

THE OFFICE OF PUBLIC WORKS **PRESENTATION**
TO THE
JOINT COMMITTEE ON **CLIMATE ACTION**



*“How the State can make Ireland a Leader in Tackling
Climate Change”*

STRATEGIC PRIORITIES

Key Strategic OPW priorities that relate to the issue of climate change are:

FLOOD RISK MANAGEMENT

Vision: To minimise the extent and impact of flooding

ESTATE PORTFOLIO MANAGEMENT

Vision: To maximise the efficient use and value of the State property portfolio



FLOOD RISK MANAGEMENT

Clonmel Flood Defence Scheme

Flooding and Climate Adaptation



Coastal Flooding, Dublin, 2002

Potential Impacts

- Increased Coastal Flooding
- More Intense Rain Events
- Increased River and Turlough Flooding
- Potential for Significant Increase in Flood Risk and Damage

Flooding and Climate Adaptation

Communities Assessed

Approximately
3 Million People

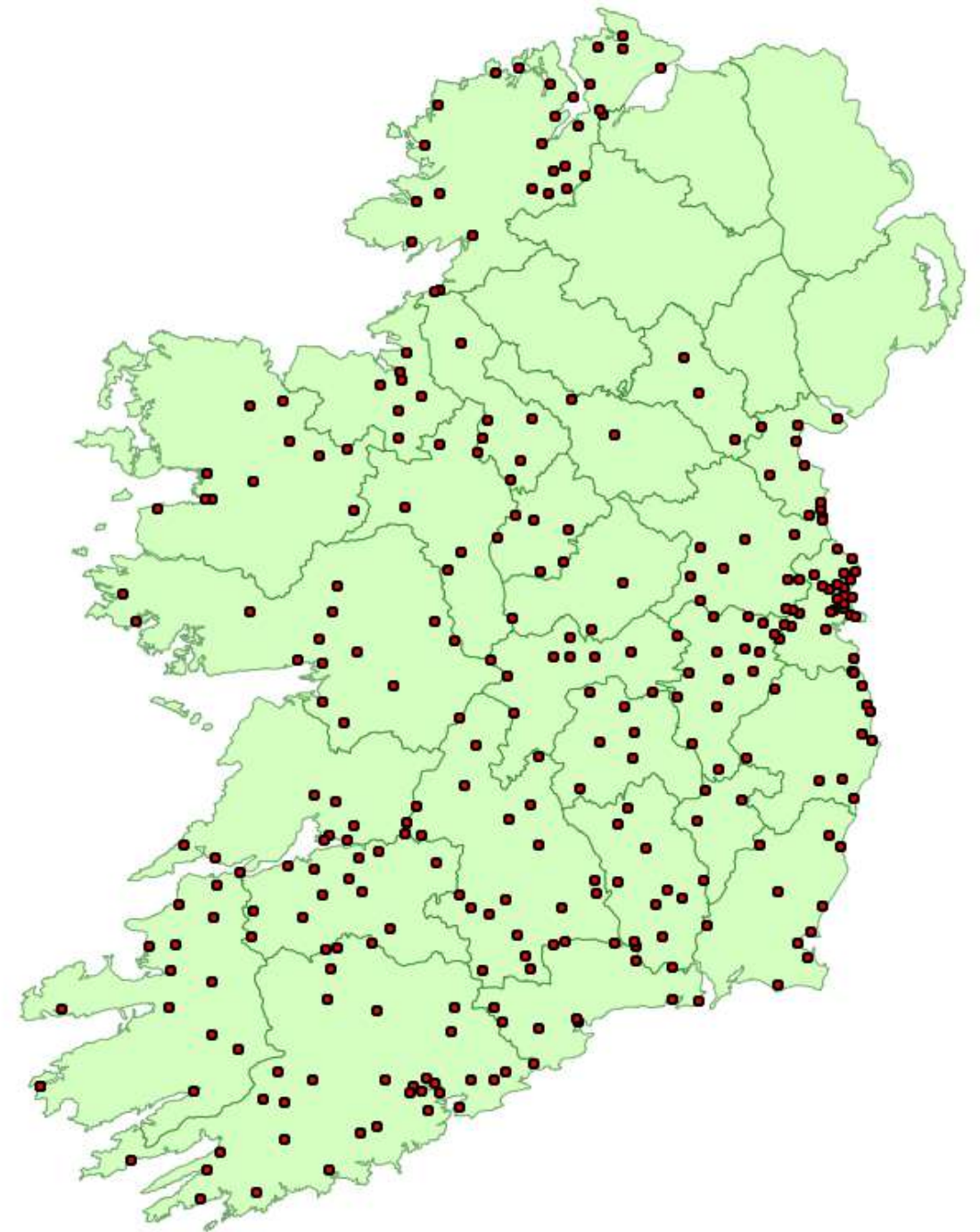
Two Thirds the Population of
Ireland

Viable Schemes Identified to Protect

Approximately 95% Properties
at Risk in Areas Assessed

Approximately 80% of
Properties at Risk Nationally

Detailed Assessment of Flood Risk for 300 Communities



CFRAM Programme

Flood Risk Assessment for Future Scenarios

Mid-Range:

- 20% Increase in River Flood Flows
- 500mm Sea Level Rise

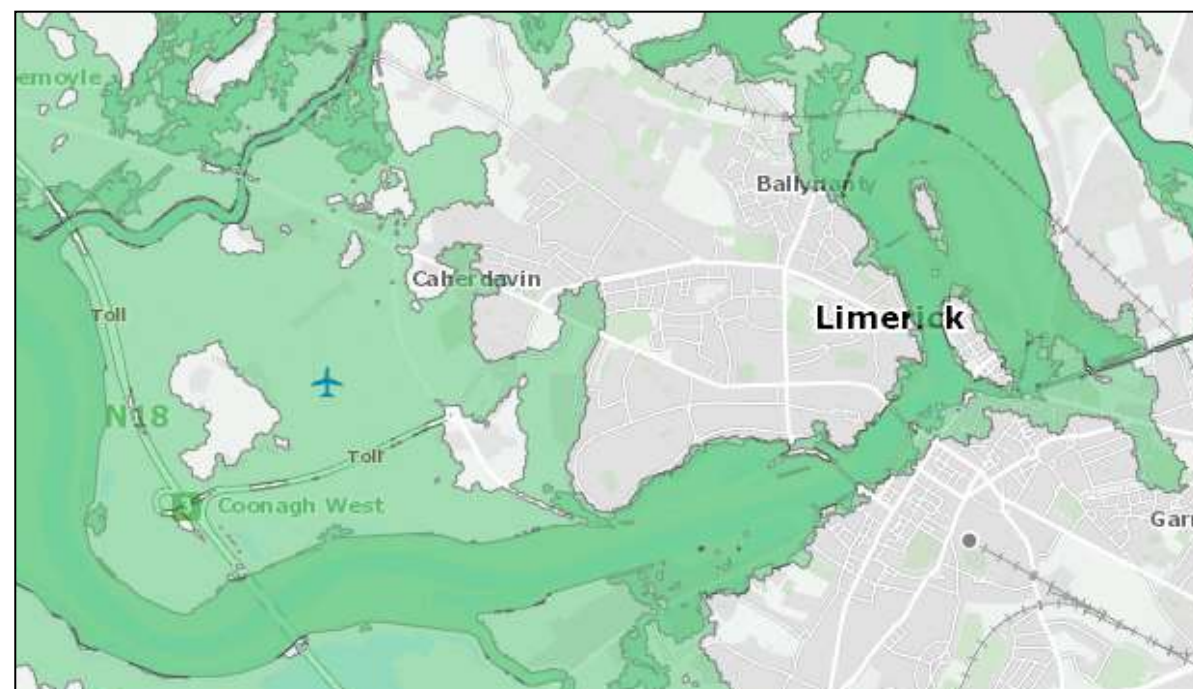
High-End:

- 30% Increase in River Flood Flows
- 1000mm Sea Level Rise

Flooding and Climate Adaptation



Coastal Flood Risk, Limerick - Today



Coastal Flood Risk, Limerick – High End Scenario



Teagasc Horticultural College

Estate Portfolio Management

Estate Portfolio Management

- EU's 2020 climate & energy objectives
- Ireland set national energy efficiency target of 20%
- Public Sector Target 33%
- Demonstrate leadership on energy efficiency for the whole of our economy and society

*Ireland's Pavilion for the Milan Expo,
Winner of Expo Sustainability Award*



Estate Portfolio Management

The Strategy document reports on the progress to date – savings of 21% in the Public Sector

Identifies the need for a “*step change in activity*” to achieve 33% by 2020.



Roinn Cumarsáide, Gníomhaithe ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment

Public Sector Energy Efficiency Strategy

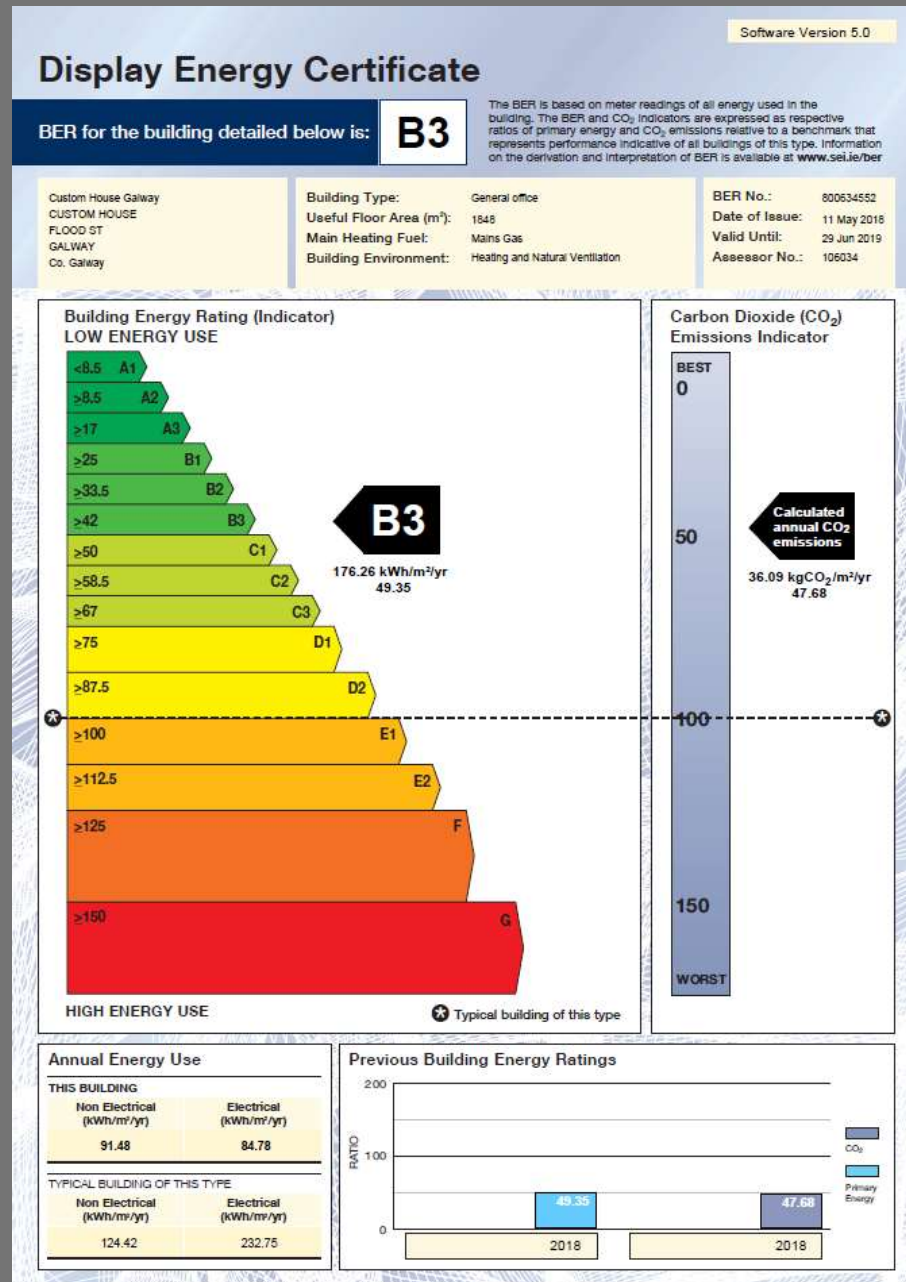
Department of Communications,
Climate Action & Environment

January 2017



Public Sector Energy Efficiency Strategy published by DCCAE in 2017

Estate Portfolio Management



Typical Display Energy Certification

Operational BER Rating	No. of Buildings
A	0.4%
B	9.3%
C	42.0%
D	36.7%
E	7.5%
F	1.3%
G	2.7%

Efficiency of the Central Government Building Stock

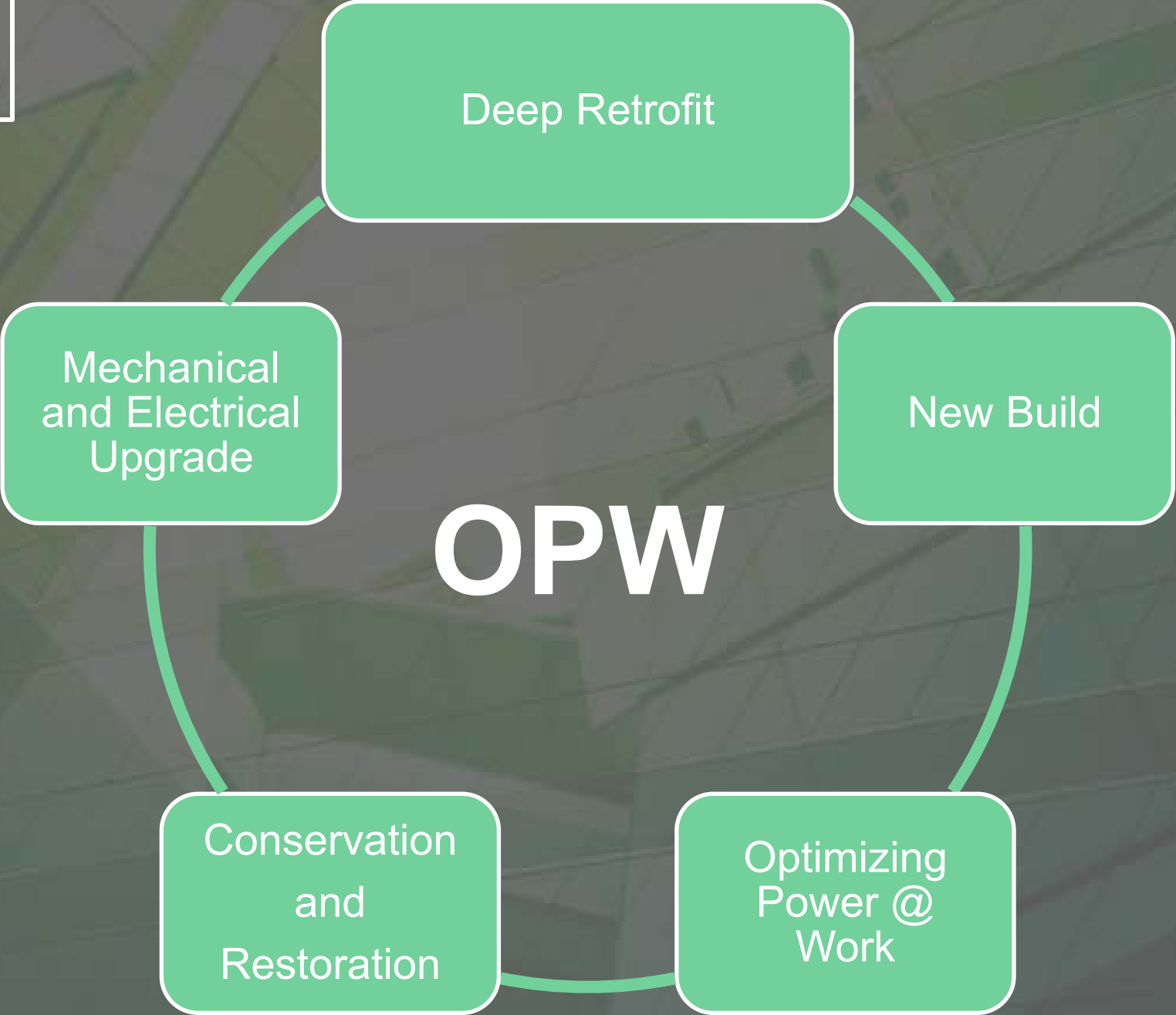
Estate Portfolio Management

- **Energy Efficiency of Existing Building Portfolio**

1. *Optimising Power @ Work (Behavioural Change)*
2. *Mechanical and Electrical Upgrades*
3. *Deep Retrofit*

- **Conservation and Restoration**

- **New Build**

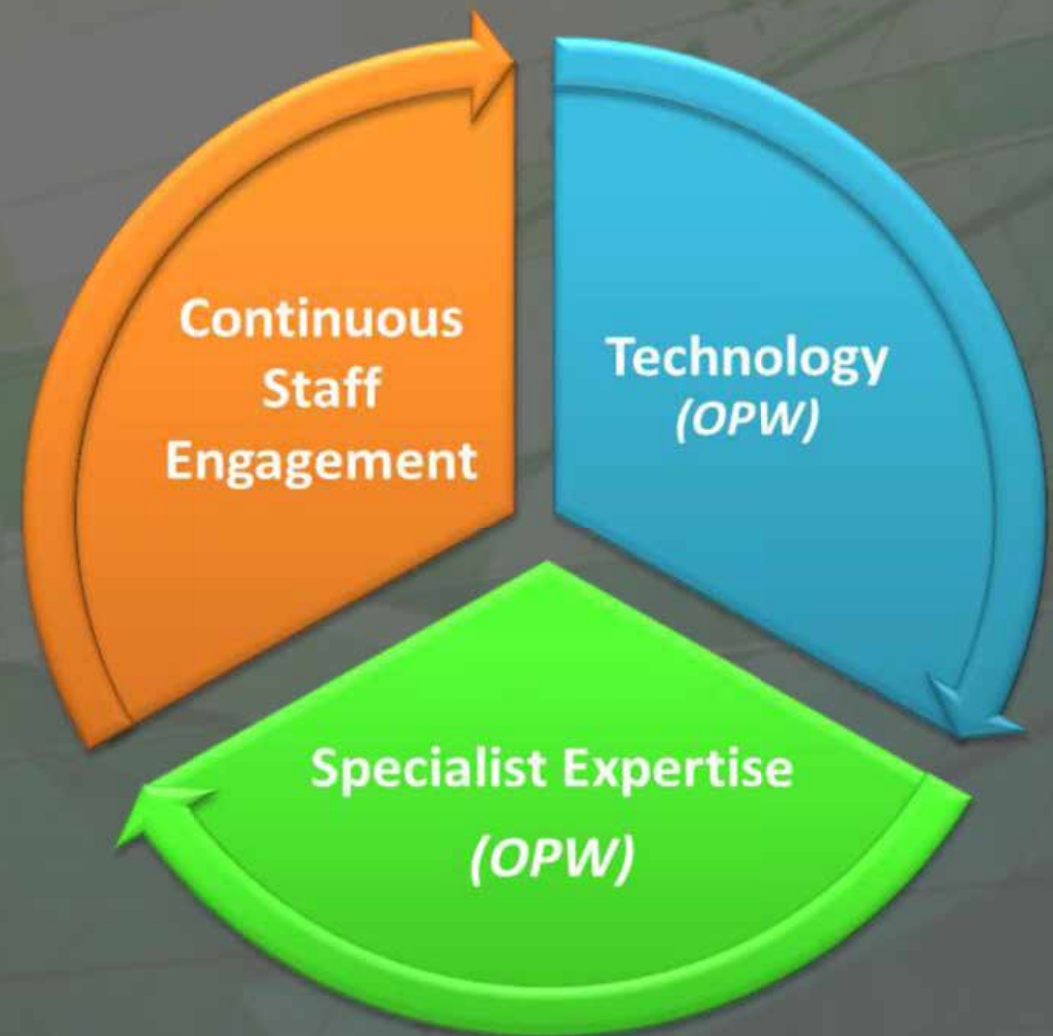


OPW Strategy to achieve the 33% Target

Energy Efficiency of Existing Building Portfolio

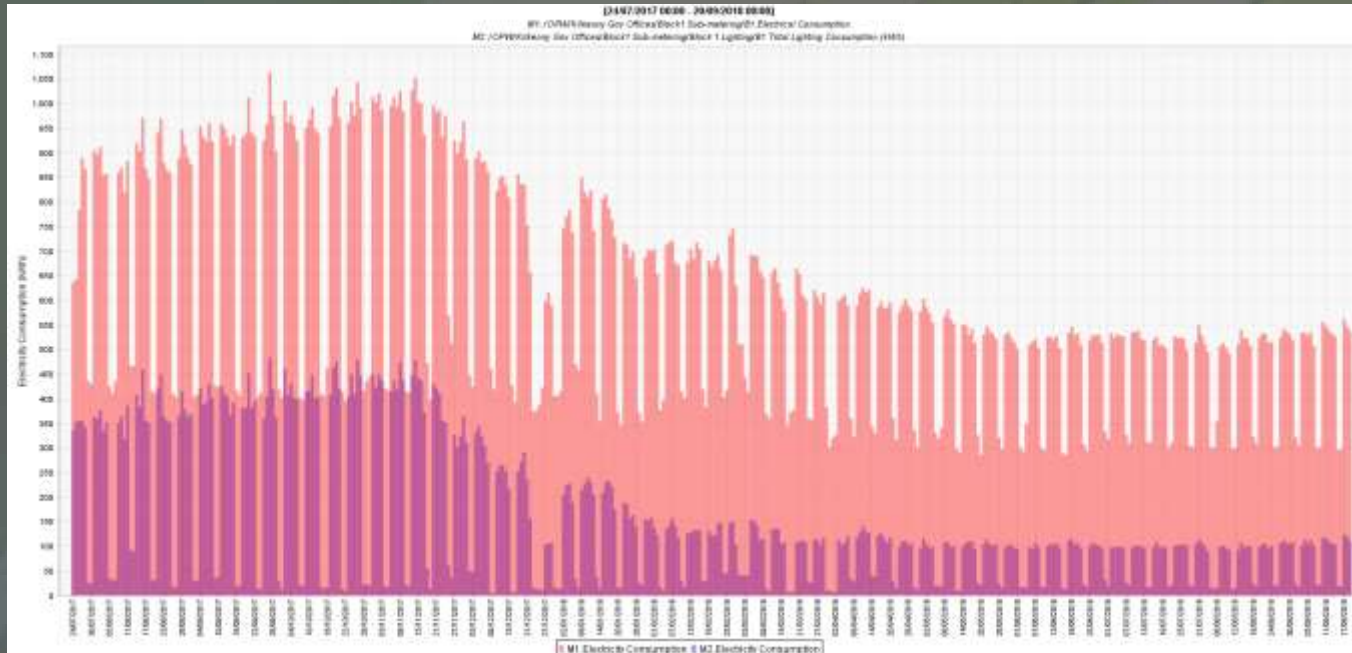
1) Optimising Power @ Work

- Three fundamental elements:
 1. *Technology*
 2. *Specialist Expertise*
 3. *Continuous Staff Engagement*
- Average annual savings of 18%
- Expanded into the wider public sector in 2014



Energy Efficiency of Existing Building Portfolio

2) Mechanical & Electrical Upgrades



- Pilot between OPW/DCCA/SEAI
- In 2017/2018 €14M invested in upgrading 44 large buildings
- Lighting/Controls, Boilers, Fabric Upgrades

Energy Efficiency of Existing Building Portfolio

3. Deep Retrofit

Strip building back to bare structure

Major Fabric upgrade

Only suitable in vacant possession

M&E Systems upgrades

Deep Retrofit
Significant savings can be achieved

Conservation and Restoration

A key part of the States portfolio relates to the heritage sites, buildings, parks and gardens within our care.

The ability to upgrade the energy efficiency of a historic structure whilst maintaining the appropriate conservation standards can be seen in recently completed projects such as the refurbishment works to **Government Buildings South Block**

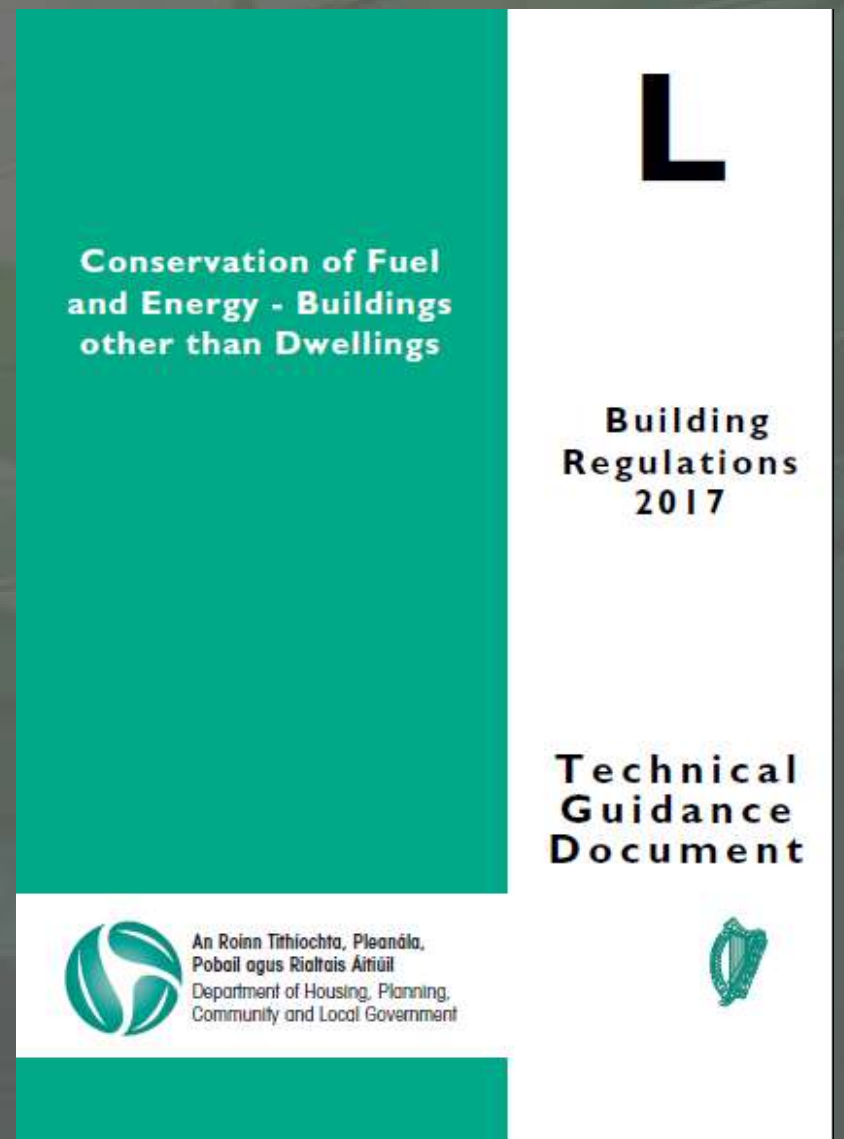
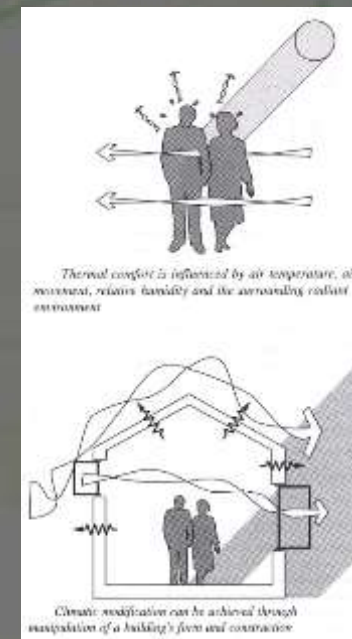


Government Buildings South Block

New Build

OPW has maintained a long standing tradition of building design based on sustainability and energy efficiency, from the publication of *'Green Design; Sustainable Building for Ireland'*

The Energy Performance of Buildings Directive requires Member States ensure that after 31st December 2018, all new buildings occupied and owned by public authorities, are **Nearly Zero Energy Buildings (NZEB)**.



New Build

Under the National Development Plan 2018 – 2027 the OPW is charged with the delivery of a number of large scale building projects, the design and construction of which will require compliance with the NZEB standard.



Lesson Lane Office Development



Forensic Science Laboratories at Backweston Campus



Garda Security and Crime Operations Centre, Military Road

SUMMARY

Estate Flood Risk Management

- Climate Change could significantly increase flood risk in Ireland
- Through the National CFRAM Programme, assessed 300 Communities, mapped potential future flood risk and identified potentially viable measures
- Progressing €1bn Flood Relief Programme, taking account of Climate Change
- Building adaptive capacity with regards to flood risk

Estate Portfolio Management

- Substantial achievements have been made with regard to energy efficiency in the Central Government portfolio
- All buildings designed since 2017 will meet A2 / NZEB targets.
- New technologies have been piloted over the past number of years and have demonstrated significant potential
- Investment required to upgrade the remainder of the portfolio

*THE OFFICE OF
PUBLIC WORKS*



Kevin Street Garda Divisional Headquarters
BER Rating A3



THANK YOU FOR YOUR ATTENTION

OPW Presentation to Joint Committee on Climate Action