

TEN-T Priority Route Improvement Project, Donegal

Donegal Pre-application Consultation Meeting No.5

Biodiversity

22nd October 2021

Introduction

Applicant: Donegal County Council

Presenters	Paula Kearney Paul Murphy	Environmental Co-ordinator, RPS – Biodiversity Barry Transportation JV – Biodiversity
Attendees	Patrick Duffy Vincent O'Malley Christian Nea Brendan O'Donnell Liam Ward Damian McDermott Áine McHugh Paul Christie Tim Patterson Eamon Cox Eamon Daly Gareth McElhinney Tatiana Kelley Emma Coyle	Regional Manager, Transport Infrastructure Ireland Head of Environmental Policy & Compliance, Transport Infrastructure Ireland Senior Engineer (Environment), Transport Infrastructure Ireland A/Director of Roads and Transportation Director of Community Development & Planning Services A/Senior Engineer, Donegal County Council A/Senior Executive Engineer, Donegal County Council Senior Executive Planner, Donegal County Council Project Manager – Section 1, RPS Barry Transportation Project Manager – Section 2, RPS Barry Transportation Project Manager – Section 3, RPS Barry Transportation Environmental Project Manager, RPS Barry Transportation Environmental Co-Ordinator, RPS Barry Transportation Deputy Project Manager – Section 3, RPS Barry Transportation

Agenda

1.0	Introductions
2.0	EIAR/NIS Update
3.0	Biodiversity <ul style="list-style-type: none">• Progress to date• Designated Sites• Surveys and Findings• Mitigation based on findings
4.0	Works Remaining
5.0	Discussion

TEN T: Phase 3 Design & Environmental Evaluation

Environmental	Route Section	Presenter
Introduction	All Sections	Paula Kearney
Biodiversity	Section 1	Paula Kearney
	Section 2	Paula Kearney
	Section 3	Paul Murphy
Discussion and Next Steps	All Sections	All Participants

Project Update

Environmental Impact Assessment Report (EIAR)
&
Natura Impact Statement (NIS)

	Title	Summary Description
Volume A	Non-Technical Summary	
Volume B: Environmental Impact Assessment Report	Chapter 1	Introduction
	Chapter 2	Consultation
	Chapter 3	Planning and Policy Context
	Chapter 4	Description of the Road Project
	Chapter 5	Assessment of Alternatives
	Chapter 6	Traffic and Transportation Assessment
	Chapter 7	Environmental Impact Assessment
	Section 7.1	Population and Human Health
	Section 7.2	Biodiversity
	Section 7.3	Land, Soil
	Section 7.4	Water
	Section 7.5	Air
	Section 7.6	Climate
	Section 7.7	Noise and Vibration
	Section 7.8	Material Assets: Agriculture
Section 7.9	Material Assets: Non-Agriculture	
Section 7.10	Cultural Heritage	
Section 7.11	Landscape	
Chapter 8	Inter-Relationships, Interactions and Cumulative Effects	
Chapter 9	Assessment of Risks of Major Accidents or Disasters	
Chapter 10	Schedule of Environmental Commitments	
Volume C	Non-Environmental Technical Appendices	
Volume D	Environmental Technical Appendices	
Volume E	Natura Impact Statement	
Volume F	Book of Drawings	

- **Introduction and Methodology**
- **Description of the Proposed Development**
- **European Sites Likely to be Impacted by the Proposed Development**
 - Lough Swilly SAC (Site Code: 002287);
 - Lough Swilly SPA (Site Code: 004075);
 - River Finn SAC (Site Code: 002301);
 - River Foyle and Tributaries SAC (Site Code: UK0030320); and
 - Lough Foyle SPA (Site Code: 004087).
- **Baseline Environment**
- **Impact Assessment**
- **Mitigation**
- **Analysis and Conclusions**

NIS Structure



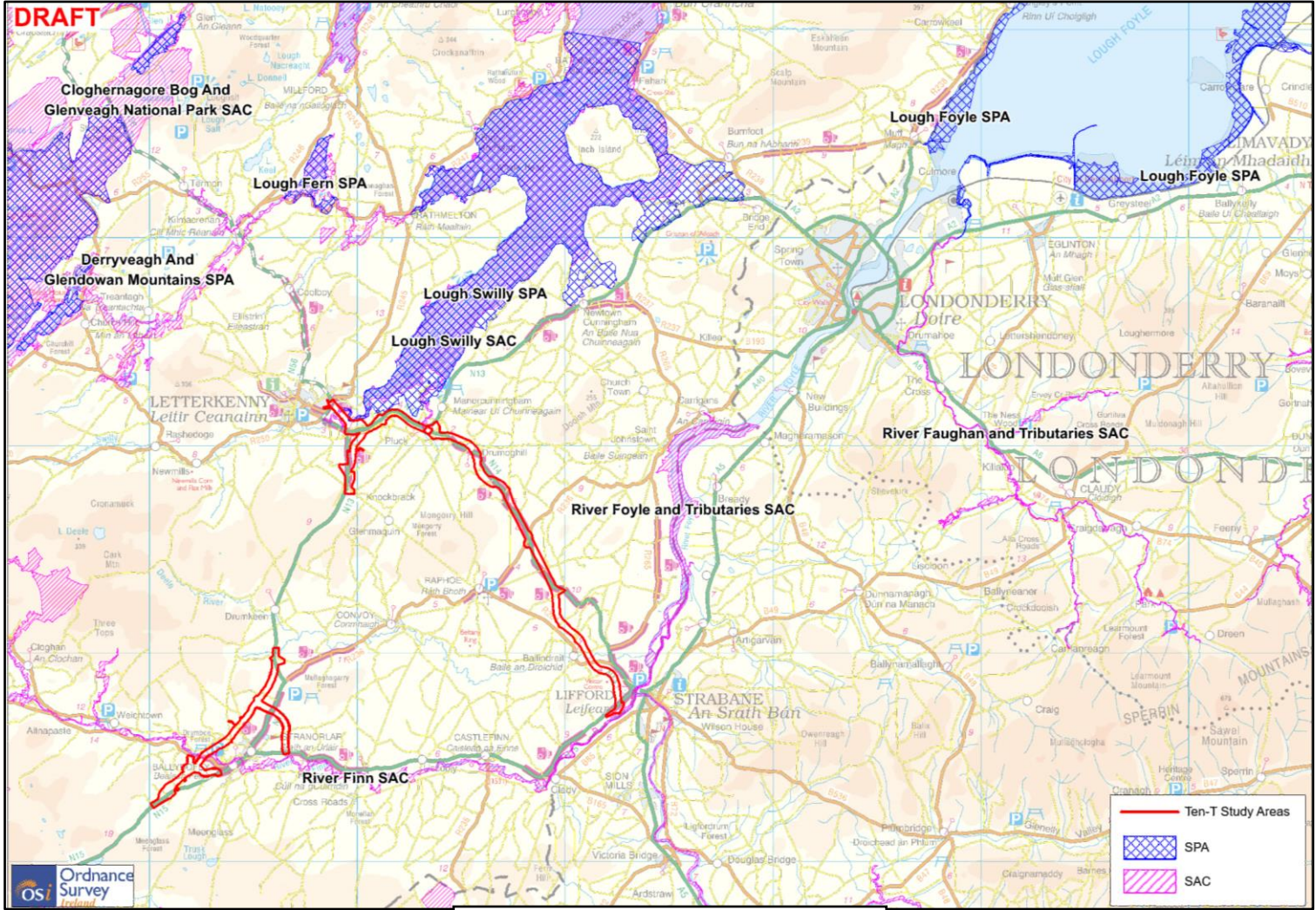
NATURA IMPACT STATEMENT

TEN-T Priority Route Improvement Project, Donegal
Volume E



TT_MGT0037-RP 8-P3-ZZ-RP:
E-EN00xx
1
Phase 3 NIS
82 P04
January 2025





European Sites

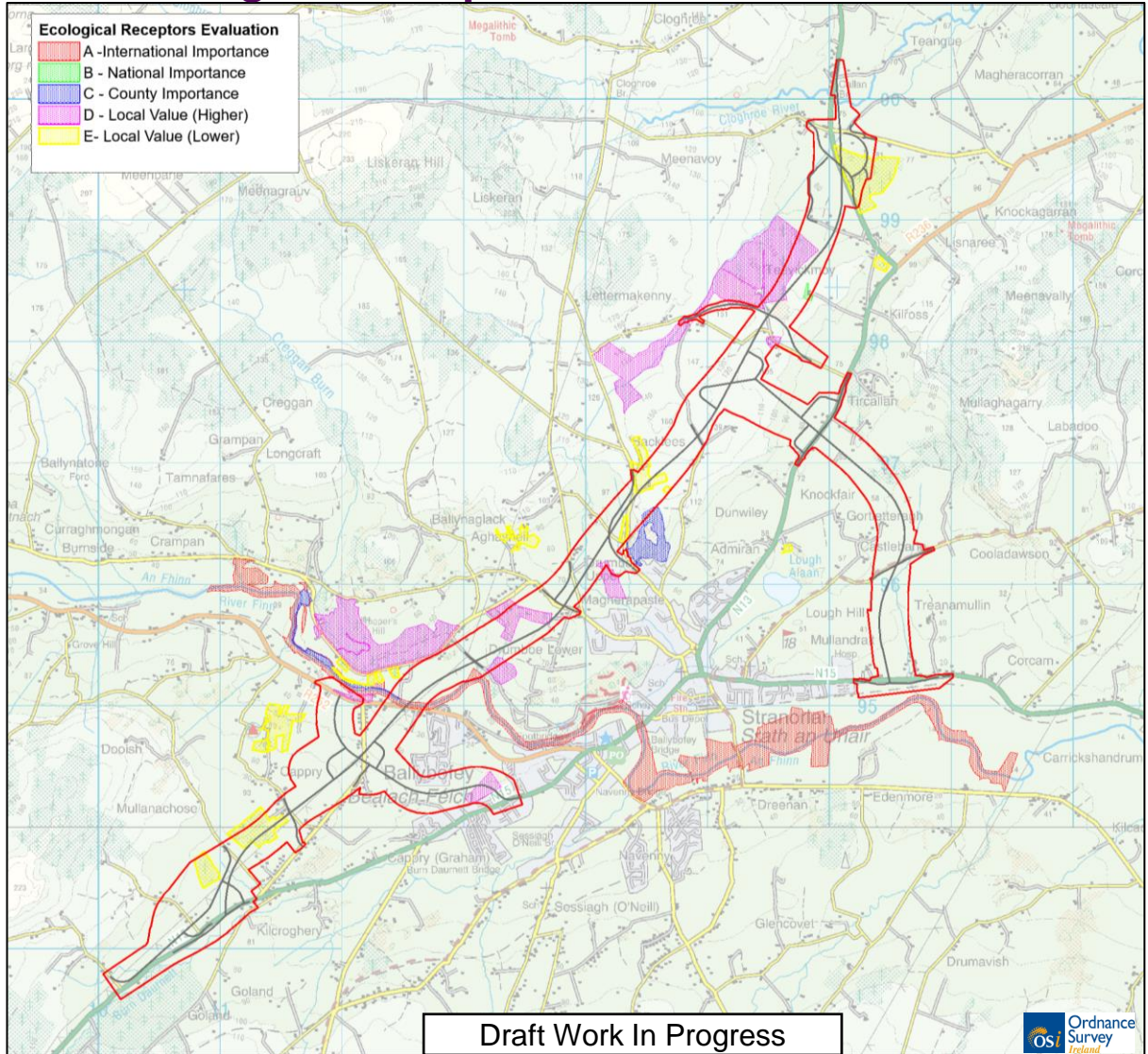
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SECTION 1

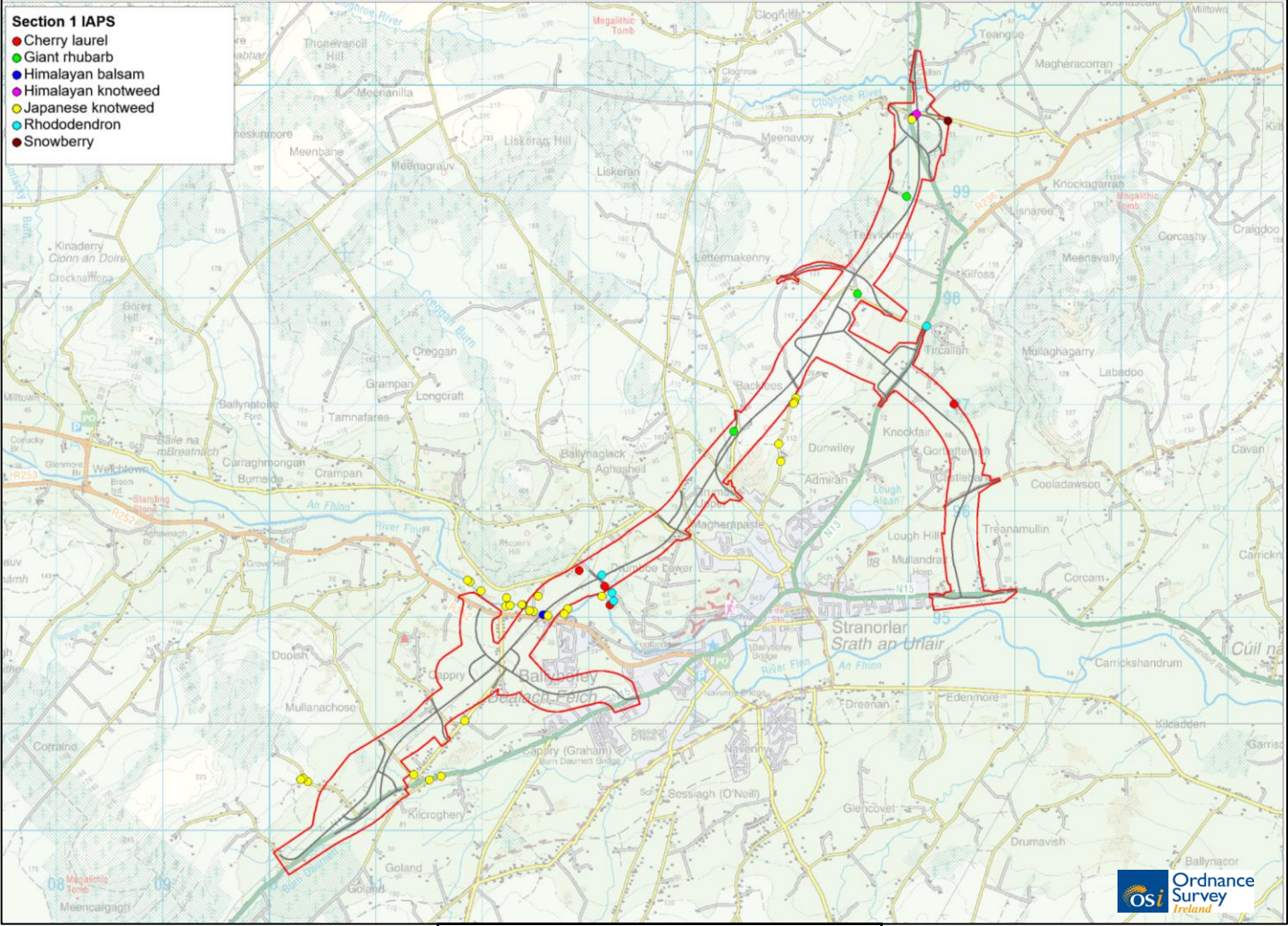
BIODIVERSITY

Summary of Baseline - Ecological Receptors

- Thirty-two Ecological Receptors (ERs) identified for the study area.
- 15 European sites with the Zone of Influence (Zoi), crosses the River Finn SAC.
- 4 NHAs, 16 pNHAs & 3 Nature Reserves within the Zoi
- Conifer and deciduous woodlands, peatlands and semi-natural grasslands supporting
- Red Squirrel (Drumboe Lower), Badger (Holy Well Woods, Teevickmoy and Gortletteragh townlands), Kingfisher on the River Finn, bat roosts (Drumboe Lower/Troopers Hill), otter (River Finn & Tributaries) & Flora Protection Order 2015 species Globe Flower



Summary of Baseline – Invasive Species



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Bat Activity

6 bat species recorded during survey complete in 2019, 2022 & 2021.

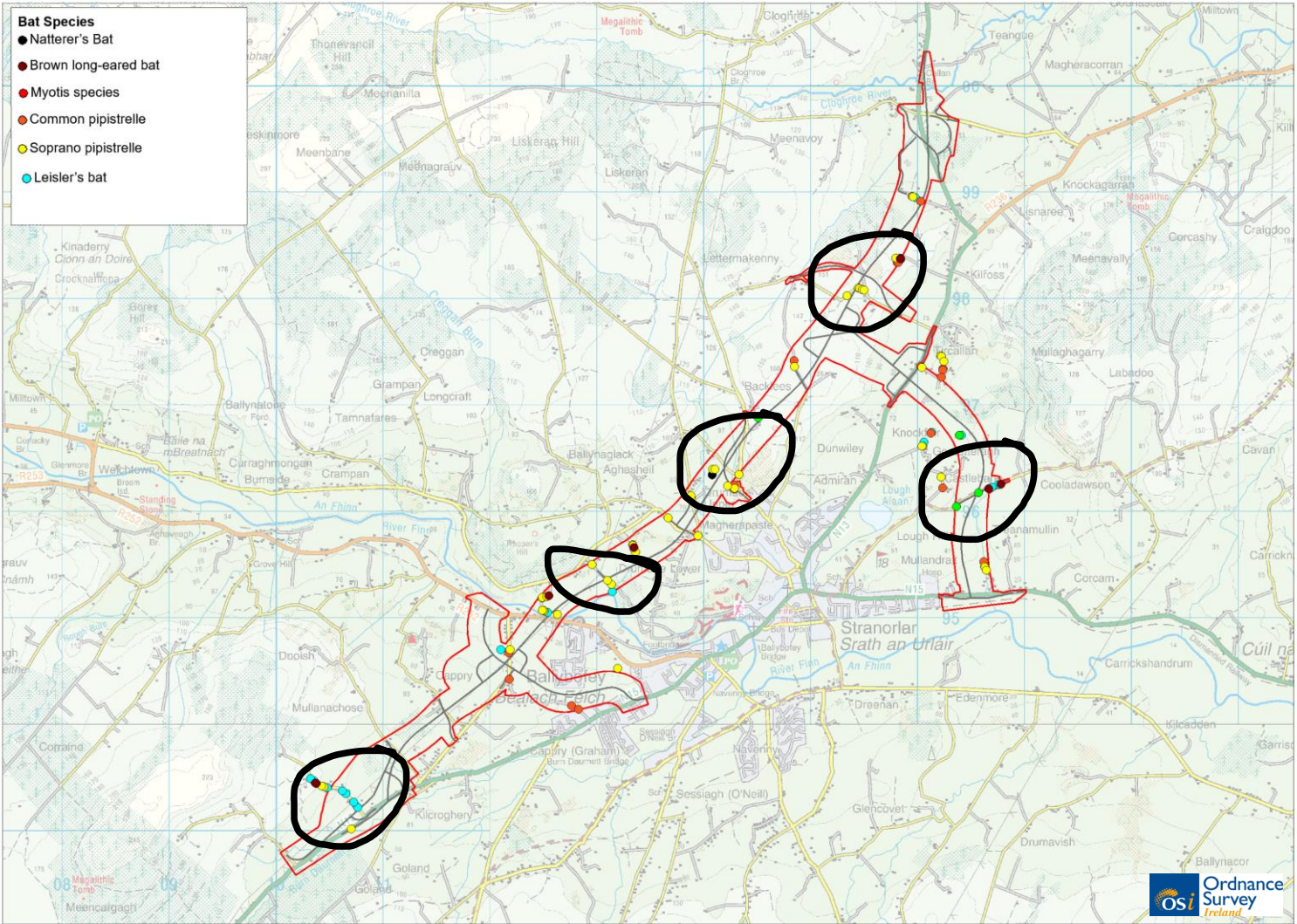
- Common pipistrelle,
- Soprano pipistrelle,
- Leisler’s bat,
- Brown long-eared bat,
- Myotis species (Daubenton's/Natterer’s bat), and
- Nathusius pipistrelle

These records were collated by:

- Building Surveys
- Static Recording locations along the proposed route.
- Walking & Driving Transects.

Potential Impacts:

- Loss of tree roosts
- Loss of building roosts
- Loss of commuting and foraging habitat
- Loss of connectivity



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Significant Direct Effects

Terrestrial

- River Finn SAC River Crossing
- Otter habitat
- Badger Setts/Territories
- Red Squirrel Habitats
- Bat Roosts
- Permanent habitat loss

Aquatic

- River Finn SAC River Crossing
- Cloghroe River Crossing – salmonid river of some significance

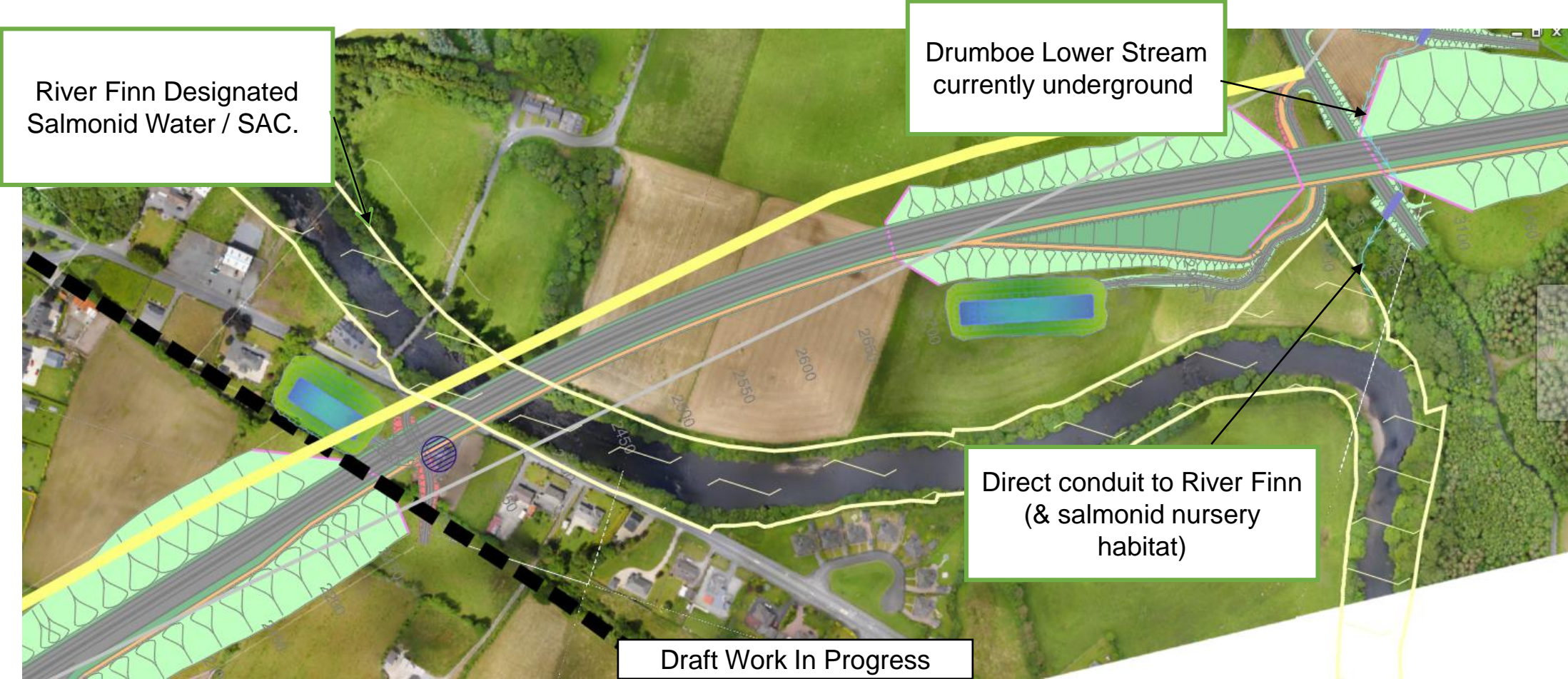
Significant Negative In-Direct Effects

Terrestrial

- Severance of commuting corridors, foraging habitat
- Noise disturbance
- Air Pollution
- Water pollution – reduction in prey species for otter

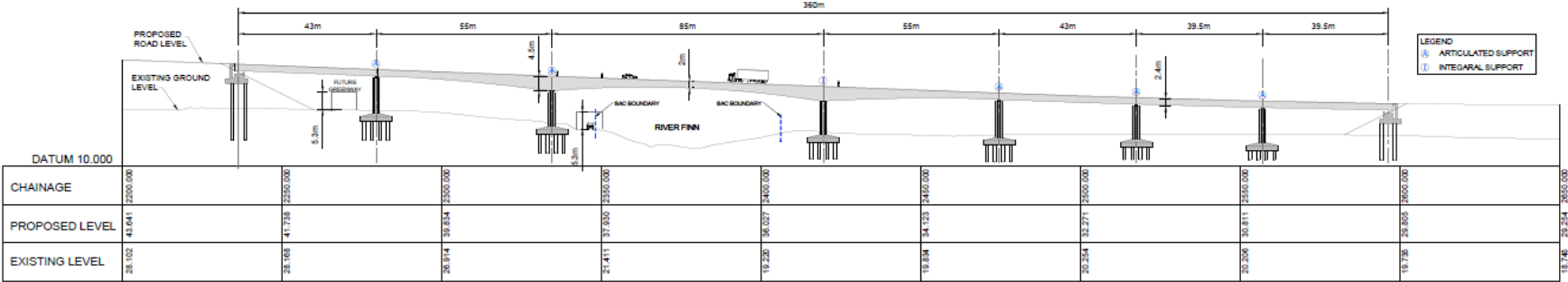
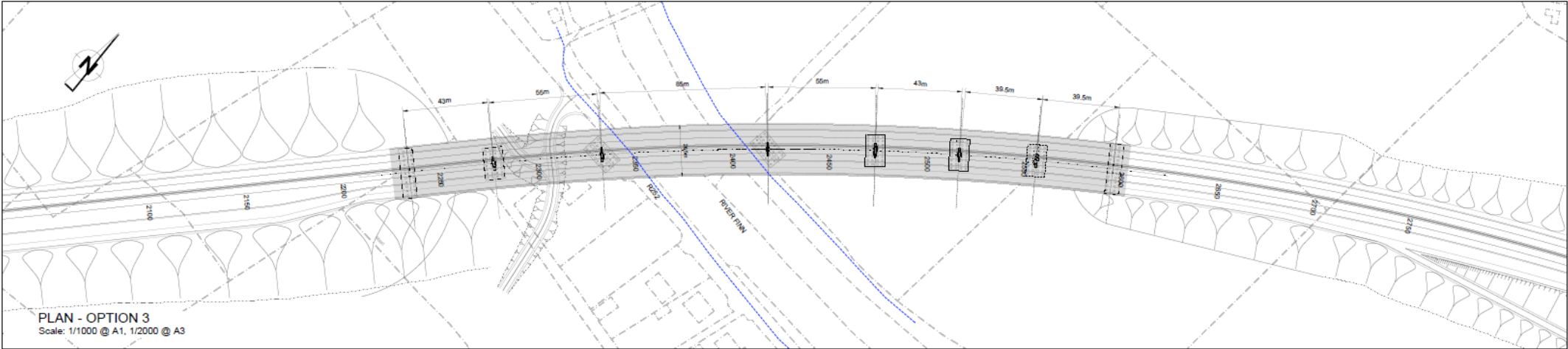
Aquatic

- River Finn SAC –downstream effected
- Culverting & realignment of fish bearing streams – Relates mainly to 8 locations: Cloghroe River, Drumboe Burn, Drumboe Lower, Teevickmoy and 4 x Tircallan – Castlebane Trib. sites – potential loss of fisheries habitat and fish passage.
- Construction – Runoff of sediment, hydrocarbon and concrete;_
- Operation – road runoff pollutants incl. mainly suspended solids, heavy metals, hydrocarbons including polycyclic aromatic hydrocarbons (PAHs) [+ chlorides, nitrates and phosphorus].
- Shade effects

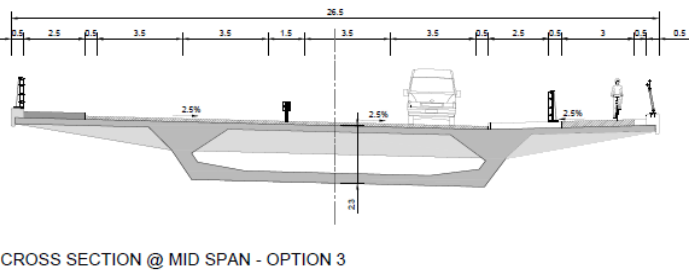
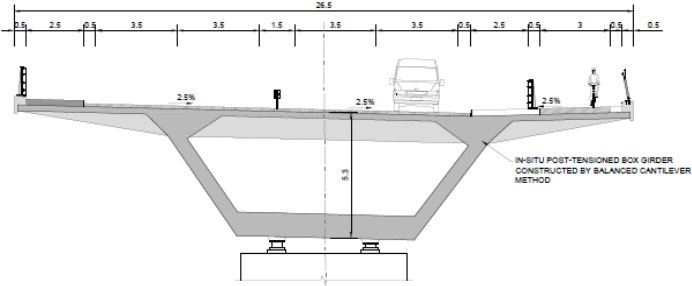


River Finn Crossing - Section 1

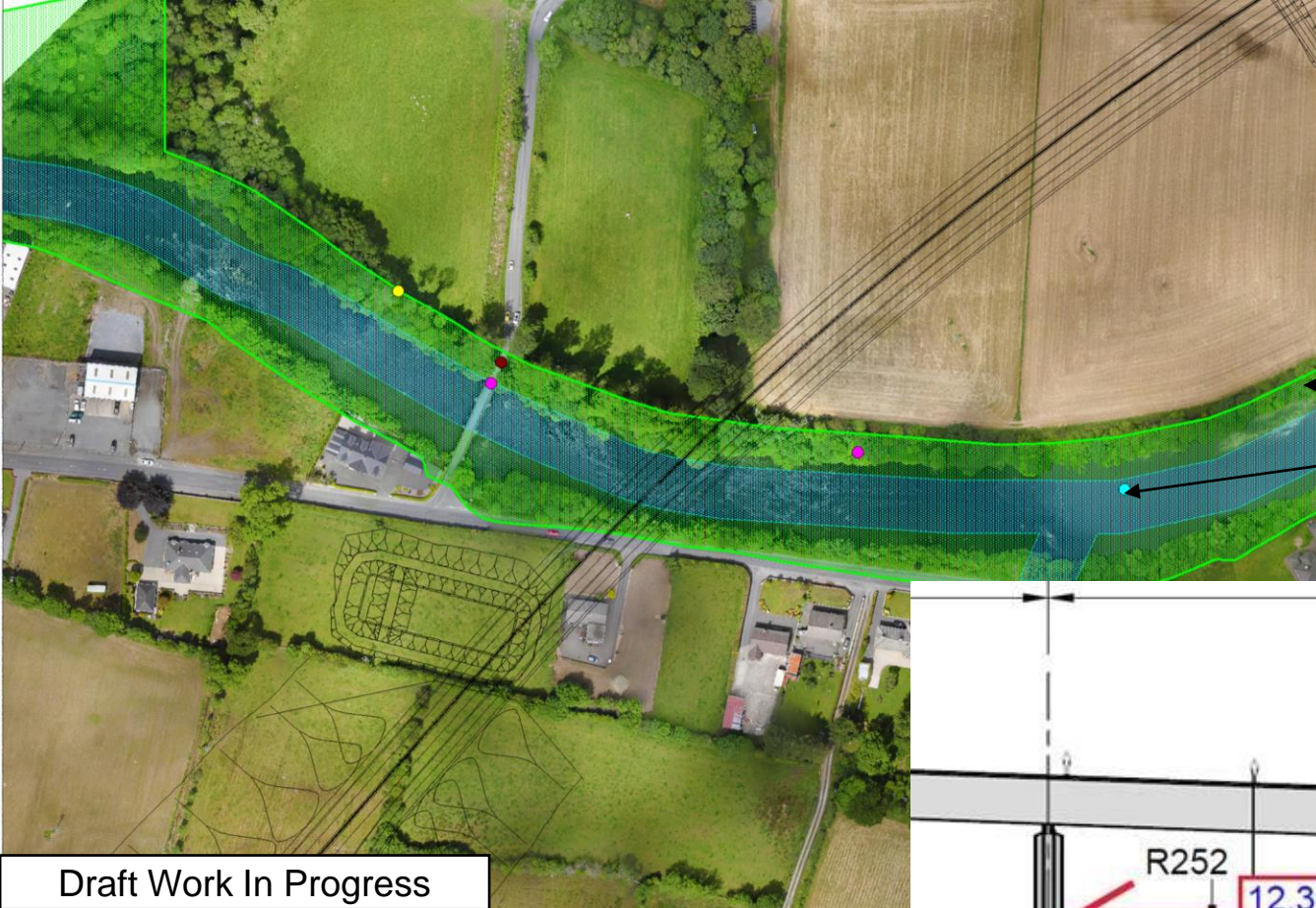
BRIDGE OPTION - 3 (POST TENSIONED CONCRETE BOX)*



LONG SECTION - OPTION 3
Scale: 1/750 @ A1, 1/1500 @ A3

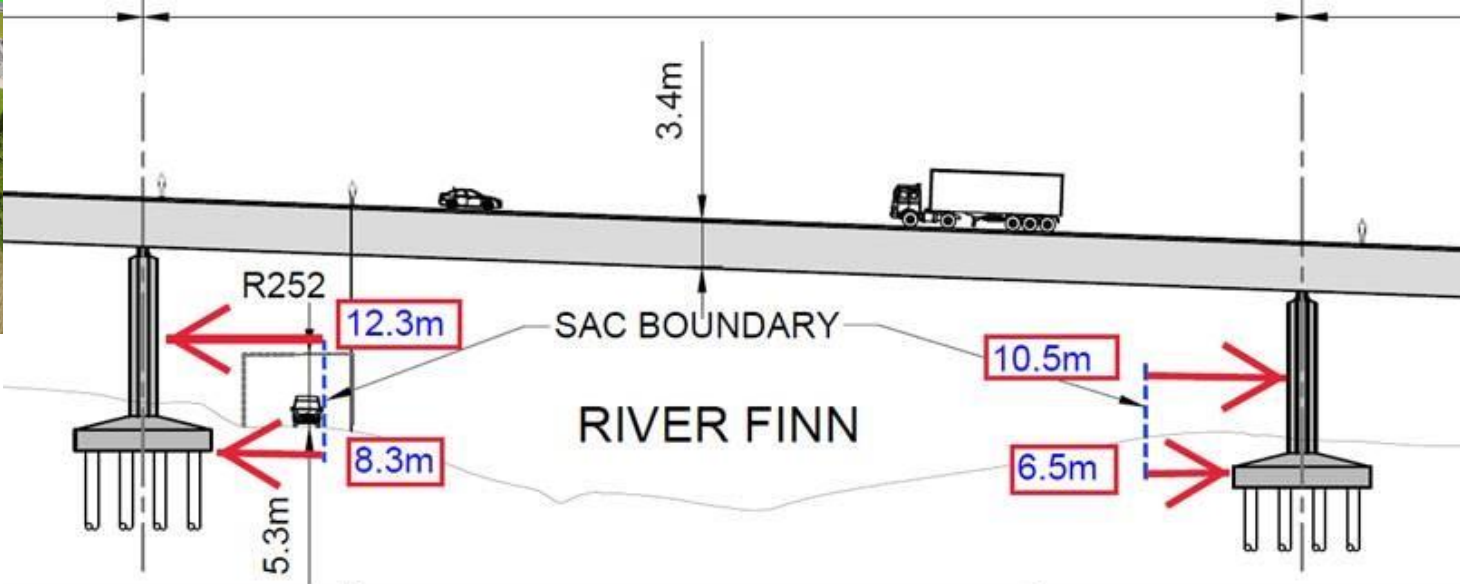


*Design to be agreed with TII



River Finn SAC
Otter Habitat and signs

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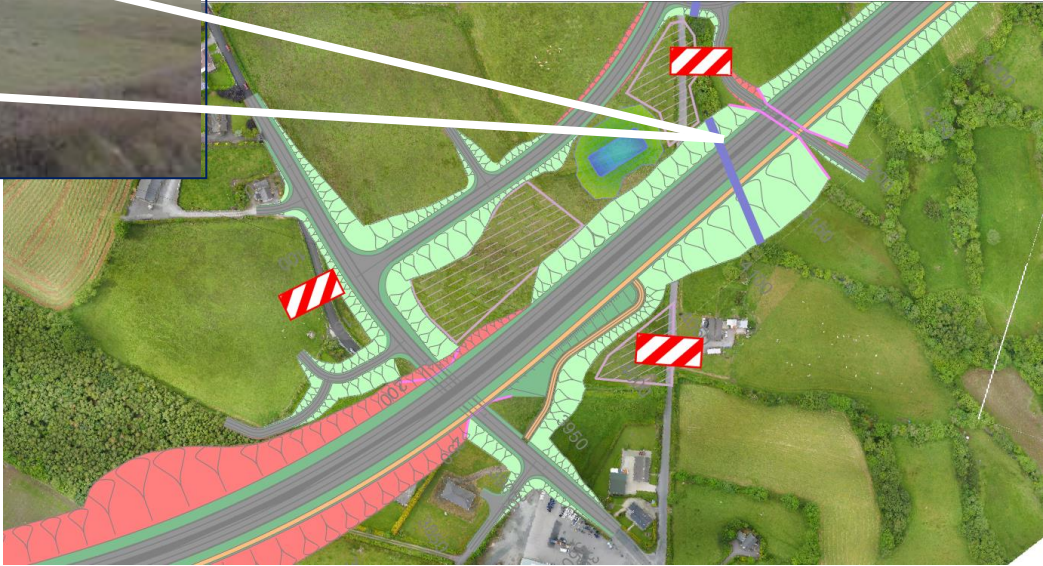
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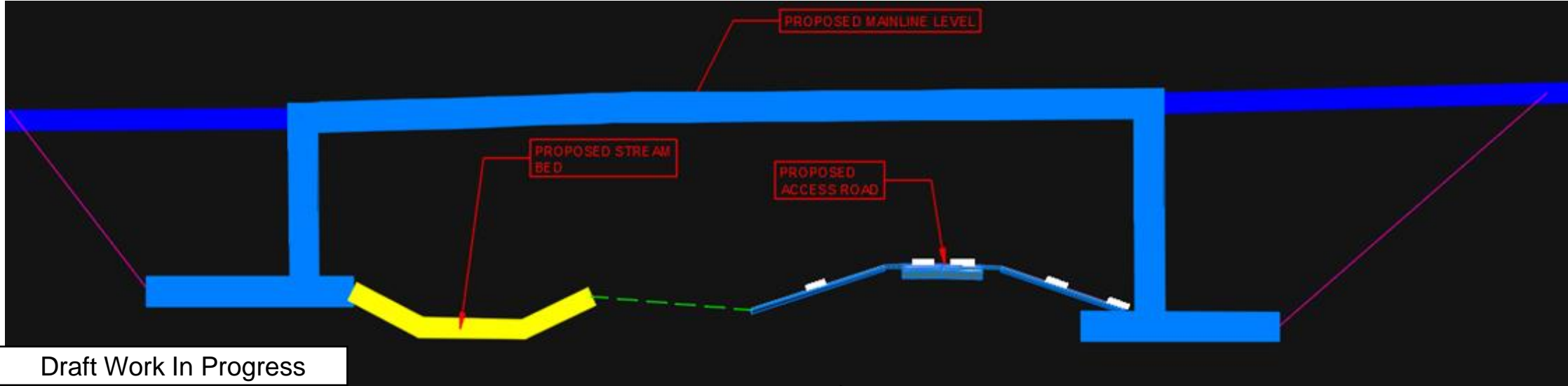
Potential Significant Operational Impact: Drumboe Burn – fish bearing tributary of River Finn. Electrofishing confirms 0+ and 1+ trout – spawning/nursery u/s



2nd Freeze Design included:
Culvert >100m long – rapid run/
sloping river channel, which would
require baffles and low flow channel

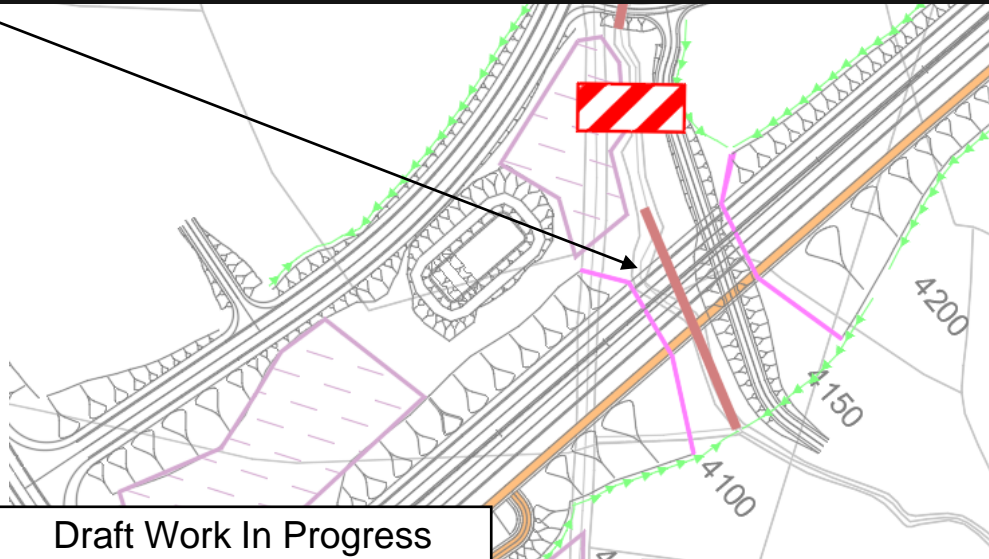
Potential to impact mammal (otter)
movement





Drumboe Burn – combined watercourse / accommodation underbridge

- larger opening & increased light
- shorter length of impacted watercourse



Cloghroe River – salmon/trout spawning nursery tributary of River Deelee

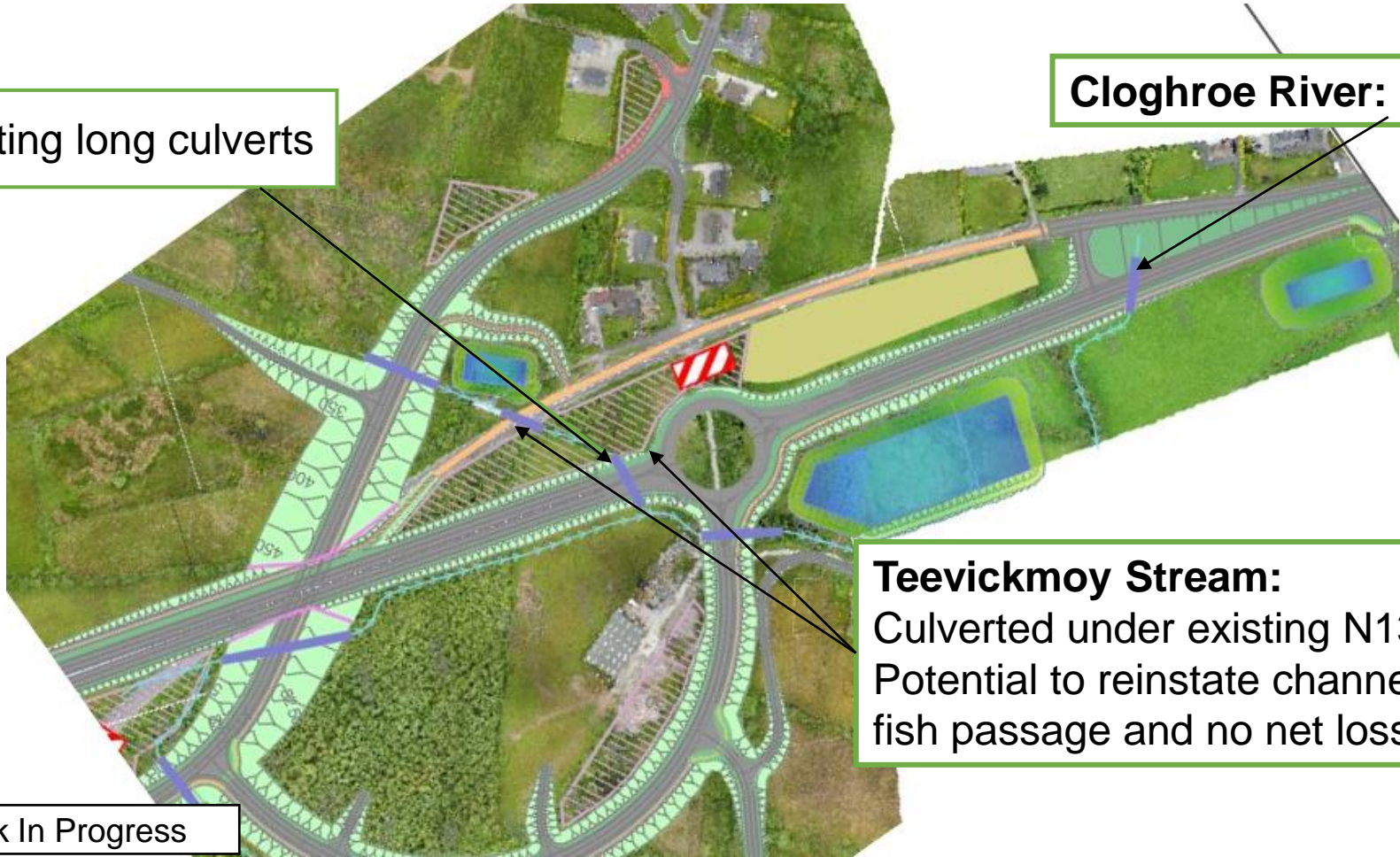
Teevickmoy Burn – trout spawning/nursery tributary of Cloghroe River

Existing long culverts

Cloghroe River: (Callan Bridge)

Teevickmoy Stream:
Culverted under existing N13;
Potential to reinstate channel to ensure fish passage and no net loss of habitat.

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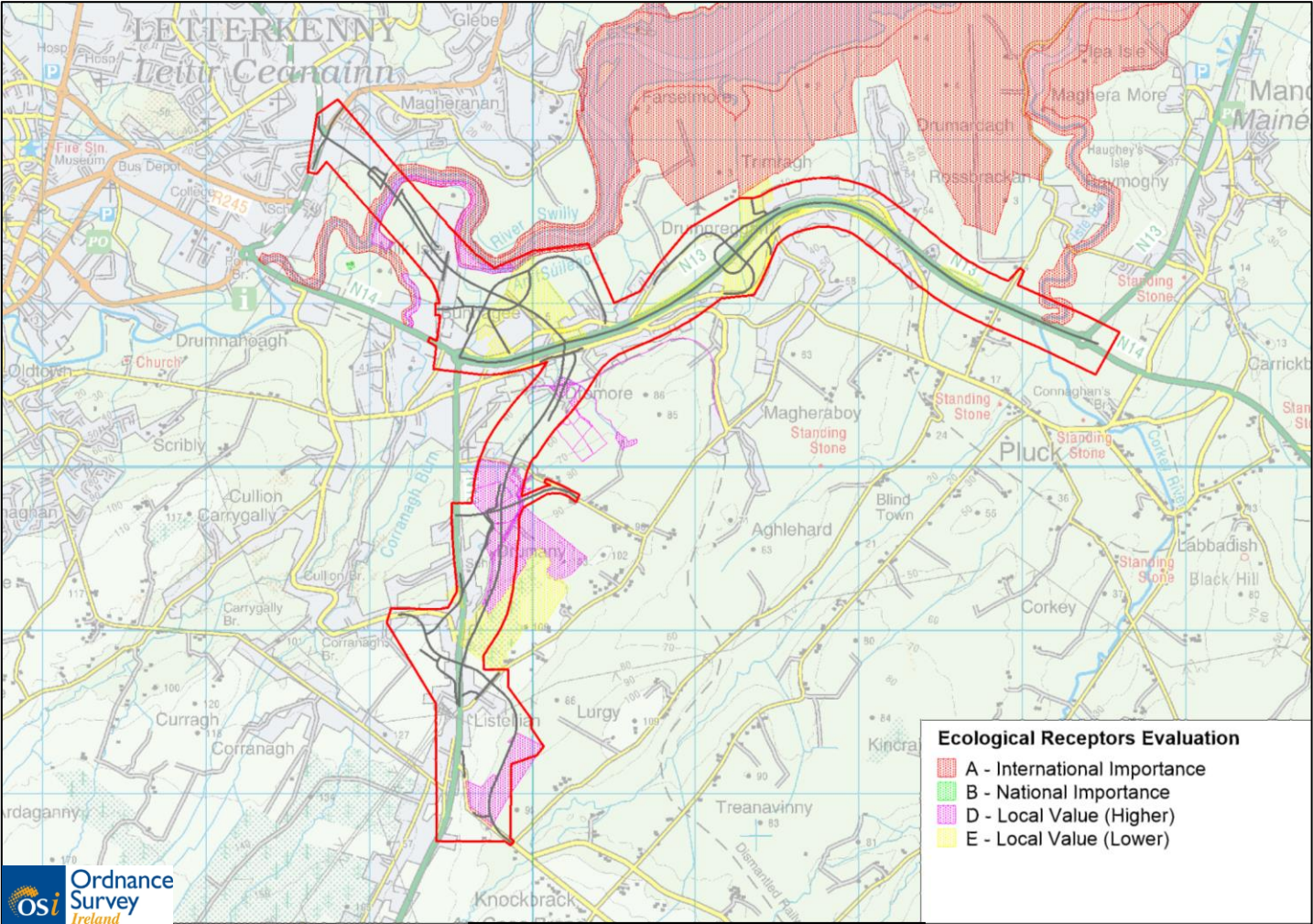
SECTION 2

BIODIVERSITY

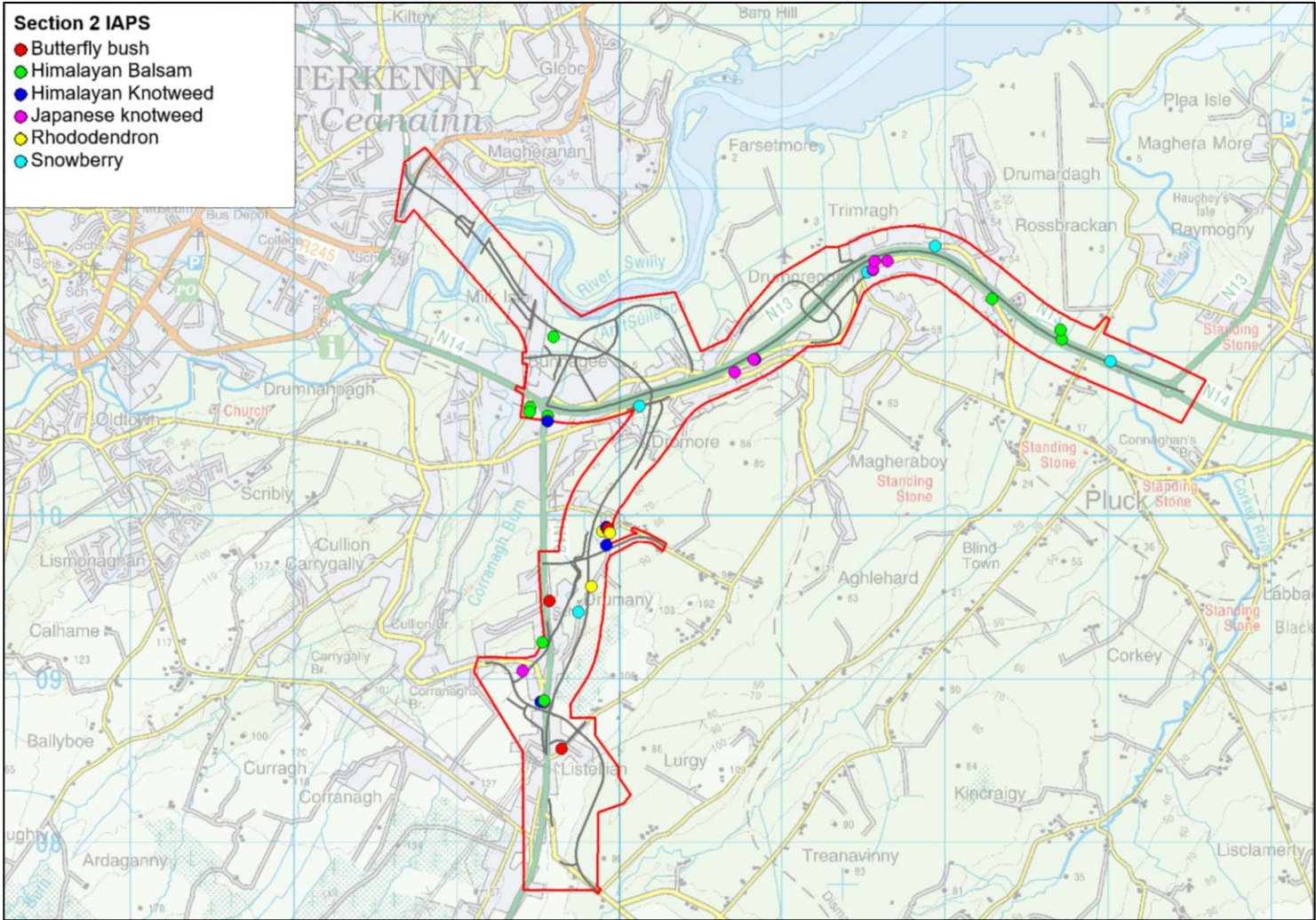
Summary of Baseline - Ecological Receptors

Terrestrial

- 27 Ecological Receptors (ERs) identified for the study area.
- 14 European sites with the Zone of Influence (Zoi), two off which are crossed; Lough Swilly SAC and SPA .
- 4NHAs, 19pNHAs & 3 Nature Reserves within the Zoi.
- Wet grasslands, woodland strips, hedgerow/treeline networks (Lurgybrack, Drumany and Dromore), over-wintering bird species, bat roosts (Dromore/Lurgybrack), otter (Lough Swilly & Tributaries)



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Draft Work In Progress

Bat Activity

5 bat species recorded during survey complete in 2019, 2021 & 2021.

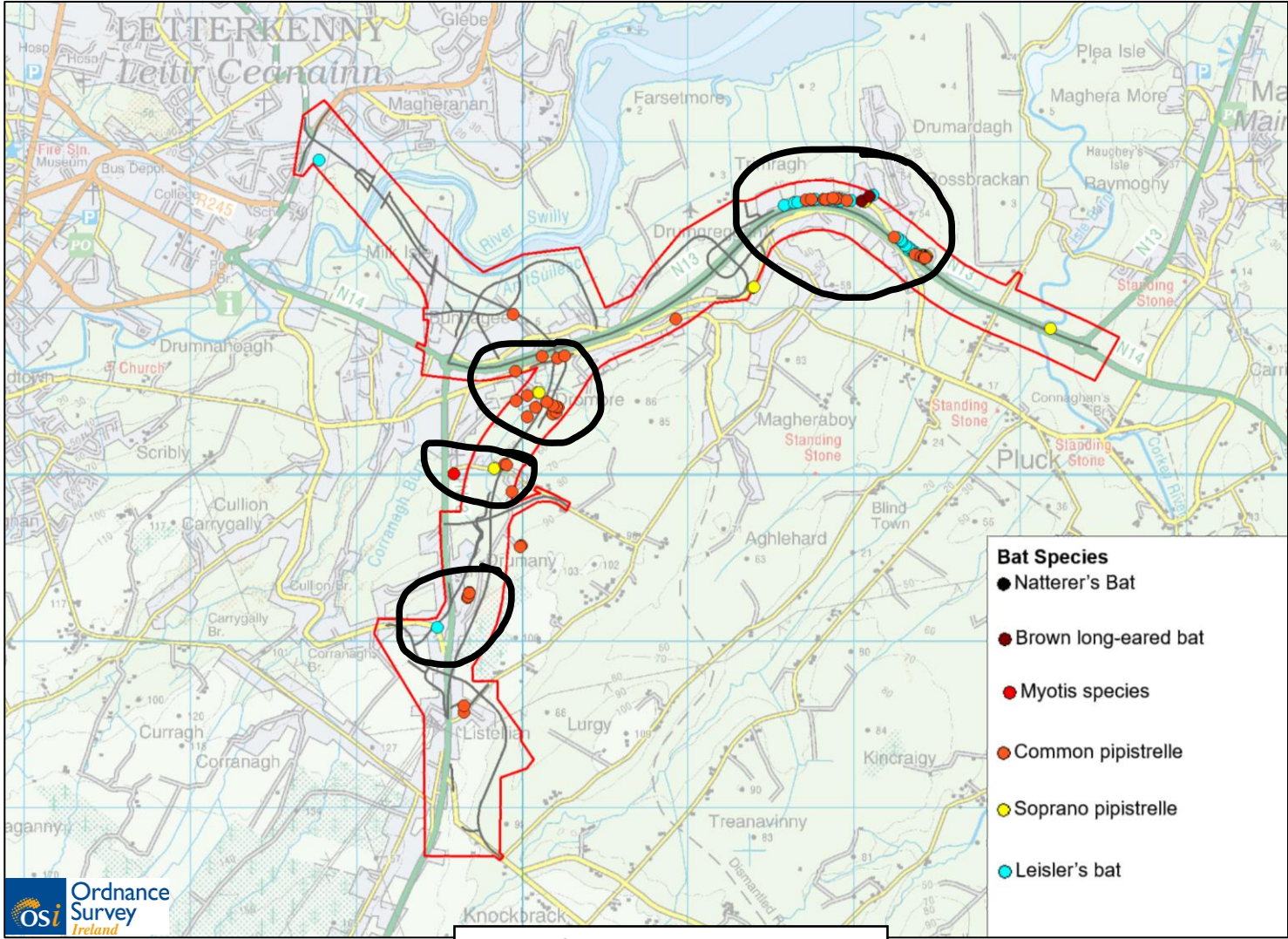
- soprano pipistrelle
- common pipistrelle
- Leisler’s bat
- *Myotis* spp.
- Brown Long-eared

These records were collated by:

- Building Surveys.
- Static Recording Units at locations along the proposed route.
- Walking & Driving Transects.

Potential Impacts:

- Loss of tree roosts
- Loss of building roosts
- Loss of commuting and foraging habitat
- Loss of connectivity



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Summary of Significant Effects

Terrestrial

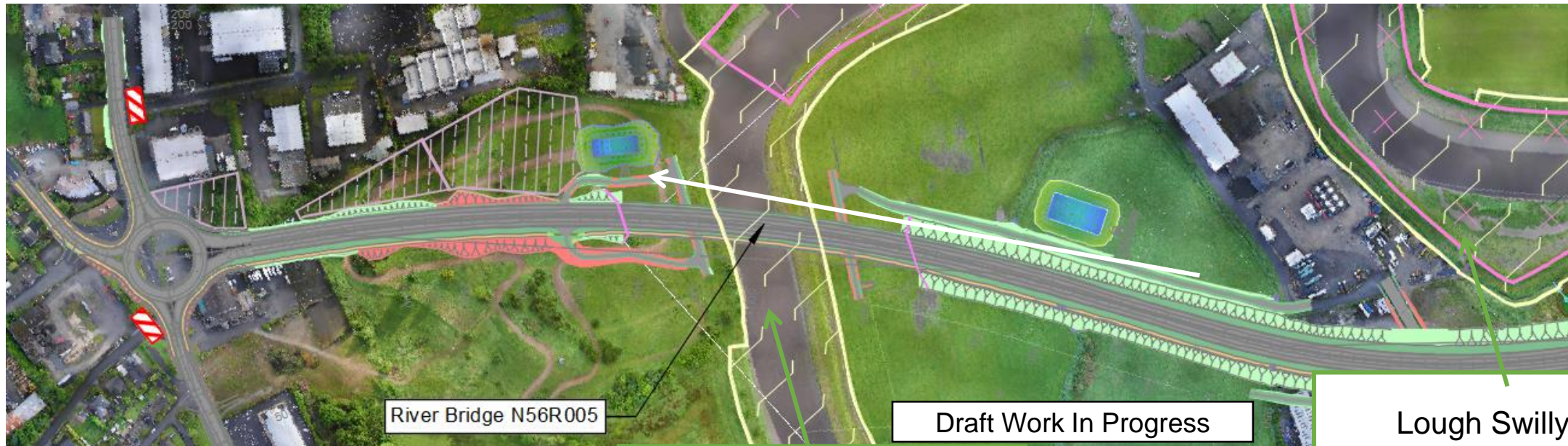
- Lough Swilly SAC and SPA river crossing on habitats/bird species.
- Permanent habitat loss of the following along the proposed alignment; agricultural and wet grassland, hedgerow & treeline network, scrub, woodland strips and conifer plantation
- Badger territory activity – no active setts identified within study area, immediately outside.
- Potential otter holts

Aquatic

- River Swilly / Lough Swilly SAC Crossing
- Isle Burn Crossing *fish migration path*
- Works at Milk Isle/ Bunnagee in close proximity to Lough Swilly SAC
- Eels (IUCN “critically endangered”) likely to be present in Bunnagee drains
- Potential positive impact on water quality (as a determinant of aquatic ecology) from reduction of traffic congestion (= road runoff pollution) at Letterkenny Polestar roundabout (near existing N14 Swilly crossing). New route has improved drainage treatment.

River Swilly Bridge

- Otter habitat is the main ecological constraint;
- **Note** - crossing area comprises Annex I Habitat - Estuaries [3110] where the instream community (Mud Community Complex) is an identified sub-type in the Lough Swilly SAC Conservation Objectives supporting document (NPWS, 2011);
- Main issues - construction phase sediment / pollutant control, no instream works or instream footprint, treatment via wetlands of road drainage.



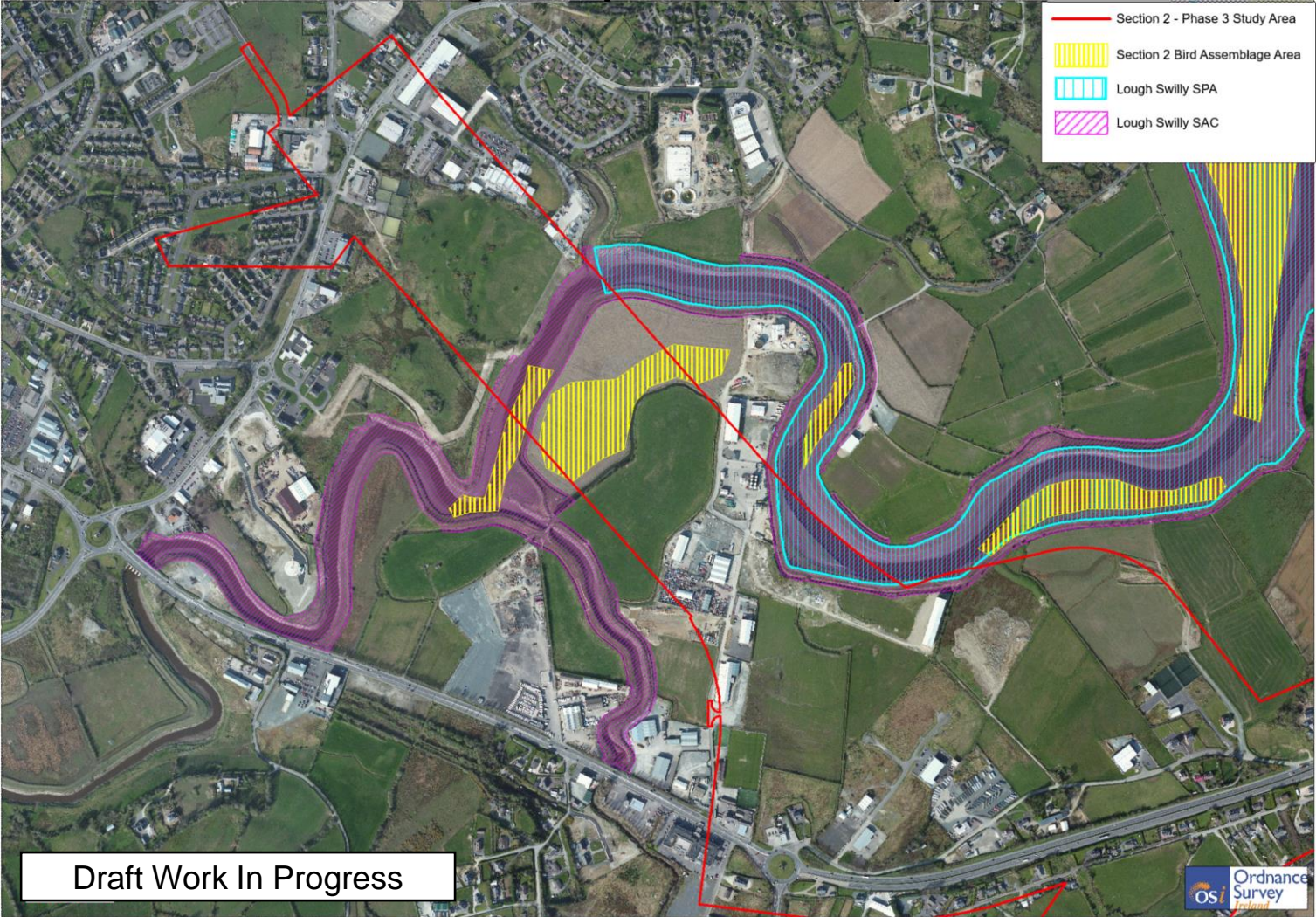
River Bridge N56R005

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Lough Swilly SPA

Lough Swilly SAC

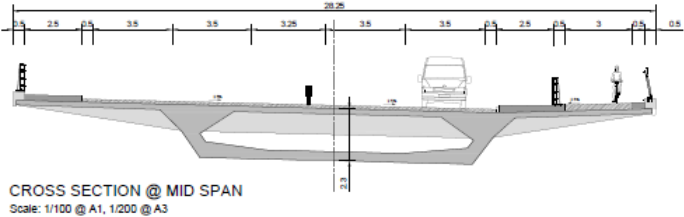
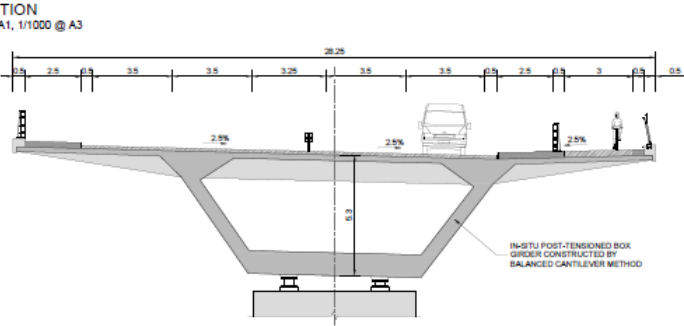
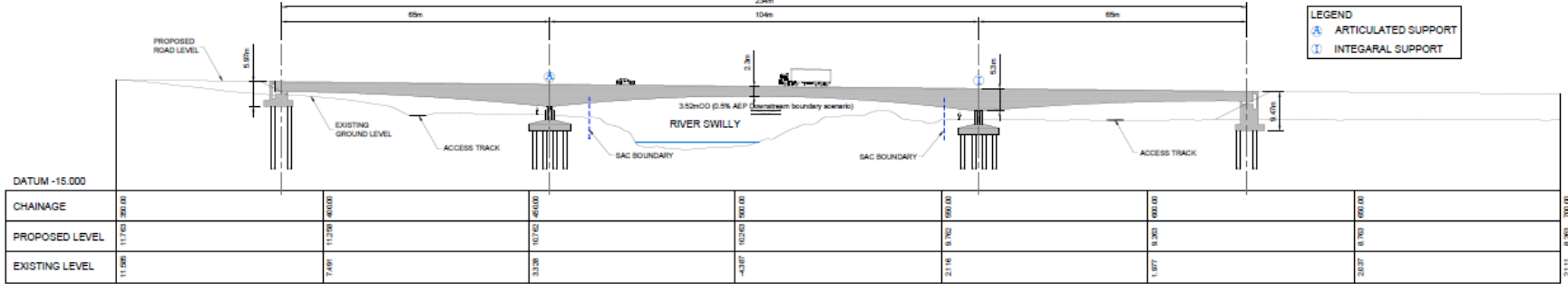
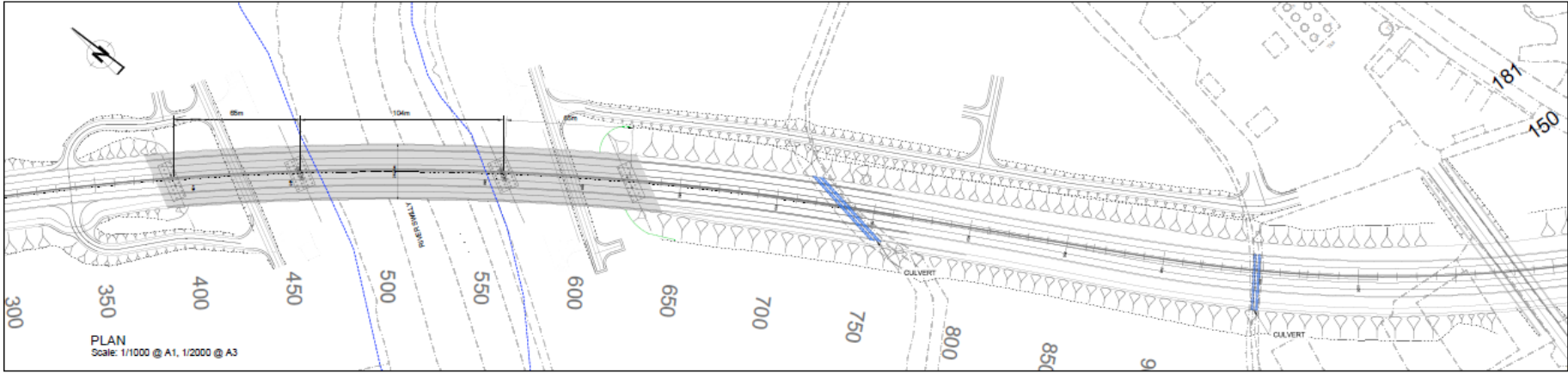
Lough Swilly SPA Letterkenny



River Swilly Crossing - Section 2

BRIDGE OPTION - 1 (POST TENSIONED BOX GIRDER)

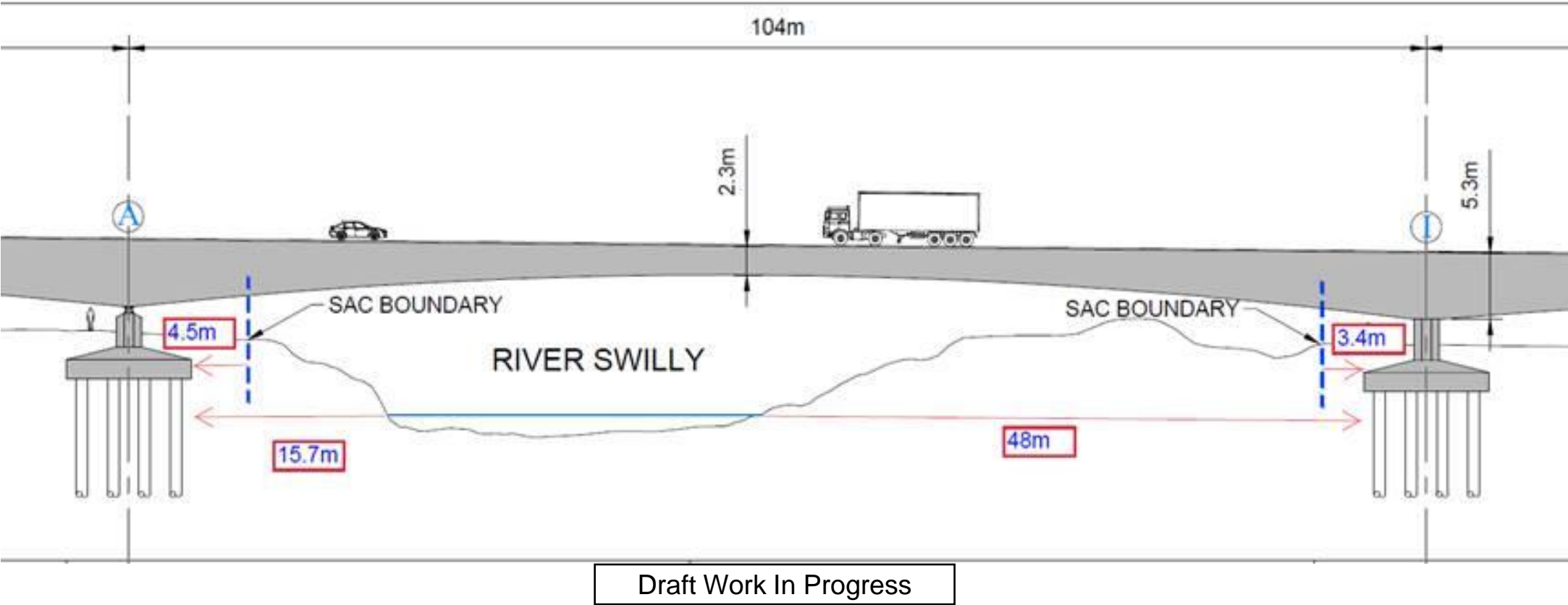
- Bridge Option takes account of existing flood defence measures
- Design to be agreed with TII



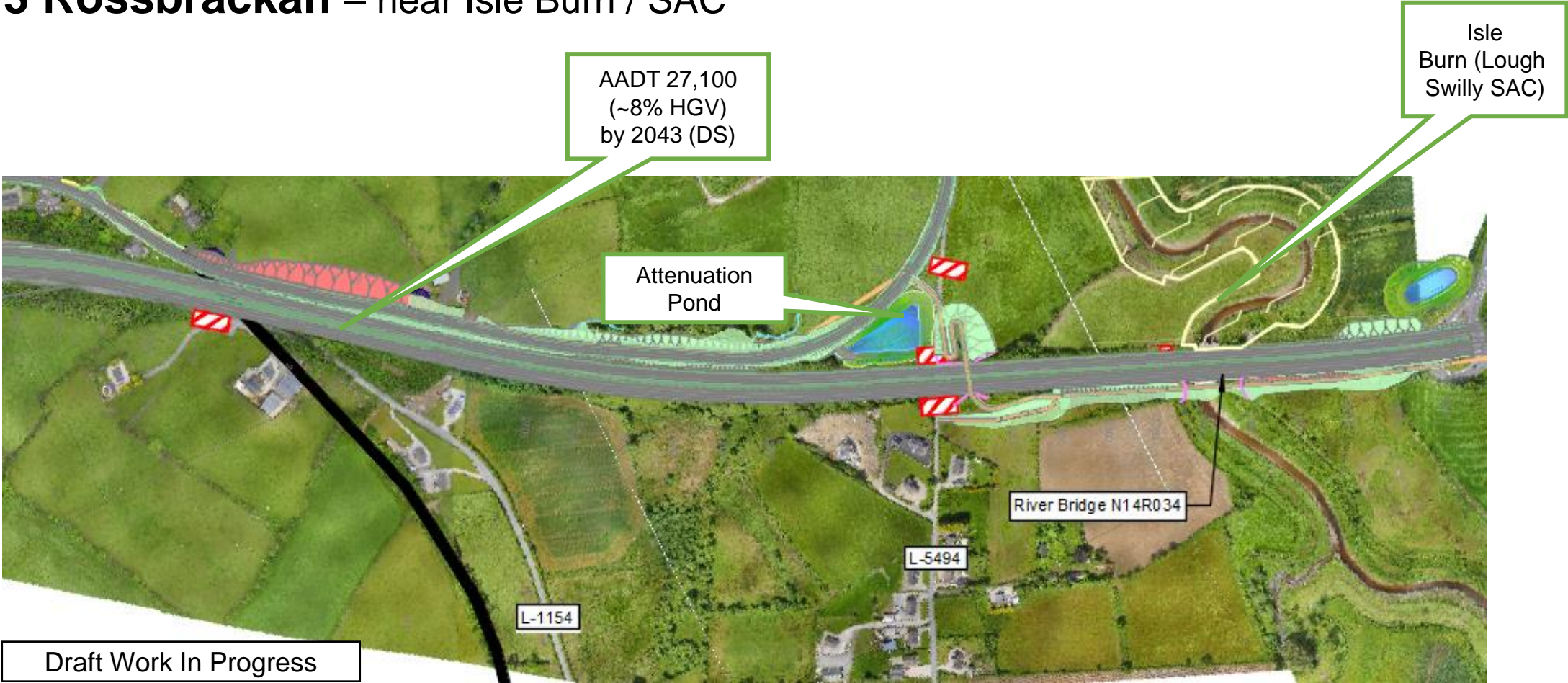
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River Swilly Crossing - Section 2

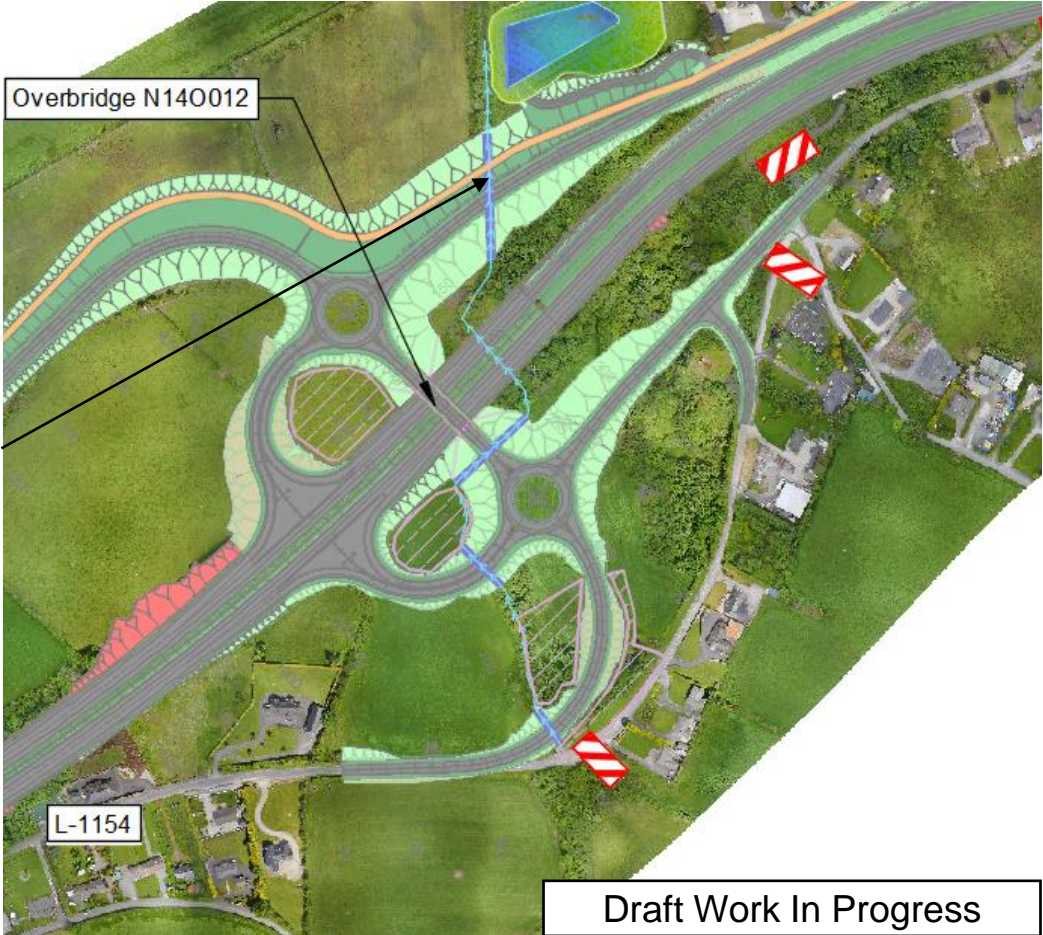
BRIDGE OPTION - 1 (POST TENSIONED BOX GIRDER)



N13 Rossbrackan – near Isle Burn / SAC



Trimragh Stream – lower reaches have some fisheries potential, culverts designed to ensure fish passage



SECTION 3

BIODIVERSITY

Summary of Baseline - Ecological Receptors

Terrestrial

- 4 European sites within the Zone of Influence (Lough Swilly SAC & SPA, River Finn / River Foyle and Tributaries SAC). The River Finn SAC / River Foyle and Tributaries SAC will be crossed at the south of the scheme on the A5 Link.
- 3 sites of National Importance within the Zol (Lough Swilly including Big Isle, Blanket Nook and Inch Lake pNHA, Feddyglass Woods pNHA & River Foyle and Tributaries ASSI) which are not been impacted directly or indirectly.
- 1 recently recorded protected plant species from the study area - Globe flower (FPO sp.) recorded from the River Finn but not within the vicinity of the proposed crossing point.
- 15 separate sites were identified as Key Ecological Receptors (KER's). All rated as Local Importance (Higher value) with exception of River Deelee (County Importance) and River Finn (International Importance).
- KER's primarily include small amount of wet willow-alder-ash woodland (WN6), oak-ash-hazel woodland (WN2), scrub (WS1) and wet grassland (GS4).

Summary of Baseline - Ecological Receptors Terrestrial Cont.

- Limited evidence of Badger and Otter with no active setts or holts recorded within the CPO. 4 inactive setts located within CPO will require derogation.
- Kingfisher present on River Finn, lower stretch of Deelee and possibly Lesliehill Stream. No evidence of nest sites recorded.
- Wintering Whooper Swan activity at Swilly Burn floodplain and some potato fields to the north at Drumbeg. Main site along floodplain was avoided during option selection, while Drumbeg site opportunistically used.
- No evidence of breeding barn owl from study area.
- Three species of High Conservation Concern (Red listed) were identified during the breeding bird surveys, namely Meadow Pipit, Grey Wagtail and Yellowhammer.

Whooper Swan foraging sites in the vicinity of the scheme



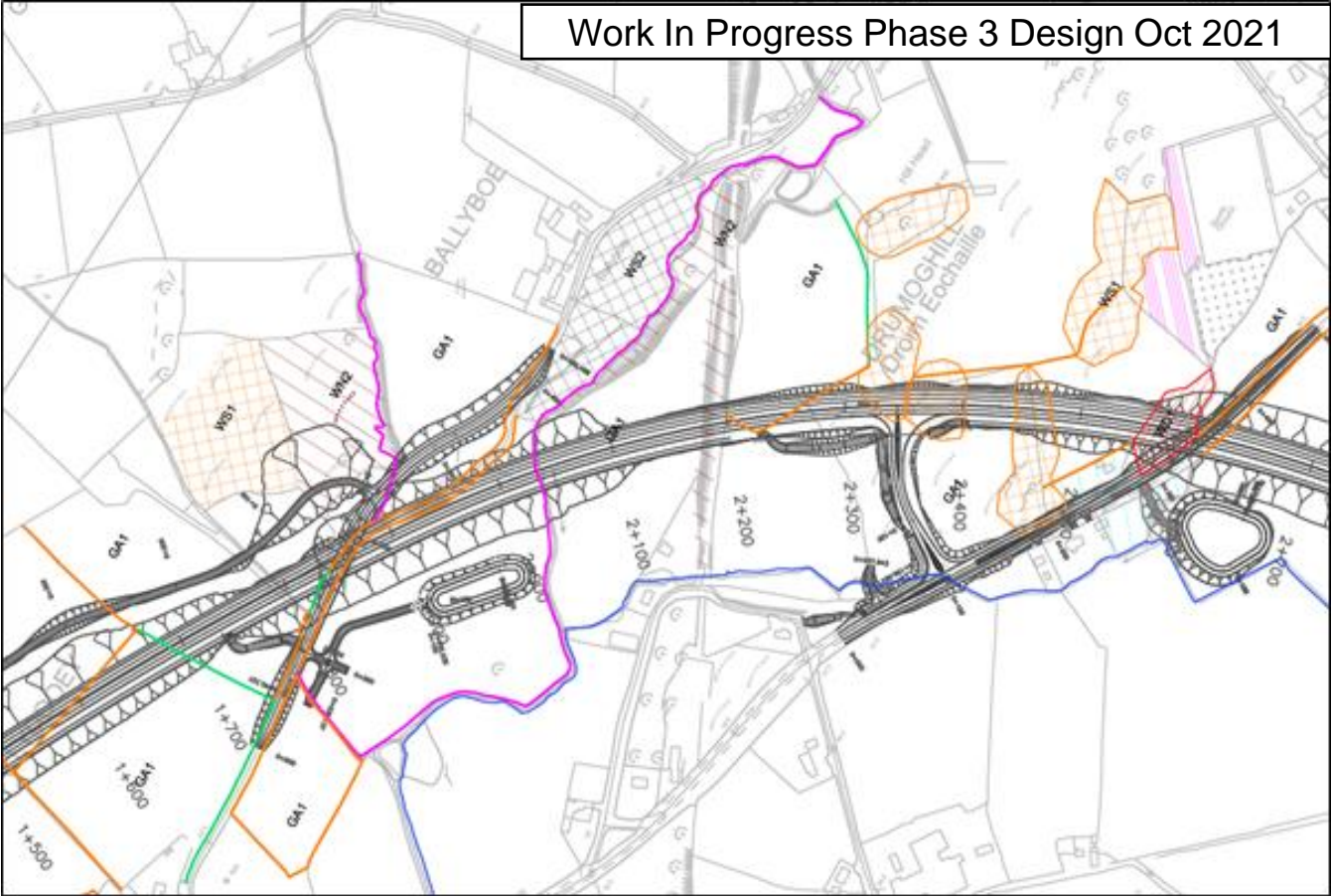
Aquatic

- The northern section drains to the north towards Lough Swilly via tributaries of the Lesliehill Stream.
- The central and southern portion of the route drain to the east in to the Foyle estuary via the Swilly Burn and its tributaries and the River Deelee catchment.
- The extreme southern portion lies within the River Finn catchment.
- Intersects total of 21 watercourses. River Finn of International Importance, River Deelee of County Importance & remainder of Local Importance (Higher value).
- Main watercourses subject to drainage schemes and canalised with flood embankments with historic floodplains providing intensive farmland.
- Water quality generally poor in all watercourses with limited fisheries value.
- Swilly Burn with population of Asian Clam (listed IAS under Habitat Regulations 2011).

Ecological Receptors Ballyboe / Drumoghilla (KER 2, 3 & 4)

Oak-ash-hazel woodland on steep ground with exposed siliceous bedrock outcrop in north, extending along river valley and extending along embankment of old railway line in centre, and isolated copse in south.
All Local Importance (Higher Value).

LEGEND	
	DRAFT CPO LINE
	DRY CALCAREOUS GRASSLAND
	DRY MEADOWS AND GRASSY VERGES
	DRY / HUMID ACID GRASSLAND
	WET GRASSLAND
	REED AND LARGE SEDGE SWAMP
	TALL-HERB SWAMP
	OAK-ASH-HAZEL WOODLAND
	RIPARIAN WOODLAND
	WET WILLOW-ALDER-ASH WOODLAND
	MIXED BROAD-LEAVED WOODLAND
	MIXED BROAD-LEAVED / CONIFER WOODLAND
	CONIFEROUS PLANTATION
	SCRUB
	IMMATURE WOODLAND
	HEDGEROWS
	TREELINES
	SPOIL AND BARE GROUND
	ERODING / UPLAND RIVERS
	DEPOSITING LOWLAND RIVERS
	DRAINAGE DITCHES
	TIDAL RIVERS
	JAPANESE KNOTWEED
	WATERCOURSE DIVERSION
	IMPROVED AGRICULTURAL GRASSLAND
	ARABLE CROPS

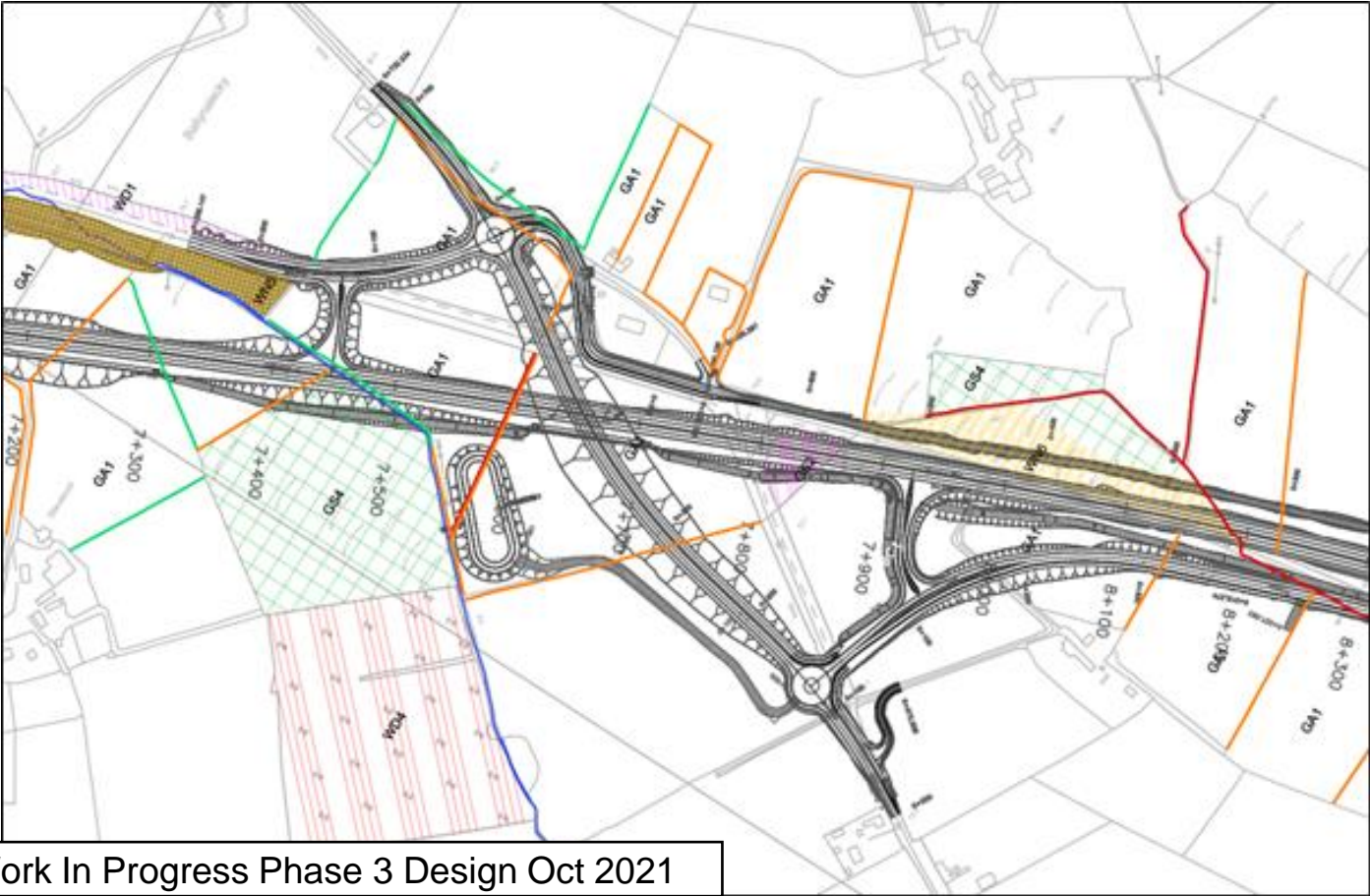


Ecological Receptors Slievebuck

Wet grassland with core of freshwater marsh bounded by stream to the east. Local Importance (Higher Value).

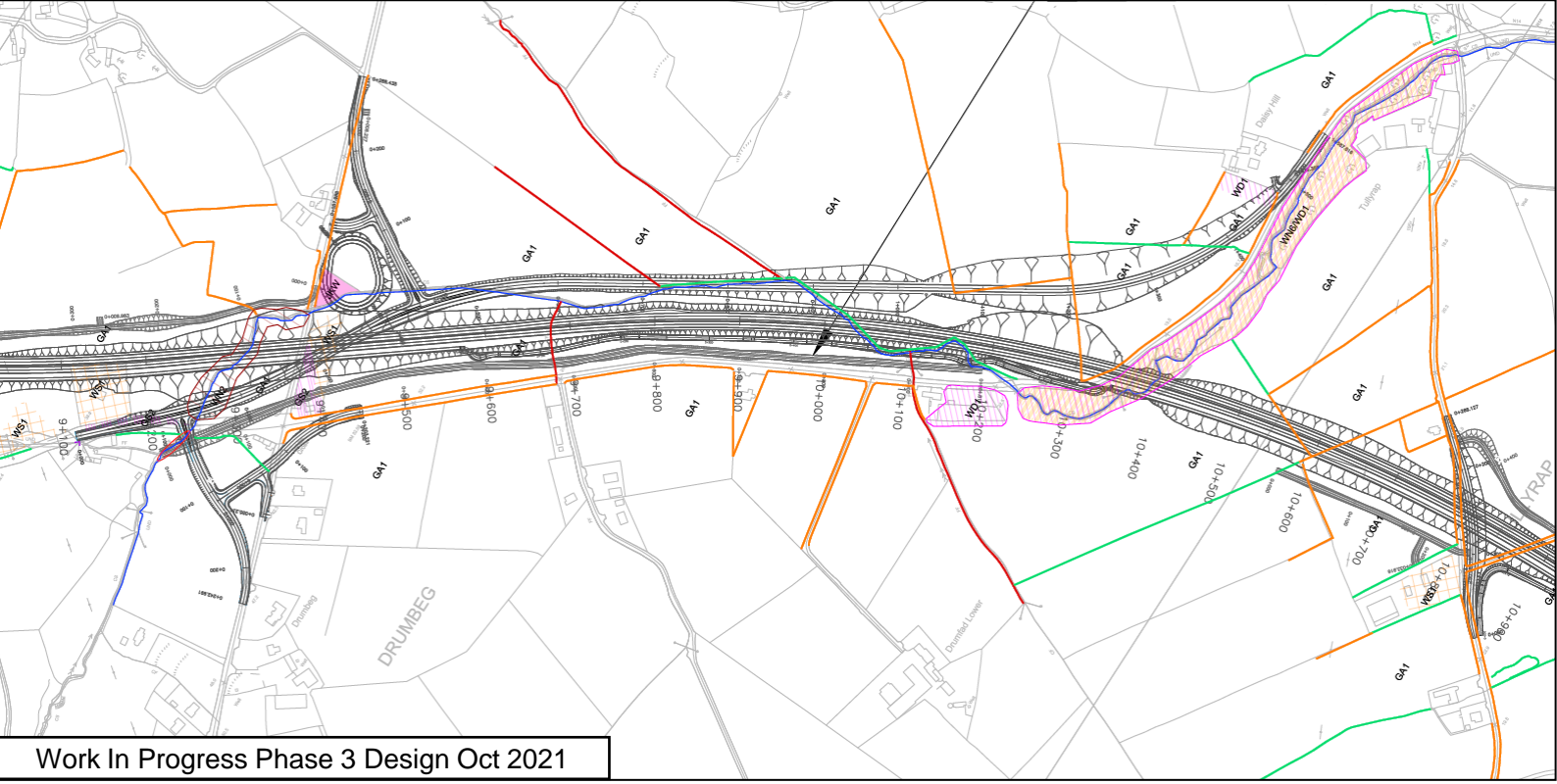
LEGEND

	DRAFT CPO LINE		SCRUB
	DRY CALCAREOUS GRASSLAND		IMMATURE WOODLAND
	DRY MEADOWS AND GRASSY VERGES		HEDGEROWS
	DRY / HUMID ACID GRASSLAND		TREELINES
	WET GRASSLAND		SPOIL AND BARE GROUND
	REED AND LARGE SEDGE SWAMP		ERODING / UPLAND RIVERS
	TALL-HERB SWAMP		DEPOSITING LOWLAND RIVERS
	OAK-ASH-HAZEL WOODLAND		DRAINAGE DITCHES
	RIPARIAN WOODLAND		TIDAL RIVERS
	WET WILLOW-ALDER-ASH WOODLAND		JAPANESE KNOTWEED
	MIXED BROAD-LEAVED WOODLAND		WATERCOURSE DIVERSION
	MIXED BROAD-LEAVED / CONIFER WOODLAND		IMPROVED AGRICULTURAL GRASSLAND
	CONIFEROUS PLANTATION		ARABLE CROPS

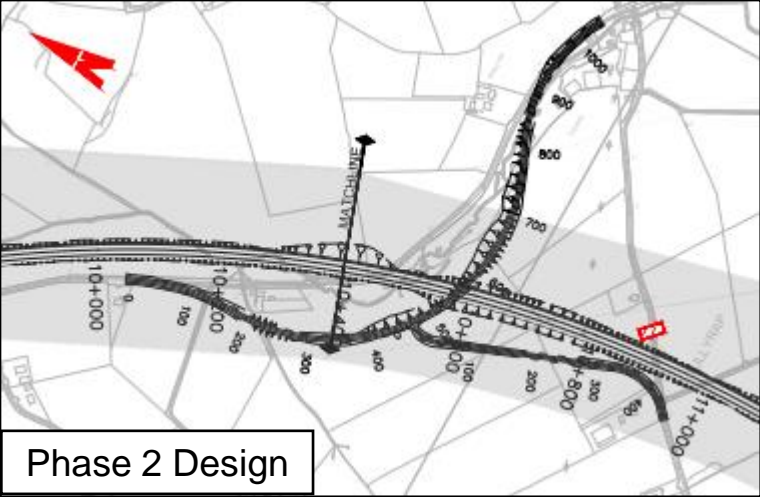


Ecological Receptors Feddyglass / Tullyrap

Linear band of wet willow-alder-ash woodland and scrub along river, with mature mixed broadleaved fringe along N14 at Tullyrap Bends. Local Importance (Higher Value). Design has been developed to minimise impact on the woodland and scrub in KER.



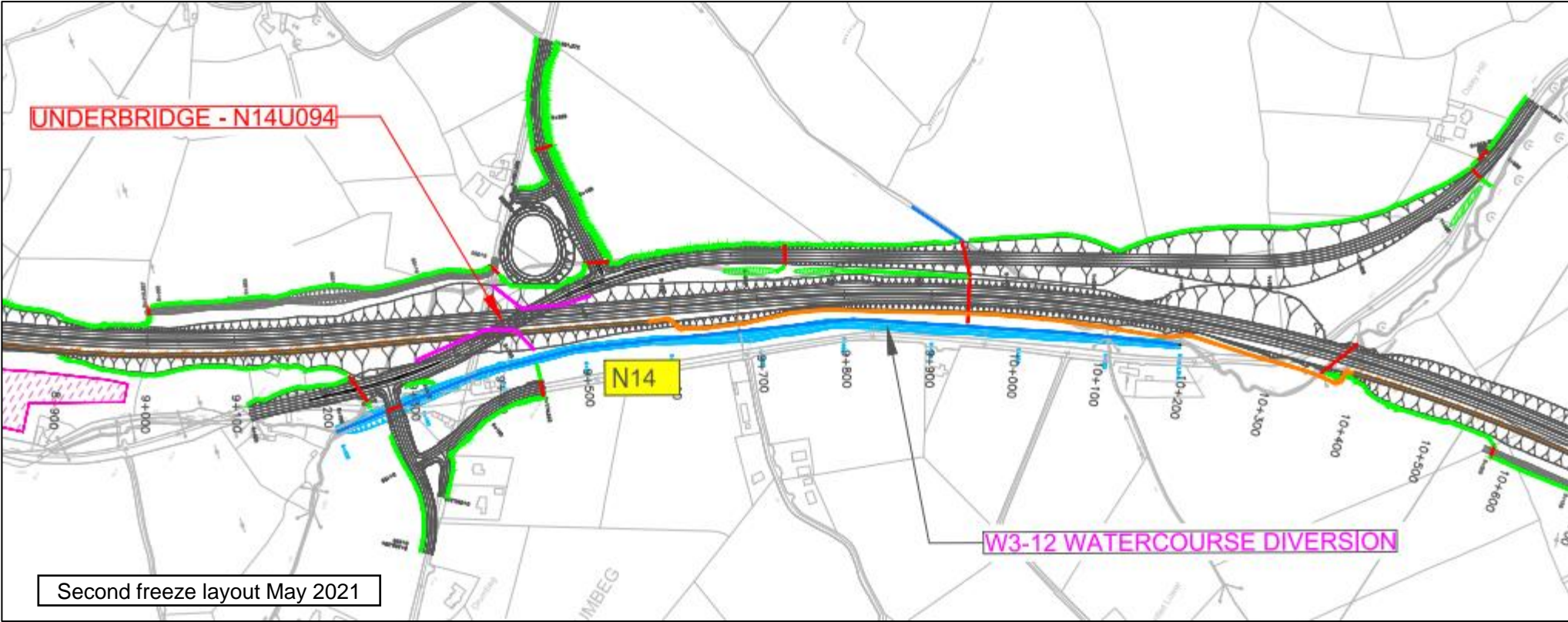
Work In Progress Phase 3 Design Oct 2021



Phase 2 Design

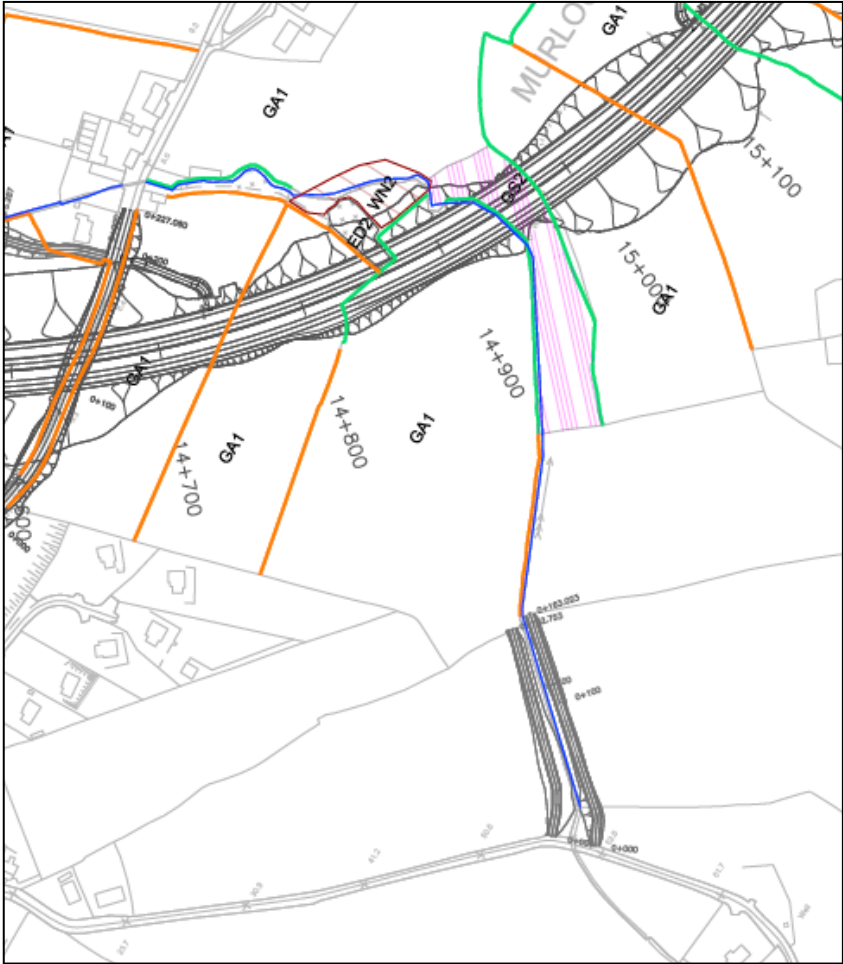
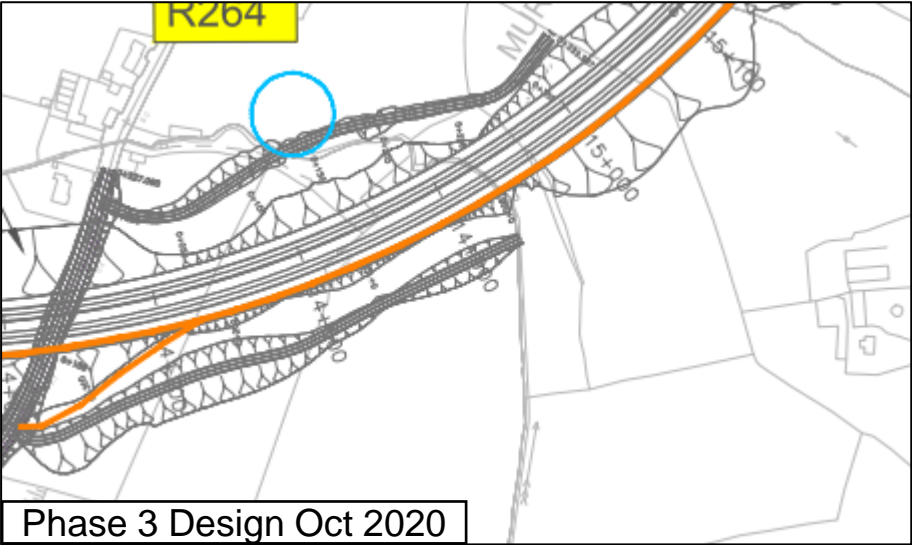
Ecological Receptors
Tullyrap Watercourse Diversion

Channel realignment required over circa 1km to avoid extensive culverting and loss of habitat. Adequate landtake to provide varied aquatic and riparian habitat.



Ecological Receptors Murlough

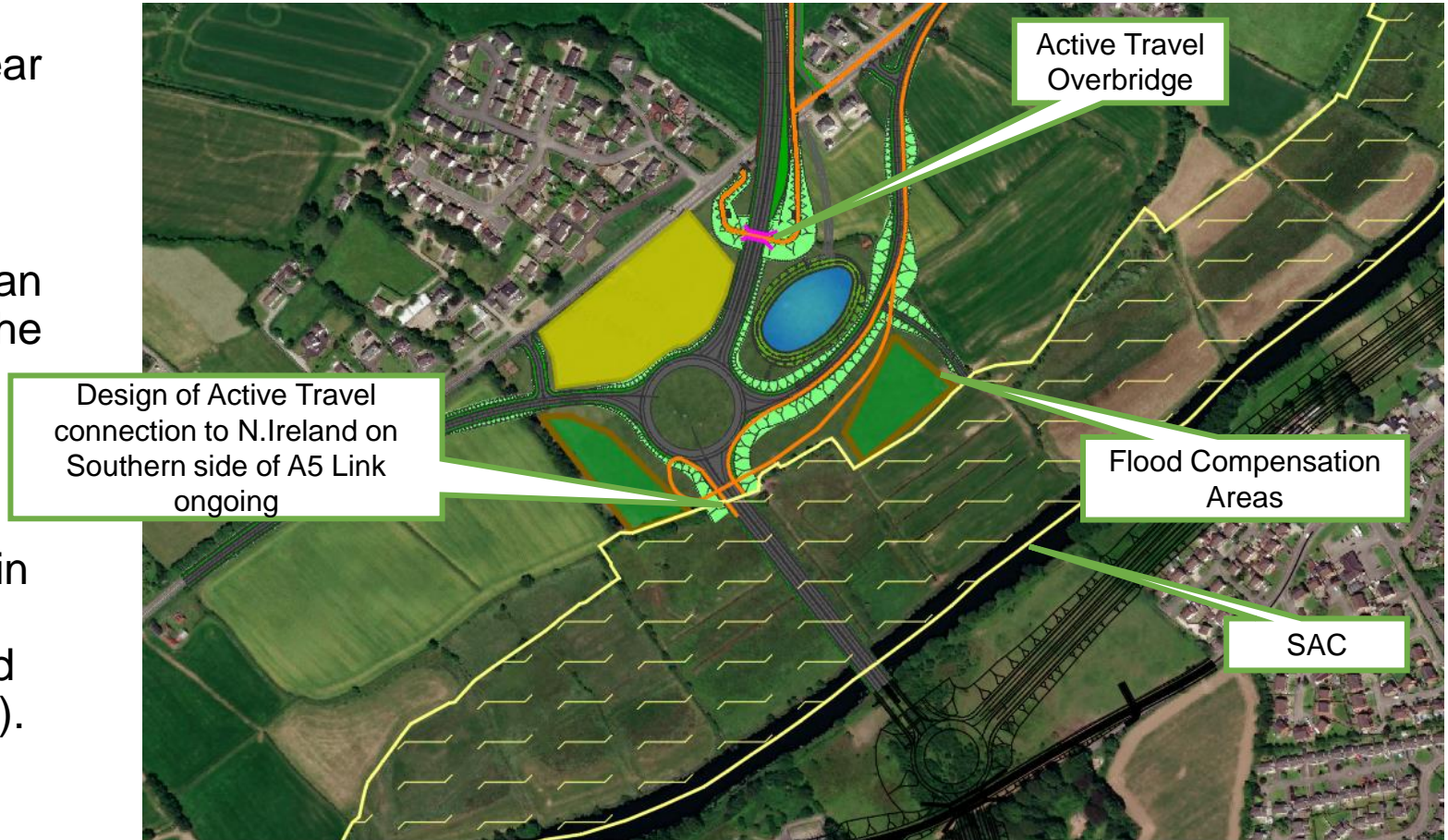
Minor stream with fringe of oak-ash-hazel woodland in steep-sided glen. Upper slopes of dry meadow vegetation with fringing mature treelines. Local Importance (Higher Value). Re-design of access tracks to reduce impacts.



Work In Progress Phase 3 Design Oct 2021

River Finn Crossing

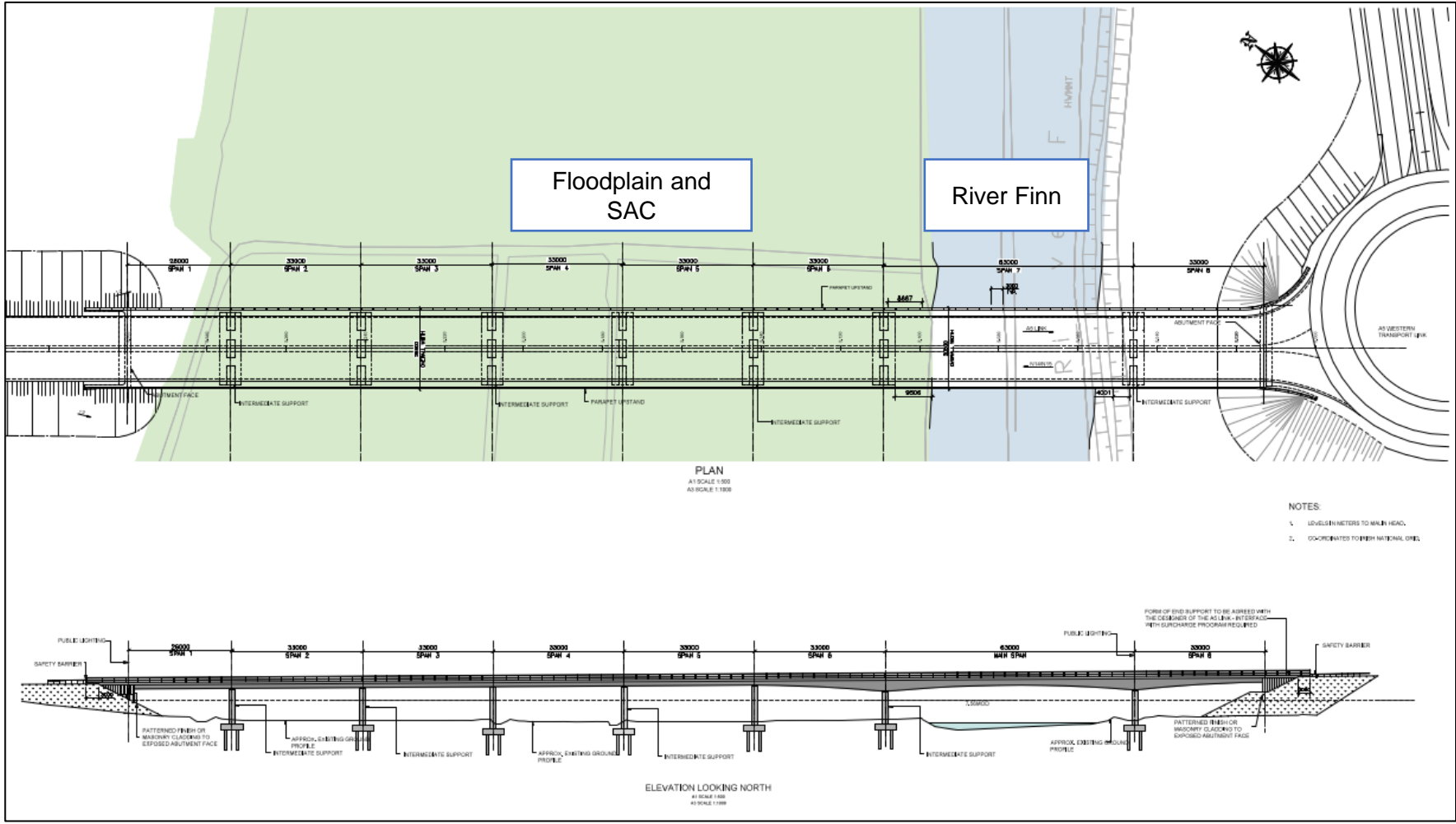
- A5 link bridge design is for a clear span structure across the main river channel which will have no direct impact on the River Finn.
- Riverbanks retained intact with an exclusion zone from the top of the river bank.
- No requirement for in-stream works.
- Bridge piers will be located within the floodplain with a small permanent loss of wet grassland habitat within the SAC (not a QI).



River Finn Crossing

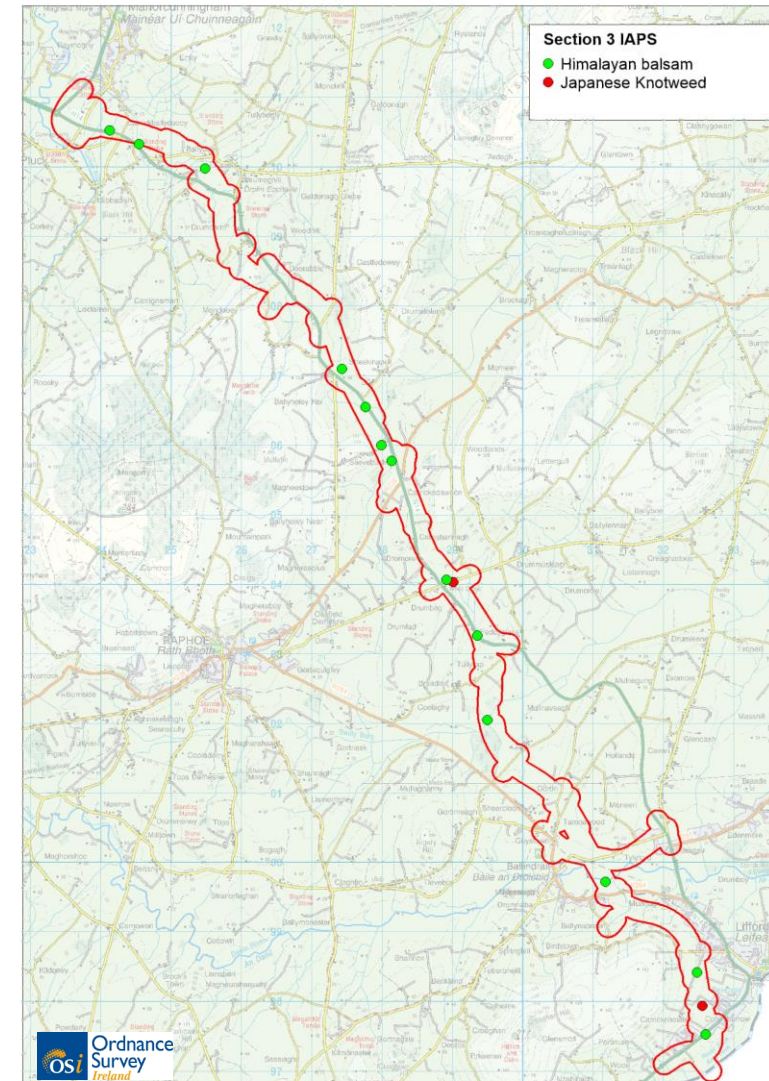
N14/N15 to A5 Link: Previously Approved design
ES/EIS 2011 – ABP Approval 05.HA033

- Bridge form previously approved to be retained in the TEN-T design proposals
- Updated cross-section required to incorporate active travel network
- Design of the bridge is still in development with a view to improve on any impacts where possible



Invasive Species Recorded along Section 3

- Himalayan Balsam widespread throughout along a number of watercourses and drainage ditches.
- Japanese Knotweed recorded at 2 locations within the CPO (Drumbeg and Carricknaslate) and one location outside of CPO (Ballyboe).
- Asian Clam present on lower Swilly Burn.



Section 3 – Bat Activity

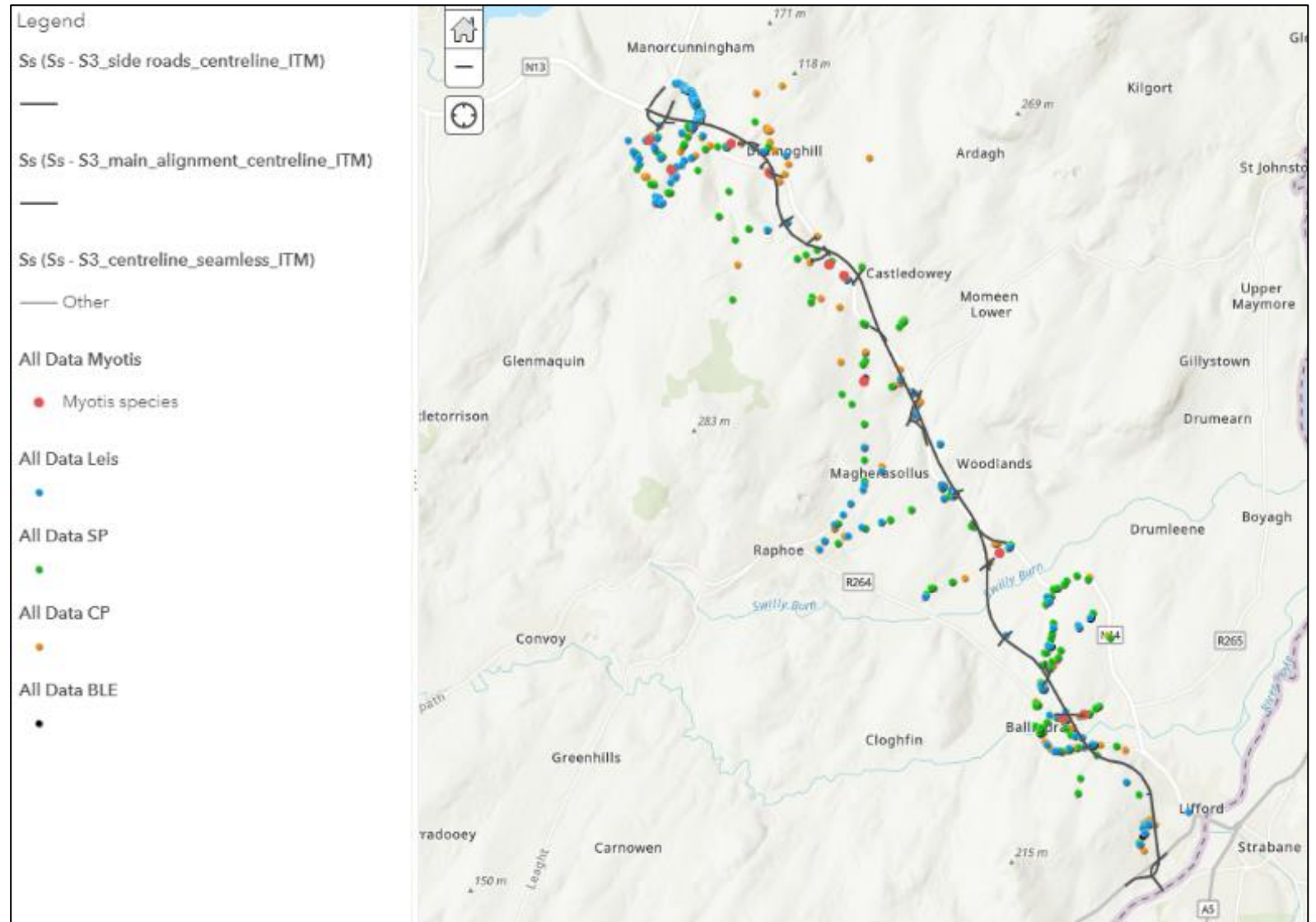
6 bat species recorded during survey complete in 2018, 2019 & 2020.

Figure shows distribution of all records along the proposed route (Number relates to number of encounters of this species):

- soprano pipistrelle (n=261):
- common pipistrelle (n=254),
- Leisler's bat (n=179),
- brown long-eared bat (n=24)
- *Myotis* spp. (n=12)
- Daubenton's bats (n=8)
- Natterer's bats (n=2)

These records were collated by:

- 26 buildings surveyed (11 confirmed roosts)
- 12 bridges surveyed (1 confirmed roost)
- 41 static locations.
- Not all within the CPO.



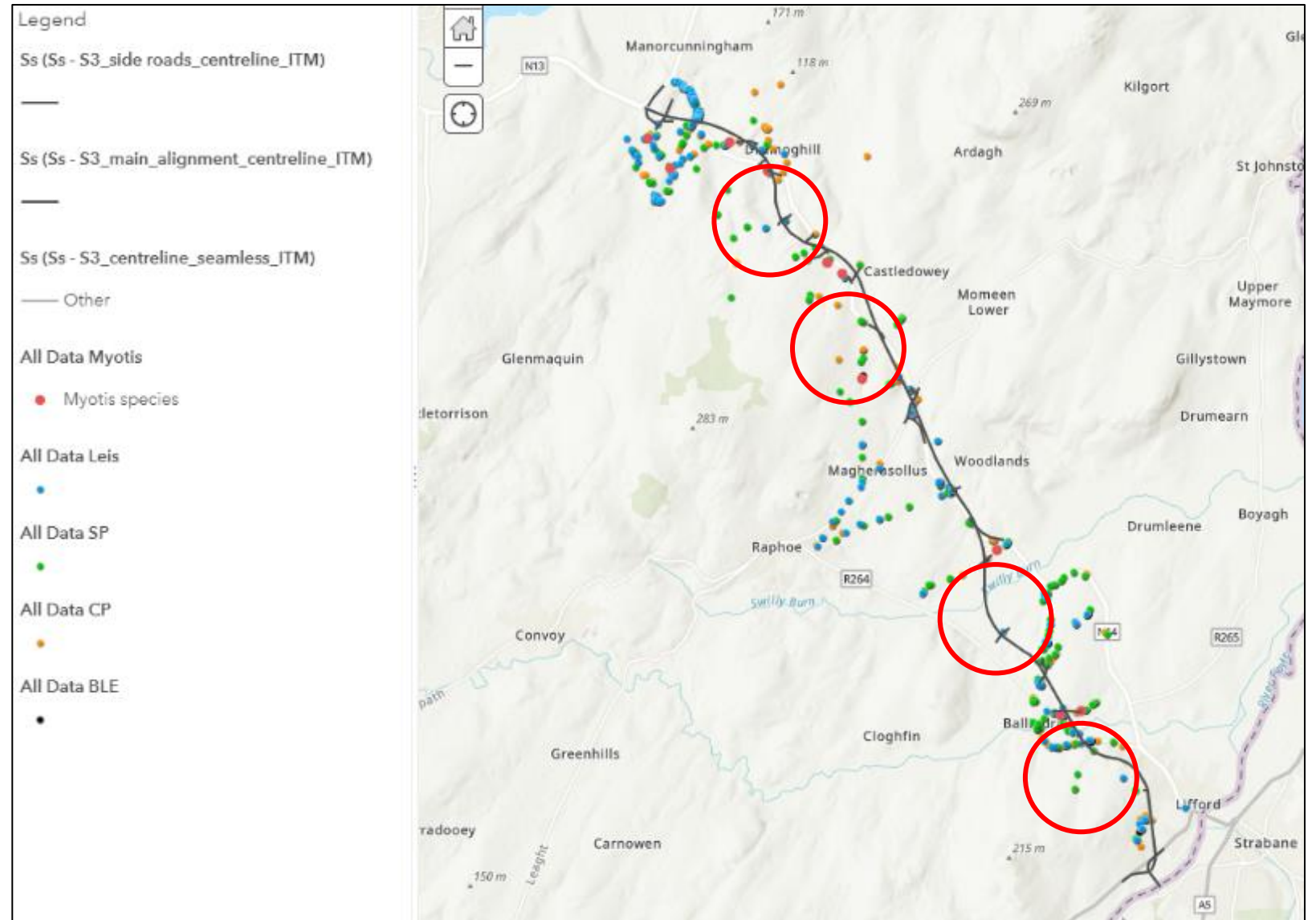
Section 3 – Bat Activity

Primary bat areas (Circled):

- Ballindrait and river valley
- Disused railway line & woodlands, Drumoghill
- Woodlands, SW of Doorable
- River and associated linear woodland north of Mullanagung

Potential Impacts:

- Loss of tree roosts
- Loss of building roosts
- Loss of commuting and foraging habitat
- Loss of connectivity
- Lighting of proposed road



Significant Direct Effects

Terrestrial and Aquatic

- Direct impacts on River Finn SAC at south end. Clear span structure over river with 5m setback from banks to avoid any direct effect on river channel and QI species Salmon and Otter. Piers and construction in the floodplain not impacting on QI habitat but there will be a small permanent loss of habitat within the SAC. Requires elaborate construction methodology.
- Lough Swilly SAC approx. 270m from the Pluck Roundabout at the north end at risk from indirect effects on water quality.
- Permanent habitat loss within KER's with resultant habitat fragmentation and barrier effect of road without mitigation.
- As many KERs consist of low-lying wet grassland / wet woodland mosaics, there is a potential for impacts on the hydrology of the retained elements of these sites without appropriate design.
- Introduction and/or further spread of invasive alien species.
- Permanent loss of habitat through culverting or channel realignments on watercourses without appropriate design.
- Temporary degradation to water quality from construction related activities such as sediment run-off and accidental spillage, etc.
- Temporary disturbance to ex-situ faunal species listed as Qualifying Interests of Designated Conservation Areas (Otter and Atlantic Salmon) during construction.

Mitigation Options: Terrestrial

Mitigation By Avoidance

- Avoid impacts on otter commuting corridor and habitats the insertion of bridges with natural bank retained.
- Where possible avoid features within the landscape which support foraging and commuting habitats for wildlife and roosting locations of bat species.

Mitigation By Prevention

- Pre-construction surveys and ecological supervision during site clearance.
- Adherence to TII Guidelines for the treatment of species during construction
- Prevent and control of invasive species as per legislation and TII Guidelines; Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Road Schemes

Mitigation By Reduction

- Single span crossing of River Finn to reduce impacts on habitats.
- Appropriate lighting solutions to reduce impacts on bats and birds
- Insertion of mammal underpasses, ledges at watercrossings
- Bat Flyovers
- Planting to minimise impact to Barn owl

Mitigation By Remedy/Offsetting

- Areas of severance acquired as part of the Compulsory Purchase Order (CPO) to allow for compensatory habitat development to off-set loss.
- Habitat loss of linear features (hedgerows and treelines) will be compensated for in the landscape design which will reconnect severed features.
- Provision of mammal passage facilities with guide-fencing and landscaping at appropriate locations along entire scheme to off-set fragmentation / barrier effects

Mitigation Options: Aquatic Biodiversity

Mitigation By Avoidance

- Good design of culverts and realigned channels as short as possible to ensure light penetration and reduce effort for fish to pass;
- TII / LA guidance to ensure fish passage – slope, length, water velocity at outfall, embedment, low flow channel, baffles, resting pools.
- Watercourse realignments - channel reinstatement to mimic natural character: substrate, flow conditions, and include riparian cover (planting).

Mitigation By Prevention

- Good construction practice in all areas (sediment, concrete etc.) / ECoW to monitor measures
- Measures required to avoid impacting on hydrology of water dependent sites.
- Measures required to avoid impacts on water quality during construction on all aquatic sites and in particular on the downstream SAC's.

Mitigation By Reduction

- Site specific control / treatment of sediment release
- Road run-off treatment – application of TII Drainage and Water Environment - Sustainable Drainage Standards; treated via attenuation areas/ wetlands

Mitigation By Remedy/Offsetting

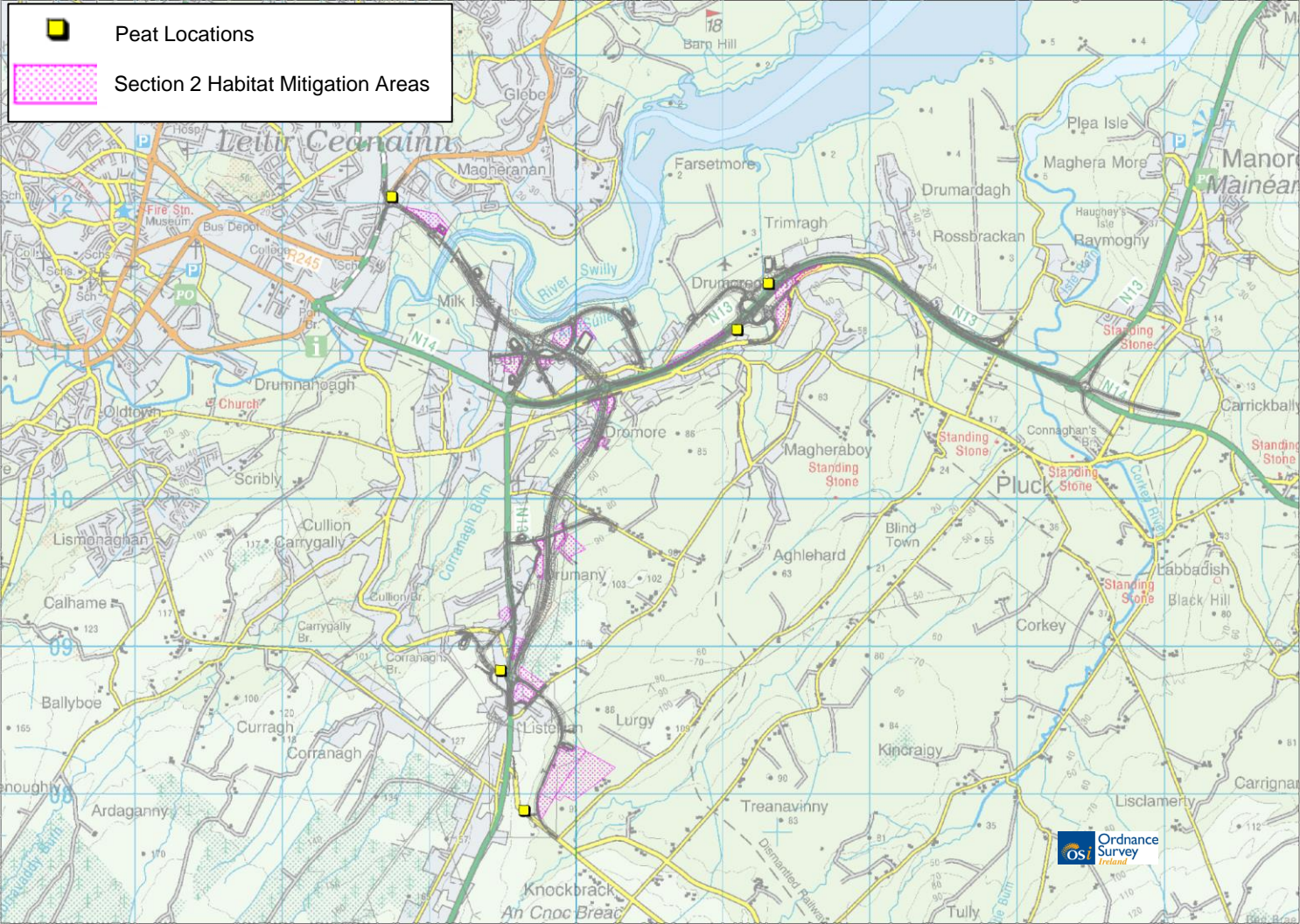
- Watercourse re-alignment design to incorporate sinuosity and varied flow regimes to reconstruct a natural river system in both plan and profile. Adequate landtake required.

Carbon offsetting performance against Key Indicators

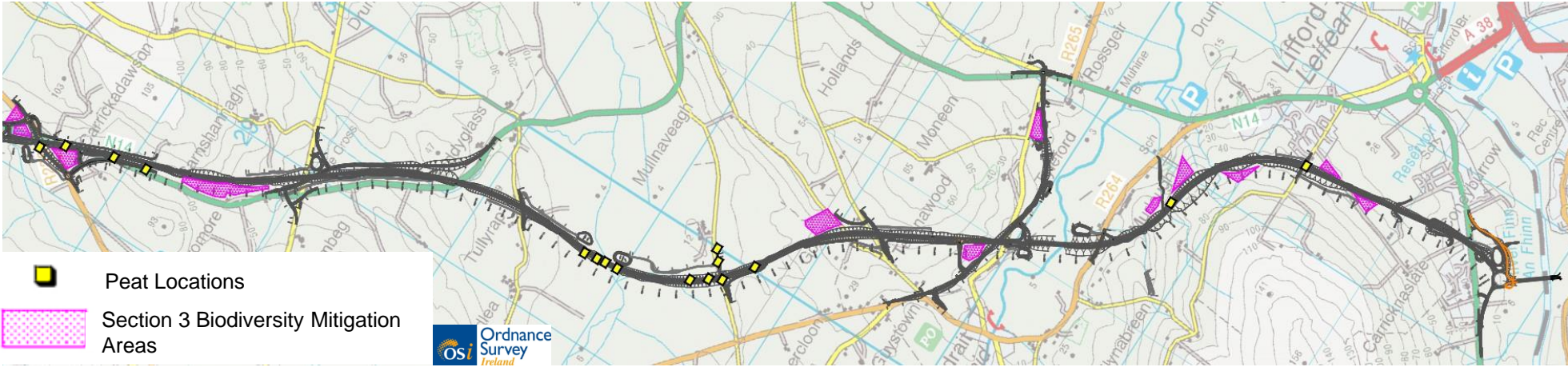
Approach	GHG emission reductions or removals	Abatement cost	Per-unit abatement potential	National abatement potential	Implementation readiness	Speed of impact	Longevity	Confidence in science
Upland peat restoration	Reductions and potential removals	●	●	●	●	●	●	●
Lowland peat restoration	Reductions and potential removals	●	●	●	●	●	●	●
Woodland creation	Removals	●	●	●	●	●	●	●
Grassland	Removals	●	●	●	●	●	●	●
Floodplain restoration	Removals	●	●	●	●	●	●	●
Constructed wetland	Removals	●	●	●	●	●	●	●
Saltmarsh restoration	Removals	●	●	●	●	●	●	●
Seagrass restoration	Removals	●	●	●	●	●	●	●

- This is currently undertaken as an offsetting approach in the UK
- Technique is understood, obstacles to quantifying the approach
- Insufficient understanding

Potential Habitat Mitigation Areas



Potential Habitat Mitigation Areas





Constructed Wetland: Typical Design



Constructed



Established

Questions