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An Bord Pleanála Oral Hearing

Irish Water

Greater Dublin Drainage

**Response to Issues Raised by Ms. Gray & Ms Joyce-Kemper in
relation to the Alternative Sites Assessment**

(28 March 2019)

Ciarán O'Keeffe



Greater Dublin Drainage Project – Oral Hearing

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Introduction

On Day 4 (26th March 2019) and Day 5 (27th March 2019) submissions were made by Ms Terri Gray and Ms Sabrina Joyce-Kemper respectively in relation to the Alternative Site Assessment (ASA) and Route Selection

I set out below my response to these submissions.

1. The ASA and Route Selection was undertaken having regard to the recommendations set out in the SEA on the GDSDS, which envisaged a process comprising four distinct phases, as outlined in Table 1, extracted from the SEA, which is attached. Three additional periods of non-statutory Public Consultation were added by the GDD team to the SEA recommended process to make it an even more robust and informative process. These were undertaken before and after Phase 1 of the ASA with the final period of non-statutory consultation taking place on publication of the outcomes of Phase 4 of the ASA.
2. The ASA and Route Selection is summarised in Section 5.6 of Chapter 5 - Consideration of Alternatives of Volume 2A of the EIAR and the full suite of reports is available at www.greaterdublindrainage.com/project-reports/
3. The Baldoyle Bay SAC is included in Figure 4.2 – Ecological Constraints of Alternative Sites Assessment – Phase One; Preliminary Screening Outcomes Report (September 2011) which is attached. However, it is acknowledged that it was not labelled. I confirm that the Baldoyle Bay SAC and SPA AND Ireland's Eye SAC and SPA were included in all assessments.
4. In progressing the Alternative Sites Assessment (ASA) the preferred mitigation approach is through avoidance of impact on human beings and the environment where possible. Micro-tunnelling has been used extensively in Ireland to avoid impacts on sensitive environmental areas. Therefore, micro-tunnelling under the Baldoyle Bay SAC/SPA is a proven and successful avoidance measure.
5. The outcome of Phase 1 of the ASA process including details as to how sites were dismissed is fully reported in the Alternative Sites Assessment – Phase One; Preliminary Screening Outcomes Report (September 2011), specifically Sections 4.7 to 4.12.

6. During the ASA Phase 1 assessment it was not possible to identify State owned lands in North County Dublin of appropriate size meeting the identified selection constraints. Refer to Figure 4.8 – Pre Screening Constraints as extracted from the ASA Phase 1 Report which is attached.
7. During the ASA Phase 2 assessment the requirement to assess 'neighbouring zoning' was not removed from the assessment process. The industrial zoned lands along the southern corridor for the orbital sewer could not be developed in the absence of an appropriately sized sewer system being constructed through these lands. The final routing of the Orbital Sewer through these lands provides this appropriately sized sewer.
8. The 2005 report referred to by Ms Gray is the GDSDS Final Strategy Report. This report recommended the area around the existing WwTP in Portrane as the site for the new wastewater treatment plant. The SEA of the GDSDS amended this recommendation to 'a Regional WwTP be sited at a location to be determined in the northern Greater Dublin Area'. The SEA also recommended that an Alternative Sites Assessment be undertaken with an objective of identifying potential sites for a Regional WwTP (and associated infrastructure). The southern and northern potential outfall locations were only identified during ASA Phase 1 - Preliminary Screening Phase.
9. The response to issues 5, 6, 7, 8 and 9 of Ms Gray's submission is best addressed with reference to the following documents, all of which are attached:
 - a) the Flow Chart outlining the iterative process of the ASA Phase 2 assessment methodology,
 - b) Figure 2 – Land Parcels, Pipeline Corridors, Marine Outfall Areas for Assessment, as extracted from the ASA Phase 2 Report, and
 - c) Extract from the ASA Phase 2 assessment matrix.
10. Figure 2 illustrates the 9 land Parcels (green shading), the pipeline corridors – lettered A to E and colour coded, and also the Northern and Southern Outfall Study Areas.
11. The pipeline corridors have varying widths along their lengths depending on local constraints, with a maximum width of 2km.
12. The 'Load Centres', i.e. the areas from which sewage flows are to be diverted were identified in the ASA Phase 1 – Pre screening Report as the Blanchardstown Catchment and the North Dublin Drainage Catchment.
13. Diversion of flows from the 'Load Centres' to individual sites and then on to the outfall area could be accommodated along alternative pipeline corridors as per examples summarised hereunder:

- Diverting the Blanchardstown catchment to the northern outfall study area via the 'northern' sites pipeline corridors A-F or A-F-E was assessed.
 - Diverting Blanchardstown to the Southern Outfall Study Area via corridors A-B-G or A-F-C-G was assessed.
 - Diverting the North Dublin Drainage Catchment to the Northern Outfall Study Area involved assessing G-D-F; G-D-F-E; G-D-E and G-C-F and G-C-F-E. However, it should be noted that using corridor 'C' would have required significantly more pumping effort than corridor 'D'.
14. Summarised assessments for (i) the site, (ii) pipeline route(s) to the site and (iii) the marine outfall were collated into the assessment matrix and through a number of workshops a detailed assessment of all three elements was undertaken by all of the technical and environmental specialists. From these workshops the three land parcels of Annsbrook, Newtowncorduff and Clonshaugh emerged as preferred site options for further consultation (ASA Phase 3) and environmental and technical studies (ASA Phase 4).
 15. In the ASA Phase 4 assessment, each of the individual components (i.e. WwTP site, its associated marine outfall location, orbital sewers and outfall pipeline) of the three emerging preferred site options were assessed to determine the most and least favourable constraints in relation to the findings from ASA Phase 2, consideration of submissions received during ASA Phase 3 (Public Consultation) and the findings of further investigative studies undertaken during ASA Phase 4.
 16. A comparative assessment was then undertaken that assigned a "more favourable" and "less favourable" classification to the identified constraints which allowed for the selection of the final preferred site option.
 17. In comparison to both the Annsbrook and Newtowncorduff site options, the Clonshaugh site option (WwTP site, southern marine outfall and orbital sewers) was assessed as being 'more favourable' under a greater number of the Environmental and Technical criteria.

Table 1 Key Stage in the ASA

Stage	Detail
1. Alternative sites identification.	<p>This stage is where a range of alternative sites are identified. There are a number of sub-stages to this first stage:</p> <ol style="list-style-type: none"> 1. Coastal modelling; 2. Environmental constraints mapping; 3. WwTP alternative sites identification; and 4. Pipeline route identification (considering alternatives). <p>At the conclusion of this first stage, there will be a number of alternative sites, which are then taken forward to the Stage 2.</p>
2. Assessment of alternative sites and selection of the preferred site for the WwTP, coastal outfall location and pipeline routes.	<p>The second stage involves the assessment of the alternative sites identified in Phase 1. These sites will then be subject to examination under a range of criteria: Ecology; Cultural and Heritage; Water; Landscape; Traffic; Air Quality; Climate; Planning Policy; Land Use; Engineering and Design Constraints; Capital and Operational costs; and Site ownership and availability.</p> <p>The assessment process will involve desk-based studies, site visits and preliminary impact assessment.</p> <p>It is not recommended that scoring or a rating system be applied to the findings from as it is not possible to accurately weigh the relative merits of one criterion (e.g. ecology or water) against another (e.g. engineering or planning policy). Instead, the selection of the preferred site should be based on an overall assessment of the advantages/positive aspects of each site, against the disadvantages/negative aspects of each site.</p>
3. Consultation	<p>The draft of this Alternative Sites Assessment Report should be made available for public consultation for a period not less than six weeks. The draft Report will be made available in clearly advertised Local Authority offices/buildings and a digital version will also be made available on the website of the seven local authorities of the Dublin region. In addition to the general public, submissions will be invited from statutory and other public organisations.</p> <p>Following completion of the public consultation stage, a Submissions Report will be prepared; summarising and addressing the range of issues and queries raised in the submissions received. Based on a consideration of the submissions received, it may be necessary to revise the assessment and evaluation results in the draft Report.</p>
4. Selection of the Preferred Site	<p>Based on the assessment findings (Stage 2) and a consideration of submissions received during Consultation (Stage 3), the selection of the preferred site of the WwTP, coastal outfall location and pipeline route should be completed. This will involve an overall assessment of the performance of each of the alternative sites against the individual criteria.</p>

Preliminary screening of the study area to identify a short list of potential alternative land parcels of suitable size to accommodate the proposed Regional Wastewater Treatment Plant (WwTP) and also to identify marine outfall locations and potential transfer pipeline corridors.

PHASE 1

STEP 1

Production of individual matrices & mapping of impacts on the land parcel options by the Environmental & Technical Specialists based on desktop studies and visual inspections including identification of the relative importance of the sub-criteria

STEP 2

Identification of the best positioned 20 ha site within the land parcels based on relevant Technical & Environmental Constraints

STEP 3

Update of the individual matrices to reflect the focus from Land parcels to the identified sites

STEP 4

Combination of the individual matrices into one overall primary matrix

STEP 5

Identify the cells which are the most favourable across the sub-criteria. Shade these cells 'green'

STEP 6

Identify the cells which are the least favourable of the sub-criteria considered to be most important by the respective specialists. Shade these cells 'amber'; On subsequent iterations, cells are shaded amber in the same way for the most important sub-criteria

STEP 7

Review the whole matrix to determine whether any site options with 'least favourable' classifications are
a) Of such significance that it would be comparatively difficult to secure planning permission on this site option; or
b) Of such environmental disadvantage that with the range of choice available this site option should not be considered further.

Can any site option be removed from consideration?

NO

YES (REMOVE SITE OPTIONS)

STEP 8

Review each sub-criteria to determine whether there are any differentiating levels of impact remain across the site options, if not, these sub-criteria can be parked from the evaluation at this stage

Has the matrix been sufficiently refined so that the differentiating factors between the remaining site options are so nuanced that it is not possible to remove any further site options/sub-criteria

NO

YES

PHASE 2

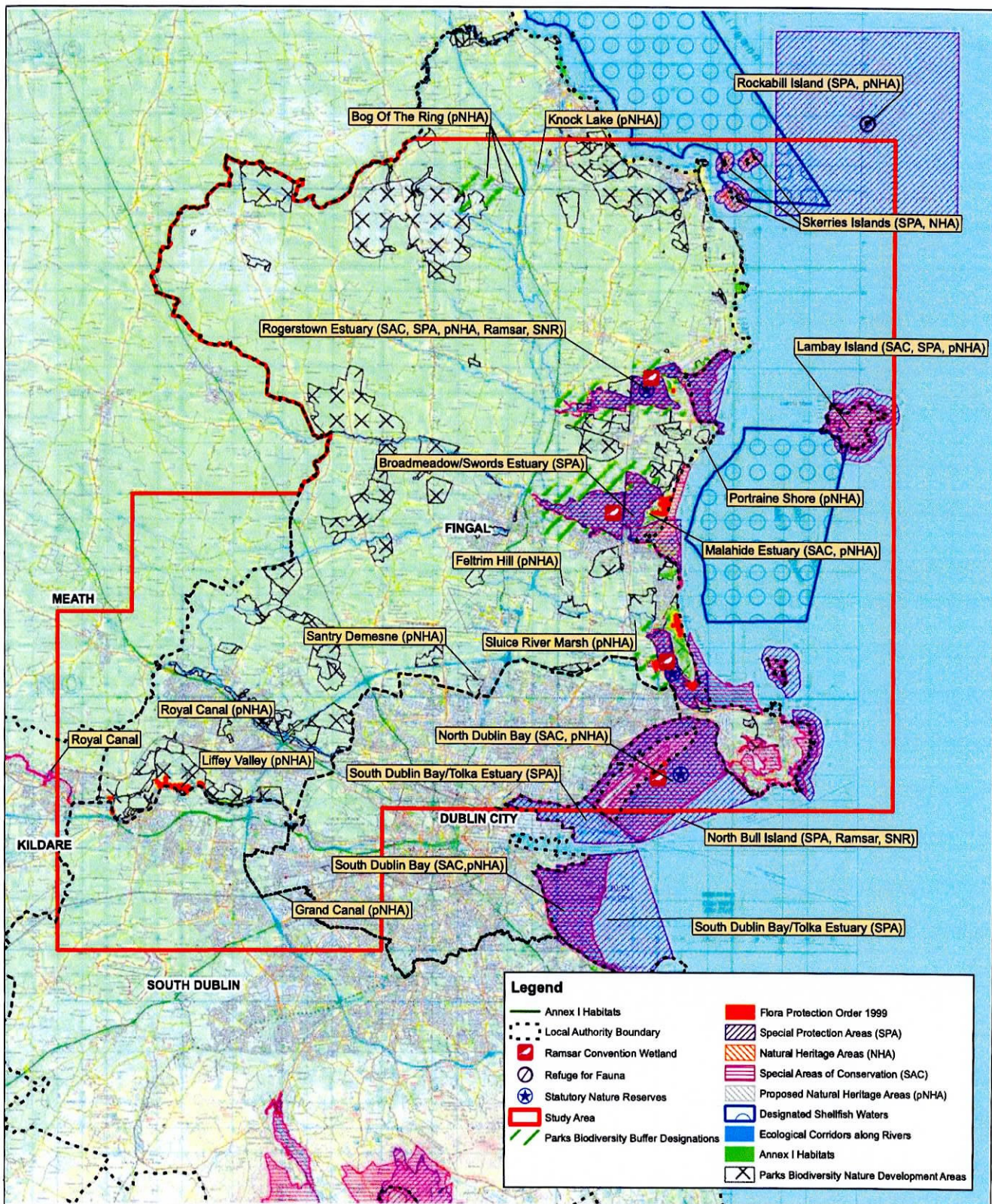
PHASE 3

Remaining site options, with identified potential mitigation, are taken forward to Public Consultation

PHASE 4

The selection of the preferred site, marine outfall location and transfer pipeline route based on the assessment findings, consideration of submissions received during consultation and further comparative costings

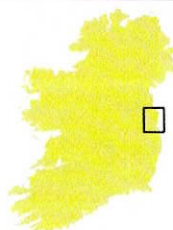
11.0	Traffic	Annabrook	Baldurgen	Clonsagh	Cookstown	Newtowncorduff
11.1	Length of access road required	1230m access road required	580m access road required	320m access road required	930m access road required	640 access road required
11.2	Number of crossings required for access road	None	2 river/stream crossings	None	1 ditch/stream crossings	1 stream/river crossings
11.3	Potential Impact on landowners	Access road impacts on 6 fields	Access road impacts on 3 fields splitting one	Access road impacts on 2 fields however can follow existing track	Access road impacts on 5 fields	Access Road impacts on 2 fields
11.4	Works required to provide safe access entrance	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok.	Visibility ok. Can make use of existing field access. Some local road widening probable	Road would likely require widening. To achieve visibility would require significant landtake.	None, Wide road, good visibility
11.5	Potential impact on surrounding local road network	Can access R132 after approx. 2km of travel on R129.	Can access R132 after approx. 2km of travel on R129.	Access onto local road however not far from N32	Access onto R108. Road not particularly suitable for HGVs. Travel distance to better road moderate	Easy access to wide road (R132)
11.6	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	None	None	None	4 accidents (3 minor 1 serious) near proposed entrance
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	few accidents on surrounding roads	High accident rate on N32 & R107 (including deaths)	few accidents on surrounding roads	Several accidents on R132
11.8	Road link impacted upon by all construction traffic (excluding major routes i.e. R132/N32)	2km (R129)	4km (R129)	450m (Clonsagh Rd)	Two options but both long (R108 & R129 7.8km, R108 & R125 6.9km)	None
12.0	Planning Policy	Annabrook	Baldurgen	Clonsagh	Cookstown	Newtowncorduff
12.2	Site Zoning	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	RU (Rural)
12.7	Zoning present within 300m of site boundary	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential)	RU (Rural)	RU (Rural) RC (Rural Cluster)
13.0	Engineering Design - Pipelines	Annabrook	Baldurgen	Clonsagh	Cookstown	Newtowncorduff
13.1	Pipeline Length					
13.1.6	Total Pipeline Lengths					
	Total Pipeline Length	47,850 m	47,850 m	30,600 m	47,900 m	47,850 m
13.2	Power Requirements					
	Total Power Requirements	10,000 kW	9,700 kW	7,850 kW	9,600 kW	9,300 kW



Greater Dublin Drainage

Drawing Title

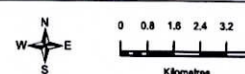
ASA: PHASE ONE
PRELIMINARY SCREENING OUTCOMES REPORT
ECOLOGICAL CONSTRAINTS



Rev.	Date	Purpose of revision	Drawn	Checked	Rev'd	App'd
C	05/10/11	ISSUED	LM	ED	JB	COK
B	28/06/11	ISSUED	LM	ED	JW	COK
A	19/09/11	ISSUED	AO	ED	JB	COK

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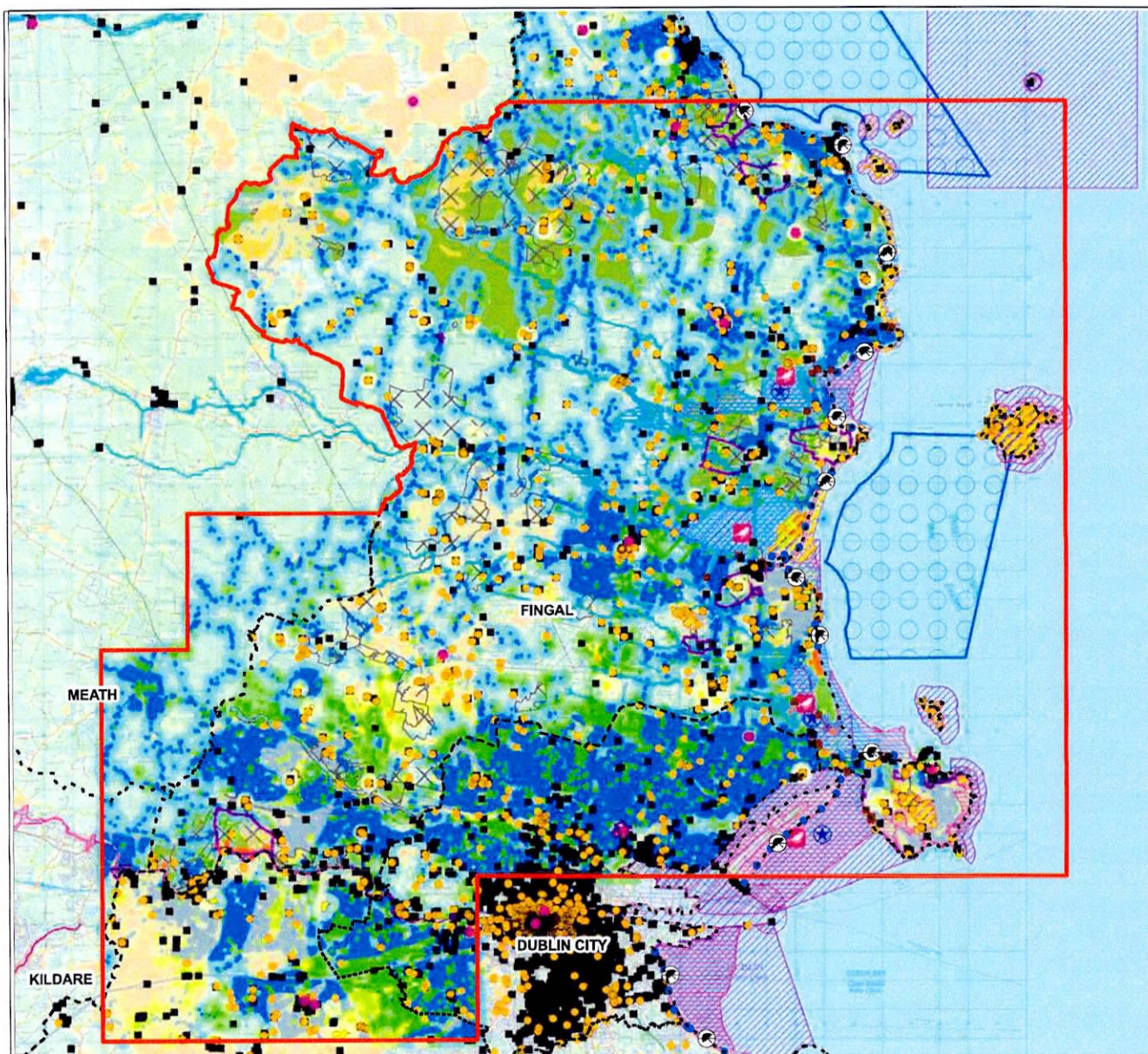
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Drawing Status: **ISSUED**
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Drawing No.: **FIGURE 4.2**



Legend

- Study Area
- Local Authority Boundary

Ecological Constraints

- Ramsar Convention Wetland
- Refuge for Fauna
- Statutory Nature Reserves
- Tree Preservation Order
- Natural Heritage Areas (NHA)
- Proposed Natural Heritage Areas (pNHA)
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Designated Shellfish Waters

- Annex I Habitats
- Annex I Habitats
- Flora Protection Order 1999
- Ecological Corridors along Rivers
- Parks Biodiversity Buffer Designations
- Parks Biodiversity Nature Development Areas

Cultural Heritage Constraints

- Sites and Monuments
- National Monuments (incl. 250m Buffer)
- Protected Structures
- Fingal Coastal Architectural Survey Inventory
- Architectural Conservation Areas

Protected Water Bodies/ Areas at Risk of Flooding (other than Ecological Constraints)

- Bathing Locations
- Nutrient Sensitive Points
- Recreational Waters
- Nutrient Sensitive Rivers
- Nutrient Sensitive Lakes and Estuaries
- WFD Salmoid Waters
- Beaches
- FEM FRAMS 100yr (Fluvial)
- FEM FRAMS 100yr (Tidal)

Landscape Constraints

- Highly Sensitive Landscape

Geological Constraints

- Geological Heritage Sites
- Sensitive Receptors (incl. 300m Buffer)
- Commercial Building
- Residential Building or Both (Commercial + Residential Building)
- Unknown Building Use
- Other Sensitive Receptors
- Extreme Groundwater Vulnerability

Greater Dublin Drainage

Drawing Title

ASA: PHASE ONE
PRELIMINARY SCREENING OUTCOMES REPORT
PRELIMINARY SCREENING CONSTRAINTS



C	05/10/11	ISSUED	LM	ED	JR	COK
B	28/09/11	ISSUED	LM	ED	JR	COK
A	19/09/11	ISSUED	AD	ED	JR	COK
Rev.	Date	Purpose of revision	Drawn	Checked	Rev'd	App'd

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FIGURE 4.8

