers citing engagement to reduce project risks or avoid delays (n = 11). Regulatory compliance was noted by some respondents, with engagement expected by planning regulations or policy (n = 7). Meeting investor or stakeholder expectations was the least frequently cited reason (n = 1).

These findings suggest that developers view public engagement primarily as a communication and risk management tool, with emphasis on informing communities and proactively addressing concerns. The relatively lower prioritisation of improving project design based on input and building local support may indicate that engagement is often approached more as a procedural measure than as an opportunity for meaningful co-creation with communities.

When asked to reflect on whether their community engagement achieved what was intended for their projects, developers reported predominantly positive assessments (Figure 23). Most respondents either agreed (n = 15) or strongly agreed (n = 7) that their engagement efforts achieved the desired outcomes. Fewer developers expressed reservations about the effectiveness of their engagement, with some disagreeing (n = 5) or strongly disagreeing (n = 3) that intended outcomes were achieved. Three respondents held neutral views on the effectiveness of their engagement efforts.

These self-reported findings suggest that most developers perceive their engagement activities as successful in meeting project objectives. This positive assessment aligns with the proactive motivations reported earlier, particularly around informing communities and identifying concerns early. However, the presence of dissenting views indicates that engagement outcomes may vary across projects, potentially reflecting differences in engagement approach, project complexity or community dynamics.

Figure 22: Developers' reasons for conducting engagement

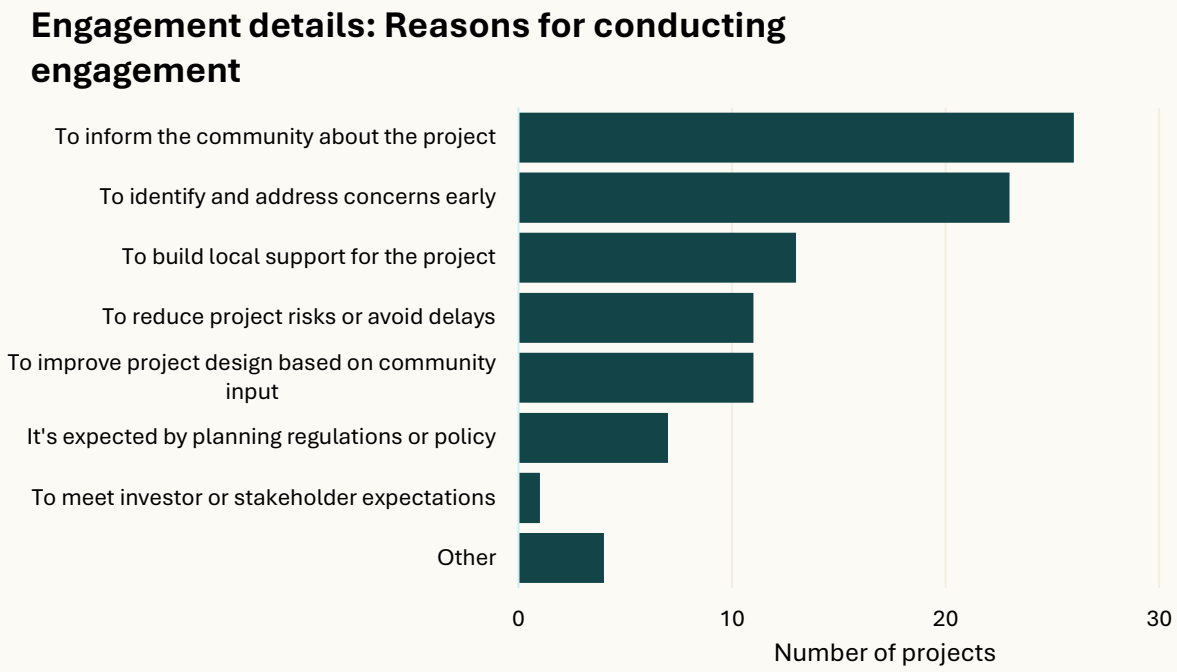
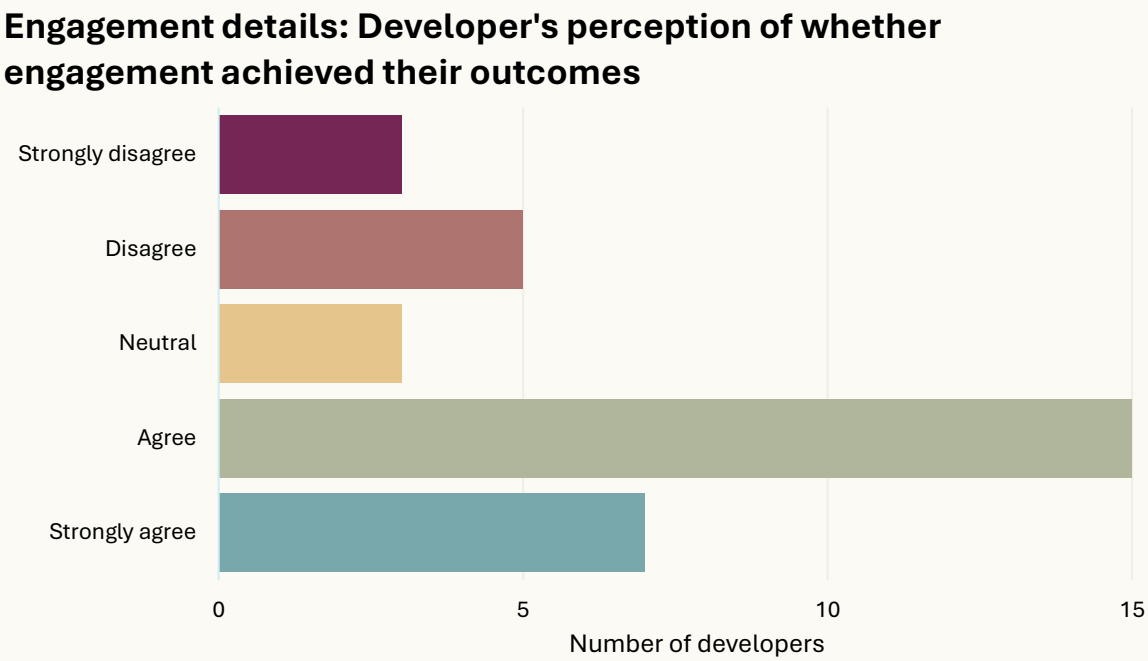


Figure 23: Developers' perceptions of whether the reasons for engagement achieve their outcomes



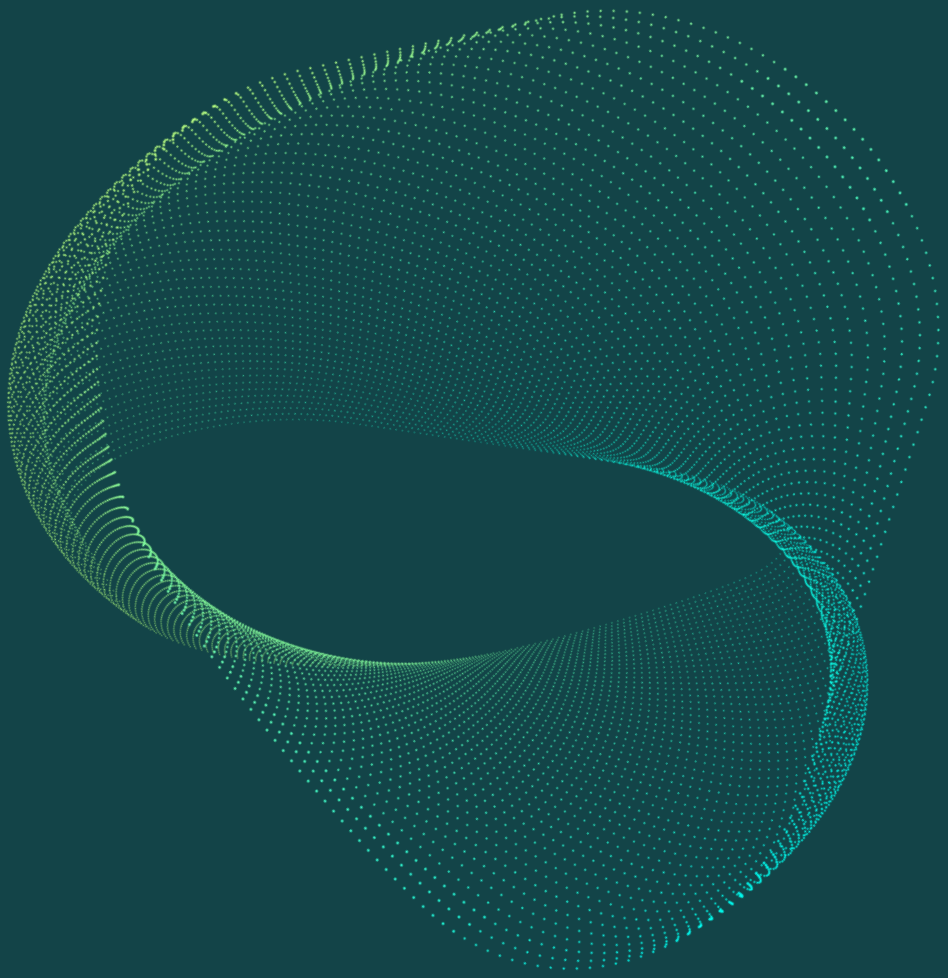
Unexpected outcomes from engagement

Developers were asked whether there were any other or unexpected outcomes from community engagement. Many respondents highlighted that engagement led to stronger support and trust among local stakeholders. In some cases, initial opposition from parish councils or vocal residents was reversed after developers demonstrated responsiveness to community concerns. One developer observed that engagement "provided a good base to work with [parish councils] as construction commenced," while another noted that the developer and local community had "built a really strong relationship with trust and tangible outcomes, prior to planning submission and construction."

Some respondents also noted the emergence of broader political and community backing as a result of engagement. Cross-party support and advocacy by local leaders were seen as a positive outcome, even if formal planning decisions did not always reflect public support. At the same time, several developers highlighted that some segments of the community remained sceptical, perceiving engagement as a "tick box exercise" and that opposition groups sometimes became more active over the course of multi-year projects, including through social media coordination or formal legal challenges.

Other unexpected outcomes related to local knowledge and practical benefits. Developers reported that engagement helped identify community concerns beyond the project itself, such as pre-existing flooding issues and that local residents sought guidance on participating in other planning processes. While a few respondents indicated no additional outcomes, the majority suggested that engagement generated relational and informational benefits that extended beyond the immediate project objectives.

Overall, these findings suggest that community engagement can produce unanticipated relational and practical outcomes. Engagement processes not only helped increase support for projects but also provided opportunities for developers to build trust, address local concerns and strengthen long-term community relationships, even in the context of ongoing opposition.



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May 2026

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