



M7 NAAS BYPASS

Ireland's First Motorway



Where it all Started - 1945



'Embryonic start' of Motorways in Ireland

- 8km Motorway at Naas, Co. Kildare
- Congestion in Naas over capacity by 200%
- 'A first' - Bridges/Embankments
 - Construction Scale (Canals/Railways)
 - Landscape /Noise Impacts
- Experience in US/UK helped manage Risks

Development of M7 Naas Bypass

- 1971 Naas Traffic Study
85,000 AADT in 2003
- Motorway Road Type - minimum 750 m horizontal curves and maximum grade of 1.7%
- Median of 12m for third lane, future extension

Development of M7 Naas Bypass

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Newhall 1983

M7 Naas Bypass Geotechnical

- Vertical profile over Canal and Ground Water issue required maximum Cut and Fill Balance
- Departure from UK Plastic Limit Value + 2% to -2% based on low CBR's & UK experience
- Engineers experience mitigated risk for soft material embankments

M7 Naas Bypass - Bridges

Driver perception on curve required high post-tensioned unit for 33m clear span



Maudlins Interchange 1983

M7 Naas Bypass – Bridges

- Maudlins Interchange – Open abutments



M7 Naas Bypass – Bridges

- Open end abutments & M Beam deck



M7 Naas Bypass – a Success

Kildare Co. Council Project Team with Direct Labour and Multiple Contracts

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M7 Naas Bypass – of its time ?

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- Appropriate for multiple motorway schemes as Employer Design and Supervise contract ?
- Costs related to unforeseen conditions

M7 Naas Bypass – Art feature

Symbol of modern world created by engineers

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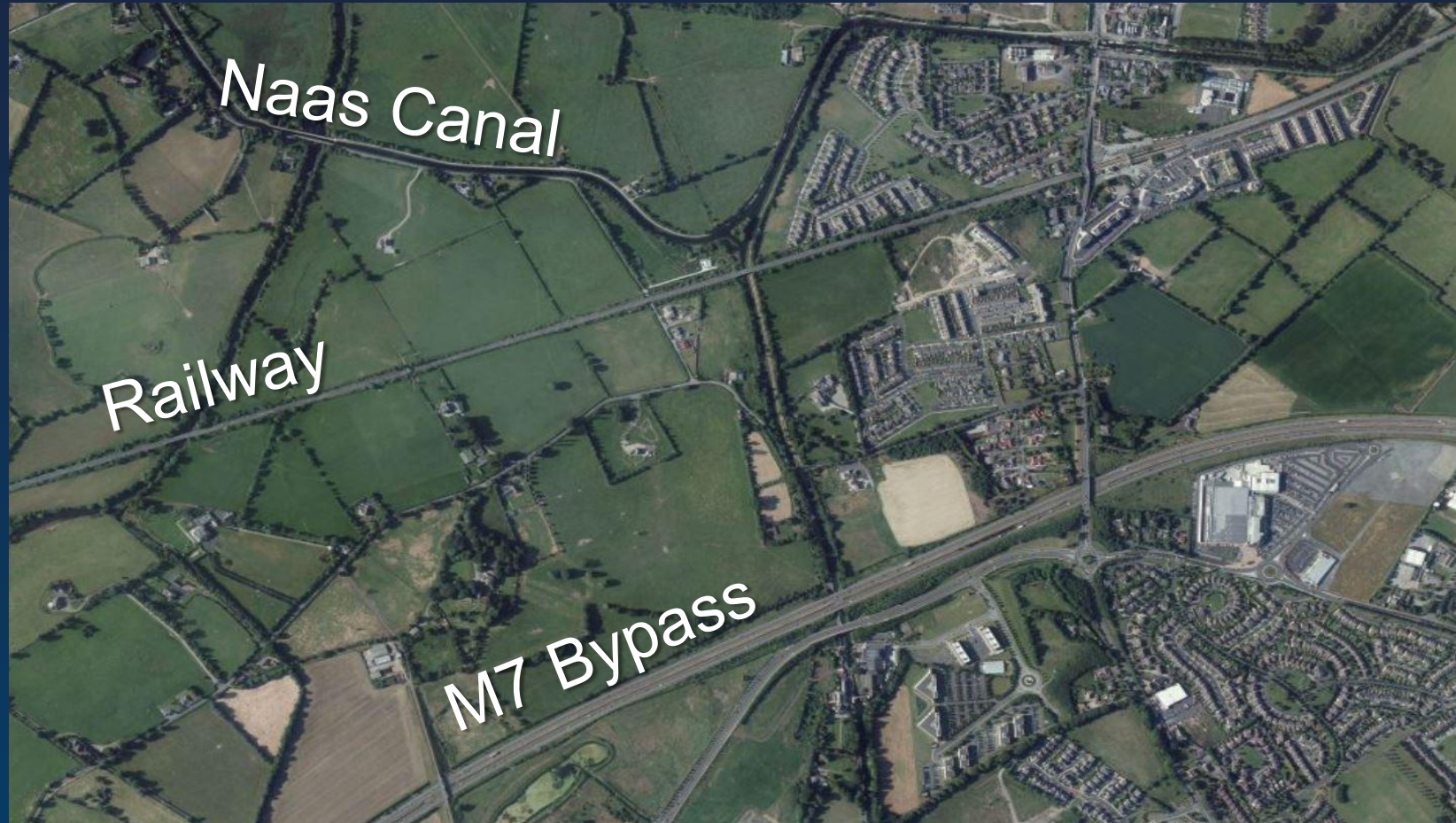


Perpetual Motion (“The Big Ball”)

Conclusion + Postscript

- Safe driving and convenience for road users and development of Naas
- Lessons learned
 - Different model needed for MIU's through risk transfer
 - Local authority changes-Direct Labour redundant and Land liaison - Advance Works
 - Contractors- innovation and JV resources

Transport Heritage at Osberstown, Naas



Transport Heritage at Osberstown, Naas

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Grand Canal at Osberstown - 1783



Transport Heritage at Osberstown, Naas

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Naas – Tullow Railway Branch - 1883



Transport Heritage at Osberstown, Naas

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M7 Naas Motorway Bypass - 1983



Transport Heritage at Osberstown, Naas

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Grand Canal at Osberstown - 1783

Naas – Tullow Railway Branch - 1883

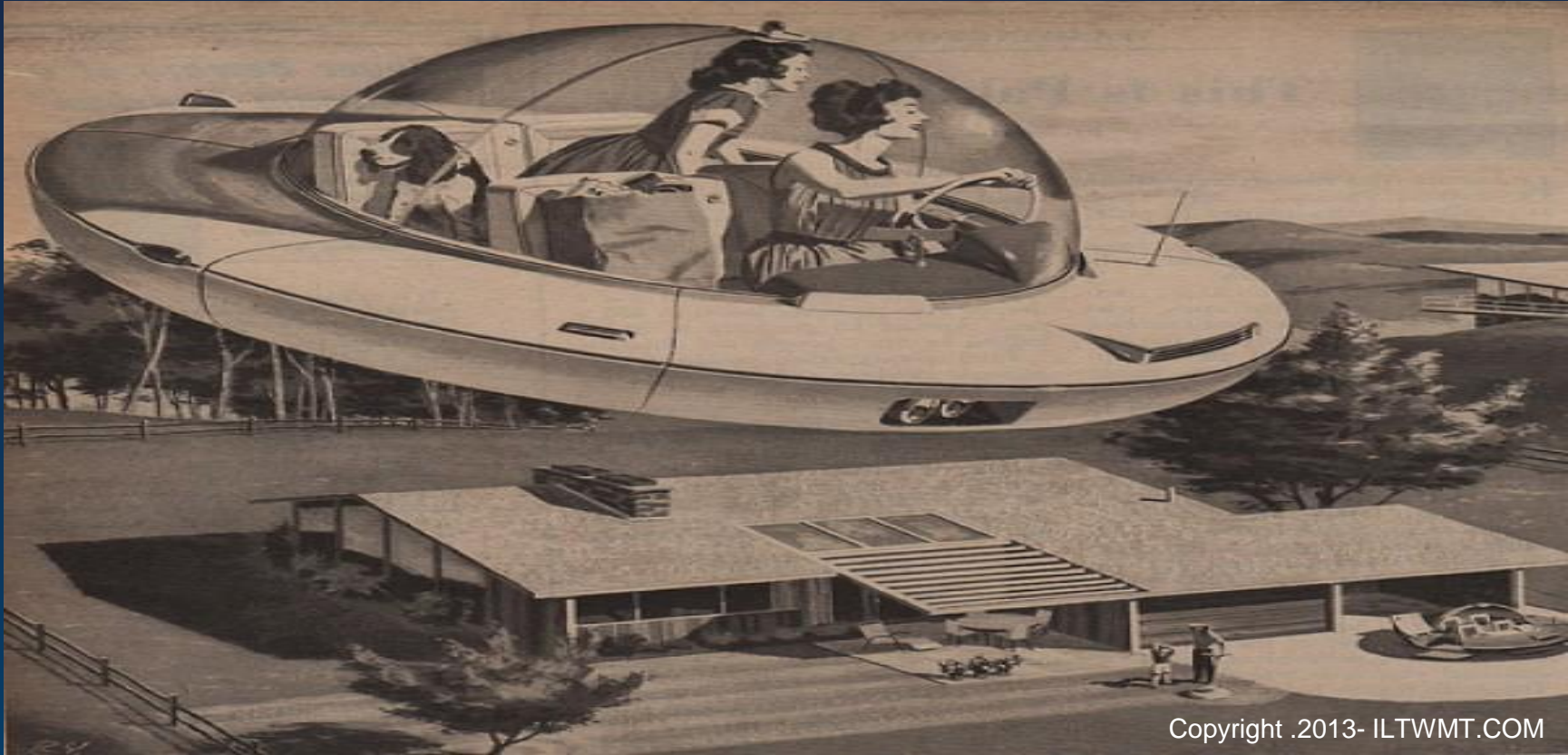
M7 Naas Motorway Bypass - 1983

? - 2083

Future Transport at Osberstown, Naas

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Perpetual Motion in 2083 ?



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Thank You for your attention

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