

Impact Assessment Outlook Journal

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Health Impact Assessment in Planning

Thought pieces from UK practice



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Health Impact Assessment in Planning

Welcome to Volume 8 of the Institute of Environmental Management & Assessment (IEMA) Impact Assessment Outlook Journal which brings together a selection of articles on health impact assessment in planning. With the world still in the midst of the Covid-19 global pandemic, a focus on health has never been more relevant. This edition explores mechanisms by which health may be better integrated into the planning system through the implementation of standalone Health Impact Assessment (HIA) or as an integral part of EIA.

Our living environments and lifestyles have long been known to impact our health and wellbeing and this has been brought into sharp focus by the Covid-19 pandemic and the associated restrictions. Issues such as provision of sufficient indoor and outdoor space, availability of natural lighting and access to greenspace and nature have been more widely recognised as essential to our continued wellbeing whilst our lifestyles and the environmental conditions within which we live have been shown to have a marked impact on our relative vulnerability to the virus.

The planning system has a fundamental role to play in managing and enhancing the spaces and places within which we live and yet, the consideration of health within planning has to date been, at best, variable. Nevertheless, there is now a ground swell of support at a national and local level, for increased consideration of health and wellbeing within the planning system. Now is the time to capitalise on this support to promote

consideration of health in planning and enhance practice.

The first group of articles within this journal explore the use of HIA in planning. In the first article, **David Horrocks** provides an overview of HIA and the associated benefits whilst the second article, from **Michael Chang** and **Carolyn Sharpe** goes on to provide a summary of the new Public Health England document entitled *'Health impact assessment in spatial planning: A guide for local authority public health and planning teams'*¹. This guide aims to support a variety of stakeholders to improve the coverage and consideration of health in planning. The third article of this journal prepared by **Laurence Carmichael** and **Clare Richmond**, describes why and how the London Borough of Tower Hamlets (LBTH) has implemented a planning policy in relation to HIA and the value of the policy to LBTH.

¹ Public Health England (October 2020) Health impact assessment in spatial planning: A guide for local authority public health and planning teams

The second group of articles within this journal consider how health can be integrated into EIA. Whilst human health and the environment have always been linked, a specific requirement to consider 'population and human health' was introduced into the most recent EIA Directive. This was transposed into UK law in 2017. Nevertheless, some three years on, the assessment of health impacts in EIA remains variable. Providing health is scoped and assessed well, consideration of these impacts should be able to be successfully incorporated into EIA without the need for a separate standalone HIA. Mechanisms to integrate health into EIA are discussed in the articles prepared by **Rebecca Raby-Smith** and **Tara Barratt** and include expanding the scope of technical topics already typically included in EIA, such as air quality, noise and land quality to consider the wider determinants of health rather than relying solely on standards, to assess impacts.

Whilst a more rigorous approach to assessment of health in EIA is considered to be required, it is nevertheless important to remember that the assessments should remain proportionate to the significance of the effects. In her article, **Ursula Stevenson** considers how a proportionate approach can be achieved, such as through training of both practitioners and stakeholders, effective scoping and the adoption of a digital approach. The final article, prepared by **Rufus Howard**, explores a potentially more radical change to the approach to EIA and structure of the resulting Environmental Statement in order to successfully integrate consideration of health, particularly given the inter-relationships between nearly all topics covered in an EIA and health.

I'd like to thank all the contributors to this Outlook Journal – both those who have agreed to use of previously submitted Quality Mark articles and those who have prepared new articles specifically for this publication. I hope that this edition of the Outlook Journal will stimulate discussion and ultimately lead to enhanced consideration of health and wellbeing within EIA and more holistically through the wider planning process.





Health Impact Assessment: An Overview

As a relatively new topic of focus, there is some uncertainty relating to what a Health Impact Assessment (HIA) is and what it can do. This article aims to give an overview of HIAs and the possible health benefits that may ensue.

What do we mean by 'health'?

When undertaking a HIA, the World Health Organization (WHO) definition of 'health' is generally used as the basis of the assessment;

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

An important point of note here is that this definition includes physical health, mental health and well being as three connected central elements of health. Therefore due consideration should be given to all three elements together, not just one or two of them in isolation.

So that's sorted, what is a Health Impact Assessment?

An HIA assesses the potential health impacts that a project or proposal might have on the local population. Whilst other technical assessments might consider potential impacts to health, for example an air quality assessment might consider the impact of more traffic emissions on the respiratory health of local people, an HIA specifically looks to the impacts on

health of the whole proposal. It brings together the health impacts from all technical areas whilst going further to consider the impacts cumulatively.

A look at the background

One of the key phases of an HIA is understanding the health background to the proposal. In understanding the current health situation for an area, a proposal can be better placed in helping to determine what impacts will occur and how to remove/mitigate them or where possible enhance positive elements.

You may not know...

A HIA looks at all health impacts - both negative and positive. A lot of proposals can have upsides for the health of local people. An HIA can help identify positive impacts and help to maximise the potential benefits. For example, ensuring that developments promote access to green space might encourage someone to go for a walk thus potentially improving their physical health. If this area is then managed to include some trees or help to establish some wildlife it may bring a more natural feeling to the walk which can help improve mental health and well being at the same time.

References

www.who.int/hia/about/why/en/
www.who.int/hia/about/why/en/index1.html

A decision making tool?

In focusing on the possible health impacts of a project or policy, an HIA can be used as a decision making tool for the Local Planning Authority (LPA) to determine a planning application. The process can also be used to inform the development of a policy or strategy. No other assessment mechanism looks to consider the health impacts in such a way therefore it is important that the HIA is undertaken where there is potential for significant negative impacts to health. This will ensure that the potential health impacts are understood before any action is taken.

The view from the WHO

For the WHO, there are several reasons why HIA should be used. One of the key reasons is that the best available evidence should be provided to decision makers at an appropriate time in the proposal. As with other assessments, if negative health impacts are identified in the early design stages, then designs can be modified to remove or mitigate the severity of the impact. If the HIA is undertaken too late, it can then be difficult to implement changes that make a clear difference for the better.

Promoting sustainable development

Linked to timely reporting of information, a further key part of HIA is its link to promoting sustainable development. If health impacts are identified early on in a proposal, health can be considered at the same stage as objectives in other areas such as social and economic impacts. This parity can then be used as a basis of moving forward with development that is sustainable across a range of objectives including health rather than health being an afterthought.

Stand alone assessment or included in the EIA?

This depends on the potential significance of the impacts, the wishes of the LPA and the judgement of the assessor. RSK has projects that have included Health as a chapter within the Environmental Statement whilst others have been undertaken as stand alone health impact assessments.

Overall benefits for the health of the surrounding area?

Going beyond references to what health impacts occur under each technical banner to instead considering all impacts cumulatively is a great way to further understand how a proposal will impact on health. This more direct focus on health allows further consideration of what impacts might occur and therefore how to remove or mitigate them.

"An HIA assesses the potential health impacts that a project or proposal might have on the local population."



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Improving the use of health impact assessments in planning

The coronavirus (COVID-19) pandemic has fundamentally changed the way individuals, families, and society value and interact with the spaces and places in which we live, work and socialise. But it has also exposed the entrenched existing inequalities that exist within and between regions and, in some cases, has increased them further¹. Those people from lower socio-economic environments are both more likely to have been exposed to the virus and are at greater risk of poorer outcomes if they do become infected. Improving access, experiences and outcomes of NHS and local government in particular for Black, Asian and Minority Ethnic (BAME) communities can be achieved by the use of health impact assessments (HIA)².

An HIA is a tool that can be employed to systematically identify and take account of these environmental changes. An HIA puts people and their health at the heart of the planning process. Its use supports the systematic identification of the anticipated impacts (both benefits and harm) of a new development and informs spatial planning decision making by developing recommendations to address health outcomes including improving mental health and wellbeing, protecting environmental health and providing access to healthcare.

A key aim of HIAs is to reduce health inequalities through action on the wider determinants of health. These determinants are the social, economic, and environmental factors that shape the conditions in which we live. In the ten years since his report on health inequalities was published in 2010³, Sir Michael Marmot has confirmed that we are going in the wrong direction; life expectancy has stalled and inequalities are widening⁴. Tackling inequalities is a core priority of those working in public health and therefore employing HIAs to shape the environments in which people live, through engagement with the spatial and environmental planning processes, is a key mechanism for achieving this priority.

HIA is not a new tool and has been applied in a wide range of settings and policy agendas. HIAs have an established international evidence base and its completion reflects a widely accepted 5-stage process; similar to that of SEA and EIA. Research on the use of HIAs in the UK suggested that HIA can be a cost-effective tool with findings on barriers and benefits in terms of process, impact and outcome evaluations⁵. Despite this, HIA is not widely employed in the spatial planning process. For England, there is no legislative or policy requirement for the use of HIAs in planning and the coverage of HIA policy in local plans (produced and adopted

¹ Public Health England, 2020. Disparities in the risk and outcomes of COVID-19

² PHE, 2020. Beyond the data: Understanding the impact of COVID-19 on BAME groups

³ Marmot M, Goldblatt P, Allen J, 2010. Fair society, healthy lives. Institute of Health Equity.

⁴ Michael Marmot, Jessica Allen, Tammy Boyce, Peter Goldblatt, Joana Morrison, 2020. Health Equity in England: The Marmot Review ten years on. London: Institute of Health Equity, www.instituteofhealthequity.org/resources-reports/marmot-review-10-years-on

⁵ York Health Economics Consortium, 2006. Cost Benefit Analysis of Health Impact Assessment

by local planning authorities) that require planning applications to include an HIA is approximately 30%⁶.

It is through the consideration of the above factors that Public Health England (PHE) is endeavoring to improve the coverage and consistency in the use of HIAs across the English planning system. It seeks to do so within the parameters of national planning policy and guidance which specify the use of an HIA *“where there are expected to be significant impacts”*⁷, and in the spirit of supporting the Planning for the Future White Paper’s proposal for a streamlined planning system and environmental assessment process⁸.

By Winter 2020, PHE intends to publish an HIA in planning guide for England. This has been developed in collaboration with national and local stakeholders, including IEMA. The guide will provide a useful framework to support individual local authority public health and planning teams, planning applicants, impact assessment practitioners, and others involved in the planning process to:

- develop and adopt local planning policies and guidance on the use of HIAs
- consider how the planning process impacts population health, wellbeing and inequalities through the wider determinants of health
- support the consideration of: whether an HIA is required; what the local triggers for their requirement should be; the type of HIA needed; and their alignment with other planning assessments

- support the consideration of the range of health and wellbeing issues to be included in an assessment in line with existing good practice guidance such as from the Wales Health Impact Assessment Support Unit (WHIASU)⁹
- help engage relevant impact assessment practitioners when considering health in impact assessments in line with exiting guidance such as from IEMA¹⁰.

The overarching message is that agreeing the right HIA process in local policy and guidance will take time and many conversations to establish what works best according to local circumstances. There is already wide recognition and commitment that supporting strong, vibrant and healthy communities is central to the purpose of planning. The use of an HIA in planning can ensure communities’ current and future health and wellbeing needs are met, and local authority public health teams are ready to support planners and impact assessment practitioners in this endeavour.

“... Public Health England (PHE) is endeavoring to improve the coverage and consistency in the use of HIAs across the English planning system”

⁶ TCPA, 2019, The State of the Union: Reuniting Health with Planning in Promoting Healthy Communities, www.tcpa.org.uk/the-state-of-the-union-reuniting-health-with-planning-1

⁷ MHCLG, 2019, Planning Practice Guidance – Healthy and Safe Communities, www.gov.uk/guidance/health-and-wellbeing

⁸ MHCLG, 2020, Planning for the Future White Paper

⁹ WHIASU, 2012, Health impact assessment: a practical guide

¹⁰ IEMA, 2017, Health in Environmental Impact Assessment A Primer for a Proportionate Approach

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Health Impact Assessment Policy in the London Borough of Tower Hamlets

The basics on Health Impact Assessment

The World Health Organisation (WHO) was the first body to develop the Health Impact Assessment (HIA) process and continues to support HIA as a policy tool. WHO defines HIA as a *"combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population"*. (WHO, 1999)¹.

The WHO has identified a set of principles for the HIA process adapted to the development management process, as follows:

- **Robust evidence:** Altogether HIA brings a robust evidence base to support the planning decision-making process and more broadly the delivery of Tower Hamlets local plan's healthy place agenda. This is critical as the borough is set for a significant increase in densification with associated environmental, social and economic consequences.
- **Participatory approach:** HIA contributes to a more participatory approach to planning new developments. Tower Hamlets requires detailed HIAs for developments over 150 housing units (and all other developments referable to the Greater London Authority (GLA)) that include community engagement to identify potential health impact and support the improved design of place.
- **Reducing health inequities:** HIA places health and equity at the heart of the place agenda by requiring developers to identify population groups more likely to be affected by their proposed development and promoting housing or neighbourhood solutions for the life course.
- **Promoting sustainable development:** The consideration of environmental health issues in HIAs provides a link between resource management and human health in construction and housing, two sectors which consume a majority of all energy consumed in the economy.

¹ European Centre for Health Policy. Health impact assessment: main concepts and suggested approach: Gothenburg consensus paper. Copenhagen: WHO Regional Office for Europe; 1999.

HIA policy development in Tower Hamlets

The HIA policy in Tower Hamlets emerged from a shared perspective and development of partnership working between Tower Hamlet's public health and planning teams. The process started with public health identifying place-based health determinants in the Spatial Planning and Health Joint Strategic Needs Assessment², in particular highlighting characteristics of the built and natural environment that impact on inequalities. The assessment showed that while residents have a strong sense of community cohesion and the Borough's demographics and economics make it a diverse and dynamic place to live, there are a number of challenges, such as:

- limited green space compared to the national average;
- high levels of noise compared to London average;
- poor air quality (e.g. the whole Borough is an air quality management area);
- over 19,000 households on the housing waiting list, of which 7,078 (37%) were overcrowded and 52.3% of households on the housing waiting list are families of Bangladeshi ethnic origin;
- the second highest density of junk food outlets near schools in London; and
- 76 betting shops concentrated in areas of high deprivation.

Spatial planning has long been identified as a key policy to tackling environmental health issues in housing, as well as sanitation and access to fresh food. Britain led the way in the 19th century for modern planning to support healthy living (Barton, 2017)³. More recently a wealth of evidence has emerged to demonstrate how the place where we live, work and play influences our physical and mental health and well-being (PHE, 2017)⁴ and can also influence equality in health (Marmot, 2010)⁵.

The evolution of 'Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits'⁶ enabled the public health and planning teams to deliver against the recommendation in the spatial planning and health needs assessment to develop the Health Impact Assessment Local Plan Policy D.SG3.

Policy D.SG3

Health impact assessments

1. The following developments are required to complete and submit a rapid health impact assessment as part of the planning application:

- a. Major development within an area of sub-standard air quality (as designated and shown on the Policies Map).
- b. Developments which contain any of the following uses:
 - i. Education facilities
 - ii. Health facilities
 - iii. Leisure or community facilities
 - iv. A5 uses (hot-food-takeaways)
 - v. Betting shops
 - vi. Publicly accessible open space.

2. Developments of a scale referable to the Greater London Authority (as set out in legislation) are required to complete and submit a detailed health impact assessment as part of the planning application.

² London Borough of Tower Hamlets. Spatial Planning and Health Joint Strategic Needs Assessment (2016). Available at https://www.towerhamlets.gov.uk/Documents/Public-Health/JSNA/JSNA_Spatial_Planning_and_Health.pdf

³ Barton, H. (2017). City of Wellbeing – A radical guide to planning, Routledge: London.

⁴ Public Health England (2017). Spatial Planning for Health An evidence resource for planning and designing healthier places, PHE: London. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729727/spatial_planning_for_health.pdf.

⁵ Marmot, Sir M., Allen, J., Goldblatt, P. et al. (2010). Fair Society, Healthy Lives: the Strategic Review of Health Inequalities in England Post-2010 (The Marmot Review). Department of Health: London.

⁶ Tower Hamlets Local Plan 2031: Managing Growth and Sharing the Benefits (2020).

To ensure an effective implementation of the new policy, a cross sector programme of work was established, led by Public Health and Development Management, with support from the newly appointed HIA Officer, funded initially for two years. External consultants were also appointed to initiate cross sector dialogue and lead a capacity building programme, through training and development and building a suite of guidance documents for developers, council officers/members and residents to enable greater engagement in the implementation of the Policy. A partnership agreement formalised planning and public health cross sector working. In addition, University College London has started to develop a methodology to evaluate the policy within the next five years.

Value of HIA in Tower Hamlets

The recent adoption of an HIA policy comes at a time when the significance of the living environment as a determinant of health is increasing through the new context of COVID-19, and the forecast of Tower Hamlets having to accommodate an additional 35,110 homes (or 3,511 per annum) by 2029, the second highest housing target in London. These bring to the fore issues such as room size, noise and housing design as well as access to green infrastructure and promotion of safe active travel which HIA can help consider in the planning process.

For Tower Hamlets, HIA needs to shape the development for its specific locality and the population surrounding it, getting into the detail of design using local residents' experience of the area. This includes, for instance, designing homes to have enough space for dining tables, creating distinctive meeting places, and establishing if there is a local need for textured pavements to provide way finding for those with poor eyesight.

HIAs should work to give greater weight to health in the planning process, to reduce health inequalities and improve health for all, and that means all scales of development covered by our HIA policy due to the specific context of Tower Hamlets.

"For Tower Hamlets, HIA needs to shape the development for its specific locality and the population surrounding it, getting into the detail of design using local residents' experience of the area."



Health in EIA

The EIA Directive (2014/52/EU) was transposed into UK law in 2017, introducing population and human health into the roster of environmental topics to assess in EIAs, presenting us with the challenge of: 'how can we improve consideration of human health in EIA to satisfy the new requirements?' Currently, health is often 'scoped out' of EIA, deferring consideration of health to aspects of other technical assessments, or as a stand-alone HIA. This article looks at how human health is currently dealt with in EIA using examples from two technical topics, Air Quality (AQ) and Land Contamination (LC), and how it could be considered more robustly.

In AQ, standards and objectives are fundamentally set for the protection of human health. For fine particulates with a diameter below 10 microns (PM10), two EU standards¹ have been set in relation to the impact that the length of exposure will have on human health: a short-term, 24-hour limit capped at 50 µg/m³, and a long-term, annual average at 40 µg/m³.

Importantly, a report² suggests a 1 µg/m³ reduction in fine particulate air pollution in England over the next 18 years could prevent c.50,900 coronary heart disease cases, 16,500 strokes, 9,300 asthma cases and 4,200 lung cancer cases. However, if 28,000-36,000 deaths annually are attributed to long-term exposure to man-made air pollution, should the assessment of AQ-related human health go even further, such as looking more closely at site-suitability, especially for residential schemes?

LC assessments also considered human health before it became a requirement. Indeed, the 'Source-Pathway-Receptor' (SPR) model used is highly valued due to the receptor (human, fauna/flora or environment) being the direct focus. The SPR approach relies on understanding of the pathway(s) along which contaminants travel to arrive at the receptor(s), as well as the impact of different contaminants on receptors. The types and vulnerability of the receptors can therefore be determined, strongly influencing the assessment and driving the stringency of the screening process. For instance, if there is potential for contaminants to come into contact with children's playgrounds, this will require a more rigorous assessment than if the same contaminants were to be present within landscaping around industrial estates.

While AQ does not differentiate between receptors, it does take a 'worst-case' approach, using the thresholds of the most vulnerable population as representatives. For example, the annual average standards³ applicable to hospitals, schools and care homes also apply to all residential locations. Whilst the impact to human health is embedded in AQ and LC assessments, the effect of these health determinants is not transparent but only implied through the standards set (a proxy), driven by public health evidence. By identifying specific receptors, LC presents a more focused platform from which effects can be more accurately derived. However, all technical assessments need to address this gap.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0050>

² <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

³ <https://www.gov.uk/government/publications/local-air-quality-management-technical-guidance-laqm-tg-09>

The study of impacts on human health within these two technical assessments is currently taken from a physical stance. There is an opportunity for technical specialists to expand their scope to include the effect they will have on mental health and wellbeing. AQ assessments could explore for example, the effect of dust on anxiety. A gap in the consideration of mental health and wellbeing also lies above the level of technical assessments; learning from HIAs, there is an opportunity to assess the potential impact from a proposed development as a whole, i.e. how will it impact on community cohesion, social justice, indices for mental health etc. HIAs also consider the cumulative effect(s) on health from other technical topics.

In conclusion, there are three key areas in which the assessment of human health in EIA needs to be developed:

1. Translate the impact of health determinants into the effect this will have on health; there is an opportunity for technical specialists to take on this role for their respective topics.
2. Bring together impacts from the technical topics in combination for an overall health and wellbeing perspective.
3. Include other holistic health impacts, such as those concerning mental health and wellbeing and community cohesion.

The latter two deliverables could be addressed in a separate 'Health and Wellbeing' EIA Report chapter.

Human health is already considered to a large extent in EIAs and the specific requirement to include it should not be viewed as challenging but seen as an opportunity to improve EIA practice and the extent that EIA can positively influence proposed developments through effective design, building in appropriate mitigation, responding to health concerns raised in consultation, and supporting broader policy aspirations towards improved environmental quality.

"There is an opportunity for technical specialists to expand their scope to include the effect they will have on mental health and wellbeing."



Assessing health in EIA – added value and the benefits of quantification

Introduction

Nearly three years on from the 2017 EIA regulation update, “population and health” remains a poorly understood topic in the EIA world.

It is clear that assessing health in an environmental context is a niche area of expertise, but a now necessary one. The lack of clarity on how to assess population and health effects can leave practitioners unsure on how best to tackle the topic. Unfortunately, this leaves the population and health topic at risk of failing to effectively mitigate adverse effects on local community health.

While population and health explicitly became part of the EIA regulations in 2017, many inter-related technical disciplines, such as air quality and noise, integrate the protection of human health into their assessments to some degree. After all, the protection of the environment is inherently conducive to protecting human health.

However, we can go further. This is where the inclusion of population and health in the updated EIA regulations adds value. While potential population and health effects are influenced by a wide range of environmental, social and economic health determinants which are scoped on a project-by-project basis, the remainder of this article uses air quality and noise health determinants specifically to demonstrate how an assessment of population and health adds value, including discussion of how and why quantification of health effects is beneficial.

Air quality

Air quality assessment levels (AQALs) form an important part of air quality assessments, whereby effects on human health receptors are judged on whether AQALs are predicted to be exceeded, how close air quality concentrations are to the AQAL, and the change in concentration as a percentage of the AQAL. While AQALs are set to protect the environment and health, health effects may be experienced for concentrations below these limits, meaning that, based on available evidence there may not be a concentration threshold below which no adverse health effects occur.

The relationship between exposure to air pollution and specific health outcomes is well understood and the evidence base is robust. As such, the application of quantitative assessment methods in these circumstances is particularly beneficial to further communicate the significance of effect on human health.

One approach to assessing health effects associated with changes to air quality is by drawing from and building upon the absolute change in air quality concentrations to calculate predicted changes in specific health outcomes (such as emergency hospital admissions) for the local population.

Specifically, the application of concentration response functions (CRFs) detailed in various consensus assessments, such as the World Health Organisation (WHO) Health Risks of Air Pollution in Europe (HRAPIE) exercise, UK advisory group Committee on the Medical Effects of Air Pollutants (COMEAP) and/or Kings College London's Environmental Research Group.

With the weight of globally recognised concentration response functions and assessment methods, a quantitative population and health assessment can refine the health assessment, better inform the application, and more effectively respond to and address community concerns and risk perceptions.

Noise

The noise health evidence base is more complex than for air quality as there are both toxicological and subjective parameters which can influence population and health outcomes. Unlike the air quality evidence base, there is an absence of consensus on the effects of noise exposure on health outcomes, which makes the sourcing of information to apply in quantitative assessments far more complex and diverse. Furthermore, RPS choose not to use the well-known WebTAG noise appraisal method of quantifying the health impacts of noise exposure, which assigns a monetary value to each Disability Adjusted Life Year (DALY) lost or gained, as it we do not consider it necessary to monetise health outcomes – which should have substantial weight on their own.

While factors such as absolute change in noise exposure and number of people affected may be taken into consideration by the noise assessment, thresholds for the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL) generally form the basis to the noise assessment.

Where considered proportionate, quantitative assessment methods can be applied to assessing health effects associated with changes in noise exposure (within RPS this is generally applied to aviation projects only). A quantitative approach provides further context and added value to noise assessment outputs by using the absolute change noise exposure, above a defined LOAEL, to calculate predicted changes in specific health outcomes (such as stroke incidence and mortality) for the local population.

As changes in noise exposure are complex and their impact on health can be influenced by a range of factors (not just being above or below the LOAEL), the application of quantitative assessment methods to assess population and health effects from changes in noise exposure is particularly beneficial to further communicate the significance of effect on human health.

Conclusion

While there is still a lack of clarity on how to assess population and health effects, overall, the assessment of population and health can provide added value to inter-related topics and help strengthen conclusions using quantitative exposure response calculations to better address community concerns and risk perceptions.

"While population and health explicitly became part of the EIA regulations in 2017, many inter-related technical disciplines, such as air quality and noise, integrate the protection of human health into their assessments to some degree."



Proportionate Health Assessment in EIA

In 2017 IEMA produced a strategy for delivering proportionate EIA. The Strategy sets out four strategic themes for action: Enhancing People, Sharing Responsibility, Improving Scoping and Embracing Innovation and Digital. This approach equally applies to health assessment in EIA as discussed below.

People – Disproportionate EIA can be a response to a perceived risk of missing key issues or impacts. Investing in professionals involved in all aspects of health in EIA can help avoid a broad assessment. Use of technical leads with professional accreditation, such as membership to the Faculty of Public Health, equally applies to health as it does to other topics. Working in multi-disciplinary teams, it is also useful to have the back-up from other EIA specialists that can advise on health determinants such as noise, air quality and contamination as well as social aspects, to avoid duplication.

Building capacity of EIA stakeholders is equally important. More Local Authorities are now employing officers with a remit covering public health, planning and environment, e.g. Tower Hamlets Council, Cambridgeshire County Council, and Torbay Council, but in other cases, often Environmental Health Officers may not have the breadth of experience to cover aspects beyond their role, such as impacts on mental health. More training is needed in health assessment in EIA to increase confidence of both practitioners and stakeholders.

Improving Scoping – Health is no different to other EIA topics in that better scoping involves continual engagement with stakeholders and the project team. This can ensure that the project evolves to reduce impacts on health, for example by incorporating more greenspace or active travel into urban design. Health is one area in particular, where perception of a significant effect, even though on paper there is no impact, is well worth some attention during scoping. Early public engagement can identify concerns and in turn communicate key messages to allay fears, such as those associated with risks from electromagnetic fields.

Health Impact Assessment (HIA) practitioners are able to draw on professional experience and understanding of health evidence from literature reviews to inform the scoping process. Publicly available checklists from bodies such as NHS London and the Wales Health Impact Assessments Support Unit can also inform health scoping exercises. However, a clear definition of determining the significance of effects in health assessments, is needed to ensure that evidence supports scoping out as well as scoping in.

Sharing responsibility – A coordinated response from across the EIA community includes health practitioners, whether they are engaged in undertaking an EIA or are a key stakeholder for consultation. This is where UK Guidance for Health Assessment in EIA could contribute to a shared understanding and lead to greater proportionality. The lack of familiarity with health assessment, including stakeholders, lawyers and developers can lead to very different approaches, ranging from ‘no comment’ to ‘do we need to cover everything?’.

Embracing innovation and digital – For me, innovation in EIA can help to answer many of the challenges to proportionality and this equally applies to health assessment. An increase in the use of online content means that virtual reality, visualisations, infographics and interactive maps in a web-based format can effectively communicate aspects relating to health. Examples include mapping of existing health inequalities to illustrate sensitive communities, visualising the diversion of a popular footway, or hearing the noise levels of a passing train at a point ‘X’.

Better data management can deliver links to large bodies of health evidence; having relevant data more accessible and ready to interrogate can allow greater focus on the key health issues and save time. Use of receptor-based data and visualisation of a development provides a better understanding of physical effects throughout a project’s life-cycle. This better demonstrates where there are perceived health impacts, rather than predicted impacts, and can help reduce public anxiety.

As a relatively new addition to the EIA Regulations, it is understandable how the tendency to de-risk a health assessment can lead to a disproportionate approach throughout the process. It’s therefore important to remember that all of IEMA’s action points outlined above can be applied to health assessment to provide a more efficient and effective EIA.

“...innovation in EIA can help to answer many of the challenges to proportionality and this equally applies to health assessment.”



The Past and Future of Health and EIA

Environmental Impact Assessment (EIA) and human health impacts have always been closely entwined and this was clear from the introductory text in the original 1985 version of the EIA Directive¹. However, this clarity was lost when originally transposed into UK legislation. Nevertheless, it would be disingenuous for anyone to suggest that health was not included in EIA prior to the explicit requirement to consider human health in the 2014 version of the Directive², especially when considering the long standing EIA requirement to consider the interaction between human beings and impacts on soil, water, air, climate, landscape, flora and fauna.

Policy makers, having seen health not being appropriately assessed in EIA practice, replaced the original wording 'human beings' with the more explicit words 'population and human health' in the 2014 update of the EIA Directive. This change entered UK law in 2017³ and the new wording initially caused a stir, with many considering health to be a new topic, whilst others took the view that it was simply a clarification of an existing and long standing requirement.

Nevertheless, the clarification has had a material effect by removing any doubts that impacts on human health should be considered in the assessment of a project. Furthermore, it is also true to say that in the intervening years between 1985 and 2020 our understanding of impacts on human health from development projects has evolved from a more narrow focus on health and safety to a broader concern with the wider determinants of health.

The 2017 EIA Regulations therefore provided a welcome opportunity to revisit existing practice and consider how effective current assessments are at assessing the effects on human health. The consensus within the impact assessment community was that whilst certain physical health elements such as air quality, noise and contamination have been routinely considered, other elements of health, such as mental and social wellbeing, have historically been either absent or inadequately assessed.

The recognition that health assessment in EIA needed to improve, created two obvious pathways, which can be summarised as an integrated or standalone approach to health in EIA. The problem with the second option, of undertaking a standalone Health Impact Assessment (HIA), is twofold. Firstly, the HIA findings still need to be incorporated back into the EIA, leading to a duplication of effort. This duplication also adds additional costs and reporting which is counter-productive to the goal of proportionate assessment, considered a key area for EIA improvement by practitioners and IEMA⁴. The second problem arising from a standalone HIA alongside the EIA is that the HIA is carried out in a siloed approach which does not factor in the other constraints and impacts arising from the other EIA topics and receptors, thereby removing the main benefit of EIA as a holistic and integrated assessment. On this basis, as set out in IEMA's 2017 Primer on Health in EIA⁵, it is the IEMA's view that human health assessment should be an integral part of EIA. However, it is also clear that coverage of potential health effects in current EIA practice is often inadequate and therefore it is imperative to improve practice.

1 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31985L0337&from=EN>

2 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052&from=EN>

3 <https://www.legislation.gov.uk/uksi/2017/571/contents/made>

4 Proportionate EIA – A Collaborate Strategy For Enhancing UK Environmental Impact Assessment Practice, IEMA 2017

5 Health in Environmental Impact Assessment: A Primer for a Proportionate Approach (2017). IEMA, Ben Cave Associates Ltd and the Faculty of Public Health, Lincoln, England. Available at www.iema.net



One of the barriers to the assessment of health in traditional EIA practice is that health is affected by nearly all of the topic-based assessment chapters, not just the obvious topics of noise, vibration and air quality. When considering the broader scope of physical, mental and social wellbeing, it is clear that all topics have potential impacts. For example, loss of locally valued ecological habitat or locally valued heritage could cause or aggravate depression and deterioration of mental health of nearby residents. The value of these assets to residents' mental wellbeing is unlikely to be assessed in the heritage or ecological chapters, which are designed to assess the impact against international and national species and habitats of concern, and/or listed or designated assets. The same could be said for links between landscape and health, flooding and health, economics and health, traffic and health etc., etc. Following on from this, if a wider and more comprehensive approach to health is considered, there is the practical issue of how and where to report the findings in the environmental statement, given the intrinsic overlap with multiple topic-based chapters.

A potential practical solution to this conundrum could be both simple and radical. The Environmental Statement/Report, and EIA process, could be refocused to be receptor led rather than impact led. Currently the reporting and assessment normally begins from a position of impacts, i.e. the impacts from noise, the impacts on air quality, the impacts on traffic, the impacts on landscape, the impacts on heritage. The receptors within these assessments are often humans, but can equally be habitats, or built assets. However, if the structure of the EIA was shifted to focus on the collective impacts on a community, or segment of a community, such as; the impacts on businesses, the impacts on residents, the impacts on recreational users, these chapters would then need to integrate the impact

from noise, air quality, contamination, landscape etc on each receptor, i.e. you would not have a standalone 'noise' chapter.

There are a number of advantages and disadvantages to this approach. The disadvantages are that you would cease to have a single compiled chapter on each impact topic, which will make it harder for a single specialist to develop and 'own' a chapter, similarly a consultee only interested in a single topic could not turn to a single "technical" chapter to read about an issue in isolation. Additionally, where would the lengthy topic specific baseline, policy and technical assessments sections sit under a receptor led reporting structure? These potential disadvantages can be largely mitigated through the use of technical appendices rather than overly long chapters, retaining the bulk of the technical materials in a separate report and removing the need to follow the ES reporting format which is ill-suited to long technical reports and baseline information.

The advantages of changing to a receptor led structure would be that stakeholders, residents and the public with a broader interest in the impacts of a project can more easily access a holistic view of the impacts on a receptor, such as their community or home. Furthermore, single technical issue stakeholders would be more likely to see their topic in the context of the other impacts and considerations by having to read across all the receptors to see the various impacts from their areas of focus. This would promote a greater understanding of the interrelated nature of development impacts and the inherent trade-offs required within a design process.

The suggested approach above is made more viable and more easily achievable by the advent and adoption of digital ways of working as set out in the recent **IEMA Primer on Digital Impact Assessment**. Digital techniques will allow the detailed baseline, policy and methodological data to be nested within the digital report interface, available to access to those seeking this information, but not getting in the way of non-specialists seeking a concise reportage on the significant effects and the proposed mitigation measures, i.e. digital offers the potential for the combination and dual benefits from both conciseness and comprehensiveness.

Whatever the methods deployed, it is imperative that a necessary improvement and focus on human health adds to, rather than eclipses, the equally important consideration of non-human species and pan-species issues such as catastrophic climate change and biodiversity loss. In summary, this article has sought to explore the history and potential future of health assessment in EIA, and to this end, three key issues have emerged.

1. The consideration of human health has always been a fundamental requirement of EIA.
2. The historic consideration of human health in EIA has often been too narrow in scope. New techniques are now being implemented to improve and widen the scope of human health assessment in EIA practice to better capture potentially significant health effects.

3. The integration of human health assessment, and interaction with other EIA factors, could be better facilitated by adopting a receptor led, rather than impact led, reporting structure.

This article was drafted for this Health edition of the Impact Assessment Outlook Journal by Dr. Rufus A. Howard, a registered Principle Impact Assessment Practitioner and the Impact Assessment Policy Lead at IEMA. Special thanks to Joanna Bagley, Andy Ricketts and Josh Fothergill for peer review of this original article on health and EIA.

"A potential practical solution to this conundrum could be both simple and radical. The Environmental Statement/Report, and EIA process, could be refocused to be receptor led rather than impact led."



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 - GESA Group (Global Environmental & Social Assessment).
 - Geographic/Regional Groups.

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Summary

Joanna Bagley - Guest Editor

What is clear from this series of articles is that, whilst HIA is not a new concept, health and wellbeing needs to have much greater prominence in the planning process than has historically been the case. There is a growing body of support for much wider implementation of HIAs either through adoption of planning policies or through assessment of health in EIAs. Key to the successful and continued implementation of HIA to ultimately achieve meaningful outcomes to enhance a population's health and wellbeing, is the adoption of a proportionate approach to ensure that mitigation and enhancement measures are focussed on the areas of greatest impact. A receptor based approach to assessment, as advocated in Rufus Howard's article, may resolve a number of the issues that currently arise in using a topic based approach to EIA. Whilst this is a fairly radical departure from much of current EIA practice, given the many changes being considered to the English planning system, perhaps now is a perfect time to make such a change.

Although HIA has been undertaken for many years, further guidance on the assessment of health in EIAs is needed for both practitioners and stakeholders, and as a result, the Impact Assessment Network health working group has been tasked to develop guidance in the coming year. If you are interested in being involved in the IA Network health working group, details of how to get involved are available on IEMA's website.

Acknowledgements

Joanna Bagley, a Senior Associate Director at Waterman Infrastructure & Environment Ltd has acted as the guest editor for this edition of the new IA Outlook Journal. We recognise and appreciate her contribution.

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IEMA's EIA Quality Mark - a scheme operated by the Institute allowing organisations (both developers and consultancies) that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed. The EIA Quality Mark is a voluntary scheme, with organisations free to choose whether they are ready to operate to its seven EIA Commitments: EIA Management; EIA Team Capabilities; EIA Regulatory Compliance; EIA Context & Influence; EIA Content; EIA Presentation; and Improving EIA practice.



Perspectives on Health in EIA

This eighth edition of the Impact Assessment Outlook Journal provides a series of thought pieces on the consideration of Health Impact Assessment in Planning. In this edition, the Guest Editor (Joanna Bagley) has selected seven articles produced by IEMA and Public Health professionals. The result is a valuable yet quick read across some of the different aspects of UK practice exploring Health Impact assessment in planning.

About the Guest Editor: Joanna Bagley

Senior Associate Director at Waterman Infrastructure and Environment Ltd

Joanna has over 20 years of experience within private sector consultancy and has project managed and directed Environmental Impact Assessments of a range of high profile urban regeneration schemes including Victoria Gate in Leeds, Hungate in York, Station Hill in Reading and the Quadrant Arcade on Regent Street. She has also led Strategic Environmental Assessments/Sustainability Appraisals (SEA/SA) of Local Plan documents and provides SEA / SA and environmental advice to strategic land holders. Joanna often retains involvement in schemes throughout the construction phase to manage the environmental requirements arising from planning conditions, client commitments and best practice.



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