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Vacant and Derelict Land in Scotland

Assessing the Impact of Vacant and Derelict Land on Communities

On behalf of the **Scottish Land Commission**

SCOTTISH LAND COMMISSION
COIMISEAN FEARAINN NA H-ALBA

In collaboration with: Kevin Murray Associates, GCU Glasgow Caledonian University

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Executive Summary

- In February 2019, Peter Brett Associates, now part of Stantec (PBA), in association with Kevin Murray Associates & Glasgow Caledonian University, were instructed by the Scottish Land Commission to research the **harms caused by vacant and derelict land (VDL) on communities** and to develop a framework which could be used for assessing the impact of VDL.

- Following a systematic review of current data and academic and 'grey' literature, there is evidently a **general lack of research focusing on the impacts of vacant and derelict land** on affected communities (Stage 1). Data sources which can profile **health, environment, economic,** and **community** impact were identified, but more detailed data analysis is needed to better establish VDL correlations and management infrastructure of VDL to understand the extent of harm on communities.

- Extensive **stakeholder engagement** including stakeholder consultations and several case study focus groups (Stage 2) examined VDLs links to harmful effects across a wide range of sites to explore how it has affected communities.

- There are **different types and scales of harm**, usually depending on the scale, former use and surrounding VDL context, including the community's social composition and its former relationship with the site, including impacts on:

  Health

  - There is evidence of a spatial association between interaction with VDL and impacts on physical health with regard to poorer health outcomes, population health and life expectancy;
  - VDL can negatively impact community wellbeing, reported effects ranging from anxiety levels, agitation and anger to increased incidence of crime and antisocial behaviours. Perceptions of risk to health from contaminated sites can also impact wellbeing and may contribute to poorer physical health outcomes;
  - VDL may inhibit or prohibit movement through an area influencing feelings of personal safety and restricting interaction/use due to fencing/hoarding; and
  - Evidence suggests that communities in areas of higher deprivation interact with VDL more regularly, with disproportionate impacts on their health and wellbeing.

  Environment

  - Contaminated VDL sites can result in the pollution of watercourses, with potential for airborne contamination, impacts on human health and wildlife;
  - Contaminants from VDL (typically former industrial uses) can present potential environmental hazards in the form of materials incorporated into structural materials e.g. asbestos;
  - Contaminated VDL sites requiring costly remediation can act as a barrier to development; and negatively influence perception; and
  - VDL sites which are not maintained can negatively influence area perceptions, locally and externally.

Economic

- The cost of remediating contaminated land, the means and timescales for recovery of infrastructure expenditure and development risk due to economic factors beyond a developer's control reduce the likelihood of redevelopment on VDL sites;
- Proximity to VDL negatively impacts developer perceptions and confidence;
- Significant opportunity cost may be associated with continuing vacancy and dereliction; and
- The level of maintenance of VDL sites can influence values of neighbouring properties.

Community

- VDL can have a significant impact on community perceptions of the local area. Visibility and clustering of VDL can have a multiplier effect and exacerbate these;
- Impacts can vary on different parts of the community e.g. legacy effects may be keener for older residents more aware of what sites were previously used for and decline over time from a previously productive use;
- VDL sites used as community green spaces can be lost following redevelopment, negatively affecting the community. It is important to recognise potential harms from removal of community assets or the refusal of temporary use of a site, and suggest measures to offset them; and
- More affluent communities may have greater resilience to cope with the impacts of VDL including the capacity to source funding and the skills of local working or retired professionals (i.e. lawyer, solicitor) to set up organisational structures. While this may accelerate reuse, the converse is also true – that communities lacking such resources may see slower, more incremental change.

- The results of the research informed development of an analytical framework to **assess the impacts of VDL sites**, to be conducted at regular intervals to continually update knowledge of VDL sites most damaging to a local area.
- The VDL measurement framework would be used in conjunction with an established statutory process (e.g. Local Development Plan), reducing the requirement for additional resources and enabling relevant policy recommendations within a mechanism that formally supports the productive reuse.
- A positive and relatively objective VDL monitoring framework is needed to ensure up to date, relevant and insightful consideration and comparison. This could be achieved and supported using open access data routinely collected in Scotland by local authorities and civil organisations. The right mechanism may also help local communities to intervene in harmful VDL sites through formal structures i.e. community trust when the harms are understood and are able to be assessed.
- The **measurement framework outlined is not a stand-alone mechanistic process**. Rather it is intended to form part of wider national and local decision-making processes for the productive use of VDL. It is neither narrowly quantitative, nor rigidly prescriptive. Some reflective qualitative augmentation (e.g. around community perceptions) is required, and a forward approach will also consider the economic implications of potential VDL site-related opportunities (which is the subject of parallel research).

1 Introduction

1.1 Aims

1.1.1 The Scottish Government's definition of vacant and derelict land (VDL) is:

- *"Vacant land is land unused for the purposes for which it is held and is viewed as an appropriate site for development. This land must either have had prior development on it or preparatory work has taken place in anticipation of future development"*; and
- *"Derelict land (and buildings) is land which has been so damaged by development, that it is incapable of development for beneficial use without rehabilitation. In addition, the land must currently not be used for the purpose for which it is held or a use acceptable in the local plan. Land also qualifies as derelict if it has an un-remedied previous use which could constrain future development."*

1.1.2 While it has reduced by 716 hectares (ha) since 2017, VDL[1] still extends to some 11,037 ha. across Scotland. Approximately 75% of derelict sites in Scotland are found within a settlement, with the remainder in the countryside. 29.1% of Scotland's population is estimated to live within 500 metres of a derelict site[2].

1.1.3 The vision of the Scottish Land Commission is *"a fair, inclusive and productive system of ownership, management and use of land that delivers greater benefit for all the people of Scotland".* To achieve this, the SLC and the Scottish Environment Protection Agency (SEPA) established the Vacant and Derelict Land Taskforce in 2018 to consider different approaches to addressing the issue and tackle the scale of the problem.

1.1.4 This research was commissioned by the SLC to examine how VDL affects communities and considers how the significance of its impacts at local level can be established.

1.1.5 It aims to:

- Provide a good understanding of the nature of the consequences of vacant and derelict land on surrounding communities; and
- Indicate a practical approach that local authorities and other organisations could use to measure the harmful effects of vacant and derelict sites.

1.1.6 Peter Brett Associates (PBA), now part of Stantec, with Kevin Murray Associates (KMA) and Glasgow Caledonian University (GCU), were commissioned at the end of February 2019 by the Scottish Land Commission (SLC) to undertake this research. It had four stages:

- **Stage 1**: Establishing an evidence base to explore and where possible quantify the harmful effects of vacant and derelict land on communities. This included a comprehensive literature review (see **Section 3.2)**;
- **Stage 2**: Stakeholder engagement and case study focus groups. In depth discussions with 15 national and regional stakeholders were held as part of the research and focus groups combining local authority, community and other stakeholders were held in Argyll & Bute, Falkirk, Fife, Glasgow and West Dunbartonshire (see **Section 3.3**);

[1] Sites greater than 0.1ha

[2] Scottish Vacant and Derelict Land Survey (2018)

- **Stage 3**: Development of an impact framework to measure potential harms. Two workshops were held to test the emerging approach:
  - **World Health Organisation**; and
  - **Stakeholder Testing Workshop** (see **Appendix A** for list of attending organisations).
- **Stage 4**: Reporting of Findings (**see Section 4**).

1.2 Report Structure

1.2.1 This remainder of this report is structured as follows:

- **Section 2 Measuring Vacant and Derelict Land in Scotland** reviews current practice by local and Scottish Government in measuring vacant and derelict land in Scotland;
- **Section 3- VDL & Potential Harms** identifies the findings of the following:
  (a) **Literature and Data Review:** profiles the conclusions of related research in Scotland, the UK and overseas;
  (b) **Stakeholder Interviews** discusses the impacts on the community from various stakeholder perspectives; and
  (c) **Case Studies:** provides an overview of the key issues identified in each of the focus groups.
- **Section 4- Analytical Framework** introduces the measurement framework developed through this research. It reflects the harms identified and explains a proposed format, and how the framework might be used;
- **Section 5– Limitations & Lessons** discusses learning points from the research; and
- **Section 6– Summary**.

2 Measuring Vacant and Derelict Land in Scotland

2.1 Measuring Vacant and Derelict Land in Scotland

2.1.1 This section reviews the existing practices used to measure the characteristics of vacant and derelict land in Scotland.

Scottish Vacant and Derelict Land Register and Survey (2018)

2.1.2 The Scottish Government annually publishes the Scottish Vacant and Derelict Land Survey (SVDLS) using VDL data supplied by Local Authorities/National Park Authorities. The SVDLS is accompanied by the Scottish Vacant and Derelict Land Register (SVDLR). The SVDLR displays site data in a spreadsheet format including location, site size, site type, ownership details, previous use and the period when the site became vacant/derelict. Authorities use separate criteria to categorise both vacant and derelict land for inclusion in the register. An example of some of the criteria includes a requirement that sites must not be in use (except for temporary open space), sites must be over 0.1 hectares and that sites must not be ready for new development without further works. The full list of criteria can be found on the Scottish Government website[3].

2.1.3 The survey[4] identifies a reduction in the area of Vacant and Derelict Land in Scotland from 11,753 hectares in 2017 to 11,037 hectares in 2018. In Scotland, East Ayrshire is noted as having the largest area of VDL (1,810 hectares) whilst Glasgow City has the largest amount of VDL of any of Scotland's 7 cities (1,005 hectares).

2.1.4 North Lanarkshire has the highest proportion of its population living within 500 metres of any derelict site (74.6%) followed by Glasgow City (60.1%) and Inverclyde (60.1%). Furthermore, the SVDLS states that approximately 58% of people in the most deprived decile in Scotland live within 500 metres of derelict land, compared to 11% in the least deprived decile.

Place Standard

2.1.5 The Place Standard tool stimulates and structures conversations regarding place and community. The tool is intended to be used by communities, voluntary groups and public agencies to discuss and attribute a score to physical and social characteristics of their local area.

2.1.6 The Place Standard Tool has been used throughout Europe and is recognised by the World Health Organisation as an accessible and adaptable means of measurement of community physical and social health. Some criteria have relevance to the measurement of the impacts of VDL such as "care and maintenance", "feeling safe" and "moving around" but the effects of VDL on communities are not discussed in isolation during the process.

2.1.7 Like many other measures, the validity of the data collected may expire over time. In addition, the community using Place Standard may change (i.e. a transient community of students). On repetition of the Place Standard tool, evidence can be consistently measured over time. The development of the framework as a result of this research is intended to have a longitudinal aspect with similarities to the Place Standard Tool and is influenced by its format.

[3] Scottish Vacant and Derelict Land Survey Criteria (2018)

[4] Scottish Vacant and Derelict Land Survey (2018) Scottish Government

Derelict Buildings

2.1.8 The Historic Environment Scotland (HES) Buildings at Risk Register (BARR), keeps a record of vulnerable properties of architectural or historic merit, often a listed building or an unlisted building within a conservation area. Many of these buildings comprise part of VDL sites on the SVDLR. At the time of writing, the Register comprises a total of 2,314 buildings[5] at risk across Scotland.

Summary

2.1.9 The review of existing practises highlights gaps in the SVDLR including the exclusion of sites below 0.1 hectare. The lack of formal recognition of smaller sites potentially excludes sites which are potentially more harmful to the community, for example, in residential areas, with the potential to attract antisocial behaviour and impact on wellbeing. The SVDLS also highlights the higher incidence of VDL in deprived areas compared with more affluent communities, potentially linking VDL- related harms and disadvantage more directly. More in-depth research is needed to establish the causal relationship between the two.

2.1.10 The Place Standard tool is a useful format for communities to evaluate the experience of living in their local area. The creation of a VDL analytical framework potentially builds on the format of Place Standard.

[5] Buildings at Risk Register for Scotland

3 Gauging the Potential Harms of Vacant and Derelict Land on Communities

3.1 Overview

3.1.1 This section reviews the potential harmful impacts of VDL on communities identified by the research, based on the findings of the literature review, stakeholder interviews and case study focus groups. A comprehensive summary is provided in **Section 3.5**.

3.2 Literature Review

Literature & Data Review –Summary

Health

- Presence of brownfield land can contribute to spatial inequalities of health outcomes and could be an important environmental determinant of population health and life expectancy;
- Positive health outcomes from participation in greening projects can remediate the harms caused by the existence of VDL; and
- There is a requirement to further research the location-specific impacts that VDL can have on communities in terms of physical and mental health outcomes and separate the specific impacts of VDL from wider socio-economic factors.

Environmental

- VDL can have a number of negative impacts on the environment. Factors such as contaminants represent environmental harms to soil, air and water quality, both within the site and potentially outside its boundaries; and
- There is a lack of research on the harmful impacts that environmental issues, even when remediated, result in failed redevelopment of sites and negative community perceptions of the local area.

Economic

- There are a number of economic barriers to the reactivation of VDL including the costs of remediation of contaminated land, the means and timescales for recovery of infrastructure expenditure and the possibility of failed development due to economic factors beyond a developers control;
- Much of the research places an emphasis on the measurement of the economic value of the solutions to VDL, rather than the economic harm caused by its presence; and
- More research is needed to identify any correlation solely between VDL levels/proximity and economic indicators. Property prices provide scope to quantify the impact of VDL.

Community

- Research demonstrates that the presence of VDL (including the deterioration of the surrounding environment) can lead to a decline in area perception;
- Further research is required to establish the extent of specific psychological harms caused by VDL characteristics and physical condition; and
- Further research is required to establish the harms on residents' perceptions of their communities and subsequent impact on individuals and communities. There is a lack of research on the established harms caused by VDL that are being addressed and, linked to this, the actual requirement for and benefits of intervention by temporary projects.

Data Review

- A number of data sources are available providing characteristics with which to profile a community;
- The combination of qualitative and quantitative data can provide additional context with which to describe a community potentially affected by VDL; and
- There is a dearth of data research proving any relationship between the presence of VDL and negative impacts on health, environment, economic and community characteristics of an affected community.

3.2.1 The literature and data review sought to establish the baseline evidence available regarding the impact of VDL on communities. A number of resources were reviewed ranging from academic to 'grey' literature (e.g. unpublished research, government reports and policy documents) and sources published from 1991 to 2019. The review of the research identified

four categories of harm; *Health, Environment, Economic and Community* which are presented in turn below. A discussion of the data review is provided in **Section 3.2.24**.

Health

3.2.2 The physical environment has been found to be a significant determinant of public health and health inequalities (World Health Organisation, 2008). Recent research into the relationship between the presence of brownfield land[6] and resulting impact upon health has found a "significant and strong, adjusted, area-level association" between brownfield land and morbidity rates (Bambra et.al, 2014). Local communities with higher amounts of brownfield land in England were found to have poorer health outcomes, including higher instances of debilitating long-term illnesses. Importantly, the research found that exposure to brownfield land could be an important environmental determinant of population health and life expectancy.

3.2.3 Crucially, the same research found that poorer outcomes appear to be attributable to brownfield land i.e. communities with similar socio-economic status in VDL areas suffer poorer health outcomes than similar socio-economically defined communities in non VDL areas. Upon these findings, the research highlighted the importance of the remediation and redevelopment of VDL being considered as a public health policy issue. In a follow up study, regional disparities in the association of brownfield land and the link between mortality and morbidity demonstrated a requirement for further research to determine the presence of spatial inequalities of health (Bambra et al, 2015).

3.2.4 In a qualitative research study on one community in Philadelphia, significant impacts of the presence of VDL on the community included crime and antisocial behaviour with subsequent effect on the communities' well-being (Garvin et. l, 2012). The study also highlighted impacts on physical health such as injury, the build-up of waste and attraction of rodents, and resultant psychological effects on anxiety levels, agitation and anger.

3.2.5 The impact of VDL on mental health has been researched in Glasgow, where more deprived communities were found to be disproportionately affected by environmental impacts and psychosocial stressors of VDL (Maantay, J and Maroko, A, 2015). The research also indicated an association between communities with higher deprivation levels and elevated rates of prescriptions for mental health issues including depression and anxiety. VDL characteristics across Glasgow demonstrate the increased likelihood of encountering VDL, with the largest proportion of VDL in high deprivation areas (69%), followed by medium deprivation (23%) and low deprivation (8%) (Mantaay, J, 2013).

3.2.6 Exposure to vacant and derelict land could be an important environmental determinant of standard of life, population health and life expectancy. Further research is required to determine the extent of the relationship between VDL and impacts on health.

Environment

3.2.7 Characteristics of VDL, particularly those with contaminants can have an impact on the surrounding area. Sites near major roads "increases the likelihood of lead in the soil, a legacy from when it was added to gasoline", while VDL sites which are upwind could "increase the likeliness of airborne contaminants" (Nassauer, 2014). Sites near water features (ponds, lakes, rivers) carry additional contamination risk factors for the environment as pollutants may leach into the nearby watercourses and travel through the wider network with potential impacts on both human health and wildlife. Vacant and derelict sites are commonly used for

[6] Although brownfield land is not always categorised as VDL, for the purposes of this literature review, the term is interchangeable as the research examines the role of derelict, contaminated, vacant and previously developed land.

the illegal disposal of hazardous waste (Duncan, 2013), which carries significant environmental contamination risks depending on the substances and quantities in question.

3.2.8 VDL formerly in industrial use, can present environmental hazards in the form of "*contaminants incorporated into structural materials, including asbestos, PCB's (polychlorinated biphenyls), lead, zinc and copper*" (Nassaurer, 2014) which can pollute waterways and spread beyond the site.

3.2.9 The appearance of VDL can also impact the perception of the local environment. The level of maintenance within an area was found to have the largest influence on an area's attractiveness, i.e. an absence of maintenance resulted in a poorer perception of the local area in contrast to well-maintained places (Morckel, 2015).

3.2.10 However, it is important to note that VDL sites can have some public value. Vacant and derelict sites, especially in urban areas, have the potential to serve as green infrastructure assets should a community be able to access and use them. Furthermore, some VDL sites help to mitigate flood risks through the capture and absorption of surface waters, and sufficient vegetation and attenuate erosion processes and act as carbon-capture systems (Kim, 2016). The study recommends an exploration of the public value of the identification of alternative strategies to use VDL in the short or long-term to support urban regeneration and renewal while sites have stalled in the development process (Kim, 2016).

3.2.11 There is ample literature regarding the ways that VDL sites can influence the local environment and human health directly. Factors such as contaminants can result in environmental impacts on soil, air and water quality, both at the site and outside its boundary. The emerging literature acknowledges some potential for beneficial effects in terms of 'ecosystem services. However, there is a lack of research on harms that environmental issues, even when remediated, play in determining the redevelopment of VDL sites.

Economic

3.2.12 Cessation of the former productive use is the economic driver for VDL. Former industrial areas have been disproportionately affected by the restructuring of Scotland's economy (Mantaay,2013; Webster, 2010). Deindustrialisation is seen to be both spatially and socially uneven with a high proportion of brownfield land in urban areas (Pike, 2017). Economic barriers to the reactivation of VDL include the cost of remediating contaminated land, the means and timescales for recovery of infrastructure expenditure and the possibility of failed development due to economic factors beyond a developers control (Adams, 2017).

3.2.13 The extent to which VDL causes economic harm is unclear. Research indicates that VDL is concentrated in areas of deprivation as measured by the Scottish Index of Multiple Deprivation (SIMD) (Mantaay, 2013).

3.2.14 Further research (Maantay and Maroko, 2015) verified this relationship statistically across Glasgow, running a simple Pearson correlation which found a positive association between VDL density and SIMD score.

3.2.15 Presence of VDL has not been subject to analysis solely against the economic indicators used in the SIMD; relationships between other factors such as health or crime may be driving this relationship. There is little in the literature to suggest that VDL density has a direct or indirect impact on employment or income. However, the literature does indicate that the proximity to VDL may instil negative perceptions of place, or social stigma (Litt and Burke, 2002; Litt et al., 2002; Garvin et al., 2012; Bambra et al., 2014). Such perceptions could have a negative effect on property prices and investor confidence.

3.2.16 A study of the economic impacts of greening land measured change in property prices around these areas (Heckert and Mennis, 2012). The research found incidences of enhanced economic value of property surrounding greened vacant sites in contrast to vacant sites with

no intervention (i.e. unmaintained) suggesting that a neglected appearance can have some impact on property prices. Further research is required to establish the extent of this relationship.

3.2.17 The economic cost of VDL represents a lost economic opportunity due to a lack of active use (Garvin et al. 2012). However, this can be difficult to quantify. The economic benefits of regeneration programmes can indicate such opportunity costs. The success of regeneration schemes is typically measured through economic indicators (Doick et al., 2004; De Sousa, 2003) or related tax-based and community development outcomes (Amekudzi and Fomunung, 2004). In such studies, the emphasis is placed measuring the economic value of the solutions to VDL, rather than the baseline harms caused.

3.2.18 There is a lack of research which identifies the baseline economic impacts of VDL specifically on communities. The available research discusses the economic impact of sites remaining inactive and of the influence this can have on the surrounding area with regard to property prices.

Community

3.2.19 Across Scotland, there are c.11,000 hectares of VDL across 3,640 sites (Scottish Vacant and Derelict Land Survey, 2018). Of these sites, 2903 (80%) are found within settlements of 2000+ people, of whom many are likely to encounter such sites regularly. Long term vacancy impacts many communities in Scotland, with 75% of sites across Scotland being vacant since 2006, and 50% since at least 1995 (Adams, 2015).

3.2.20 Where land is acquired in anticipation of future demand for development but is slow or not yet occurring is '*preventing development in many parts'* of Glasgow (Yates, 2015, p.10). Consequently, the slow rate of development of many sites and the tendency of owners to install restrictive fencing has been called an '*anti-social imposition'* in its removal of resident's ability to travel through areas within their community (Reynolds, 2011 p.371).

3.2.21 Community projects have long been thought of as a response to bridging the development gap in VDL and utilising the space for the community. Some communities in Glasgow have resorted to guerrilla urbanism by planting seeds on VDL sites (Guerrilla Gardening, 2018). Guerrilla urbanism is described as "*incremental and self-directed action toward increasing social capital, economic opportunity and general liveability*" (Lydon & Garcia, 2015, p.25) and echoes the emotional impact behind communities who have seen decline of their places both in the long and short term. These spaces have a crucial part to play in reversing the harm that VDL causes; namely the long-term decline into dereliction and perception of an area.

3.2.22 In Glasgow, temporary solution-based initiatives such as Stalled Spaces aim to facilitate and support the use of VDL as a community asset. Research found that 9 out of 10 participants felt their participation in a Stalled Spaces project had a positive impact on their wellbeing, with 75% of people feeling that they had become more connected and active within their community (Yates, 2015). Meanwhile uses have been found to encourage knowledge exchange, learning opportunities, mobilisation and a reduction in social isolation by providing a common goal and aspiration for communities, and begins to address the harms that the presence of VDL has had on the community (Skimming, 2018). Although there have been many solutions-based research papers written on the benefits of the reactivation of VDL, there is currently a lack of research on impacts on the community due to the presence of VDL. Further research is required to consistently establish the impacts on perceptions of areas and the emotional impacts on individuals and the wider community because of the presence of VDL.

3.2.23 The literature indicates that there is a lack of research on a causal relationship between the presence of VDL and community impacts including influences on physical/mental health, increased levels of crime/antisocial behaviour, a reduced quality of life and reduced investment/economic opportunity. Much of the research is benefit focused and highlights a

requirement to determine the need for interventions on VDL across Scotland. The monitoring and evaluation of harms caused by VDL is crucial to addressing the impacts upon communities.

Data

Socio-economic Indicators

3.2.24 Several data sources were reviewed to establish the potential for a correlation between the presence of vacant and derelict land, and tangible harms experienced by the community. Many public data sources were found which enable the profiling of a local community, including:

- Proximity to vacant and derelict land;
- Employment statistics including income indicators, age profiles, household sizes;
- Education indicators including educational attainment (including qualifications), attendance rates, proportions of people aged 16-19 not in full time education, employment or training and proportion of 17-21-year olds entering full time higher education;
- Health indicators including age of first time mothers, rates of ante-natal smoking, low birthweights, comparative illness factors, hospital stays related to alcohol misuse, hospital stays related to drug misuse, standardised mortality ratios, proportion of population being prescribed drugs for anxiety, depression or psychosis, proportion of live singleton births of low birth weight and emergency stays in hospital; and
- Economic data such as dwelling characteristics, house prices and sale data.

3.2.25 Some fire and crime indicators are available, with the latter only available at data authority level. This has resulted in a shortfall of crime data able to be formally obtained at a local level with regards to incidences of crime on VDL sites.

Correlation between Socio-economic Indicators and the Presence of VDL

3.2.26 Despite the availability of data which can profile community characteristics, there is a current dearth of data research proving any relationship between the presence of VDL and negative impacts on health, environment, economic and community characteristics of an affected community. Research demonstrates that areas of higher deprivation are more likely to have vacant and derelict land in close proximity (Mantaay, J, 2013).

3.2.27 The Scottish Index of Multiple Deprivation 2016 (SIMD) identifies concentrated areas of deprivation and the specific challenges which areas face. The information is represented via data zones, of which there are 6,505 in Scotland. Each data zone represents between 500 to 1,000 household residents[7]. Overall SIMD ranks are provided in addition to a further seven categories of deprivation. The seven categories provide a ranking of deprivation relating to income, employment, health, education/skills, housing, geographic access and crime. The Scottish Public Health Observatory also (ScotPHO) publishes health indicators such as physical health, wellbeing and lifestyle data from national to local level. The Scottish Government publishes annual data showing the proportion of Scotland's population living within 500 metres of a derelict site[8]. The data available ranges from high level (national/county) to local data zone outputs.

[7] SIMD https://www2.gov.scot/Topics/Statistics/SIMD/FAQUsingSIMD

[8] Population living in close proximity to a derelict site, Scottish Government https://statistics.gov.scot/resource?uri=http%3A%2F%2Fstatistics.gov.scot%2Fdata%2Fproximity-to-derelict-site

3.2.28 Although data to identify the characteristics of a community is available, no causal relationship between the presence of VDL and direct detrimental community impact has been established. While it is clear from the literature and date review that communities of higher deprivation are more likely to come into frequent contact with VDL, further research is required to establish a relationship between VDL and impacts on quality of life. Without the creation of a data analysis tool, assumptions must be made. This data could be spatially combined via heatmapping to provide a simple visual representation, combining public data, local knowledge and local authority held information such as planning, regeneration, contaminated land and environmental health data.

3.2.29 Additionally, it is important to note that upon consideration of the harmful impacts of VDL, this should apply to the 'affected community'. The 'affected community' can consist of those in closest proximity but can also be measured by population size beyond data zone boundaries or a proportion of the residential population disproportionately affected by decline (i.e. the loss of a major employer).

3.2.30 It is also important to consider the resilience of the local community in their ability to adapt to the decline and dereliction of their local area. It may be appropriate to consider the possibility of a lesser impact of VDL due to a communities' ability to adapt and overcome the negative impacts of sites which have fallen out of productive use in contrast to less resilient communities.

3.2.31 The combination of quantitative and qualitative data may provide additional context and aid in the understanding of the level of impact that VDL has had on the 'affected' community. The use of survey, consultation, workshop and place standard data can also aid in the assessment of impact.

3.3 Stakeholder Consultations and Case Studies

Stakeholder Interviews and Case Study Summary

Health

- Impacts on wellbeing caused by the presence of VDL can be exacerbated by concerns over risks of contamination to health;
- Incidences of crime and antisocial behaviours are more frequent on VDL sites and have an impact on the wellbeing of the community; and
- Misinformation regarding the level of contamination and risks to health can be misreported among the community acting as a stressor.

Environment

- VDL sites which are unmaintained can exacerbate its negative impact;
- Contaminants from previous use can be a barrier to redevelopment;
- Natural greening of VDL sites can result in use of the site by the community if they are able to access it, resulting in the loss of a community asset upon redevelopment; and
- The appearance of VDL can impact visitor perception and length of stay.

Economic

- Lack of economic opportunity can lead to the loss of local workforce and impact chances of recovery;
- Lack of investment can result in disenchantment and an opinion of a low chance of recovery among the community;
- Lack of investment in infrastructure can be a barrier to development, leaving sites vacant for longer and postponing their potential to contribute to the local economy; and
- Structure left below ground level from demolition can provide additional financial barriers to redevelopment.

Community

- Visually prominent VDL can have a greater impact on area perception (i.e. on major commuter routes);
- Perceptions of the speed of the development process can be harmful to communities. Mitigating this harm may require managing expectations of speed of recovery;
- VDL sites formerly used as community green spaces can be lost following redevelopment. Difficult to ascertain if a site is harmful when the site is frequently used by the community; and
- The length of vacancy/dereliction of a site impacts parts of the community in different ways i.e. when a site first becomes vacant (i.e. sense of loss) to the impacts of long-term dereliction.

3.3.1 Fifteen stakeholder interviews took place with a selection of local authorities and organisations including:

- Argyll and Bute Council;
- Central Scotland Green Network Trust;
- Clyde Gateway;
- Falkirk Council;
- Glasgow City Council;
- Historic Environment Scotland;
- NHS Scotland;
- North Ayrshire Council;
- Scotland's Regeneration Forum (SURF);
- Scotland's Towns Partnership;
- Scottish Canals;

- Scottish Community Alliance;
- Scottish Environmental Protection Agency (SEPA);
- West Dunbartonshire Council; and
- Wheatley Group.

3.3.2 The stakeholders were selected to cover a range of perspectives and types of engagement with VDL and tacking its potential harms across Scotland.

3.4 Focus Groups

3.4.1 Focus Groups were held in five areas to discuss local experiences of the community harms associated with VDL and how it affects communities. A summary of each focus group discussion is outlined below.

Argyll and Bute

3.4.2 A focus group was held on the 6th June 2019 with representation from Adrishaig Community Council, Lochgilphead Phoenix Project, Lochgilphead Community Council, MAKI Area Community Planning Group and the Adrishaig Development Company. A discussion on the impacts of VDL in the Argyll and Bute Area noted the following:

- Ownership of VDL has been difficult to trace in the area and impacts on the ability of the local community to take action;
- The decline of the industrial legacy along the waterfront is very visible and contributes to the overall decline of the area;
- VDL in the area is impacting on length of stay for visitors and reducing overall economic benefit from visitor spend;
- Traumatic effect on the community with regards to the loss of activity and character of the area;
- Derelict properties are attracting antisocial behaviour to VDL with poor security; and
- Fewer residents of working age are staying in the community due to loss of economic opportunity. The closure of many businesses in the main retail area has contributed to the negative perception of the area. The loss of businesses may be due to several socioeconomic factors, but participants noted that the VDL present throughout the area contributes to its visual decline.

3.4.3 Vacant and derelict land is currently measured in Argyll and Bute by the inclusion of data to the SVDLR.

Falkirk

3.4.4 A focus group was held on the 23rd May 2019 with representation from the Central Scotland Green Network Trust (CSGNT), SEPA and the contaminated land, environmental health and planning teams at Falkirk Council. A discussion on the impact of VDL in the Falkirk area noted the following:

- Visually prominent buildings located in the heart of the community can have the greatest impact (e.g. close to commuter routes or in town centres). Edge of town VDL sites may not necessarily impact the community;

- Many of the older members of the resident population are adversely impacted from observing the decline and closure of some sites over long periods of time;
- Some residents have contacted the authority seeking further information over responsibilities or ownership of well-known vacant and derelict sites. Additionally, there has also been some confusion by communities over the local authorities' responsibility to tackle problematic VDL sites regardless of its ownership;
- The size of site often does not correspond to the greatest impact. Smaller sites (less than 0.1ha) can cause significant harm to a community should they be the focus of regular nuisance such as antisocial behaviour; and
- Sites surrounded by fencing/boundary walls can have lesser impact as such sites do not have any interaction with the general public.

3.4.5 Current measurement focuses primarily on the annual provision of VDL data for the SVDLR. Annual visits by local officers keep track of the condition of VDL in the Falkirk Council area. Many local authorities across Scotland use environmental data management software to record environmental issues on sites within the local authority area. However, resourcing limits the amount of information on VDL the authority can gather and maintain.

Glasgow

3.4.6 A focus group was held on 7th June 2019 with representatives from Glasgow City Council, Possilpark Greenspace and Glasgow City Region. A discussion on the impact of VDL in Glasgow noted the following:

- Sites which have been neglected can prohibit or inhibit movement. Many of these sites are close to each other, resulting in a clustering effect and exacerbating the impact;
- Cleared sites provide large areas of open space which tend to be avoided by the community due to impacts on feelings of safety;
- Appearance of VDL can generate apathy towards the local area. Lack of maintenance or repairs to damaged VDL can contribute to its appearance and encourage fly tipping and vandalism;
- Developer perceptions can be impacted by the condition and cost of remediating contaminated sites and the availability of information on the extent of its contamination. Should a developer receive inadequate or incomplete information, this can result in a loss of confidence and interest in its redevelopment, resulting in a longer period of vacancy. It is important to acknowledge that remediated sites remain on the contaminated land register until the owner/developer elects to go through the identified process to have it removed. This may impact the likelihood of redevelopment should the site remain on the register for a long period of time after it has been remediated; and
- Many communities live close to VDL. For example, 100% of Possilpark's population are within 500m, 96% within 250m and 68% within 100m.

3.4.7 Glasgow City Council has a number of initiatives to remediate VDL such as temporary use initiatives, bioremediation of contaminated sites and working partnerships with local organisations to tackle the impact of VDL. Measurement of the amount of VDL is currently undertaken in the annual submission of data to the SVDLR.

Tayport Community Trust

3.4.8 A focus group was held with members of the Tayport Community Trust on the 6th August 2019. The Trust has undertaken the redevelopment of the former Abertay steelworks into a

community hub which will be complete by the end of 2019. The workshop focused on VDL in Tayport and the impact which the dereliction of the steelworks had on the community.

- The local community have previously sought to purchase VDL, but ownership of VDL sites in the area has proven to be a significant barrier;
- The amount of VDL in the local area contributes to 'negativity, doubt and scepticism' of recovery;
- VAT regulations resulted in unforeseen costs for the refurbishment of the former Steelworks. Heavy contamination and dust issues represented risks to health. Impacts on community perception were noted with a sense of loss and wasted opportunity due to the 30-year period of vacancy;
- The appearance of VDL in the area is an eyesore and negatively impacts on visitor experience; and
- Antisocial behaviour and vandalism on VDL sites contribute to decline of the area and impacts on investor confidence.

3.4.9 The workshop provided an opportunity to discuss the challenges of addressing the harms of VDL from a community perspective. Fife Council annually submit VDL data for the SVDLR.

West Dunbartonshire

3.4.10 A focus group was held on the 13th June 2019 with representatives from West Dunbartonshire Council, Scottish Environment Protection Agency (SEPA), Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES). The participants held a number of different roles (planning, regeneration, conservation, environmental health and contaminated land). A discussion regarding the community impacts of VDL in the WDC area noted the following:

- Extensive contamination is present at some VDL sites across WDC, including Queens Quay (former industrial shipyard in the process of redevelopment). Misinformation regarding the level of contamination and risks to health at Queens Quay have been reported among the community;
- The ongoing dereliction of Queens Quay was highly visible to local community and situated in close proximity to Clydebank town centre. Formerly a large employer, it negatively impacted the local communities' perception of the local area on its closure since the early 2000's who have since seen the site decline into dereliction (legacy impact);
- Costly remediation strategies have impacted the likelihood of redevelopment, resulting in dereliction of several sites awaiting development and often contributing to decline of surrounding area;
- The dereliction of Carless (former oil Depot) has become a recreational resource for the community. Some local residents objected to its allocation in the LDP noting that the site had greened over and was used regularly; and
- Other WDC VDL impacts include poor perceptions of recovery by the community, damaged investor confidence and variation of VDL impacts with regard to previous use, extent and types of subsequent harms caused. Fencing around VDL also restricts freedom of movement and access to cultural heritage assets within a VDL site boundary for the local community.

3.4.11 Current measurement of VDL focuses primarily on the annual provision of VDL data for the SVDLR. The environmental health and contaminated teams routinely collect data on vacant

sites via specialist software, informed by information sent in by the general public and regular site visits.

3.4.12 The case study focus groups and stakeholder consultations demonstrated variations in impacts from VDL across urban and rural contexts and from participants experiences in observing the harmful impacts of VDL.

3.5 Differences between the Results of the Literature and Data Review and the Stakeholder Consultations/Case Studies

3.5.1 The case studies and stakeholder discussions provided an opportunity to expand upon the results of the literature and data review. Key findings include:

- A requirement for greater consideration of the impacts of sites below 0.1 hectare. Often these sites can attract antisocial behaviour and impact on the wellbeing of those living nearby but are not formally recorded in the SVDLR;
- Communities can perceive the risk to health from contaminated VDL to be greater than is accurate. This in turn can impact on their wellbeing;
- VDL in proximity to local centres or on major transport routes can cause greater impact due to their visibility; and
- The impact of VDL can impact different parts of the community in relation to length of dereliction i.e. sudden loss of major employer or frustration at long term vacancy and lack of recovery/productive use.

3.6 A Summary of Harms Identified During the Research

3.6.1 The following harmful community impacts resulting from the presence of VDL was identified during the research:

Health

- There is evidence of a spatial association between interaction with VDL and impacts on physical health with regards to poorer health outcomes, population health and life expectancy;
- VDL can negatively impact community wellbeing, reported effects ranging from anxiety levels, agitation and anger to increased incidence of crime and antisocial behaviours. Perceptions of risk to health from contaminated sites can also impact wellbeing and may contribute to poorer physical health outcomes;
- VDL may inhibit or prohibit movement through an area influencing feelings of personal safety and restricting interaction/use due to fencing/hoarding; and
- Evidence suggests that communities in areas of higher deprivation interact with VDL more regularly, with disproportionate impacts on their health and wellbeing.

Environment

- Contaminated VDL sites can result in the pollution of watercourses, with potential for airborne contamination, impacts on human health and wildlife;
- Contaminants from VDL (typically former industrial uses) can present potential environmental hazards in the form of materials incorporated into structural materials e.g. asbestos;

- Contaminated VDL sites requiring costly remediation can act as a barrier to development; and negatively influence perception; and
- VDL sites which are not maintained can negatively influence area perceptions, locally and externally.

Economic

- The cost of remediating contaminated land, the means and timescales for recovery of infrastructure expenditure and development risk due to economic factors beyond a developer's control reduce the likelihood of redevelopment on VDL sites;
- Proximity to VDL negatively impacts developer perceptions and confidence;
- Significant opportunity cost may be associated with continuing vacancy and dereliction; and
- The level of maintenance of VDL sites can influence values of neighbouring properties.

Community

- VDL can have a significant impact on community perceptions of the local area. Visibility and clustering of VDL can have a multiplier effect and exacerbate these;
- Impacts can vary on different parts of the community e.g. legacy effects may be keener for older residents more aware of what sites were previously used for and decline over time from a previously productive use;
- VDL sites used as community green spaces can be lost following redevelopment, negatively affecting the community. It is important to recognise potential harms from removal of community assets or the refusal of temporary use of a site, and suggest measures to offset them; and
- More affluent communities may have greater resilience to cope with the impacts of VDL including the capacity to source funding and the skills of local working or retired professionals (i.e. lawyer, solicitor) to set up organisational structures. While this may accelerate reuse, the converse is also true – that communities lacking such resources may see slower, more incremental change.

4 Analytical Framework

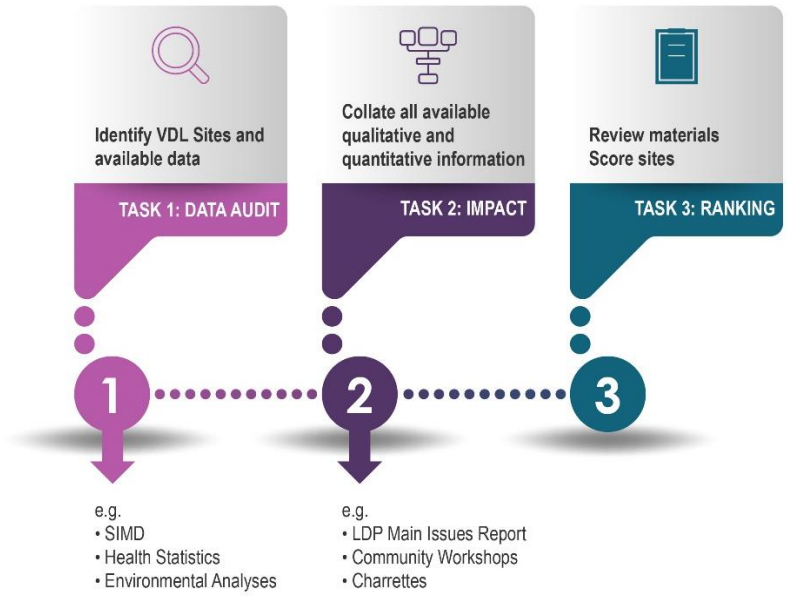
4.1 Overview

4.1.1 This section suggests an approach to assess the potential harmful impacts of vacant and derelict land on communities. The aim is to add a layer of evidence, currently not taken into account by any formal mechanism, to inform decisions relating to VDL.

4.1.2 The tool is intended to be used by local authorities and other bodies to evaluate the scope of VDL within a designated area (i.e. a town or village within a local authority area).

4.1.3 The tool could be used in conjunction with a statutory planning process such as the Local Development Plan (LDP). Alternative processes could include its use to inform local place plans, assist preparation for policy interventions such as Compulsory Sales Orders and other evidence gathering exercises that may assist with regenerating a VDL site.

4.1.4 The proposed steps in the process to gather the required information to assess harms of specific sites are outlined below.



4.2 Step 1: Data Audit

4.2.1 The first stage in the data collation process should focus on gathering available baseline data and any internal or external databases (i.e. SVDLR) on each of the VDL sites within the local authority area. The purpose of Step 1 is to begin to identify VDL sites within the local authority area which are considered to be most likely to be actively harming communities. Step 1 aims to narrow down the list of sites within the local authority area and identify key sites to take forward into Step 2 for further assessment. Step 1 should take the following characteristics into consideration:

- **Specific location of site:** To what extent is it highly visible/prominent within the local area and how frequently does the local community encounter it?

- **Whether they are individual sites or part of a cluster**: To what extent does it negatively contribute to the decline of its surrounding area and the local perception of the area?
- **Ownership profile of site**: Have interested parties been unable to get in touch with the owner? How often is it the source of frequent complaints from the local community because of its condition or is it locally significant due to its previous use?
- **Condition of site**: Does the site have dangerous structures or recorded contamination? Is it neglected and impacting the appearance of the surrounding area?
- **Antisocial behaviour issues including vandalism or fire raising**: Is it well known for antisocial behaviour incidents by both the local community and the local police/fire brigade?
- **Surrounding community**: What are the characteristics of the surrounding community and what is their capacity to adapt to VDL? To what extent are VDL sites the subject of complaints? How do VDL sites impact the day to day lives of the community with regard to movement, wellbeing etc?
- **Green infrastructure**: To what extent is the VDL site frequently used and valued by the community as a local green asset for activities? How safe is the site for people to use and is it maintained?
- **Consider which sites (if any) are impacting the community but not yet on the VDL Register**: This may include sites which have recently become vacant or sites below 0.1 hectare.

4.2.2 It is important to note that the above list is not exclusive. There may be other VDL sites (e.g. edge of town sites) which do not display many of the above characteristics. It is important at this stage to use local authority knowledge to consider **all** potentially harmful sites to accurately narrow down a list of sites for further assessment.

4.2.3 Consideration should also be given to the definition of the 'community' affected by the VDL site. This could be the business community, a community beyond administrative boundaries or varying population sizes or specific age brackets of the community throughout the authority area. Areas frequently used by the community such as key entry points to an area, or valued community infrastructure may also be identified as an affected community.

4.2.4 At this stage, discussions should take place with the Police and Fire Brigade to highlight any sites significantly impacting communities of which data may not be publicly available. These discussions may focus on sites well known to the Police or Fire Brigade with regular incidents of recorded crime, antisocial behaviour or vandalism.

4.2.5 The data collected in Step 1 should also take account of any available 'Health', 'Environment', 'Economic' and existing 'Community' data in addition to the characteristics identified in **Section 4.2.1**. An example of the data[9] which should be collected is shown in **Table 4.1**.

4.2.6 With regard to the data sources in **Table 4.1**, the data should be gathered as a means of characterising the local community to provide a basis for intervention. However, further investigation would be required to establish **causal** links between VDL and reported impacts.

[9] The range of data collected can incorporate multiple intermediate data zones to demonstrate the potential variation in data across a geographic area affected by the VDL site.

Table 4.1 Recommended Data to Inform Step 1

Type of Impact	Data Source	Type	Source	Relevance
Health/Wellbeing/ Safety	• % of population prescribed medication for mental health issues. • Proportion (%) of low birth weight. • Comparative Illness Factor (CIF) • Health SIMD rank	Quantitative	https://simd.scot/	Contextual
	Local authority community survey results exploring quality of life (e.g. wellbeing, general health and opportunities for exercise).	Qualitative	Internal local authority records	Information regarding quality of life in local area. Potential to have information with regard to specific VDL sites.
	Recorded incidents of crime in local community, Crime SIMD rank.	Qualitative	Discussions with local police/fire brigade/https://simd.scot/	Contextual
Environment	Antisocial Behaviour/Petty Crime including fire raising.	Qualitative/Quantitative	Discussions with local police/fire brigade	May identify site specific incidents i.e. VDL with most frequent reports of ASB.
	Contamination.	Qualitative/Quantitative	Internal local authority records (Contaminated Land Register/Strategy)	Site specific information with regard to impacts on surrounding environment (including watercourses) and potential risks to health.
Economic	% of local population who are income deprived, Income SIMD rank.	Quantitative	https://simd.scot/	Contextual
	% of local population who are employment deprived, Employment SIMD rank, Education/skills domain rank.	Quantitative	https://simd.scot/	Contextual
	Developer/Investor perceptions (residential and commercial), Housing domain rank.	Qualitative This likely not to be formally recorded/readily available but may consist of interviews	Internal local authority knowledge, interviews	Site specific information with regards to impacts on area perception or fall on neighbouring property values if any.

Type of Impact	Data Source	Type	Source	Relevance
		with local property professionals to understand the impact of VDL on local investment/property values.		
	Education SIMD rank, % of 17-21 year olds entering full time higher education, % of 16-19 year olds not in full time education, employment or training & % no qualifications.	Quantitative	https://simd.scot/	Contextual
Community* **An assessment of community impact may be further reinforced by the community engagement and additional data gathering discussed in Step 2*.	% of community living within a 500m radius of VDL, Level of public transport accessibility.	Quantitative	https://statistics.gov.scot/home, https://simd.scot/	Contextual/ demonstrates how frequently the local community encounters VDL sites.
	Formal responses to LDP on specific VDL sites.	Qualitative	Internal/ Published on Local Authority website.	This may provide relevant information on VDL sites which are having a detrimental impact on the local community (i.e. impacting quality of life)
	Registered complaints with the local authority.	Qualitative	Internal local authority records	This may provide relevant information on VDL sites which are having a detrimental impact on the local community (i.e. impacting quality of life)

4.3 Step 2: Impact

4.3.1 Following the identification of harmful sites in Step 1, Step 2 aims to identify additional information in order to finalise the list of sites taken forward for assessment into Step 3. **Table 4.2** identifies the data to be gathered in Step 2:

Table 4.2 Additional data to be gathered in Step 2

Additional Data	Comment	Data Source	Type	Relevance
Place Standard Tool	The inclusion of Place Standard data is recommended if available, but consideration should be given to affected communities who may not have used the Place Standard tool, with care taken to ensure that all affected communities are considered equally.	Qualitative	Internal records, Local community groups	Relative importance. Of relevance to VDL, *"Care and Maintenance", "Feeling Safe" and "Moving Around"* criteria may identify harmful sites.
Local authority held information (from internal activities)	Inter-departmental discussions will assist efficient communication and database sharing (i.e. knowledge sharing between Planning, Regeneration, Economic Development, Contaminated Land and Environmental Health departments).	Qualitative/Quantitative	Internal local authority databases	Shared information between departments may identify characteristics of VDL sites which may be impacting the local community (e.g. contaminants and potential impacts to health if encountered).
Local authority held information (from external activities)	Including relevant survey outcomes (e.g. regeneration initiatives), consultation outcomes, local knowledge regarding local investor behaviour/views and previous community workshop outcomes.	Qualitative	Internal local authority data	Information on how specific VDL sites may impact perception.
Any additional area specific relevant statistical data	This may include the inclusive growth diagnostic etc	Qualitative/Quantitative	Scottish Government	Contextual

4.3.2 Community engagement might also be undertaken at this stage to share findings and involve the community in a shared understanding of the issues and/or to agree a list of harmful sites. For example, this may consist of a local online survey or use of the tool described in Step 3 with the community. This would provide additional context with regard to gaining an insight into local perceptions of how the presence of VDL has impacted the local community (i.e. their health, the local environment, economic characteristics and their wider community capacity to address decline).

4.3.3 The combination of data gathered from Step 1 and further quantitative and qualitative data in Step 2 will identify the VDL sites of greatest impact and provide the required information to assess VDL sites in Step 3.

4.4 Step 3: Ranking (Optional)

4.4.1 Step 3 proposes a method to identify the degree of harm for each VDL site and to collect evidence to support business cases for intervention. The results can be shown visually to swiftly compare the relative impacts of VDL sites across the local authority area.

4.4.2 Following the collection of quantitative and qualitative VDL data for each site, each of the site criterion shown in the scoring table (**see Figure 4.1**) can be assessed on a rating from 0 to 6 (**see Figure 4.2**). The table is accompanied by a set of criteria (**see Table 4.3**) explaining the method for scoring, split by four types of impact: *Health, Environment, Economic and Community*. This shows examples of characteristics which can be referred to in scoring. For example, each criterion will be given a score in the scoring table, with an average score given to each overall type of impact caused by the presence of the VDL site (e.g. Health).

4.4.3 The average score should then be calculated for each of the four types of impact. This provides a gauge of harm for each impact category which can then be used to calculate an average overall harm score for a site.

Figure 4.1 Scoring Table to be used

Type of Impact	Criteria	Site Score
Health	1.Physical Health	
	2.Wellbeing	
	Average Score	
Environment	3.Previous Use/Contamination	
	4.Crime	
	Average Score	
Economic	5.Economic Impact (Residential)	
	6.Economic Impact (Commercial)	
	Average Score	
Community	7.Community Perception	
	8.Safety	
	9.Community Infrastructure	
	Average Score	
Overall Average Score		

Figure 4.2 Scoring Matrix

Harms	
Cat 6 Very **High** level – Significant negative impact of VDL	Multi-faceted negative impacts on access, health/wellbeing/perception /behaviour.
Cat 5 **Strong** level	Strong, notable and substantial impact on community and perceptions.
Cat 4 **High** level	High level impact but not in all areas (health, environmental, economic, social).
Cat 3 **Moderate** level	Some effect of one type
Cat 2 Marginal(**low**) level	Some marginal impact, impact on place and perception
Cat 1 **Low** level – Negligible impact from presence of VDL	Barely registers impact, not seriously debilitating
Cat 0 Level 0 – No impact from presence of VDL	No negative impact whatsoever

Table 4.3 Scoring Criteria

Descriptor	Criteria	Example Characteristics
Health	1.Physical Health	▪ The site restricts freedom of movement for the surrounding community with its enclosure or condition of the site interrupting commonly used walking or cycling routes. Injuries on site may be reported by those close to or inside the site (High); ▪ The site contributes to overall degradation of the area (not pleasant to move around in) leading to avoidance of walking/cycling (Medium); and ▪ The site has no/low impact on physical health of community (Low/No Impact).
	2.Wellbeing	▪ The site contributes to the overall degradation of the surrounding area, having a significant impact on the wellbeing of the affected community and is regularly subject to complaints (High); ▪ The site has a moderate impact on community wellbeing (anxiety, stress or anger) (Medium); and ▪ The site has minor/no impact on community wellbeing (Low/No Impact).
Environment	3.Previous use/contamination	▪ Site records indicate considerable levels of contamination which is not contained and has the potential to pollute watercourses with potential severe impact on the community (High); ▪ The actual levels of site contamination are moderate, but community comments indicate significant feelings of danger and potential harm than the actual contamination risks recorded (Medium); and ▪ The site is considered safe for human interaction and is frequently occupied by cyclists or walkers? (Low/No impact). Note: The legal definition of contaminated land by the UK Government is: "*Land is legally defined as 'contaminated land' where substances are causing or could cause: significant harm to people, property or protected species, significant pollution of surface waters (for example lakes and rivers) or groundwater.*"
	4. Crime	▪ The condition of the site encourages regular gatherings resulting in significant levels of antisocial behaviour and recorded crime. There may be reported gatherings/reports of criminal activity on the site (High); ▪ The site occasionally is subject to such gatherings sometimes resulting in reports of anti-social behaviour, fly tipping, vandalism or fire raising? (Medium); and ▪ Negligible/no human activity on the site. No impact on the surrounding community? (Low/No Impact).
Economic	5. Economic Impact (Residential)	▪ The presence of the VDL site has resulted in a significant impact on perception of the area for potential buyers i.e. houses on the market for long periods of time or a potential reduction in value of homes. (High); ▪ The presence of VDL has resulted in minor impacts to value and/or perception of the vitality of

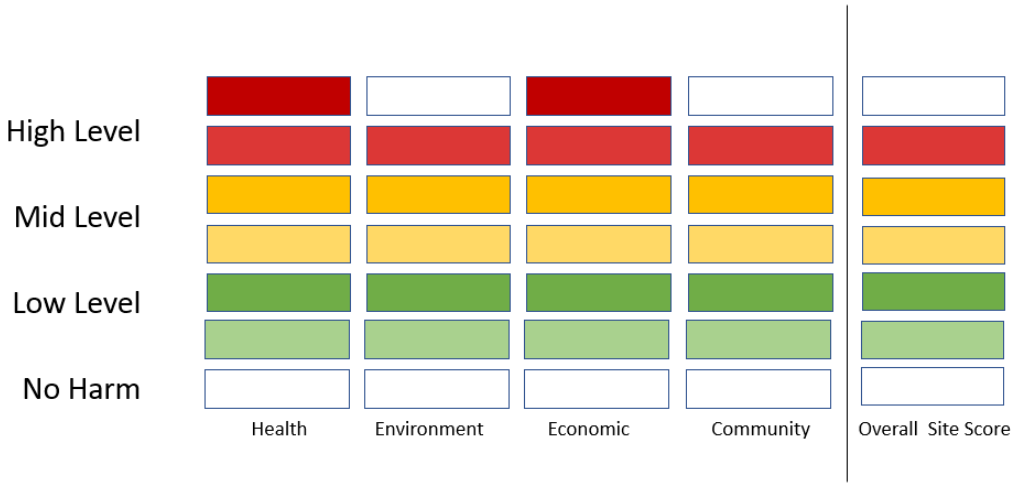
Descriptor	Criteria	Example Characteristics
		life in the local area. It may consist of regular petty damage to property. It may also have resulted in slowed down growth or a reduction in positive household relocation (High/Medium); ▪ The presence of the VDL site is not significant enough to warrant any economic impact (Low/No Impact);
	6. Economic Impact (Commercial)	▪ The presence of the VDL site has significantly impacted on the value of land/businesses in close proximity or reduced footfall/resulting income (High); ▪ The presence of vacancy/dereliction resulted in lost/abandoned attempts at reinvestment/regeneration (High); ▪ The site is contributing to the decline of the surrounding area and is having a temporary (following closure) impact on business (Medium); and ▪ The presence of the VDL site is not significant enough to warrant any economic impact (Low/No Impact).
Community	7. Community perception* *Identified through the use of existing authority qualitative information or from consultation activities.	▪ The presence/condition of the VDL site significantly negatively impacts the affected communities' perception of the general area including regular feelings of apathy or anger (High); ▪ The site has contributed to a moderate impact on perception (i.e. it does not go unnoticed by the community and may be the subject of regular conversation at public events) (High/Medium); and ▪ The VDL site has negligible/no impact on community perception (Low/No Impact).
	8. Safety	▪ Multiple and regular complaints of antisocial behaviour affecting feelings of safety and/or freedom of movement (High); ▪ Moderate impacts on feelings of safety and/or freedom of movement (Medium); and ▪ No negative impact on movement/safety (Low/No Impact).
	9. Community Infrastructure	▪ The community has expressed repeatedly that they wish to make use of the VDL site and have been unable to access the site or required information (ownership, condition etc.). (High/Medium); ▪ The community have periodically used the site for temporary community activity but are prevented from using it for community benefit to supplement other assets (Medium); and ▪ The VDL site is permitted to be used as a permanent community asset. Consistent use of community activity that would negatively impact the community should the site be reactivated? (Low harm score as it is used for community activity. High likelihood of harm if they lose the asset due to redevelopment).

4.5 Demonstrating the Results

4.5.1 Having arrived at an average score of harm by category for each site, scores from 0 (No harm) 1-2 (Low Level), 3-4 (Mid-Level) and 5-6 (High Level) could be presented in a simple 'graphic equalizer' format. An overall site score can also be visually represented. An example is shown in **Figure 4.3** below.

4.5.2 The format provides a visual representation of the results of the qualitative and quantitative assessment allowing a quick method of reviewing multiple sites simultaneously.

Figure 4.3 Visual Representation of Results



5 Limitations & Lessons

5.1 Overview

5.1.1 This section outlines the limitations of the research and identifies lessons to be applied in future research.

5.2 Limitations

Data

5.2.1 Throughout the research, comparable data varied significantly due to differences in the availability of open source data and the extent to which data can be compared and analysed (i.e. availability of comparable data at different data zone levels).

5.2.2 Quantitative research focusing on the use of data to explore the potential for a correlation between vacant and derelict land, and negative community impacts is recommended. This can accompany the recommended analytical framework and over time may identify improvements in overall standard of life for communities following the reactivation of VDL.

5.3 Lessons for Future Research

5.3.1 The relationship between the presence of VDL and impacts on quality of life for a community have not yet been established using quantitative methods. Research identifies a correlation between high deprivation and a greater likelihood of encountering VDL but acknowledges this may be one of a number of wider socio-economic factors.

5.3.2 Future research should take account of the role which data can play in mapping and evaluating the impacts of vacant and derelict land in relation to communities. This research identified a number of negative community impacts which may form the basis of future quantitative research.

5.3.3 The research also highlighted the difference in impact that VDL has on different parts of the community. It is important to acknowledge that not all redevelopment of VDL will result in the removal of negative impact. Future research may assess the implications of a loss of open space or community asset as a result of a sites redevelopment.

6 Summary

6.1 Overview

6.1.1 This research explores the harmful effects of VDL on communities and proposes an analytical framework which could be used by local authorities to assess the harmful impact of VDL sites.

6.2 Research

6.2.1 At Stage 1, a review of the literature and data was undertaken to establish the existing evidence base for the harmful impacts of vacant and derelict land on communities. The review found evidence of harmful aspects of VDL, although little to date, which has clearly established community impacts directly attributable to vacant and derelict land.

6.2.2 Stakeholder engagement and case study focus groups discussed community harms and measurement procedures for vacant and derelict land. A number of different types of harms were identified, usually dependent on the scale, former use and surrounding context of VDL and often defined by the composition of the affected community and its former relationship with the site.

6.3 Requirement for the Framework

6.3.1 Stages 1 and 2 informed the creation of an analytical framework. A testing workshop was held in July 2019, from which feedback was incorporated into the final framework.

6.3.2 The analytical framework indicates a process for assessing the impacts of VDL sites which may be used in conjunction with existing statutory processes, reducing requirements for additional resourcing, and repeated at regular intervals to address the most harmful sites.

6.3.3 Importantly, the framework has not been developed as a stand-alone mechanistic process. Rather, it is intended to form part of the wider national and local decision-making processes relating to the effective reactivation of VDL.

6.3.4 Some reflective qualitative augmentation (e.g. around community perceptions) is required, and a forward approach will also consider the economic implications of potential VDL site-related opportunities (which is the subject of parallel research).

6.4 Next Steps

6.4.1 The research has established the requirement for a mechanism to address the consequences of vacant and derelict land on communities and further data research. There is also a requirement for a positive and relatively objective VDL monitoring framework to ensure up to date, relevant and insightful consideration and comparison. This could be achieved and supported using open access data routinely collected in Scotland by local authorities and civil organisations.

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Appendix A Testing Workshops

A.1 Testing Workshops

A.1.1 As part of the development of the analytical framework, two testing workshops were held. The first was held on the 10th June 2019 as part of the International Making Place Conference hosted by NHS Health Scotland and the World Health Organisation in Glasgow. It was attended by approximately 20 people. The workshop included a presentation and discussion on the results of the research, and a roleplaying exercise in which participants could attribute an impact rating on fictitious sites from different perspectives (resident, landowner and business owner).

A.1.2 Feedback from the workshop demonstrated that the utilisation of the measurement framework in practice by a local authority would significantly benefit from local knowledge held by officers. The consideration of impact for different members of the community was well received.

A.1.3 The second testing workshop was hosted by the project team at the Tontine Building in Glasgow.

Figure A.1 Testing Workshop 18th July 2019

A.1.4 The event attracted over 30 attendees providing representation from:

- Adrishaig Community Council;
- Argyll and Bute Council;
- Central Scotland Green Network Trust (CSGNT);
- Clyde Gateway;
- Coalfields Regeneration Trust;
- Community Land Scotland;
- Development Trust Association Scotland (DTAS);
- Falkirk Council;
- Friends of Possilpark Greenspace;
- Glasgow City Council;

- Glasgow City Region;
- Greenspace Scotland;
- Highlands and Islands Enterprise (HIE);
- Historic Environment Scotland (HES);
- NHS Health Scotland;
- Scotland's Regeneration Forum (SURF);
- Scotland's Towns Partnership;
- Scottish Canals;
- Scottish Community Alliance;
- Scottish Environment Protection Agency (SEPA);
- Scottish Government;
- Scottish Natural Heritage (SNH);
- West Dunbartonshire Council; and
- Wheatley Group

A.1.5 The format of the workshop consisted of a short presentation outlining the stages of the research and the primary community impacts of VDL identified throughout the stakeholder interviews and focus groups. The aim of the workshop was to provide an opportunity for organisations and local authorities to test the format of the measurement framework and give detailed feedback on the accessibility and perceived reliability of the frameworks results. Photographs from the event are provided below.