

# RECLAIMED ASPHALT PAVEMENT (RAP) IN IRELAND

## CURRENT POSITION AND FUTURE NEEDS

IAT SEMINAR ATHLONE

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EDMUND HEGARTY IAPA

# Future Bitumen Resources

Bitumen will become scarcer

Alternatives already being examined (BIO-Binders)

Up to 20% replacement by 2030

Biggest Store in existing road network

Existing resource must be protected

# EAPA / IAPA Terminology

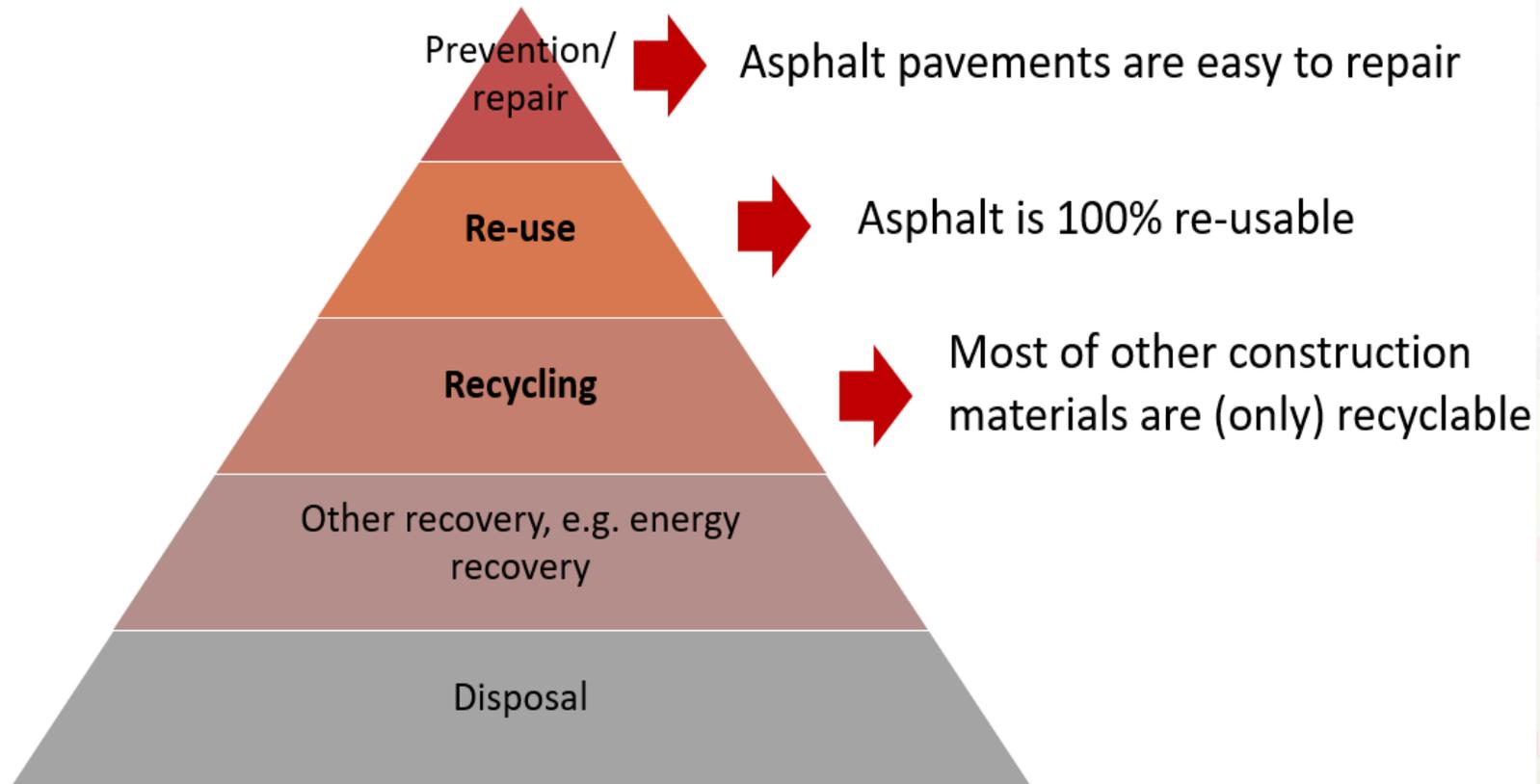
## Asphalt Re-use: (aka 'Closed loop recycling')

Operation by which reclaimed asphalt (RA) is added to new asphalt mixes, with the aggregates and the aged bituminous binder performing the same function as in their original application.

## Asphalt recycling:

Operation by which reclaimed asphalt (RA) is used as unbound sub-base, foundation, fill or road material, with the recovered aggregate and bitumen performing a lesser (or alternative engineering) function than in the original application.

# Asphalt in Waste Hierarchy



# Re-use to Maximize Preservation

100% Re-usable .....multiple times

Worlds highest volume Re-used material

No RAP should be wasted as fill or stone replacement

Re-use is at higher level in Waste Hierarchy than Recycling

# Environmental Product Declarations (EPD)

## Carbon Footprint of Bituminous Mixtures

### Raw Materials:

- Aggregates and Filler 7% to 9%
- Bitumen 35% to 40%

# RAP to Reclaimed Asphalt and Storage of RA



# Hot Reclaimed Asphalt Feed at 60% +



# Rap in Ireland Current Position

RAP arisings approx. 500,000 t annually.

19 RAP Plants in Ireland at end 2022 (Total of 42 Plants).

RAP returned to asphalt plants for Re-use: approx. 220,000 t (max).

Industry must be assured of RAP availability to justify ongoing investment.

Misuse of RAP must be addressed.

# Current Allowed Uses of RAP

Up to 30% in Binder and Base courses

Not allowed in Surface Courses

Trials up to 60%

Trials in Warm Mixes

Revisions to TII Series 900 anticipated



## Asphalt Plants In Ireland

- 42 plants
- 19 plants with Re-use facility

# National By-Product Criteria for RAP

Scope to cover specific end uses only. (Certainty of End Use assured)

EPA Register of Producers, Holders and End Users.

Batch sizes also published.

Criteria and Self-monitoring requirements set out.

Removes need for individual Art 27 Notification for each project.

# EPA National Criteria for BY-Product RAP

Batch is entire volume of RAP delivered to each end user (e.g. 1 batch per End User)

Producer provides Statement of Conformity for each batch to Holder and End User.

End User approves Producer as approved supplier and provides End User's Declaration.

Documentation held for 1 year.

Self Monitoring requirements with EPA checks.

## Conclusion

IAPA Welcomes National By-Product Criteria for RAP

Less cumbersome system for controlling use of RAP

Encourage proper Re-use of RAP

Must stop wasting valuable resources embedded in RAP

**Thank you for your attention**

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