

Population and Human Health Assessment Standard

1st & 2nd May 2024

P&HH Standard - Production and Publication

Publication of Population & Human Health (P&HH) Standard expected in Autumn 2024

External consultation on the Draft Standard in Summer 2024.

Including (not limited to):

- Environmental Protection Agency
- Institute of Public Health
- Health Service Executive
- Health and Safety Authority
- Economic and Social Research Institute
- Central Statistics Office
- Department of Housing, Local Government & Heritage
- Sport Ireland

Preparation of the Draft Standard has included:

- Close working with TII Environment team and specialist consultants (Noise, Air Quality)
- Extensive peer review by and workshops with Health Impact Assessment specialists
- Updates to reflect the revised TII Project Appraisal Guidelines (PAG)

Need for a P&HH Assessment Standard

The EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU, aims to *‘ensure a high level of **protection of the environment and human health**, through the establishment of minimum requirements for EIA, prior to development consent being given, of public and private developments that are likely to have significant effects on the environment’.*

The 2014 amended Directive introduced changes from the 2011 Directive, including the replacement of ‘Human Beings’ with **Population and Human Health**.

The P&HH Standard supports TII’s Vision as set out in the Sustainability Implementation Plan (SIP) to:

*‘lead in the delivery and operation of sustainable transport, enabling our networks to drive inclusive growth, create job opportunities, **enhance the well-being of all persons including vulnerable groups**, strengthen our resilience to address climate change, maintain our commitment to the environment and continue to prioritise safety.’*

Objectives of the P&HH Assessment Standard

Ensure the production of documents and deliverables in **compliance** with the TII Project Management Guidelines (PMGs), Project Appraisal Guidelines (PAGs), EIA Directive and other relevant legislation, guidelines and standards.

Ensure the **robust, proportionate** assessment of P&HH effects resulting from proposed projects in accordance with the PAGs and, where relevant, the EIA Directive.

Provide **evidence-based** information on P&HH effects to guide decision makers during options selection and project determination, in accordance with the Project Appraisal Guidelines (PAGs).

Incorporate appropriate **mitigation and enhancement** measures to avoid or reduce significant adverse effects and **improve P&HH outcomes**.

Implementation of the Standard

The Standard is to be used in the planning, design and construction of national road projects that:

- Require approval under Section 51 of the **Roads Act**, 1993, as amended (proposed national road development subject to EIA Environmental Impact Assessment).
- Require approval under Section 177AE of the **Planning and Development Act**, 2000, as amended (certain local authority development subject to Appropriate Assessment).
- Are subject to **Part 8 of the Planning and Development Regulations**, 2001, as amended (known as the 'Part 8' procedure).

The Standard may also be used as a guide in the consideration of P&HH effects of other types of project such as active travel routes and greenways.

Practitioner Competency

Evidence of competency	Examples	
	Population assessment practitioner	Health assessment practitioner
Academic qualifications	<p>Honours degree (National Framework of Qualifications (NFQ) Level 8 or equivalent level); and/or Master's degree (NFQ Level 9 or equivalent level), in a relevant discipline such as:</p> <ul style="list-style-type: none"> - Environmental sciences - Social sciences - Planning - Geography 	<p>Honours degree (National Framework of Qualifications (NFQ) Level 8 or equivalent level); and/or Masters degree (NFQ Level 9 or equivalent level), in a relevant discipline such as:</p> <ul style="list-style-type: none"> - Public health / Epidemiology - Medicine - Environmental sciences - Social sciences - Planning - Geography
Professional associations	<p>Chartered Status or membership of a professional body that represents environmental and social assessment professionals. May include:</p> <ul style="list-style-type: none"> - Institute of Environmental Management and Impact Assessment (IEMA) - Institute of Environmental Science (IES) 	<p>Chartered Status or membership of a professional body that represents, among others, HIA professionals. May include:</p> <ul style="list-style-type: none"> - Institute of Environmental Management and Impact Assessment (IEMA) - Faculty of Public Health (FPH)
Professional experience	<p>Provide evidence of 4 or more years' relevant post-graduate professional experience, such as:</p> <ul style="list-style-type: none"> - Undertaking population, community and/or socio-economic assessments for infrastructure and/or urban development projects. - Planning, including roles/ responsibilities relating to healthy design and placemaking, active travel or other relevant discipline. 	<p>Provide evidence of 4 or more years' relevant post-graduate professional experience, such as:</p> <ul style="list-style-type: none"> - Undertaking health assessments for infrastructure and/or urban development projects. - Public health, including roles/ responsibilities relating to wider determinants of health and healthy placemaking. - Planning, including roles/ responsibilities relating to healthy design and placemaking, active travel or other relevant discipline.

- EIA Directive states 'the developer shall ensure that the EIAR is prepared by competent experts'
- It is the responsibility of the developer to ensure, to the satisfaction of the consenting authority, that the practitioners who undertake assessments are expert, qualified and competent

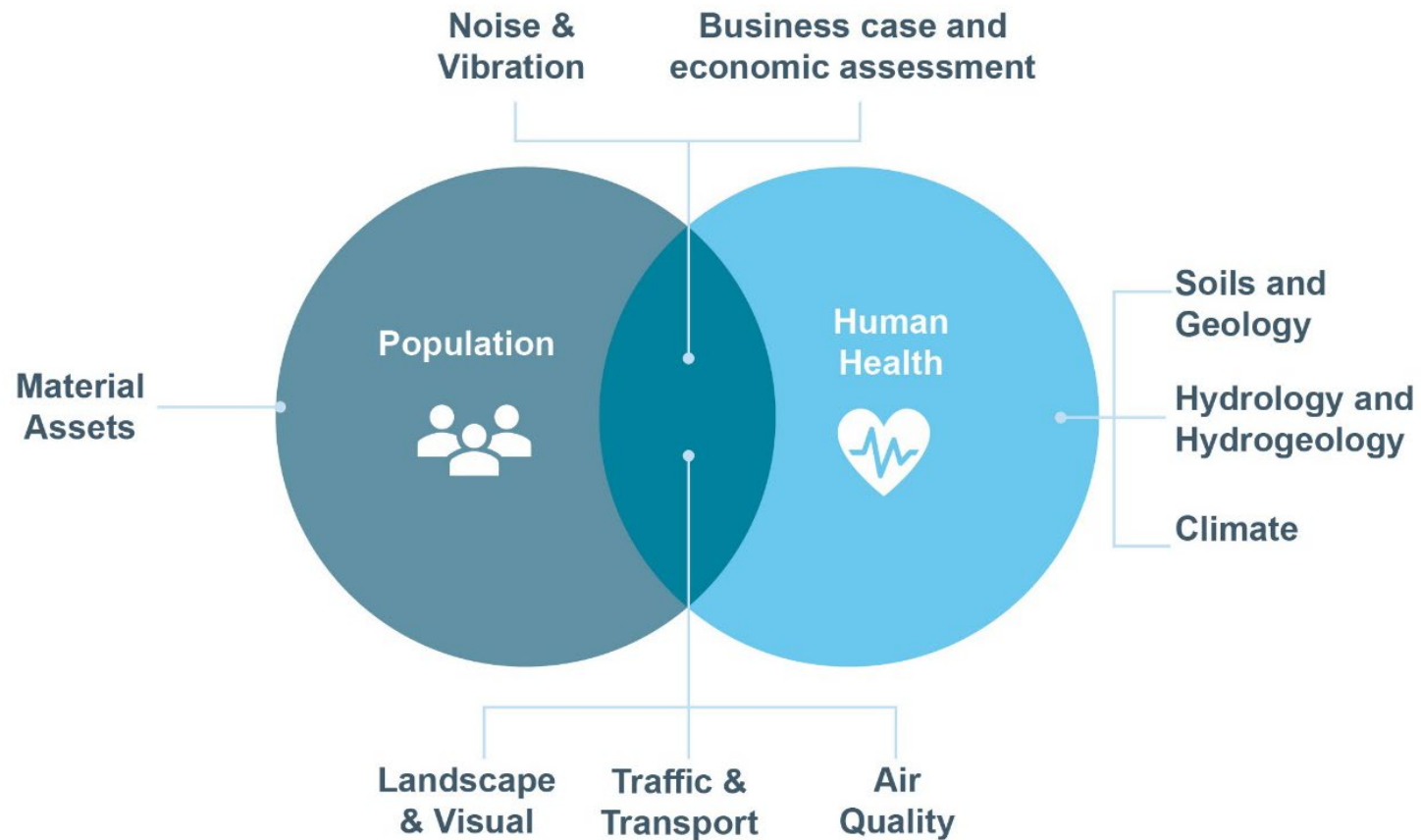
Related Guidance

- Health Impact Assessment Guidance: A Manual. Institute of Public Health (IPH), 2021
- Guidelines on the Information to be Contained in EIARs, EPA, 2022
- Institute of Environmental Management and Assessment (IEMA) Guide to Effective Scoping of Human Health in Environmental impact Assessment, November 2022
- IEMA Guide to Determining Significance for Human Health in Environmental Impact Assessment, November 2022
- Design Manual for Roads and Bridges (DMRB) LA112 – Population and human health, Revision 1, January 2020



Interaction with other disciplines

- P&HH is a broad topic encompassing a wide range of impacts, many of which are considered in other PAG / EIA topic assessments
- P&HH assessment is informed by outputs from other assessment topics



Population Assessment - Definition and Scope

Population resources and receptors

Private property and housing

Community land and assets

Businesses and development land

Non-motorised road users

Types of impact

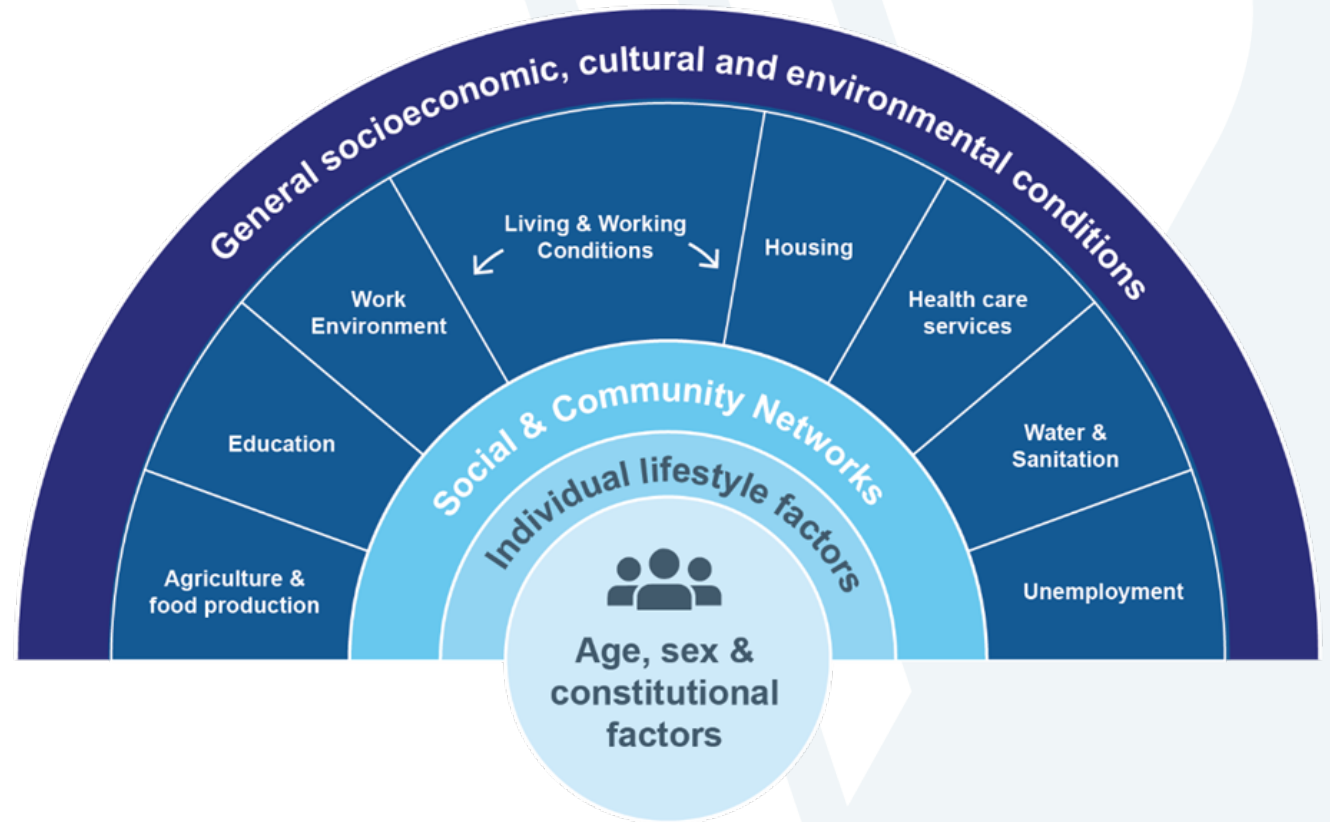
Demolition and land take

Impacts on amenity value

Impacts on accessibility and severance

Human Health Assessment - Definition and Scope

- World Health Organization (WHO) definition of health: *'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'*
- Health assessment is based on the 'Wider Determinants of Health' – social, economic and environmental factors that influence health
- Health equity is considered, including impacts on vulnerable groups and distribution of impacts across the groups with different levels of social deprivation, health status or other relevant characteristics



Dahlgren & Whitehead, 1991

Human Health Assessment Scope – Wider Determinants of Health



- Assessment scope will be determined by the health assessment practitioner
- Scope is based on identifying impacts on health determinants that are likely to give rise to health and wellbeing effects
- Scope should be proportionate, focusing on likely significant effects
- Potential significant effects identified using *Source – Pathway – Receptor* model

Human Health Assessment Scoping

Source – Pathway – Receptor

Source Project Element	Effect on Health Determinant(s)	Pathway Means of Transmission	Receptor Sensitive Population
Provision of improved cycle routes and crossings	Improved opportunities for physical activity, safety and connectivity ✓	Local community will experience improved cycling provision ✓	New routes and crossings will be used by the local community ✓
Earthworks and construction of foundations	Ground contamination – potential mobilisation of contaminants ✓	Contamination contained through required mitigation measures in Environmental Management Plan ✗	Users of public footpath alongside construction site and residents of nearby housing ✓
Land take required to construct project	Green space and physical activity – loss of land from playing fields ✓	Local community will experience reduced access to this resource ✓	Playing fields are used by local community and sports clubs ✓

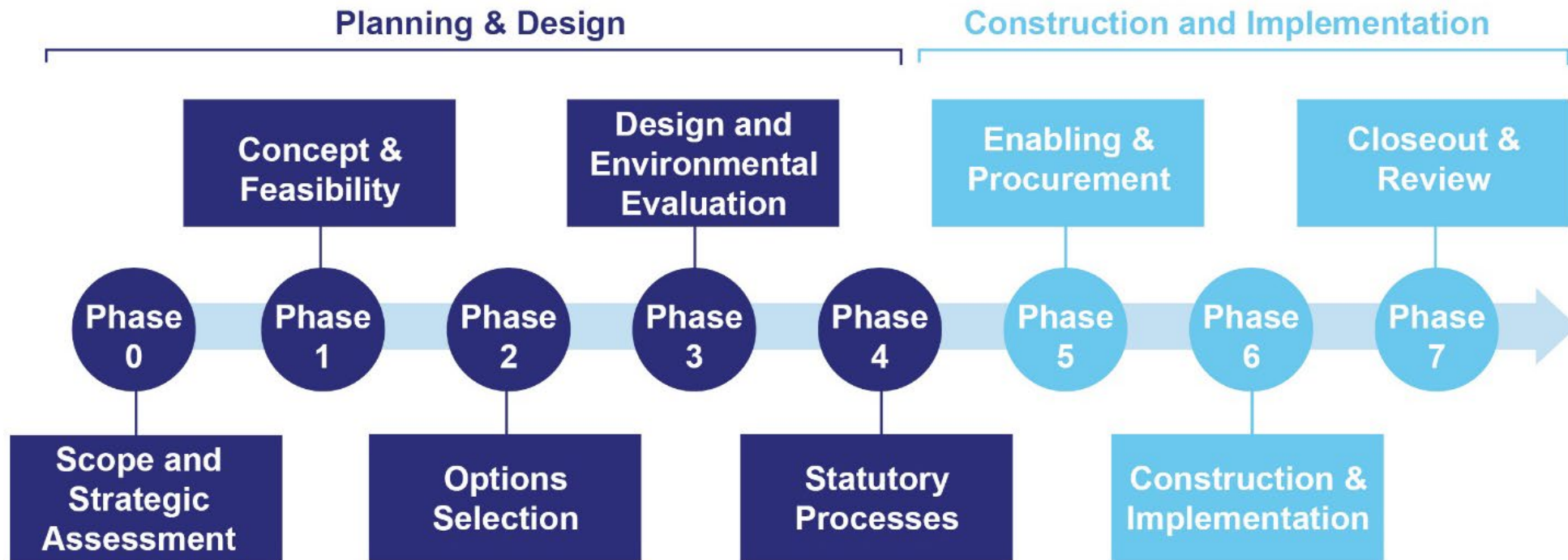
Scope in
←

Scope Out
→

Scope in
←

TII PMG Project Phases

P&HH Assessment Standard applies to PMG Phases 1-4



PMG Phases 0-1

Phase 0: Scope & Strategic assessment

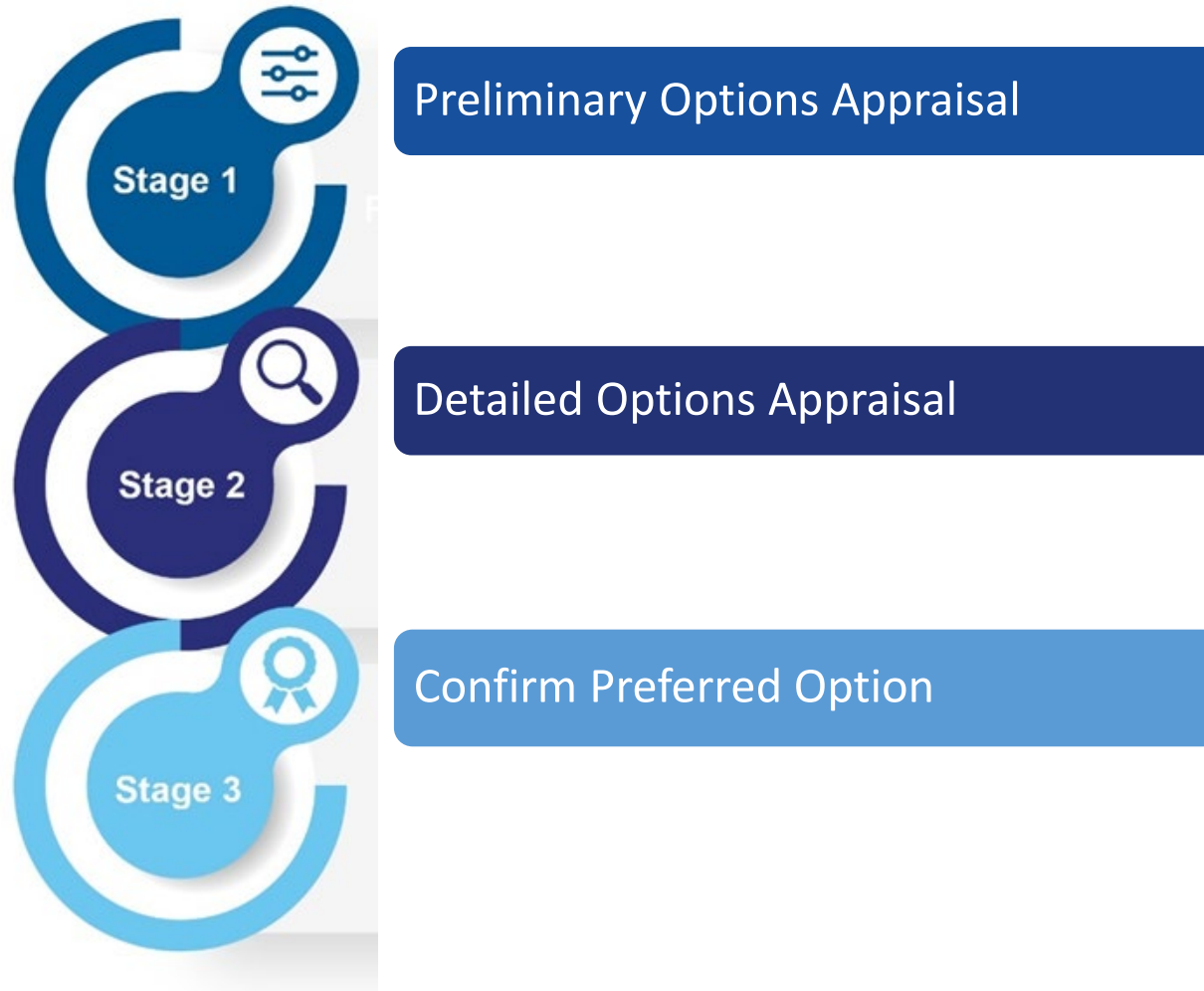
No specialist P&HH input. Project Manager to:

- Ensure that the project is aligned with strategic programmes and plans
- Develop and investigate the feasibility of the project

Phase 1 Concept and Feasibility

- Define preliminary Zone of Influence based on likely geographic extent of impacts
- Collate and analyse publicly accessible health and social baseline data
- Map key constraints, such as residential areas, sensitive community resources and vulnerable populations
- Review plans, programmes and policies relating to the protection and improvement of public health
- Identify risks and opportunities (focus on enhancement – potential to improve outcomes)
- Input to the identification of Strategic Options
- Prepare inputs to the Feasibility Report

PMG Phase 2 – Options Appraisal



Objectives at Phase 2:

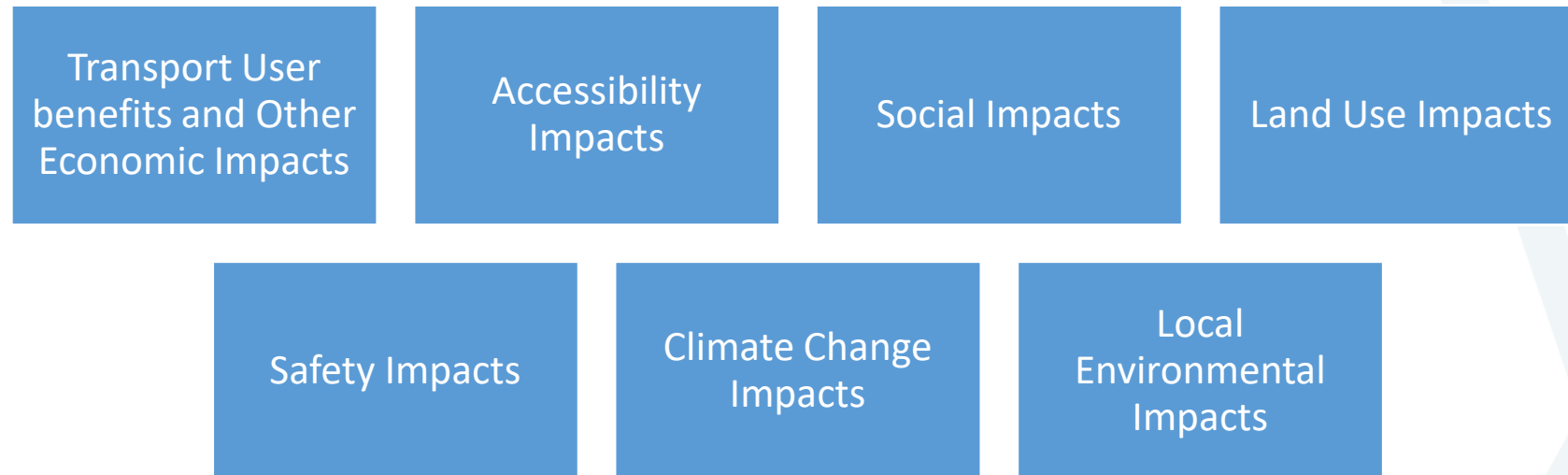
- Ensure that Population and Human Health effects are fully considered in the options appraisal process
- Focus on optimising P&HH outcomes through the selection of the preferred option
- Focus on reducing health and social inequalities
- Add value to the appraisal process and avoid duplication

PMG Phase 2 – Options Appraisal

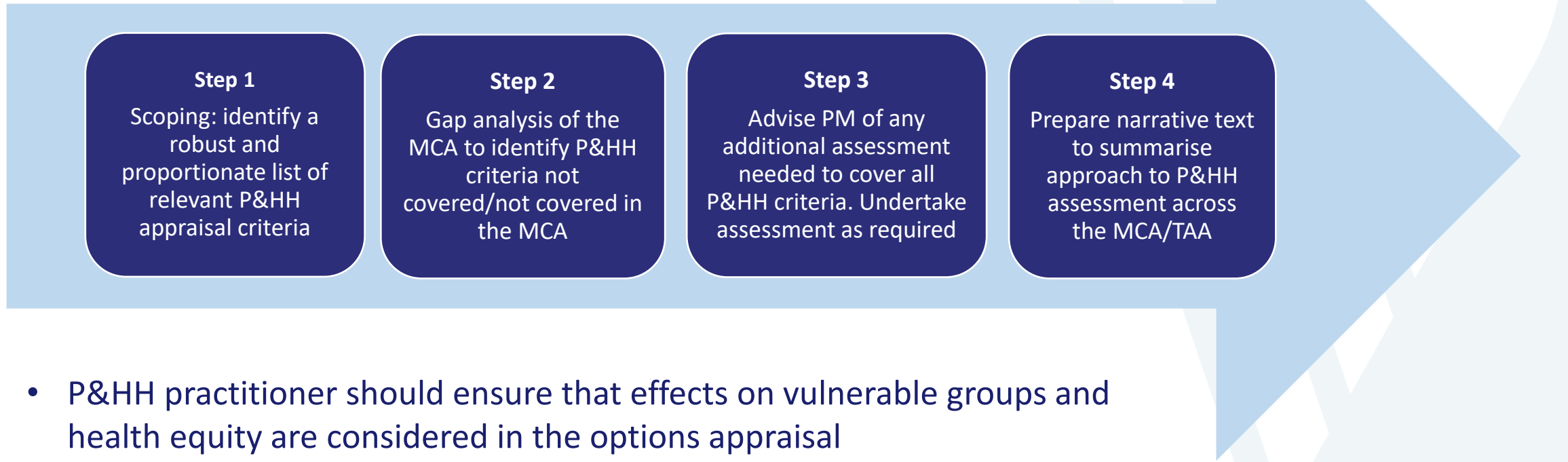
Multi-Criteria Analysis (MCA) / Transport and Accessibility Appraisal

- Factors affecting P&HH are broadly covered in the seven TAA / MCA Appraisal Criteria
- PAG Guidance states it is essential to avoid double counting in the options selection process

MCA/TAA Appraisal Criteria



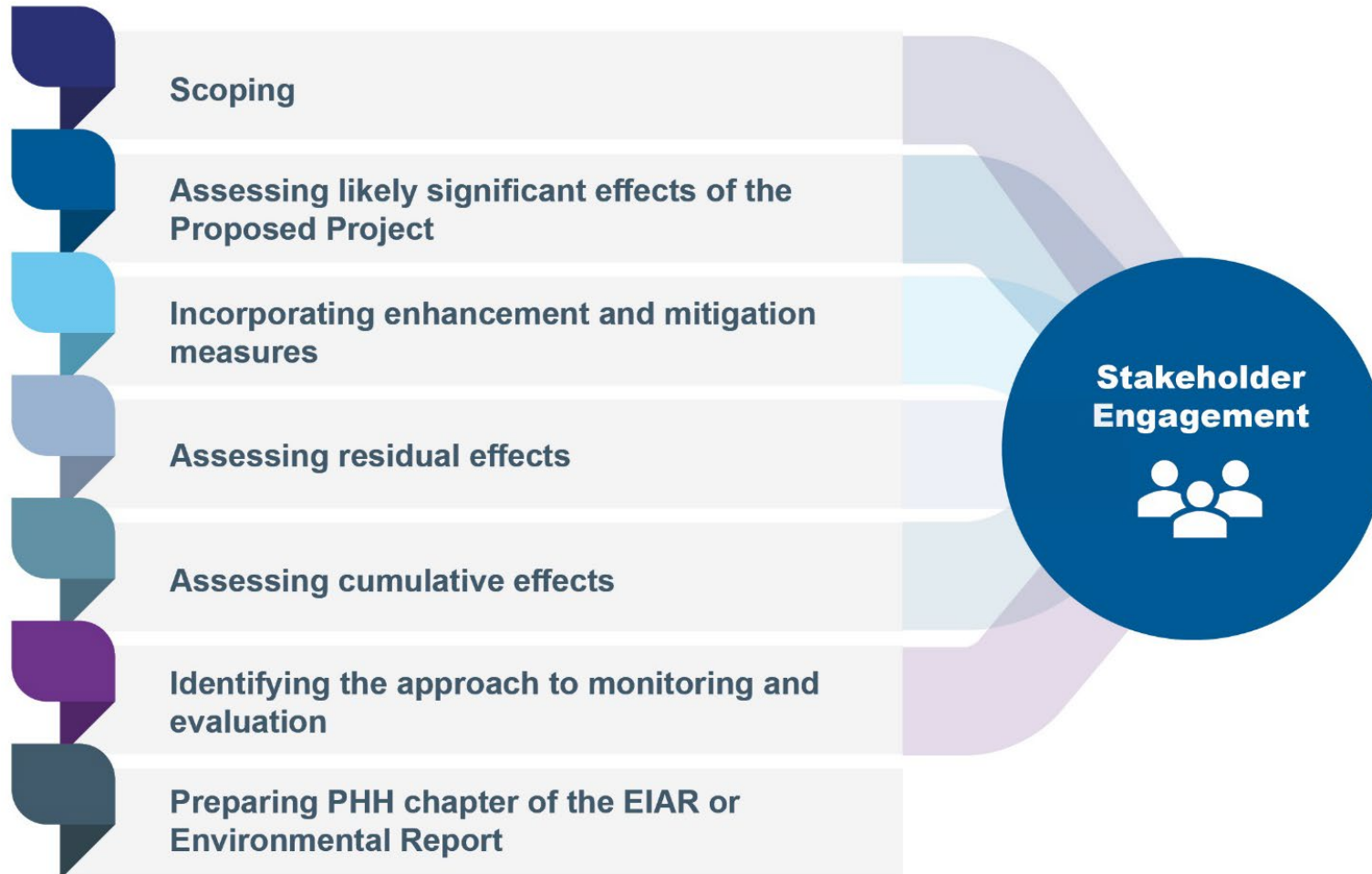
PMG Phase 2 – Options Appraisal



- P&HH practitioner should ensure that effects on vulnerable groups and health equity are considered in the options appraisal
- Analysis of the distribution of impacts and benefits across geographic areas and social groups will be included in the Social Impact / P&HH analysis



PMG Phase 3 – Assessment of Preferred Option

Stages of EIA



PMG Phase 3 – Baseline Data Sources

Population Data

Baseline Information	Likely Data Sources
 Private property and housing: <ul style="list-style-type: none"> The location and number of properties within the ZOI. The location of residential development land and number of units within the ZOI. 	<ul style="list-style-type: none"> Geodirectory's GeoAddress Data Prime2. Aerial photograph. Local Authority Development Plans Project Ireland and National Development Plans.
 Community land and assets: <ul style="list-style-type: none"> The location of community land (e.g., common land, village greens, open green space, allotments, sports pitches etc). The location of community assets (e.g., village halls, healthcare facilities, education facilities, religious facilities etc). The level of existing accessibility restrictions/severance to community land and assets within the ZOI. The frequency of use of community land and assets within the ZOI. 	<ul style="list-style-type: none"> Geodirectory's GeoAddress Data Prime2. Aerial photography. Central Statistics Office. Local Authority Development Plans. Project Ireland and National Development Plans. Open Space and Land Use Condition Survey. Stakeholder engagement. Pobal mapping Economic & Social Research Institute publications'
 Socio-economics, businesses and development land: <ul style="list-style-type: none"> The location and number of businesses within the ZOI. The location of tourism receptors within the ZOI. The location of land allocated for development by local authorities and the number of future jobs it should generate. The level of existing accessibility restrictions/severance to development land and businesses within the ZOI. Existing planning, economic and regeneration plans and strategies. Labour supply, employment levels and unemployment levels within the ZOI. 	<ul style="list-style-type: none"> Geodirectory's GeoAddress Data. Prime2. Aerial photography. Central Statistics Office. Local Authority Development Plans. Project Ireland and National Development Plans. Stakeholder engagement. Economic & Social Research Institute publications'
 Non-motorised road users: <ul style="list-style-type: none"> The type, location and extent of NMU provision (e.g., public rights of way, National Trails, canals, greenways, blueways etc) within the ZOI. The frequency of use of the NMU provision within the ZOI. 	<ul style="list-style-type: none"> Sport Ireland Outdoors. Local authority data sets. Traffic and transport survey results (inclusive of NMU traffic counts and origin/destination of users where practicable).

Human Health Data

Baseline information	Geographic area
Demographic data	
Total population	Local Electoral Area
Population density	Electoral Division
Population by age group	Electoral Division
Population by sex	Administrative County
Population by sex and age	Small Area
Resident population by ethnic or cultural background	Small Area
Family units with children by size and age of children	Small Area
Social and economic data	
Population by sex and social class	Small Area
Population aged 15 years and over by principal economic status and sex	Small Area
Housing tenure (owned, local authority rental, landlord rental)	Administrative County
Percentage of Housing Assistance Payment and Rent Supplement Properties	Local Authority
Population aged 15 years and over by age education ceased	Small Area
Population aged 15 years and over by sex and highest level of education completed	Small Area
Number of households with cars	Electoral Division / Small Area
Number of households with cars	Small Area
Persons at work or unemployed by occupation and sex	Small Area
Persons at work or unemployed by industry and sex	Small Area
Health data	
Deaths from respiratory disease	Area of Residence
Diseases and mortality rates attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Area of Residence
Persons with disability by sex	Small Area
Carers by sex	Small Area
Population by general (self-rated) health and sex	Small Area
Frequency of walking, cycling or using public transport instead of driving	NUTS3 Region

PMG Phase 3 – Stakeholder Engagement

Guidance on effective stakeholder engagement

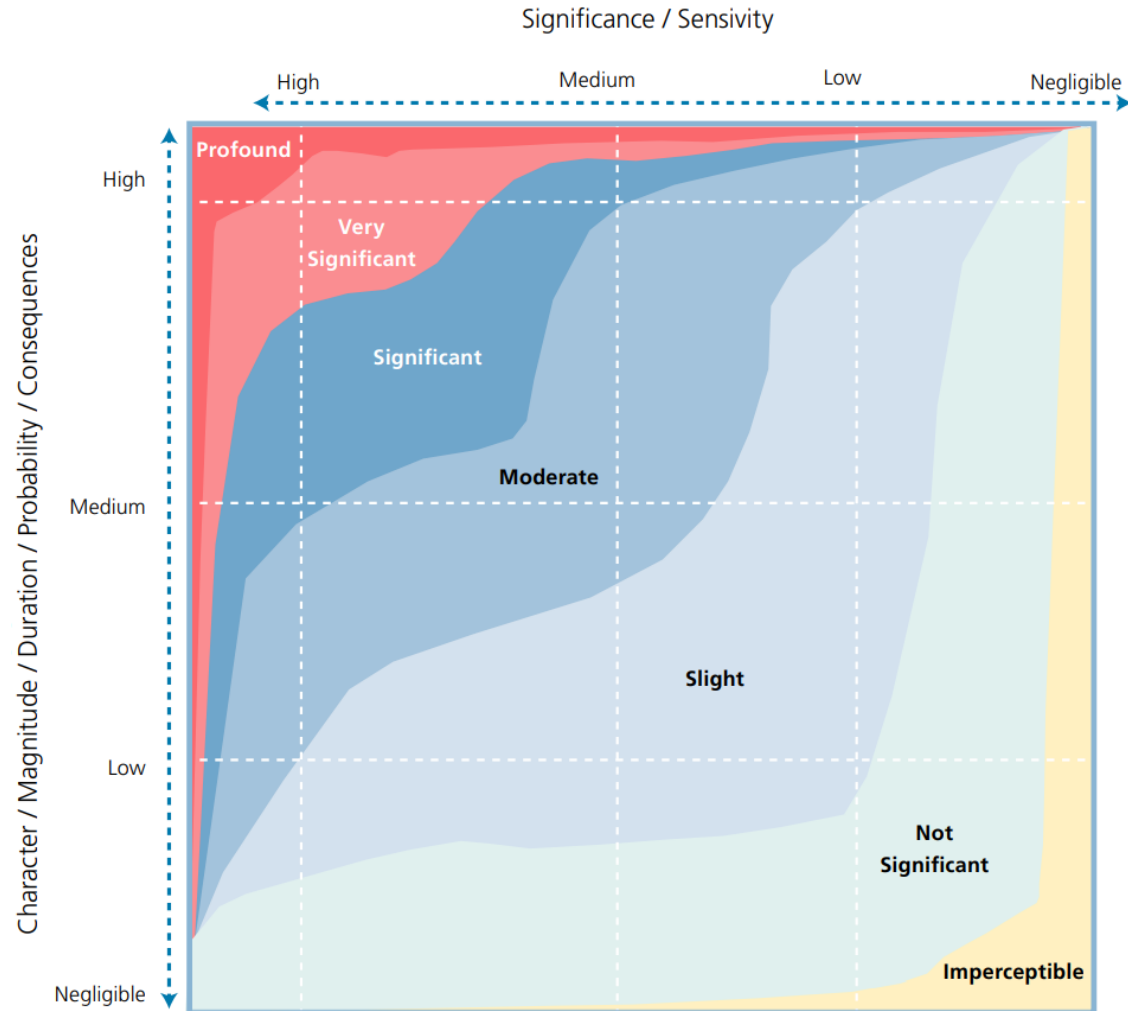
- Prior to engaging with stakeholders, the PHH practitioner should be familiar with the stakeholders' key goals, policies and reports
- Stakeholders should be briefed in advance of meetings, to ensure they understand the scope and purpose of the meeting
- Records should be kept of meeting minutes and actions

Stakeholders include:

- Community representatives and leaders of local interest groups (e.g. anglers, cyclists, walkers, sports and equine)
- Potentially affected businesses
- Local health and social care representatives
- Environmental Protection Agency
- Other relevant agencies and departments

PMG Phase 3 – Assessment of Preferred Option

Assessment based on sensitivity of receptors and magnitude of impact (in line with EPA Guidance)



- Standard provides specific magnitude and sensitivity criteria for Population assessment
- Guidance on application of IEMA magnitude and sensitivity criteria for human health
- Assessment is qualitative, based on professional judgement, supported by quantitative data and evidence
- Fully referenced narrative text to clearly explain assessment rationale

PMG Phase 3 – Assessing health outcomes from exposure to harmful substances or emissions

- Physiological health outcomes can be quantified using established concentration response functions (CRFs), e.g. for noise and air quality impacts
- Changes in health outcomes at population level are small - reliable assessment can be done where there is permanent, substantial change in exposure of a large population to noise / air pollution
- May apply to major projects that result in a large shift in the location transport emissions, e.g. a bypass that diverts traffic away from a densely populated urban area
- P&HH Standard provides guidance on when / how to undertake quantitative health assessment



Has the environmental assessment identified a significant change in the concentration of pollutant / level or emissions?



Will the change be temporary or permanent, short or long term?



Will the number of people exposed to the change be large enough to yield meaningful assessment results



Have local communities or stakeholders expressed concerns about health risks from increased exposure?



Can concerns be allayed through other means such as effective communication of qualitative assessment findings?

PMG Phases 5-7

Construction and Implementation – P&HH Inputs

Phase	Potential PHH inputs - examples
Phase 5 Enabling and Procurement	In the case of a significant time lag during the statutory process, it may be necessary to update aspects of the Phase 3 PHH assessment
	Further development of P&HH mitigation in response to conditions attached to the consenting authority's decision
Phase 6 Construction and Implementation	A review of the procedures in place for delivering committed mitigation, enhancement and monitoring, to ensure it is consistent with the commitments made at Phase 3
	Review of the results of P&HH monitoring and recommendations to address any issues identified
Phase 7 Closeout and Review	Post project review, required at the completion of any major project. May include 'lessons learned' for the P&HH aspects, such as: <ul style="list-style-type: none"> • Did the P&HH mitigation and enhancement measures deliver the outcomes predicted in the EIAR? • Were there any unexpected P&HH impacts that were not identified in the EIAR? • Are there conclusions or lessons learned that are applicable to other projects or may require amendments to TII policies and guidelines?

Questions / Discussion



Bonneagar Iompair Éireann
Transport Infrastructure Ireland



Bonneagar Iompair Éireann
Ionad Gnó Gheata na Páirce
Sráid Gheata na Páirce
Baile Átha Cliath 8
Éire, D08 DK10



www.tii.ie



+353 (0)1 646 3600



Transport Infrastructure Ireland
Parkgate Business Centre
Parkgate Street
Dublin 8
Ireland, D08 DK10



info@tii.ie



+353 (0)1 646 3601