

Social Value, Infrastructure and Stakeholder Engagement: A Complex Triangle

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Abstract (200 words)

Infrastructure is critical for the economic and social prosperity of society. Some large infrastructure projects are also critical for our future society due to their intragenerational nature and long lifespan. Understanding the social value of infrastructure is therefore important in order to deliver a socially successful as well as technically successful project. Stakeholder engagement, in turn, is critical in understanding and identifying social value, however, the strength of this relationship is often underestimated during project development. The impact of this underestimation can be detrimental to a project. Using the case study of the Didsbury Flood Storage Basin Improvements Scheme in Greater Manchester, this article demonstrates how the stakeholder engagement process is intrinsically linked to social value preservation, creation and enhancement on infrastructure projects. It is argued that by investing time, resources and money in the stakeholder engagement process, the social value creation and enhancement on a project can be significant. If this investment is missing on a project, the social value perceived to be received by stakeholders diminishes. Therefore, this article calls for a greater understanding of the interdependency between the stakeholder engagement process and social value, and a need for an appreciation of this relationship within the infrastructure sector.

Keywords chosen from ICE Publishing list

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1 **Introduction**

2 The built environment influences and shapes society (Infrastructure and Projects Authority,
3 2016; Raiden et al, 2019). Infrastructure plays a significant role in that its purpose is to meet
4 society's fundamental needs such as sanitation, water supplies, energy supplies, transport and
5 flood protection to name but a few (Fitton, 2015; ICE and Useful Projects, 2020; RICS, 2020).

6 In addition to providing communities with critical services, infrastructure also contributes to the
7 economic and physical growth of society (Marshall, 2012). Investment in infrastructure has the
8 potential to stimulate the UK economy (Infrastructure and Projects Authority, 2016).

9 Infrastructure projects have recently been cited as playing an important part in the 'levelling up
10 agenda', whereby the levels of inequality within the UK are brought more in line to try and
11 eradicate the significant gap which exists (ICE and Useful Projects, 2020; IED, 2020, Raiden et
12 al., 2019). It is also perceived to be a key driver of the 'Build Back Better' initiative, in response
13 to the COVID 19 Pandemic which started in 2020 (PMO, 2020). Given the economic downturn
14 due to the pandemic, investment in infrastructure projects has the potential to create social,
15 economic and environmental benefits, thus helping to rebuild the economy and society following
16 the crippling effects of the pandemic (ICE and Useful Projects, 2020).

17

18 However, the critical nature of infrastructure is often overlooked (Fitton, 2015; Star, 1999). Its
19 place in everyday life means it is taken for granted and almost invisible to users (Star, 1999).

20 For this reason, the social impact infrastructure has on communities and society as a whole, has
21 often been neglected historically compared to the economic, environmental, and technological
22 impacts (Fitton and Moncaster, 2019; Raiden et al., 2019, Simm, 2012). This perception is
23 beginning to change, nevertheless.

24

25 Within the built environment, and specifically within the field of infrastructure, the preservation,
26 creation, identification, articulation, and to a certain extent the quantification, of social value has
27 been gaining prominence over a number of years (Fitton et al, 2016, Fitton and Moncaster,
28 2019; RICS, 2020). The Social Value Act (2012) brought to prominence the importance of
29 understanding the wider social benefits of procurement and began a step change in how
30 procurement contracts were determined (RIBA and University of Reading, 2020). Most recently

31 the UK Government has revised their procurement framework to include an emphasis on
32 delivering value for society (Cabinet Office and Lopez, 2020). New measures launched require
33 businesses wanting to win public sector Government contracts to demonstrate how they will
34 deliver social value with a supplier's social value 'score' included in the assessment criteria
35 (Cabinet Office and Lopez, 2020).

36

37 With a similar emphasis, the National Infrastructure Commission (NIC) recently published its
38 'Design Principles for National Infrastructure' (NIC, 2020). A key message from this publication
39 was that infrastructure should be designed for people, with people, in a co-productive manner
40 (NIC 2020). It should not solely be designed by architects or engineers with little understanding
41 or regard for the context of the scheme or the stakeholders impacted (de Sousa, 2019; Fitton et
42 al, 2016; Fitton and Moncaster, 2019). The guide urges infrastructure projects to find
43 opportunities to go above the technical and economic boundaries and provide social value and
44 wider benefits (NIC, 2020).

45

46 The main process which enables the identification of social value and allows projects teams to
47 understand the wider benefits for stakeholders is the stakeholder engagement process (Fitton,
48 2015; Mulholland et al, 2019; SVUK, 2020). Stakeholder engagement is embedded in
49 legislation, primarily through the UK Planning System. Under the National Planning Policy
50 Framework (NPPF), engagement with stakeholders is seen as a method of developing
51 successful projects. In Paragraph 66 of the NPPF there is an expectation that all plans and
52 proposals submitted into the UK Planning System reflect the views of the stakeholders impacted
53 (Ministry of Housing, Local Communities and Local Government, 2019). The geographically
54 large scale of some infrastructure and longevity of other infrastructure projects, both
55 intergenerational and intragenerational, means that stakeholder engagement should be an
56 integral part of the conception, design, construction and delivery of infrastructure projects
57 (Consultation Institute, 2020; Milligan et al., 2009; UK Green Building Council, 2020). However,
58 there is evidence that there is an implementation gap between the theory behind the
59 stakeholder engagement process and how the stakeholder engagement process is carried out
60 in practice (Fitton and Moncaster; 2019; Kothari, 2001).

61

62 This paper argues therefore, that the current stakeholder engagement process is inadequate to
63 fully understand and engage with stakeholders. A greater appreciation of the importance of the
64 stakeholder engagement process is needed. This means allocating a reasonable and
65 considered amount of project budget and resources, early within the project lifecycle. This will
66 allow meaningful engagement with stakeholders to understand their current situation, needs,
67 wants and values and means that social value can be incorporated, considered and preserved
68 from the beginning of a project, created and maximised where possible, resulting in a more
69 socially successful project.

70

71 Section 2 of this paper further examines the interdependency between stakeholder engagement
72 and social value. This is followed by Section 3 which explains the design of the research and
73 provides an explanation of the case study that has been used to illustrate the argument
74 presented in this paper. Section 4 provides the results and a subsequent discussion. Section 5
75 offers concluding remarks and recommends the need to place greater emphasis and
76 importance on the stakeholder engagement process as a means to creating, maximising and
77 delivering infrastructure projects which are not only technically successful, but provide social
78 value and wider benefits to local communities. A brief suggestion for areas of future research
79 concludes the paper.

80

81 **2. The Interdependency between Social Value and Stakeholder Engagement**

82 Although social value has gained prominence over the years within the built environment, the
83 concept itself is still subjective and causes confusion as to what it actually means (Raiden et al.
84 2019). There is no one agreed term to describe social value and as a result, varying definitions
85 have been created depending on the context in which it is being used (Raiden et al. 2019). The
86 term is also often used interchangeably with terms such as 'social benefit', 'social impact' and
87 'social outcomes', further adding to the confusion (Raiden et al. 2019). The lack of clarity
88 concerning the meaning is often a barrier to its implementation (Fitton 2015; Raiden et al. 2019).
89 This has in turn led to a lack of industry wide guidance on how social value should be articulated
90 and delivered (Raiden et al., 2019).

91

92 In a broad sense, Social Value UK (SVUK) define social value as the assessment of ... *“the*
93 *relative importance that people place on the changes they experience in their lives”* (Social
94 Value UK, 2021). From the perspective of infrastructure these impacts can be social,
95 environmental or economic and range from increasing wellbeing, job creation, improved air
96 quality, flood protection, resilience to threats such as climate change, promotion of social-
97 inclusion and use of local supply chains, to name but a few (ICE and Useful Projects, 2020;
98 RIBA, 2020, RICS, 2020).

99

100 Social value is derived from an understanding of what the stakeholders and local communities
101 impacted by the infrastructure projects want and need (Fitton and Moncaster, 2019). The first of
102 the five fundamental principles, according to SVUK, is to involve stakeholders (SVUK, 2020).
103 The second is to understand the level of change or impact from, in this instance, the future or
104 current infrastructure project (SVUK, 2020). Social value cannot be articulated, preserved or
105 created if stakeholders are not involved, as it is dependent on their situation, and their wants,
106 needs and desires (O'Brien and Wolf, 2010). It is therefore necessary that project teams do not
107 try and assume they understand what stakeholders want but take the time to engage and fully
108 understand the context (NIC, 2020). Conducting a process such as a Local Needs Analysis at
109 the very early stages of a project will help to develop a profile of the local communities. These
110 profiles can help project teams understand economic, social and environmental needs and
111 provide insight into demographic trends, inequalities and experiences (ICE and Useful Projects,
112 2020). The output of the Local Needs Analysis should help identify where and how social value
113 can be created or maximised to benefit the stakeholders (ICE and Useful Projects, 2020).

114

115 Conducting a Local Needs Analysis is one method to engage with stakeholders. Much like the
116 concept of social value, stakeholder engagement is often open to interpretation and the process
117 is carried out in different ways with different levels of success (Cooke and Kothari, 2001;
118 International Association for Public Participation, 2014). There is a wealth of literature
119 examining stakeholder engagement and participation in the planning and design of
120 infrastructure projects using case studies from all different infrastructure sectors including the

121 water sector (see for example Casscetta et al. 2015, Chinyio and Olomolaiye, 2010, Luyet et al.
122 2012, Mathur et al. 2008, Mok et al. 2015). The literature and case studies examine the
123 theoretically complex process of engaging with stakeholders during the different stages of an
124 infrastructure project, the potential failings of stakeholder engagement and the associated
125 impacts, as well as evidence of best practice and the benefits for infrastructure planning and
126 design.

127 Figure 1 demonstrates the different ways stakeholder engagement can be carried out, from
128 basic information provision to a more collaborative approach in which stakeholders are able to
129 help shape decision making (International Association for Public Participation, 2014).

130

131 Figure 1: The scale of effectiveness of stakeholder engagement. Source: International
132 Association for Public Participation (2014)

133

134 For a process to be participatory and collaborative, stakeholder engagement should take place
135 very early on in the conception of the project and then continually throughout all stages
136 (Consultation Institute 2020; UK Green Building Council, 2020). The benefits of such an
137 approach are that it develops trust with, and provides transparency for, stakeholders. They are
138 able to help shape decision-making, so the project meets their needs and requirements, and
139 they are left with a legacy that provides wider benefits, not just environmental or economic
140 (Consultation Institute, 2018; Johannessen and Han, 2013). The benefit for project teams of
141 adopting a collaborative approach to stakeholder engagement is that if stakeholders feel they
142 are involved, are listened to and there is a relationship built on trust and transparency, they are
143 less likely to oppose decisions (Howgate and Kenyon, 2009; Milligan et al, 2009; Whitmarsh et
144 al., 2013). Opposition, especially on large infrastructure projects is costly in terms of budget
145 and time as well as reputation (Ledoux et al., 2005). Also, if project teams are able to detect
146 areas of opposition early by engaging with stakeholders, these can be mitigated quickly before
147 they escalate, avoiding costly delays (Mehring et al., 2018). Gaining buy-in from stakeholders
148 early can help provide a smooth transition through the project lifecycle (ICE and Useful Projects,
149 2020).

150

151 Although a collaborative approach to stakeholder engagement seems, in theory, the best
152 choice, in reality, most current stakeholder engagement practices on infrastructure projects lie
153 very much in the consultative area, with some best practice examples moving towards the
154 involve stage (Cooke and Koathari, 2001; Fitton and Moncaster, 2019). A reason for this is the
155 perceived resource and budget intensity of stakeholder engagement. This type of activity is
156 often allocated less project resources and budget than the more technical aspects of projects
157 (Correia et al., 1998). There is also the issue that project teams do not like the uncertainty of
158 engaging with stakeholders when they do not have a fully formed design or concept (Hunt and
159 Taylor, 2009; Whatmore and Landstrom, 2011). There is a perception that project teams do not
160 want to promise something that will not be delivered (McEwan, 2011). A final reason why a
161 collaborative approach to infrastructure projects is not more regularly undertaken is because of
162 the professional perception of knowledge. Some professional teams see the public 'lay'
163 knowledge as inferior to their 'expert' knowledge. This often results in the public only being able
164 to influence peripheral aspects of a project (Few et al, 2007; Fitton et al, 2016; Mehring et al,
165 2018).

166
167 By not engaging with stakeholders early and in a meaningful way, the ability to identify,
168 preserve, create and maximise social value on a project is therefore greatly reduced from the
169 outset. With limited involvement of stakeholders, projects teams will only be able to deliver a
170 small amount of social value and potentially not where stakeholders want or need it most (Begg
171 et al, 2017; Moon et al, 2017). The following case study seeks to demonstrate how the
172 stakeholder engagement process and social value are interdependent and how the level of
173 social value preserved or delivered by an infrastructure project can be determined by the
174 stakeholder engagement process.

175

176 **3. Research Design and Case Study**

177 The aim of the research was to investigate a social phenomenon, namely the relationship
178 between social value and stakeholder engagement within the context of infrastructure projects.
179 The research question posed was “ *How does the stakeholder engagement process impact on*
180 *the preservation and creation of the social value of an infrastructure project?*”

181 The research was therefore exploratory in nature, seeking to gather knowledge and information
182 about the social phenomenon (Yin, 2009). The research was designed using a qualitative
183 inductive approach, following constructivist grounded theory (Charmaz, 2006; Glaser and
184 Strauss, 1967). Using such an approach iteratively develops theory from data, checking against
185 further data and then refining the theory more (Charmaz, 2006; Urquhart, 2013). The theories
186 developed were checked by collecting further data from participants thus emphasising the social
187 construction of its nature (Charmaz, 2006; Creswell, 2009; Urquhart, 2013). The approach also
188 recognised that the perspectives, values and knowledge of the researcher will have an
189 inevitable influence on the data collection process (Thornberg and Charmaz, 2014).

190

191 The research was framed using a case study approach which enabled the researcher to be
192 immersed in a real-world context, in order to study the research problem from within (Flyvberg,
193 2006). A case study approach facilitates the investigation of the 'how' and 'why' questions of
194 the phenomenon (Yin, 2009). This research is part of a wider research project which used three
195 flood alleviation schemes as case studies. A selection criterion was developed as part of the
196 wider research project to identify the preferred characteristics of the case studies including
197 availability of data, ability to speak to both the local community and the project teams, ability to
198 access the flood alleviation scheme and for the case study to have only been completed within
199 a couple of years of data collection. For the purposes of this paper one case study was used,
200 the Didsbury Flood Storage Basin Improvements Scheme because it provided interesting
201 results given the research question and is described in more detail in the next subsection.

202

203 The data collected was qualitative in nature. Publicly available planning documents were used
204 and analysed first to describe the technical details of the scheme and gain an understanding of
205 the context. However, the primary source of data was semi-structured interviews with the
206 professional team members involved in delivering the scheme (including engineers, town
207 planners, environmentalists, flood risk modellers and architects) and individuals from the
208 community in Didsbury impacted by the scheme. Semi-structured interviews were used as it
209 allowed the researcher to have a degree of structure to the discussion, but also allowed both the
210 participant and the researcher to discuss other topics of relevance (Creswell, 2009; Silverman,

211 2010). Theoretical sampling techniques were employed to identify individuals who were closely
212 embedded in the scheme from both the local community and the professional team (Emmel,
213 2013; Urquhart, 2013). Snowball sampling was then used to identify additional suitable
214 participants (Bryman, 2012). In total 21 semi-structured interviews were conducted, nine with
215 the professional team members and 12 with members of the local community.

216

217 The data collected was analysed iteratively throughout the process (Glaser and Strauss, 1967;
218 Hunter and Kelly, 2008). Interviews were recorded and transcribed and then coded with the aid
219 of the computer-aided qualitative data analysis software NVivo; this helped to manage the large
220 sets of data while the researcher retained the role of analyst (King, 2008; Welsh, 2002). The
221 coding process allowed the researcher to identify the relationships emerging from the data and
222 develop theoretical explanations for the findings (Charmaz, 2006).

223

224 **3.1 Case Study: The Didsbury Flood Storage Basin Improvements Scheme**

225 Didsbury is situated in Greater Manchester, in the north west of England. It is a 62 ha flood
226 storage basin, operational from 1979 and used to relieve peak flow from the River Mersey under
227 the management of the Environment Agency. It is predominately used as a recreational area
228 with allotments, a golf club, a rugby club and a park. The River Mersey is also a community
229 attraction, with foot and cycle paths along the banks and is designated a Local Nature Reserve
230 and a Site of Biological Interest (Figure 2).

231

232 Figure 2: The recreational area alongside the River Mersey in Didsbury. Source: Fitton (2014)

233

234 There are a small number of residential properties and businesses situated within or in close
235 proximity to the basin.

236

237 The Environment Agency, as the client, commissioned a project to improve the efficiency of the
238 basin. The basin had not been performing as required, with water unable to flow effectively to
239 the western section and therefore exceeding its capacity in the eastern section. There was
240 concern that the basin would not drain quickly enough if there were two flood events in quick

241 succession. A scheme was proposed by an engineering consultant which saw a channel
242 constructed through the allotments, removing up to 40% of the allotments, to facilitate the
243 movement of water from east to west. Very little stakeholder engagement was carried out
244 during the design of the initial scheme, apart from statutory activities which were legally
245 required. The local community and stakeholders only learned of the scheme through third
246 parties. Once they had been made aware of the plans, they came together to oppose the initial
247 scheme creating a powerful and effective opposition campaign. This resulted in the
248 Environment Agency, as the client, rejecting the initial scheme and commissioning a new design
249 by a new engineering consultant.

250

251 The implemented scheme used a number of different aspects to achieve the same level of
252 protection as the initial scheme but leaving the allotments as they were. The Environment
253 Agency made it clear to the new consultants that stakeholder engagement was critical in the
254 project given the opposition already experienced. Consequently, the new consultants
255 approached the project very differently and engaged with stakeholders from the very beginning.
256 The improvements for the scheme included;

- 257 • installation of new monitoring and telemetry equipment;
- 258 • construction of a floodwall and a floodgate to protect the residential properties;
- 259 • installation of flood mitigation measures to protect the local amenities;
- 260 • construction of a new outfall to the eastern section of the basin; and
- 261 • creation of a maintenance strategy to ensure no obstructions impeded the flow of
262 floodwater.

263 The scheme was commended by the Institution of Civil Engineers in 2012 for its community
264 work (Fitton, 2015).

265

266 **4. Results and Discussion**

267 Analysis of the interviews conducted with both the local community participants (LCP) and the
268 industry professionals (IP) showed how detrimental the lack of effective and collaborative
269 engagement had been during the initial design phase of the scheme. One participant explained
270 how he came to hear about the plans for the scheme,

271 *"I think the thing that didn't particularly please us was we only found out by accident from the*
272 *allotment people [about the initial proposal]. Nobody told us about the proposed scheme until*
273 *one of my friends from the allotments said do you know about this? So, then we chased up and*
274 *got involved ..."* (LCP14)

275 This type of stakeholder engagement does not demonstrate a collaborative, participatory
276 approach which is required to create a socially successful scheme (ICE and Useful Projects,
277 2020; NIC, 2020). Nor does this type of stakeholder engagement facilitate the understanding,
278 identification, preservation and creation of social value for the scheme (Fitton, 2015; Mulholland
279 et al, 2019; SVUK, 2020). It goes completely against a key principle of social value - involving
280 stakeholders (SVUK, 2020).

281

282 The social value of the Didsbury Flood Basin was significant, even before the scheme was
283 proposed. One participant explained why the area held significant social value,
284 *"Well it was huge [the social value of the scheme], because there is a big community of*
285 *allotment holders some of them are retired, they would have found it quite distressing if it [losing*
286 *the allotments] would have interrupted their natural way of life ..."* (LCP16)

287 Another participant who was an allotment holder discussed why having an allotment was so
288 important to him,

289 *"It would be very upsetting to me if someone said you can't have an allotment because when I*
290 *get up at 6:30 in the morning what do I do ... all day?... this [the allotment] has been a big part*
291 *of my life for the last 30 years ..."* (LCP14)

292

293 It is evident that the allotments were an integral part of life for some Didsbury residents (Fitton,
294 2015). However, by not engaging with stakeholders effectively or early enough, or even at all,
295 professional knowledge dominated the design process (Few et al, 2007; Fitton et al, 2016;
296 Mehring et al, 2018). Those responsible for the design of the scheme were unable to
297 understand what the needs of the community were, what values they held, and what the Flood
298 Basin, and its associated amenities, meant to them. This type of lay knowledge is critical in
299 identifying the social value of a scheme and understanding how to protect that social value and
300 where possible, maximise it (Begg et al, 2017; Moon et al, 2017). However, as one professional

301 explained, there is a conflict between lay knowledge and professional knowledge, with the lay
302 knowledge often being seen as inferior to the professional expertise held by those employed to
303 design the scheme,
304 *“... we are professional people; this is what we do for a day job. The person on the street does*
305 *not do flood risk as a day job necessarily ... the public ... are paying money for us to do a job*
306 *therefore we should do that job and if they are paying me as an engineer to do a job then I shall*
307 *do that job as an engineer.”* (IP9).

308 The inadequate engagement on the initial design had an impact on how the scheme was
309 perceived even during the next phase. Collaborative and early engagement with stakeholders
310 builds trust and gains buy-in from stakeholders (Howgate and Kenyon, 2009; Milligan et al,
311 2009; Whitmarsh et al., 2013). By developing the initial design with little or no engagement the
312 relationship with stakeholders was damaged, as one participant explained,

313 *“I’m afraid from a fairly early stage it was clear that there was going to be a lack of trust because*
314 *we were kept in the dark and the attempt was made to just steal the allotments.”* (LCP8)

315 This resulted in the implemented design being developed very differently.

316

317 The opposition from stakeholders and the local community of Didsbury forced the Environment
318 Agency to reject the initial design which impacted heavily on the allotments and employ another
319 set of professionals to rethink the solution (Fitton, 2015). One participant explained how the
320 approach to the design was very different to the first design,

321 *“It was looking to minimise the disruption to recreational activity on the site really and the*
322 *allotments ... Not having a detrimental effect on the amenity value of those areas as a result of*
323 *the works that we were implementing.”* (IP6)

324 Another way that the scheme was approached differently was through the engagement with
325 stakeholders. The incorporation of lay knowledge and creating a collaborative relationship was
326 important for this scheme’s design as explained by this professional,

327 *“We tried to go to them [the local community] with, this is the problem we are trying to solve and*
328 *this is what we are looking at – is there anything you can throw in that might help us or any*
329 *ways you think we should be looking at this, that we are not?”* (IP6)

330 This type of approach is more in line with the collaborative, participatory method of stakeholder
331 engagement which facilitates the understanding and identification of social value (Fitton and
332 Moncaster, 2019; ICE and Useful Projects, 2020; NIC, 2020). The professionals used a mixture
333 of both lay and expert knowledge to create not only a technically successful scheme, but a
334 socially successful scheme that understood the social value of the Flood Basin to the
335 stakeholders (Few et al, 2007; Fitton et al, 2016; Mehring et al, 2018). One participant
336 explained that this was the main social value of the scheme, leaving the basin as it was,
337 *“... it’s a very well used public space... It [the social value] was the sympathetic design, it was*
338 *making sure that it did blend in – minimum impact on basin users.”* (IP2). This sentiment was
339 echoed by a local community stakeholder also,
340 *“... but I had no complaints about it [the implemented scheme] because it was such a relief that*
341 *they weren’t going to implement the original scheme.”* (LCP15)
342 As the quote above by LCP15 alludes to, the implemented scheme was received much more
343 favourably than the initial design. This was due mainly to the effective and collaborative
344 engagement which was carried out,
345 *“You couldn’t fault the consultation, they were taking into account what the allotments were*
346 *saying, they were listening to me when we discussed the finer details of the operation works*
347 *once the wall was built and restoring the garden to the way it was and so on ...”* (LCP18)
348 By engaging continuously with stakeholders, the design team was able to develop trust, use lay
349 knowledge to enhance the design process and ensure the needs and wants of the stakeholders
350 were met, thus creating a scheme which had, and preserved, social value.
351
352 By not taking a collaborative and participatory approach to the initial design of the scheme,
353 additional costs and time were incurred from the project perspective, as well as damage to the
354 relationship with the local community and stakeholders and consequently, a loss of trust
355 (Howgate and Kenyon, 2009; Milligan et al, 2009; Whitmarsh et al., 2013). By understanding
356 the importance of the stakeholder engagement process and the personal values held by the
357 stakeholders on the second attempt, the outcome was very different. Listening, collaborating
358 and engaging with stakeholders helped facilitate social value as a core design consideration
359 (ICE and Useful Projects, 2020; NIC, 2020; Raiden et al, 2019; RIBA and University of Reading,

360 2020). This ultimately resulted in a scheme that was viewed by industry and stakeholders as
361 both technically and socially successful (Begg et al., 2017, McEwan, 2011).

362

363 **5. Conclusion**

364 Infrastructure is critical for the economic and social prosperity of society. Understanding the
365 social value of infrastructure is important in order to deliver a socially successful as well as
366 technically successful project. Stakeholder engagement is a critical method which helps to
367 facilitate the understanding and the identification of social value. Through the detailed case
368 study presented in this paper, the research has shown however, that current approaches to the
369 stakeholder engagement process do not always facilitate the consideration of social values
370 effectively. This case study provides a story of two halves. One is the impact of designing a
371 scheme with only a technical perspective, with little or no consideration of the values of the
372 community the scheme is being designed for. The second is the success of designing a
373 scheme that has a social perspective and is developed collaboratively with those the scheme is
374 meant for.

375

376 The research demonstrates that some industry practices of the stakeholder engagement
377 process are still very much focused on information dissemination and are tokenistic in nature.
378 Adopting such an approach results in important information from stakeholders being omitted
379 from consideration in the design of schemes, although in reality this information is just as critical
380 for the success as the technical detail. By neglecting to engage with stakeholders and collect
381 important lay information, industry professionals risk losing the trust and buy-in from local
382 communities and stakeholders. The research shows that stakeholders have the ability to
383 generate such forceful opposition that can overpower the industry professionals. The outcome
384 for industry, if a redesign is required, is lost time, and abortive costs in terms of money and
385 resources, as well as a breakdown of relationships with the stakeholders and local communities
386 and loss of reputation.

387

388 In contrast, the research has also provided evidence that when the importance and validity of
389 lay information is collected and used, the outcome is more socially acceptable. By investing the

390 time and resources in stakeholder engagement from the beginning of a project, trust can be
391 built, and a relationship developed. This in turn can facilitate a co-production approach whereby
392 both the stakeholders and the industry professionals design the scheme together. This
393 mechanism helps to ensure that the social perspective of the scheme is considered throughout,
394 and design decisions can be taken on both a technical and social level. The outcome is twofold.
395 Firstly, for industry professionals they are able to reduce the risk of opposition and increased
396 costs and abortive work as they are able to identify contentious issues earlier and mitigate them.
397 Also, the relationship developed with stakeholders means these issues are easier to deal with.
398 Secondly, stakeholders are able to shape, influence and co-produce a scheme that they live
399 with day in, day out. They are able to ensure that social value is weaved into the design
400 process, so they are left with a scheme that is technically successful, but provides wider
401 benefits to the local community, over and above the technical success.

402

403 The findings clearly demonstrate that there is still a need for change. Participatory, early and
404 effective engagement with stakeholders at the beginning of a project, with due consideration of
405 the lay information available, is key in facilitating social value consideration. There is evidence
406 that some industry professionals understand the importance, but within the infrastructure sector
407 there are still examples of technically led projects, with a tokenistic stakeholder engagement
408 process and very little consideration of the social value of the scheme. This requires a change
409 in attitude towards the social perspective of projects and the validity of the stakeholder
410 engagement process.

411

412 The ultimate goal should be for the co-production of infrastructure projects which equally
413 considers the technical and the social perspectives. Stakeholders should be fully involved early
414 with a mix of expert and lay knowledge shaping the design process. Industry professionals
415 need to accept this change and adapt their perceptions of the stakeholder engagement process.
416 It should not be perceived as a tick box exercise and resource and time intensive, but
417 something that is integral in obtaining the right information to help successfully design the
418 project which provides social value to those for whom it is being designed.

419

420 There are limitations to the research, however. The conclusions drawn are representative of this
421 case study and this type of infrastructure. Applying a similar research approach and research
422 question to different case studies and on different types of infrastructure projects would be
423 interesting. Further research is also now needed to investigate the effectiveness of a co-
424 production approach in preserving, creating and maximising the social value of infrastructure
425 projects. The research should look at the most effective mediums to change industry
426 perceptions of the stakeholder engagement process and how from a standards and legislative
427 perspective, stakeholder engagement and how the social considerations can be incorporated
428 earlier and with more emphasis in the design process including how the client defines the
429 project process and scope in relation to social value and how design professionals are procured
430 based on their project priorities. In addition to taking an industry perspective on the future
431 research, another direction the research could take would be to use a co-production approach
432 to further the knowledge in this field between industry and academia (Moncaster et al., 2010).

433

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439

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- 570
- 571 **Figure captions (images as individual files separate to your MS Word text file).**
- 572 Figure 1. The scale of effectiveness of stakeholder engagement. Source: International
573 Association for Public Participation (2014)
- 574 Figure 2. The recreational area alongside the River Mersey in Didsbury. Source: Fitton (2014)