

# Health Impact Assessment in Spatial Planning in England –Types of Application and Quality of Documentation

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## Abstract

Health Impact Assessment (HIA) is a decision support approach which is applied in various shapes and forms throughout the world. In England, amongst a range of areas of application, HIA is applied in local (spatial) plan making and project development planning. Whilst various authors have reflected on HIA practice in England, the extent of application and its quality has remained unclear. This paper aims at addressing this gap by reporting on the results of a systematic review of HIA in planning. It is found that between 100 and 200 HIAs are likely being produced each year in England. Whilst most assessments are rapid (desk based), there are also examples of comprehensive and intermediate HIAs, where a participatory procedural approach is followed. An important finding is that those HIAs applied within the context of other assessments (integrated impact assessment -IIA, strategic environmental assessment - SEA/ sustainability appraisal -SA and environmental impact assessment – EIA) tend to be of a higher quality than standalone HIAs, mainly because of the existing comprehensive statutory procedural requirements for these other assessments into which HIA can be integrated.

## Keywords

Health impact assessment, spatial planning, integrated impact assessment, strategic environmental assessment, sustainability appraisal, environmental impact assessment,

## ***Introduction***

Health Impact Assessment (HIA) is a decision support approach for the advancement of health and wellbeing, used in project development and management, as well as in plan and policy making (Kemmm et al. 2004, Harris-Roxas et al. 2012, Mindell et al. 2009). Whilst HIA has been in use globally for several decades (according to scopus<sup>1</sup>, HIA was first mentioned in the context of environmental impact assessment, EIA, in the late 1970; see e.g. Morris and Novak 1976 and WHO, 1978), in most jurisdictions the extent of its application and the quality of documentation has remained unclear. Whilst the professional HIA literature has grown consistently over the years (see Winkler et al, 2020; Harris-Roxas et al, 2012), to date the main focus of that literature has been on conceptual questions (e.g. Hughes and Kemp, 2007; Northridge and Sclar, 2003), case study reviews (e.g. Chadderton et al, 2013; Corburn and Bhatia, 2007; Diallo et al, 2017) and on providing guidance (e.g. Forsyth et al, 2010; Moya-Ruano et al, 2017). Systematic reviews of the application of HIA have been sparse with a few notable exceptions. These include Haigh et al (2013), who provided for a systematic review of practices in Australia and New Zealand and Bever et al (2021) who reflected on HIA experiences in the US housing sector. Generally speaking, whilst there is consensus amongst those advocating the use of HIA that when applied to a specific policy, plan or project it should comprise a staged process and the application of a range of suitable methods (Harris-Roxas et al, 2012; Quigley et al, 2006), to what extent this is actually achieved has remained unclear.

This paper provides an evidence-based systematic practice review into the extent of the current use and quality of HIAs in local (spatial) plan making and project development planning in England. It responds to suggestions that research is urgently needed on the degree to which spatial plans and their impact assessments in England incorporate health' (Gray et al 2011). In this context, the importance of HIA is derived from observations by Carmichael et al (2019) and by Bond et al (2013) on the integration of different IA tools. The paper also aims at providing evidence needed in order to address concerns that criticism of HIA is often opinion-based rather than informed by research and practice (Haigh et al, 2013, 535).

It is not the purpose of this paper to elaborate on how decisions are changed as an outcome of HIA or to reflect on other aspects of HIA effectiveness. Evidence for HIA effectiveness is currently being compiled in a follow-up project, based on a review of three good practice HIA cases. The results of this review will be presented in a future publication (Muthoora et al, forthcoming).

This paper provides for the first systematic review of HIA practice in planning in England ever. Driving the selection of the sample for investigation in the underlying research was a typology of HIA, which will be subsequently introduced. Furthermore, in order to establish the quality of HIA documentation a review table and scorecard were devised to assist with reviewing specific HIA cases. This follows on from the approach used by Haigh et al in their systematic review of HIA practice in Australia and New Zealand in 2013. Importantly, findings of the data collection and quality review were shared with public health and IA experts and practitioners in England whose comments and suggestions were considered when interpreting results from the review.

### ***The consideration of health and HIA in planning in England - context***

In England, within a 'Health in All Policies' (HiAP) context, recently the use of HIA has been widely advocated (Chang, 2019). This is in line with practices in other UK nations. In Wales, HIA is a statutory requirement in specific circumstances, based on the Public Health (Wales)

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<sup>1</sup> the largest online abstract and citation database of peer-reviewed literature

Act 2017. Here, the Wales Health Impact Assessment Support Unit (WHIASU; see e.g. Green et al. 2017) actively supports the application of HIA. Furthermore, in Scotland, the 'Health and Inequalities Impact Assessment Network (SHIAN)' aims to provide support (e.g. training and capacity building) for those engaging with HIA.

Public Health England (PHE), an executive agency of the Department of Health and Social Care, aims at supporting the application of HIA (see e.g. PHE, 2020). In planning, HIA has received increasing attention since 2012, the year in which the English National Planning Policy Framework (NPPF; MHCLG, 2019a) was introduced by the Ministry of Housing, Communities and Local Government (MHCLG). Promoting healthy and safe communities is one of the NPPF's main policy requirements. In the same year, the Health and Social Care Act (2012) established a duty on local authorities to improve the health of local people (Section 12). Finally, the Planning Practice Guidance on Promoting Healthy and Safe Communities (MHCLG, 2019b) recommends the use of HIA.

In English Local (spatial) Plan (LP) making in single Local Authority (LA) areas and Strategic Plan (SP) making in areas where at least two LAs co-operate, HIA is usually conducted in combination with Strategic Environmental Assessment (SEA) / Sustainability Appraisal (SA), either next to it, or fully integrated within Integrated Impact Assessment (IIA). Here, SEA was transposed based on the EU Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment' (commonly referred to as the SEA Directive) within SA.

Notwithstanding the use of HIA itself, SEA/SA requirements also include specific health and wellbeing objectives (Bond and Pope, 2014). Furthermore, it is the duty of local authorities – in response to the UK Equalities Act (2010; see also Povall et al. 2014) – to undertake an Equalities Impact Assessment (EqIA) of local (spatial) plans and policies. EqIA aims at ensuring that decision making does not discriminate against anyone based on protected characteristics, including age, disability, gender (including reassignment), marriage and civil partnerships, pregnancy and maternity, race, religion and faith and sexual orientation. EqIA provides an important input into HIA, as does SA. IIAs (see Fischer et al., 2021) comprise at least an SEA inclusive SA, HIA, EqIA and at times other assessments (e.g. on gender, age, transport).

There are some clear indications that the application of HIA within local (spatial) plan making in England has been increasing over the last quarter of a century. For example, whilst a comprehensive review of practice in 2011 established that only six of 83 LAs adopted core strategies (known then as local development strategies and now referred to as local plans) came with an HIA (i.e. about 7%) (Tajima and Fischer, 2011), a recent systematic review of local plan appraisal practices in 2019 found that 16 out of a sample of 117 local plans (i.e. about 14%) had HIAs prepared (Fischer, 2019). HIA in plan making is said to usually consider biophysical (e.g. flora, fauna, air, water, soils), socio-economic (e.g. employment rate, income, social inclusion and exclusion, crime rate) and behavioural (e.g. active travel, healthy food consumption) determinants of health (Fischer et al., 2010; 2018).

Regarding the application of HIA in Environmental Impact Assessment (EIA) for projects in England, there are currently no reliable figures. Submissions of HIAs in planning are not recorded centrally, but individual LAs may do so through authority monitoring reports. However, a rapid review of 20 randomly selected recent EIAs found that two had included the preparation of HIA (i.e. 10%; Fischer 2019). Also, over half of the EIAs had at least a chapter on population demographics, including human health (even if those chapters tend to be short). The consideration of health therefore appears to have become more extensive in EIA since the last

major review by the Institute of Environmental Management and Assessment (IEMA) was conducted in 2011. This had established that 13% of all EIAs included a chapter on population demographics and another 6% one on human health. Importantly, the consideration of health in project development with associated EIA has been strengthened by the latest revision of the European EIA Directive 2014/52/EU from 2014, in particular due to changing terminology from 'human beings' to 'human health' (Fischer et al., 2016; Cave et al, 2019; Acheson et al 2019).

About 30% of LAs (98) in England have adopted HIA requirements for development projects (Chang, 2019). Frequently used in this context are supplementary planning documents (SPDs). Most local HIA 'triggers' established in e.g. local (spatial) plans respond to thresholds on the number of residential units or new commercial floorspace of new developments. Other triggers include impacts on vulnerable people, proximity to wards with high levels of deprivation, healthcare provision, loss of open space, and hot food takeaways.

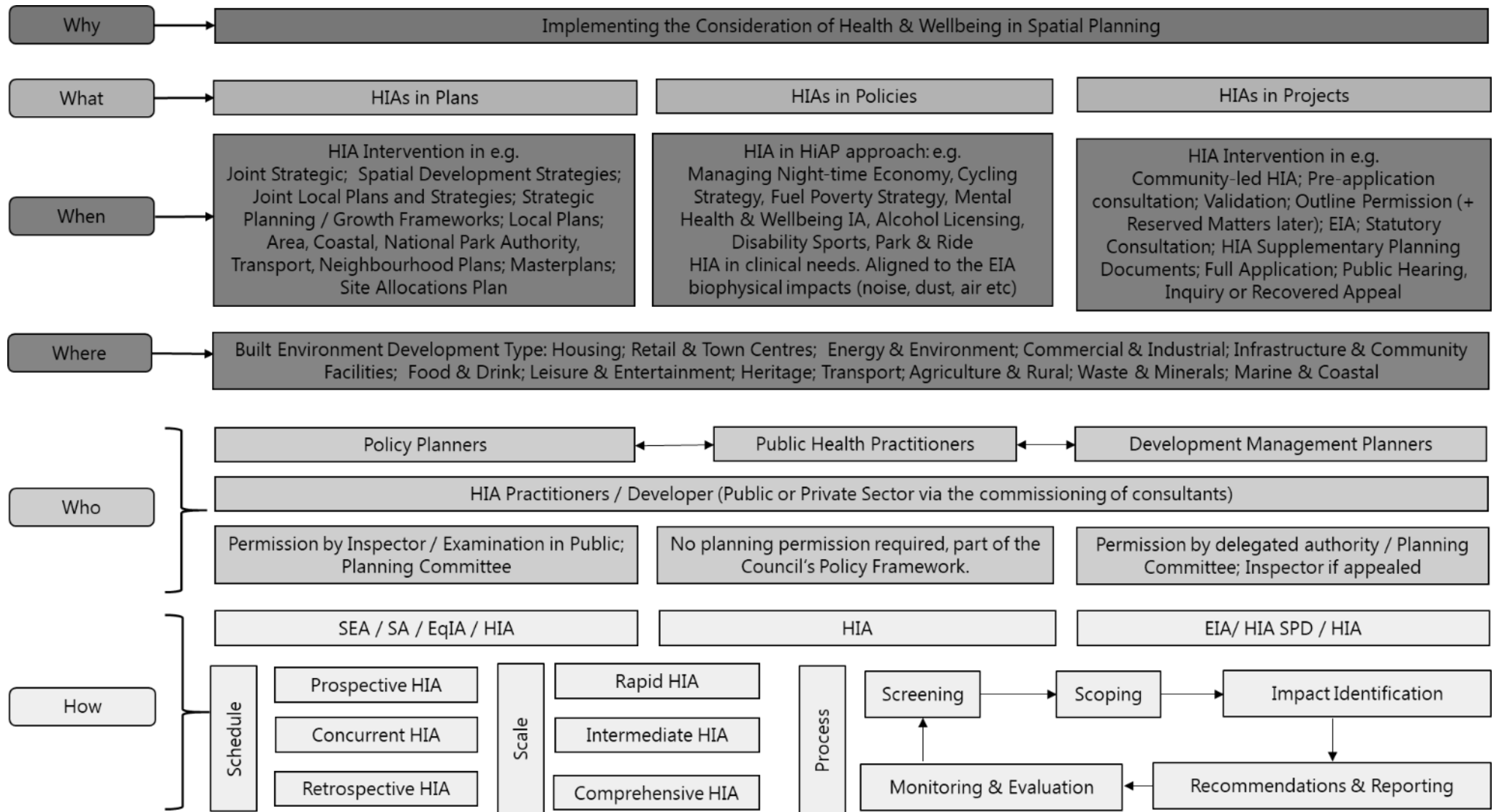
Figure 1 shows how HIA is currently used in Planning in England. Different situations of application are depicted, including plan making, policy making and project development. Some of the criteria introduced here are used to define the later HIA sample selection.

*Plan making* includes devising a series of planning policies mapped across a LA area, guiding the approvals process for built environment project developments. These are set out in the Local Plan, usually for over a 15-year period. Plan HIA can be integrated with SEA/SA and in IIA or can be standalone, as described above.

*Project development* includes capital build projects in different sectors and areas, including e.g. housing developments. A project development seeking consent, if large scale or meeting certain thresholds, will be required to include project EIA. This will comprise an assessment of biophysical impacts, including e.g. soils, air, water, noise quality, as well as the associated impact on human health. In this paper, we consider HIAs prepared as part of EIAs and HIAs that are submitted for smaller project consents without an EIA, responding to e.g. local planning guidance or advice to produce an HIA.

*Policies* originate within the HiAP approach. They can focus on different aspects (e.g. a Strategy for the Night-time Economy) and gain approval not through the Local Planning Authority (LPA)'s planning function, but through an LA's policy framework. Policy HIA is not covered further in this paper.

Figure 1: The Application of HIA in Spatial Planning



Source: Authors own design

Three major categories of HIA, applied in local (spatial) planning and project development planning in England are distinguished with regards to their scale and schedule, as is shown in Table 1. These are similar to the categories found in other jurisdictions, including Australia and New Zealand (Haigh et al, 2013).

Table 1: Categories of HIA in Spatial Planning in England

Scale		Schedule	
<b>Comprehensive / Full</b>	Duration between 6 months and a year	Usually prospective (applied in parallel or integrated with a plan or project preparation process)	Conducted as a participatory process, similar to how most EIAs and SEAs would be done.
<b>Intermediate / Desktop</b>	Duration of over 3 months	mostly retrospective (making recommendations on how a draft plan or project can be optimised in health terms)	Conducted as a desktop exercise, but going beyond completing a checklist
<b>Rapid / Desktop</b>	Duration of 1-6 weeks	Usually retrospective (making recommendations on how a draft plan or project can be optimised in health terms)	Usually based on checklists; best-known example in England is London HUDU HIA guidance (NHS London, 2012)

HIAs are undertaken at comprehensive, intermediate or rapid scales with varying duration within a prospective, concurrent or retrospective<sup>2</sup> scheduling of a plan or project preparation process. Comprehensive and (some) intermediate HIAs should follow a staged process, consisting of screening, scoping, impact identification, recommendations and reporting, and monitoring and evaluation.

LAs in England have distinct functions. Policy planners will produce the Local (spatial) Plan for an area and the associated IAs (SEA/SA, EqIAs, HIAs). The production of the IAs is often outsourced to the private sector. Whilst this can enhance the quality of documentation, it can also lead LAs not developing associated capacity and expertise. So whether or not the effects of outsourcing are positive or negative very much depends on the extent to which LAs remain involved in the IA process (see e.g. Therivel et al, 2009).

Whilst the LA will approve local plans, the final say is with the (national) Planning Inspectorate. Development management planners operate the consenting process for construction projects. Here, the applicant produces the EIA and/or the HIA. Approvals are by delegated authority to the planning officer or by the LA’s planning committee. Health policies are usually produced by public health practitioners. These cover most areas of a LA’s business, especially if a council follows a HiAP approach. Approvals are through the LA’s policy framework.

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<sup>2</sup> Retrospective here means that HIA was applied after a draft plan / preliminary final plan had been prepared

## ***Systematic review of HIA practices in planning in England - sample selection and review methodology***

For the research underlying this paper, a sample of plan HIAs was determined, including 10 HIAs integrated with SA/SEA in IIA, 10 HIAs aligned to SA/SEA (standalone), 10 Project HIAs as part of the EIA and 10 HIAs without EIA (standalone). These cases were sourced based on:

- (a) systematic screening of local and other strategic plan making exercises of the 325<sup>3</sup> LPAs in England responsible for local and strategic plan making, as well as a review of the over 2,000 non-technical summaries of EIAs listed on the Institute of Environmental Management and Assessment (IEMA)'s webpages ([www.iema.net](http://www.iema.net)).
- (b) recommendations from key stakeholders.

To enable an evaluation of the identified HIAs, similar to the approach followed by Haigh et al (2013), a quality review table and an associated grading system ('scorecard') were designed (see Appendix). This is based on the approach followed by other existing reviews tables, including for EIA in the UK (Lee N and Colley R 1992), SEA in England (Fischer, 2010), HIA in the UK (Jacobson et al. 2009), and HIA in Wales (Green et al. 2017). It was developed, using evidence from evaluations of existing HIA frameworks (Mindell et al., 2009) and various sources that describe the consideration of health issues in town planning (Carmichael et al. 2019, Chang 2019). The quality of each HIA was thus reviewed, using 53 review questions, grouped into six categories.

The following review scores were used:

- A – the work has generally been well performed,
- B – the work was performed satisfactorily, however with omissions or inadequacies,
- C – the work was performed unsatisfactory because of omissions or inadequacies,
- D – task not attempted,
- N/A – question not applicable.

Two researchers reviewed each HIA, agreeing on categories and final scores. These were not necessarily average grades, as e.g. one unsatisfactory (C) or not attempted task (D) could lead to an overall downgrading. Each item within the six sections was scored, adding any additional comments to assist with the discussion between reviewers as to the overall section scores and the final scores. The review scorecard was initially tested on four HIAs, one of each type; (1) with SEA/SA in IIA, (2) as a standalone plan HIA next to SEA/SA, (3) next to project EIA, and (4) as a project standalone HIA. Results were shared with a wider audience (as is further explained below), before the remaining 36 quality reviews were completed.

Discussion of the test results of reviews occurred in November 2019 at a London (UK) workshop with a group of 20 planning and public health experts, representing LAs and the private sector from the South of England. The workshop had the key aim of co-

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<sup>3</sup> These do not include National Park Authorities and Development Corporations

generation of knowledge and the bridging of the gap between research and practice. Results of the reviews of the full set of 40 HIAs were shared with an additional 80 planners, public health practitioners, elected members, private consultants, and academia from across the North of England in a second workshop in Liverpool in March 2020. Here, findings were discussed through a series of presentations, supported by breakout group discussions.

Whilst HIAs applied within LP making (within SEA/SA in IIA and next to SEA/SA) are easily identifiable because of all LP documents are being made available on local authority websites, cases for the other two types of HIAs were inaccessible without the support of experts. None of the Non-Technical Summaries (NTSs) listed on IEMA's webpages mentioned any HIAs. There is no national repository or data collection for HIAs<sup>4</sup>, although there is a legal duty that these documents are made publicly available as part of submitted planning application documents. Standalone project HIAs were identified based on advice by LAs. All HIAs are from the post 2012 period, i.e. the year the National Policy Planning Framework and the Health and Social Care Act came into effect and with it the establishment of PHE.

## ***Review Results***

Reviews of 40 HIAs were conducted, 10 for each type of HIA from across England, undertaken between 2013 and 2019. Table 3 (*A Quality Review Summary*) presents the grading results of the review. Dark green indicates the highest possible score (A). Colours then indicate the range of scores from light green (A-B), over yellow (B), orange (B-C), red (C), dark red (C-D) to violet (D).

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<sup>4</sup>The Department of Health archived the HIA Gateway (2008-2014) website in 2015



Table 3. Quality Review Grading Summary

IIA	DATE	GRADE	HIA SPD	TYPE	TIMING	SEA / SA + HIA	DATE	GRADE	HIA SPD	TYPE	TIMING		
			A-D	Y/N	R/I/C	P/C/R				R/I/C	P/C/R		
1	London SE*	2019	B	N	R	C	1	North West**	2013/18	C	N	C	R
2	London N	2016	A-B	Y	R	C	2	London N ~	2019	B	N	I	C
3	East England	2018	C	N	R	C	3	London SE	2013	B	N	R	C
4	North East	2017	A-B	N	I	C	4	W Midlands	2016	A-B	Y	R	R
5	South West	2019	B-C	N	R	C	5	London SW	2016	B-C	N	R	C
6	South	2012	B-C	N	R	C	6	South West**	2014/18	B	N	I	R
7	E Midlands	2017	C	N	R	C	7	E Midlands	2018	C	N	R	C
8	W Midlands (joint)	2016	A-B	Y	I	C	8	E Midlands	2018	A-B	N	R	C
9	North West*	2017	A	N	C	C	9	Yorkshire & the Humber	2016	A-B	N	R	C
10	W Midlands	2016	B	N	R	R	10	North East	2017	B	N	R	C
EIA + HIA	DATE	GRADE	HIA SPD	TYPE	TIMING	HIA (no EIA)	DATE	GRADE	HIA SPD	TYPE	TIMING		
				R/I/C	P/C/R					R/I/C	P/C/R		
1	South West	2017	A	Y	I	C	1	South West	2013	C	Y	R	C
2	E Midlands^	2013	A-B	N	R	P	2	South West	2013	D	Y	R	P
3	South West	2019	C	Y	I	C	3	London SW^^	2019	B	N	R	C
4	East	2012	B	N	I	P	4	London N	2019	C	Y	R	C
5	South East~~	2017	B	N	R/I	R/C	5	London N	2018	C	Y	R	P
6	South East	2019	C	N	R	P	6	North West	2019	C	N	R	C
7	South East	2013	A	Y	I	C	7	South East	2016	C-D	Y	R	C
8	South East	2014	B	Y	I	C	8	Yorkshire & the Humber	2017	C	Y	R	C
9	South West	2019	B	Y	R/I	C	9	Yorkshire & the Humber~	2013	A	Y	I	C
10	South East	2018	C	Y	I	C	10	London E	2019	B	N	R	C

Legend: R/I/C (Rapid / Intermediate / Comprehensive); P/C/R (Prospective / Concurrent / Retrospective)

\* Emerging plan currently at scoping stage; \*\* in 2 parts (HIA of local plan and HIA of Site Allocations); ~HIA of local plan not SA; ~~-retrospective of existing New Town, concurrent with project application and policy (non-planning) for service delivery; ^ prospective HIA for a NSIP, ES not reviewed for this research; ^^ no SPD but advised to undertake HIA at pre app consultation; ~ community led HIA; NB. SPD if published on website as of Feb 2020

Overall, 23 of the 40 HIAs (i.e. 57%) achieved average grades of at least 'B' or better (work is performed at least satisfactorily). However, this average score is impacted by a poor performance of standalone project HIAs, where only three out of the 10 HIAs were found to perform satisfactorily. Amongst the non-standalone HIAs, 13 out of 20 (i.e. two thirds) were performing satisfactorily or better (which is exactly the same figure found by Haigh et al (2013) in their review of HIAs in Australia and New Zealand). The main reason for the poor performance of standalone project HIAs is that these were all rapid and were not associated with any other IA procedure. However, and in line with expectations on what HIA should look like (Harris-Roxas et al, 2012), the quality review scorecard is based on the application of a comprehensive HIA procedure. That is, it should include the commonly accepted stages screening, scoping analysis and report preparation, influencing decision-making, follow-up and monitoring, and consultation and participation.

Two-thirds of the HIAs (27) used the London HUDU Rapid HIA model. Less than a third (12) were intermediate and only one was comprehensive. With regards to the schedule, over three-quarters (31) of the HIAs were undertaken concurrently with the plan making or project planning process. Five were prospective (Plan and Project HIAs) and four were retrospective (i.e. applied to preliminary final plans). Forty per cent of the HIAs (16) were triggered by local HIA SPDs.

Half (10) of the plan HIAs and the majority (17) of the project HIAs were undertaken by external (private) consultants. The remaining HIAs were prepared in-house by local authorities, collaboratively between local authority planners and public health officers. One HIA was community driven<sup>5</sup> and supported by local public health practitioners.

Subsequently key findings are presented by each type of HIA. Whenever possible, results are discussed in the light of the wider literature. However, the extent to which this can be meaningfully done varies, as the criteria and data set used in the research underlying this paper are unique.

#### *HIA in Plans applied in IIAs*

Most of these HIAs (7 out of 10) were integrated with EqIAs and all of them integrated outcomes with the recommendations and objectives of Joint Strategic Needs Assessments (JSNAs)<sup>6</sup> and Health and Wellbeing Strategies (HWSs)<sup>7</sup> or had developed in-house approaches for ensuring health considerations. All HIAs offered definitions of health, of health inequalities and of the wider determinants of health. They considered objectives, standards and targets for health and wellbeing, established at international, UK and regional/local levels.

In all HIAs, unequal impacts on minority ethnic communities were left unassessed unless in response to impacts on Traveller and Gypsy communities. Impacts on vulnerable communities only included the elderly and the disabled and mental health impacts were reduced to aging populations with dementia. None of the HIAs provided any information on sensitive receptors. This was previously also observed by Haigh et al (2013) for Australia

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<sup>5</sup> This was an HIA triggered by the affected community. With regards to how the public may be involved in HIA, see e.g. den Broeder et al, (2017).

<sup>6</sup> JSNAs are processes through which LAs and Clinical Commissioning Groups (statutory bodies responsible for planning and commissioning of health care services for their local area) assess current and future health, care and wellbeing needs of a local community to inform local decision making

<sup>7</sup> HWSs outline priorities of LA areas as a basis for action to improve people's health and reduce health inequalities that exist

and New Zealand who found that whilst equity issues were mentioned, overall 'differential impacts on vulnerable and disadvantaged groups were poorly dealt with in the assessment phase' (ibid, p543). Whilst all HIA looked at possibilities to enhance positive health outcomes, less than half (4) of the HIAs limited their assessment of potential negative health impacts for some controversial policies (in particular, housing allocations) and only with short-term perspectives in mind (during construction). This confirms earlier findings by Fischer et al (2018) that HIA tend to focus on enhancing positive outcomes, rather than on identifying negative impacts.

None of the HIAs made suggestions on how to create win-win solutions when assessments found both, positive and negative impacts in e.g. discussions of preferred options (a recurring problem not just in HIA, but also e.g. SEA and EIA; see Morrison-Saunders and Fischer, 2006). In one case, a policy on tourist accommodation considered the positive impacts on the local economy and the tourist experience but did not mitigate against the negative impacts on the provision of affordable homes and on health because of additional pressures on existing facilities and services. All HIAs considered health in relation to the siting and consideration of health care and leisure facilities. This confirms Harris-Roxas et al (2012) who observed that HIA usually focuses on health infrastructure implications of proposed developments.

Nine of the 10 HIAs were prepared prior to any major decisions being made on subsequent project development. One HIA was prepared in a situation where a housing-led building programme was already underway. Half (5) of the HIAs did not include baseline data from the SEA/SA scoping report. As a consequence, it is difficult to comprehend the document. The bulk of the HIAs (7) used a rapid approach to assess numerous policies (in line with the associated SEA/SA, which in one case meant 700 policies were assessed), making them (at least in parts) incomprehensible. The problem of English SEAs/SAs assessing too many policy options has been raised on a number of occasions ever since the introduction of formal SEA requirements in 2004 (see e.g. Therivel and Fischer, 2012).

Within a majority of HIAs (8) there was a poor description of the monitoring arrangements, with at best the use of individual council's existing annual monitoring reports being mentioned. None of the HIAs discussed the Public Health Output Framework (a list of national indicators with the aim to improve and protect the nation's health, and improve the health of the poorest, the fastest) or offered reporting programmes with dedicated leads for management of the monitoring. Not adequately dealing with monitoring has been observed to be an issue with many IA approaches (see e.g. Arts and Morrison-Saunders, 2004).

#### *Standalone HIAs in Plans next to SEA/SA*

Over half of the HIAs (6) stated that they were successful in leading to an increase in collaborative working between planners and public health practitioners. In this context, they explained that they enhanced participatory working through stakeholder workshops, using a critical appraisal approach. Also, half of the HIAs (5) involved comprehensive community consultation programmes. As a result, statements were included in plans, expressing commitment to collaborative working. All HIAs reflected on the recommendations and objectives of JSNAs and HWSs. One HIA stated that it was the first time since the 1950s that the LP had a dedicated chapter to Health and Wellbeing because of the outcome of the HIA. Most (8) HIAs separated clinical needs and public health needs and also separated health and care facilities from the wider determinants of health. One HIA undertook an analysis of the health of the local authority borough and was therefore a 'state-of-the-health' assessment, rather than a prospective HIA.

Whilst one HIA dealt with the siting of health care facilities only, none dealt with waste and occupational health and safety impacts on health. Furthermore, one HIA found negative impacts of a new housing development regarding flooding, air quality and waste, but stated that the impacts were positive because of the new housing being created therefore addressing the housing crisis (similar to what was raised above with regards to win-win solutions and trade-offs). Nine out of 10 HIAs were not part of the SEA / SA process but were prepared retrospectively to it, i.e. at the stage when a draft or preliminary final plan were available (see also the comment above with regards to the frequent late application of HIA). Nine out of 10 HIAs said they were constrained by time, which meant that they used rapid HIA models. This confirms suggestions by Harris-Roxas et al (2012) that HIAs are frequently rushed, due to lack of resources.

Two HIAs recommended that LAs adopt HIA SPDs, one of which included an appraisal of the council's SA's HIA SPD. Somewhat worryingly, none of the associated SEAs/SAs reflected on the outcomes and recommendations of the HIA. This confirms findings by Fischer et al (2018) that HIAs are often 'bolted-on' rather than developed and aligned with other IAs (unless they are fully integrated in IAs). Two of the 10 HIAs advocated the use of an existing 'Public Health Outcomes Framework' for HIA monitoring, which considering the observations from the paragraph above on monitoring is positive.

#### *Project HIAs prepared with EIAs*

HIAs produced in combination with EIAs covered a variety of projects, including housing, hotels, offices, university campuses, healthcare facilities, gyms and sports facilities, cinemas, healthy new towns, retail, community centres, public realm developments, green infrastructure, schools, highways and railway routes. All of them considered what can be seen as innovative concepts, such as lifetime accessible homes, lifetime neighbourhoods, co-living units, community orchards, green roofs and food roof gardens. In line with EIA requirements, all HIAs separated impacts during construction from those during operation. There was a particular emphasis on bio-physical assessment aspects, including air quality, dust, noise, vibrations, waste and health and safety.

Half of the project HIAs applied next to EIA applied a community consultation-led approach (triangulation of community voices, community profiling and expert knowledge). However, six of the 10 HIA failed to reflect on the EIA statutory community consultation outcomes.

One HIA assigned health codes to governance structures regarding the development of a new town. One HIA also considered health and wellbeing and mental health and wellbeing as integrated with the existing Public National Health Service (NHS) infrastructure service provision and separate to the project approval. Half (5) of the HIAs were triggered because of a provision for health care facilities. This underlines the persistent strong link that exists between the application of HIA and health infrastructure implications of proposed developments (Harris-Roxas et al, 2012). External consultants completed the majority (9) of HIAs. In this context, public health practitioners were not included.

Whilst none of the HIAs considered any project options, three were seeking to secure health considerations through section 106 agreements (legal agreements between LAs and developers for mitigation payments if significant impacts on the local area are unmoderated through conditions attached to a planning decision). Generally speaking, HIAs did not reflect on the negative impacts on biodiversity identified in EIAs and those HIAs that were applied to longer-term projects (e.g. for 20 years) found it difficult to forecast their health

impacts. In one case, a residents' relocation strategy arose because of refurbishment of existing housing covered in the EIA. However, health impacts of relocation / resettlement remained unassessed in the HIA.

In all cases, the relationships between HIA and EIA remained unclear and at times the HIA and EIA appeared disjointed (similarly to what was observed earlier with regards to plan HIA). Those HIAs that were prepared in an integrative manner with project EIAs were found to be the strongest HIAs regarding monitoring arrangements. One HIA of an outline planning application<sup>8</sup> noted that mitigation details would be submitted later at full application stage. However, this could affect the recommendations provided by the HIA at the outline planning stage.

### *Standalone project HIAs*

Seven of the 10 standalone HIAs were prepared in response to local HIA requirements (e.g. a policy or SPD on HIA). Three HIAs used a range of sources to define their methodological approaches, adapting Ireland, Wales and London HIA rapid toolkits. One HIA was triggered because of a pre-application consultation and in one case, screening resulted in HIA being recommended. Whilst there are no formal requirements for HIA screening, the developer undertook one in order to highlight the project's positive health impacts.

Four of the 10 HIAs discussed what can be seen as innovative concepts, including district heating systems, healthy streets, combined heat pumps, solar panels, sustainable urban drainage systems (SUDs), responsibly sourced materials, waste minimising water fixtures and fittings. One HIA also involved a police architect to design out crime. In another case, a local apprentice scheme was secured for the construction phase through a section 106 agreement. For a housing development, not only were cycle routes included but also cycle storage and electric vehicle (EV) charging points. Yet four of the HIAs had a focus on the proximity to and capacity of health care facilities only.

Seven standalone HIAs were found to be weak with regards to the description of baseline profiles (an issue which does not usually arise when HIA is applied next to EIA, due to comprehensive requirements for considering baseline conditions in EIA). In one case, the HIA portrayed a housing development with no affordable units as positive as it was in an area of predominantly social housing. One housing development without parking was promoted as being 'car free' or 'car lite' developments, without evidence. Furthermore, one HIA emphasised the health benefits of living in a green area to justify building on the Green Belt. One HIA assessed the impact of a 16-storey new building without analysing health impacts of tall building developments in low density areas.

One community-led HIA was conducted via a neighbourhood planning process and the project proposal ended up being rejected, in part because of predicted negative health impacts. Somewhat oddly, one HIA was found to be written in the style of a marketing brochure to promote positive health benefits of a project. However, negative short-term impacts caused by construction were ignored. Most (8) HIAs included either poor quality maps or no maps at all. This is a consequence of being rapid assessment that were not associated with other IAs that may have come with more substantial resources.

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<sup>8</sup> An outline planning permission grants, in principle, development and construction, subject to certain conditions based on e.g. size and shape.

## ***Further observations***

In this section, we firstly reflect on the extent of HIA application in plan and project preparation in England. We also look at what the existence of requirements and guidance appears to mean for HIA quality. Furthermore, how options and different determinants of health are dealt with is reflected on.

### *Extent of HIA application in plan and project development in England*

In many countries, the extent of HIA application has remained unclear. Whilst based on a practitioner survey, Winkler et al (2020) found that there appears to be an increasing trend in HIA application in some world regions, including Europe, there are currently no figures associated with that trend.

With regards to plan HIA in England, in 2021 there were 16 statutory joint or aligned LPs (either complete or under preparation) as well as 5 joint strategic plans and two spatial development strategies (Fischer et al, 2021). All of these are associated with HIAs, which all involve HIA. This means 23 HIAs have been / are being prepared in this context. Also, between January 2012 and October 2020, a total of 249 LPs in England were adopted by the respective LAs. An additional 78 LPs are due or currently underway.<sup>9</sup> Thirty percent or 98 of all LAs were found to have HIA SPDs in place (Chang, 2019). For those, it is highly likely that an HIA would also have been associated with the local (spatial) plan making process. Overall HIA activity associated with local plan making for the period 2012-2020 thus increases to 121 HIAs (i.e. 15 pa on average).

In the absence of a centrally held repository / managed database HIAs in England, it has proved difficult to access submitted HIAs. However, considering that close to 100 LAs have HIA SPDs in place and with prudent estimates of this potentially triggering around one to two HIAs per year per LA, then between 100 and 200 project HIAs would accompany planning applications across England annually. Finally, if 10% of the 269 EIAs<sup>10</sup> prepared in 2019 in England had an HIA associated with them (see above), this would mean an additional close to 30 project HIAs may be prepared per year.

Based on the above estimations it is safe to assume that at least between 100 and 200 HIAs are conducted every year in plan and project development situations in England. What is of importance, though, is that many of these will be rapid only. This means that a large proportion of the HIAs would not be comparable to IAs that involve comprehensive IA procedures, such as those associated with EIAs and SEAs.

### *The impact of HIA policy and guidance*

Whilst the influence of guidance and the existence of HIA SPDs on the quality of HIA reports is difficult to establish, there is some emerging evidence. For the HIA types prepared next to (or integrated with) statutory impact assessments tools (i.e. SEA/SA and EIA), on average, slightly higher scores were in those situations where a LPA HIA SPD or HIA policy was in place. In this context, an HIA SPD can be regarded as an expression of

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<sup>9</sup> Including National Park Authorities and Development Corporations. *Monitoring Local Plan Progress* Planning Inspectorate, updated monthly (Oct 2020) Available at <https://www.gov.uk/guidance/local-plans> [last accessed 17/11/20]

<sup>10</sup> Live tables on planning application statistics *Decisions with Environmental Statements* Table P134 (June 2020) Available at <https://www.gov.uk/government/statistical-data-sets/live-tables-on-planning-application-statistics> [last accessed 17/11/20]

commitment to HIA. In standalone project HIAs, the picture was reversed and the quality of HIAs was lower in situations where an SPD HIA or policy was in existence. It is therefore feasible that preparing an HIA when unrequired shows a high level of commitment from those responsible for triggering it. Commitment can be lower in situations where there is a duty to prepare an HIA and where the HIA can develop into something more akin to a tick-box exercise.

With regards to the use of rapid HIA tools, such as the one published by the London Healthy Urban Development Unit (HUDU) (NHS London 2012), common triggers for undertaking an HIA include those where major developments of 10 or more housing units are considered, hot food takeaways, commercial development over 2 hectares, and sensitive or vulnerable host communities (Chang, 2019).

For LAs that had HIA SPDs or a HIA policy in place, there is consistency to preparing HIAs. In these areas, HIA expertise and capacity develops through training and specific guidance once requirements are in place. Expertise is one of the strongest explanatory factors for good quality IAs and one of the highest scoring HIAs in the whole sample was prepared by a team led by an internationally renowned HIA expert. This is in line with observations made elsewhere on the effectiveness of IA tools (Fischer and Gazzola, 2006). Finally, for local plan practice, the results of the quality reviews suggest that HIAs jointly prepared by planning and public health officers were of a particularly high quality.

What is established here for HIA is in line with observations for other impact assessments tools where the quality of, for example, pilot IAs is high, and observed average quality becomes lower once formal requirements are in place for preparing many more IAs, including by those authorities that are not IA pioneers and that have little expertise. However, only in the presence of formal requirements are IA tools consistently applied. IAs that are not formally required tend to be disbanded if there is a failure to formalise them after a piloting/testing period. This was observed, for example, by Fischer (2002) for policy level IAs in transport planning. Regarding guidance, it is important to note that only tailor-made guidance is able to provide specific instructions and is likely to improve impact assessments quality overall (Montaño and Fischer 2019).

### *Options and consideration of different determinants of health*

None of the HIAs appropriately considered any options. This is most likely associated with the late application of HIA and the problem-driven approach used by HIA, where the focus is on optimising a given development option rather than on supporting decision making for that option (Fischer et al., 2018). This is problematic, as HIA currently does not contribute much to the discussion of the best feasible plan or project alternative / option. The latter is at the heart of the impact driven approach used in SEA/SA and EIA. In this context, HIA is consistently prepared late in plan and project preparation. Even when conducted concurrently, it focuses on a preferred alternative / option, attempting to optimise it from a health perspective.

HIAs provide an opportunity for linking health-related initiatives (e.g. sustainable transport or green infrastructure) and health benefits. However, frequently relationships are implied rather than being explicitly and specifically stated. Therefore, whilst requests are made to develop sustainable transport or green infrastructure, these are currently not site or quantity specific. This is in line with other HIA recommendations such as requests for adequate provisions for health facilities. Here, HIA would not normally suggest, for example, a

particular site where these should develop. This is somewhat non-ambitious, especially given that other IA tools often make site specific suggestions.

Whilst the importance of having consistent aims and objectives of different health determinants is widely accepted, there is currently little evidence for whether and how this operates in practice. Based on the results of the HIA reviews, there is some concern with regard to equal weight not being given to social, economic, and environmental determinants of health. This is particularly clear in situations where HIA integrates with other IAs, as the standalone HIAs that were included in the sample had a tendency to focus more heavily on social and behavioural aspects. In particular, in new housing developments, it was observed that environmental aspects are systematically subordinated to economic aspects. Associated impact matrices (part of the HIA) persistently show negative impacts on environmental aspects, whilst mostly depicting positive economic and, to a slightly lesser extent, social impacts. Whilst in this context assessments refer to the need for mitigation at later (project) stages, they do not attempt to reflect on whether mitigation will be possible or what potential trade-offs might mean for health. An example of a way forward which would address this issue is provided by a high quality HIA which clearly stated that there was no consensus between stakeholders on whether predicted impacts were acceptable. However, a list of mitigation measures was subsequently provided in case they implemented the associated project later.

## **Conclusions and Recommendations**

HIA has been gaining in importance in the English planning system over recent years. Following the release of both, the NPPF and the Health & Social Care Act in 2012, HIA has been advocated as an approach to support embedding health considerations in planning decisions. As a consequence, HIAs are now likely to be more frequently and routinely applied in both, plan making and development projects and there are indications that at least between 100 and 200 HIAs may be prepared each year in English planning. Most of these are rapid HIAs, though, meaning that they are prepared as a desktop exercise over a few days only. Often HIAs are aligned next to, or integrated with other impact assessment tools, including SEA/SA, EIA, EqlA and others during the planning applications process for development projects. Yet, despite their widespread use, to date understanding of that practice in England, as elsewhere in the world, has remained poor.

It is in this context that this paper has reported on a systematic review of HIA practice in England, in local (spatial) plan making and project development. Based on the reviews of 40 HIAs, representing different situations of application (local plan related HIA within an integrated approach to assessment and HIA next to SEA/SA and as standalone plan HIA, as well as project plan related HIA next to EIA and standalone project HIA) and based on advice and comments by public health and planning experts, new insights were gained into the practice of HIA in planning in England. Based on the findings presented in this paper, the following recommendations are provided for improving the application of HIA in spatial planning in England:

*Embed the use of HIAs earlier in the planning process and consistently apply procedural steps*

Overall, HIA is associated with an assessment tradition which is problem-driven. This means it aims to improve a plan or project once it has been drafted in making it healthier by 'health proofing' it. In this context, it does not assess different options, but focuses on optimising the plan / project from a health point of view once it has been devised. However,



this means HIA is usually applied at the end of the plan / project preparation process, i.e. once many important decisions have already been taken, closing the process to any further intervention. In order to influence plans and projects better, and also to affect the choice of a preferred plan or project option, HIA should engage more closely with other IAs that are applied earlier.

### *Provide greater clarity on consideration of health issues*

HIA should become more sensitive to the potential trade-offs between different health determinants' dimensions, including economic, social, and environmental dimensions. Currently, and in particular in situations where assessments are integrated into one overall process (and most notably in new housing development sites), negative environmental impacts are consistently predicted, while economic impacts and to a lesser extent social impacts are positive. Furthermore, the identification and evaluation of health inequalities and mental health and wellbeing impacts, the specific impacts on minority and vulnerable communities, and the establishment of sensitive receptors are all found to be done poorly. It is particularly here where public health practitioners can provide some valuable support to the planning system through HIA. One of the strengths of standalone HIAs in the reviewed sample was that came with extensive consultation and participation requirements.

### *Develop consistent national guidance and best practice on HIAs*

There is an urgent need to develop HIA guidance for specific situations. In this context, HIA needs to learn to make concrete suggestions for the development of health initiatives, including, for example, sustainable transport and green infrastructure.

In project development, existing HIA cases are currently poorly accessible and, as a result, not well known. There is therefore a need for an HIA repository. In this context, and as a recommendation from this project, non-technical summaries that are prepared for project EIAs and that are accessible through the Institute of Environmental Management and Assessment (IEMA)'s web-pages should clearly state any associated HIA documentation.

In local plan preparation, and in the absence of PHE being a statutory consultee, it is prudent to include Directors of Public Health and their teams in at least the screening and scoping stages of SA / SEA. Planning and public health officers have collaborated more closely through HIA, and an effort should be directed into developing this important relationship further.

Finally, planners and public health officers and practitioners need training on how to use HIA in, for example, in different plans and projects. In this context, HIA capacity building in town planning will be a critical component for more effective HIA.

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## Appendix: HIA Quality Review Scorecard

Baseline description of the development proposal or local plan / integration process of health

The SA/SEA/EIA/HIA report: Overall Grade for Section 1

- Describes the overall purpose, aims and objectives of the development proposal or local plan
- Clearly states who owns the development proposal or local plan and who is responsible for conducting the project or plan making process
- Clearly states what other projects, plans, programmes & policies are/may be relevant & relationships with them
- Describes how SA/SEA/EIA/HIA and development proposal or local plan processes were integrated (impact assessment should take place during development proposal or local plan preparation)
- With a view to avoiding duplication, describes what issues are addressed in other assessments or elsewhere
- Provides information on relevant aspects of the current state of physical and mental health, and wellbeing of those possibly affected (communities/ population) by the development proposal or local plan, indicating knowledge and data gaps as well as unknowns
- Provides information on sensitive receptors, i.e. people with an increased sensitivity potentially affected by the local plan or development proposal (found in e.g. schools, day care centres, hospitals, nursing homes)
- Provides information on health & wellbeing objectives, standards and targets, established at international, UK and regional/local levels, and shows how these have been taken into account

Identification & evaluation of key issues/options

The SA/SEA/EIA/HIA report: Overall Grade for Section 2

- Describes the options / alternatives that were considered, taking objectives & scope of development proposal or local plan into account
- Provides a definition of health and wellbeing which is being used (and which should include mental health)
- Lists the health and wellbeing issues considered in assessment and explains why they were chosen
- Provides information on the likely negative and positive effects of the development proposal / local plan and the considered options / alternatives on:
  - a) Mental health and wellbeing (including, e.g. avoiding stress)
  - b) Economic determinants (satisfying employment; unemployment; affordable housing; poverty; sustainable & affordable transport; compulsory purchase)
  - c) Social determinants (education for different groups; inequality; social exclusion; crime rates)
  - d) Cultural determinants (healthy lifestyles (walking/cycling); leisure (open areas, sport); food; health of BAME (Black, Asian and Minority Ethnic) communities and/or vulnerable groups)
  - e) (Occupational) health and safety
  - f) Access to health and social care activities/services
  - g) Houses and buildings: healthier built environments
  - h) Sustainable transport
  - i) Community cohesion and sustainability, community isolation, loss of, or access to, community facilities
  - j) Biophysical determinants of health (soils; climate/ flooding; air; water; flora and fauna)
  - k) Environmental Health - noise and light pollution, vibrations, smell and waste
- Lays out what matters are more appropriately assessed at other levels or layers of decision making, with a view to avoiding duplication

## Determination of potential health impact significance

The SA/SEA/EIA/HIA report:

Overall Grade for Section 3

- Describes how authorities that are responsible for or have a role in health protection, health promotion and health care were consulted when scope and level of detail of information in assessment were identified.
- Explains and justifies (with regards to its appropriateness) the methodology for assessing health impacts and their significance.
- Identifies if the expected change and magnitude (if possible in a quantified manner) in community / population physical and mental health and well-being can be considered acceptable (or desired), given consultation responses, objectives and standards and the policy context.
- Identifies which options / alternatives in the long-term (without significant short-term detriment) are most likely to significantly:
  - a) narrow health inequalities?
  - b) lead to an increase in healthy lifestyles?
  - c) lead to more safe and cohesive communities?
  - d) Improve socioeconomic conditions for people?
  - e) Improve environmental conditions for people?
  - f) Improve access to good quality health and social care?
  - g) Lead to improved mental health and wellbeing?
- Identifies the probability, duration (short, medium and long-term permanent and temporary), frequency and reversibility of effects, both positive and negative of the different options / alternatives
- Identifies the negative and positive secondary, cumulative & synergistic nature of effects and opportunities of the various options / alternatives

## Consultation Process

The SA/SEA/EIA/HIA report:

Overall Grade for Section 4

- Describes how authorities that are responsible for or have a role in health protection, health promotion and health care were consulted when scope and level of detail of information in assessment were identified
- Describes how the draft development proposal or local plan and SA/SEA/EIA/HIA report were made available to authorities and the public likely to be affected or having an interest and were allowed to express their opinions within an appropriate time frame
- Includes or makes reference to a statement of community involvement or states that none was produced
- Confirms that consultation results on the development proposal or local plan and SA/SEA/EIA/HIA are to be considered in decision-making

## Presentation of information and results

The SA/SEA/EIA/HIA report:

Overall Grade for Section 5

- Has been prepared before any important decisions on the development proposal or local plan are made
- Provides information on any difficulties (such as technical deficiencies or lack of know-how or missing / inadequate data) and uncertainties encountered in compiling the required information
- Once a decision has been made, is accompanied by a statement summarising how physical & mental health & wellbeing considerations have been integrated into the development proposal or local plan and how the SA/SEA/EIA/HIA report and the results of the consultations have been taken into account and the reasons for choosing the development proposal or local plan as adopted in the light of the other reasonable alternatives / options dealt with

Alternatives, mitigation, recommendations on preferred options, monitoring

The SA/SEA/EIA/HIA report:

Overall Grade for Section 6



Presents an outline of the reasons for selecting the options / alternatives dealt with, and describes how the assessment leading to these reasons was undertaken

Provides recommendations that are:

➤ specific, measurable, appropriate, realistic & time bound (SMART)

➤ clear about who is expected to take action

➤ clearly linked to the impacts identified

➤ preventing or mitigating potential negative impacts and maximising positive impacts and opportunities

Provides information on the measures envisaged to prevent, reduce and as fully as possible offset any (significant) adverse effects on community / population health of implementing the project or plan and enhance positive outcomes

Describes the measures envisaged concerning monitoring of the significant effects relevant to population and human health of the development proposal or local plan implementation in order, inter alia, to identify at an early stage unforeseen adverse effects

Shall explain how monitoring and follow-up is done, in order to be able to undertake appropriate remedial action; the what, how, and who of monitoring need to be specified

Grading

The SA/SEA/EIA/HIA report:

Overall Review Grade



A The work is generally well performed

C The work was performed unsatisfactory because of omissions or inadequacies

D N/A

B The work was performed satisfactorily, however with omissions or inadequacies

D Task not attempted

These are not necessarily average grades, as a C or D mark could lead to an overall downgrading

Comments for discussion



