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Development of a Sustainability Assessment Methodology

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LEnSE Work Package 2

- Developing a framework and format for LEnSE
- Defining the assessment content of the method and developing a limited number of issues for testing
- Development of a prototype assessment tool
- Testing of the methodology

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LEnSE Framework principles

- Synchronisation with existing methods
- Scope of the Label
 - Assessment type
 - Building type
- Scale of application
- The relevance of assessment issues

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LEnSE Framework principles

- Categorisation and weighting of the assessment issues
 - Determining the relevant weightings
- Assessment output
- Assessors and length of assessment

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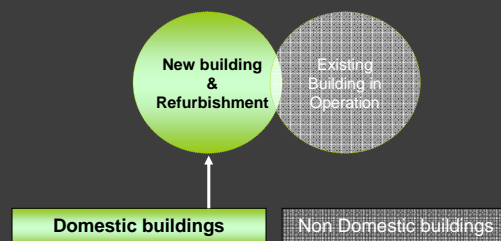
LEnSE Proposed structure

- Stage 1: Building & Assessment type
- Stage 2: Assessment requirements
- Stage 3: Scoring & Weighting
- Stage 4: Output

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LEnSE Proposed structure

- Stage 1: Building & Assessment type

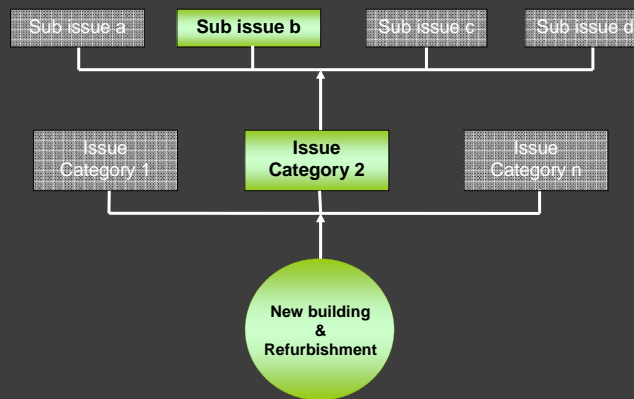


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LEnSE Proposed structure

- Stage 2: Assessment requirements



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LEnSE issue categories

- **Environmental issues**
 - Climate change
 - Air quality
 - Biodiversity
 - Resource use & waste
 - Environmental and geophysical risk
- **Social issues**
 - Health & Wellbeing
 - Accessibility
 - Security and safety
 - Social and cultural value
- **Economic issues**
 - Life cycle costs and value
 - Financing and management
 - Support for local economies
 - Externalities

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LEnSE Sub issues

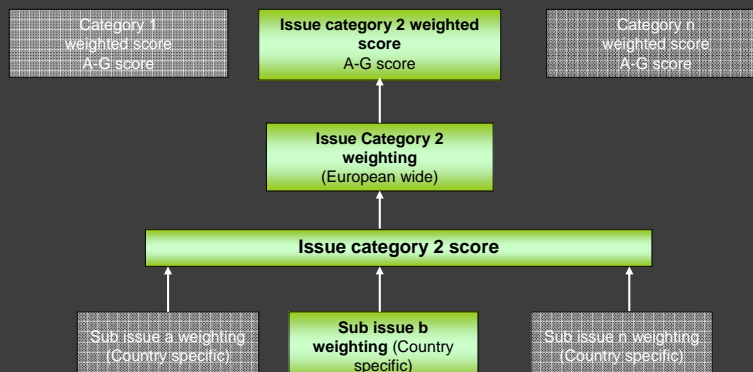
- **Climate change (env)**
 - Building related CO₂ emissions
 - Transport related CO₂ emissions
 - Renewable & Low carbon energy
 - Refrigerant and insulant global warming potential (GWP)
 - NOx emissions from heating source
- **Accessibility (soc)**
 - Proximity to, and provision of key amenities
 - Proximity to public transport node(s)
 - Frequency of public transport
 - Access to public transport information
 - Provision of safe pedestrian route-ways
 - Provision of safe cycle route-ways

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LEnSE Proposed Structure

- Stage 3: Scoring and weighting



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LEnSE Weighting

- Issue category
 - European wide consensus weighting with flexibility for country specific adjustment
- Sub issue
 - Country specific consensus weighting

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LEnSE Weighting

- Issue category = European wide weighting

Issue category	Climate change	Air Quality	Biodiversity	Resource use and waste	Env. & Geophysical risk
EU weighting	200	200	150	75	100

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LEnSE Weighting

- Sub issue = country specific weighting

Issue Category	Climate change			
EU weighting	200			
Sub issue	UK	France	Czech Republic	Greece
Building CO ₂ emissions	70	45	65	100
Transport CO ₂ emissions	30	50	45	10
Renewable & low carbon energy	60	45	50	60
Refrigerant GWP	30	30	25	20
NO _x Emissions	10	20	15	10
Total	200	200	200	200

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LEnSE Scoring

- Sub issue score: Building CO₂ emissions

Country		UK		France	
Country specific weighting		70		45	
Entry level requirement		200 KgCO ₂ /m ²		170 KgCO ₂ /m ²	
Band	Requirement as a percentage of entry level requirement	KgCO ₂ /m ²	Available points	KgCO ₂ /m ²	Available points
A	90% =	<20	70	<17	45
B	80% =	<40	60	<34	38.4
C	70% =	<60	50	<51	32
D	50% =	<100	40	<85	25.6
E	30% =	<140	30	<119	19.2
F	20% =	<160	20	<136	12.8
G	10% =	<180	10	<153	6.4

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LEnSE Scoring

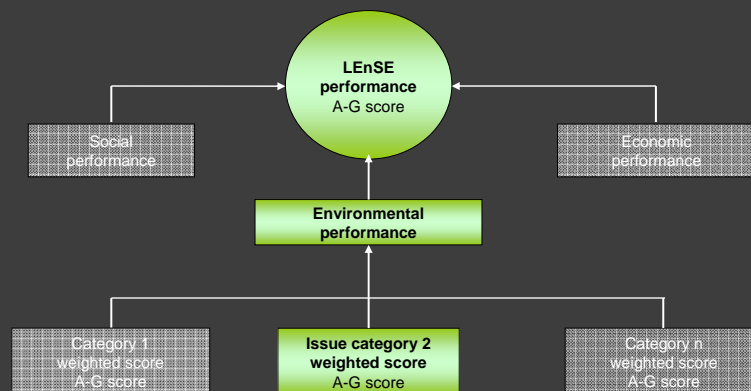
- Issue category scores

Issue category	Weighting	LEnSE Points achieved					Total
	1000	Sub issue a	Sub issue b	Sub issue c	Sub issue d	Sub issue e	
Climate Change	200	30	10	10	25	5	80
Resource use & waste	200	40	0	5	25	35	105
Biodiversity	150	10	5	0	0	20	35
Health & Wellbeing	75	10	10	5	5	8	38
Security and safety	100	35	12	2	3	10	62
Life Cycle Costs and value	100	10	0	0	5	30	45
Support for local economies	175	0	0	15	15	15	45
LEnSE Score							410

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LEnSE Proposed Structure

- Stage 4: Output



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LEnSE Rating

- Example: 410 points = LEnSE E Rating

Building Rating	% of maximum available points		Benchmark
A	90%	=	900
B	80%	=	800
C	70%	=	700
D	50%	=	500
E	30%	=	300
F	20%	=	200
G	10%	=	100

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LEnSE Certificate

- LEnSE Rating
- Issue Category Ratings

Energy		Fridge-Freezer
Manufacturer Model		
More efficient A B C D E F G Less efficient		A
Energy consumption kWh/year (Based on standard test results for 2014)		325
Actual consumption will depend on how the appliance is used and where it is located		
Fresh food volume l Frozen food volume l		190 125
Noise (dB(A) at 1 m)		
Further information is contained in product brochures		

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LEnSE: Next Steps

Sub task 2.1: Structure and format

- Re-fine and finalise the structure

Sub task 2.2: Content of the assessment

- Re-fine and finalise the labels proposed content

Sub task 2.3

- Develop a prototype assessment tool

Sub task 2.4

- Test the methodology

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